



PHOENIX

ENVIRONMENTAL SCIENCES

Detailed flora and vegetation survey for the Eramurra Solar Salt Project

Prepared for Leichhardt Salt Pty Ltd

January 2025

Final



Detailed flora and vegetation survey for the Eramurra Solar Salt Project
Prepared for Leichhardt Salt Pty Ltd

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EXECUTIVE SUMMARY

Leichhardt Salt Pty Ltd (Leichhardt) proposes to develop the Eramurra Solar Salt Project (the Project), located approximately 55 km west-south-west of Karratha in north-west Western Australia. The project aims to develop high purity industrial-grade sodium chloride salt from seawater via a solar evaporation, crystallisation, and raw salt purification operation.

In March 2020, Phoenix Environmental Sciences Pty Ltd (Phoenix) was commissioned by Leichhardt to undertake a detailed flora and vegetation survey for the Project. The purpose of the survey was to define the flora and vegetation values of the study area. The outcomes of the survey were to be used to inform environmental approvals for the Project.

The study area is located in the Eremaean Botanical Province, covering a coastline extent of more than 22 kilometres. The study area is approximately 26,448.9 ha and is comprised of two regions: the Original Study Area (22092.8 ha), and the Study Area Expansion (4356.1 ha).

The combined findings of the database searches and literature review identified 21 significant flora species within the desktop search extent, including 20 Priority flora and one novel species. No records of Threatened flora were identified within the desktop search extent.

A total of 360 identified flora taxa were recorded during the field surveys, comprising 53 families and 164 genera. The number of flora taxa recorded during the surveys represent 70% of the species identified in the desktop assessment and compares favourably to other surveys within close proximity to this Project. Thirteen introduced flora species were recorded within the study area, of these, one is listed as a Declared Pest and Weed of National Significance (WoNS); **Prosopis glandulosa x velutina*.

No Threatened flora were recorded during the survey. Three Priority 3 species were recorded within the study area, two of which are deemed range extensions. The study area represents a range extension for another species which is subsequently considered significant. Twelve novel or potentially novel species are reported, nine of which are *Tecticornia* with unresolved taxonomy. Of the remaining desktop significant flora not recorded in the study area, suitable habitat was identified for 11 Priority species.

Seventeen vegetation types were mapped for the study area. The majority of the vegetation types are generally representative of the broader vegetation associations within the desktop review of the local region. Two vegetation types, Ex and TeWa, are considered to have regional significance as Priority Ecological Communities. A total of 11,873.1 ha (44.9% of the study area) is considered the '*Horseflat Land System of the Roebourne Plains Priority 3(iii)*' PEC and 117.9 ha (0.4%) is considered the '*Coastal dune native tussock grassland dominated by Whiteochloa airoides Priority 3(iii)*' PEC.

The majority of the remnant vegetation in the study area was recorded to be in Excellent condition with negligible signs of damage caused by human activities since European settlement. A remaining minority of the vegetation was recorded to be in Very Good to Degraded condition due to the presence of weed species.

While this survey provides a baseline of flora and vegetation for the study area, proposed impacts (and their proportions) are expected to vary depending on the Project's footprint and/or development envelope.

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1 INTRODUCTION

Leichhardt Salt Pty Ltd (Leichhardt) proposes to develop the Eramurra Solar Salt Project (the Project), located approximately 55 km west-south-west of Karratha in the Pilbara region of north-west Western Australia (WA; Figure 1-1). The project aims to develop high purity industrial grade sodium chloride salt from seawater via a solar evaporation, crystallisation and raw salt purification operation.

In March 2020, Phoenix Environmental Sciences Pty Ltd (Phoenix) was commissioned by Leichhardt to undertake a detailed flora and vegetation survey for the Project.

The study area is located in the Eremaean Botanical Province as defined by EPA (2016b).

1.1 BACKGROUND

Phoenix completed a desktop study and brief site reconnaissance of the Project to define the potential environmental values present within the study area in 2018 (Phoenix 2018). The desktop review included interrogation of several State and Federal databases, as well as a review of scientific publications and relevant biological survey reports.

The findings from this initial desktop and reconnaissance work identified the possible presence of conservation significant flora and vegetation within the study area and therefore indicated the necessity for a detailed flora survey (EPA 2016b).

A five-day targeted survey of *Tecticornia* species/vegetation types was planned for February 2020. However, *Tecticornia* species were found in either a damaged or desiccated state due to the passing of Tropical Cyclone Damien nine days earlier that followed a period of well below average rainfall. Additionally, the mudflats were inaccessible due to inundation from heavy cyclonic rainfall and the survey was abandoned after just one day (Phoenix 2020). Consequently, two additional visits were required to complete the phase 1 Autumn season survey for the original study area (Table 4-3).

The scope presented here therefore addresses the remaining detailed survey required, including completion of the interrupted *Tecticornia* survey.

1.2 SCOPE OF WORK

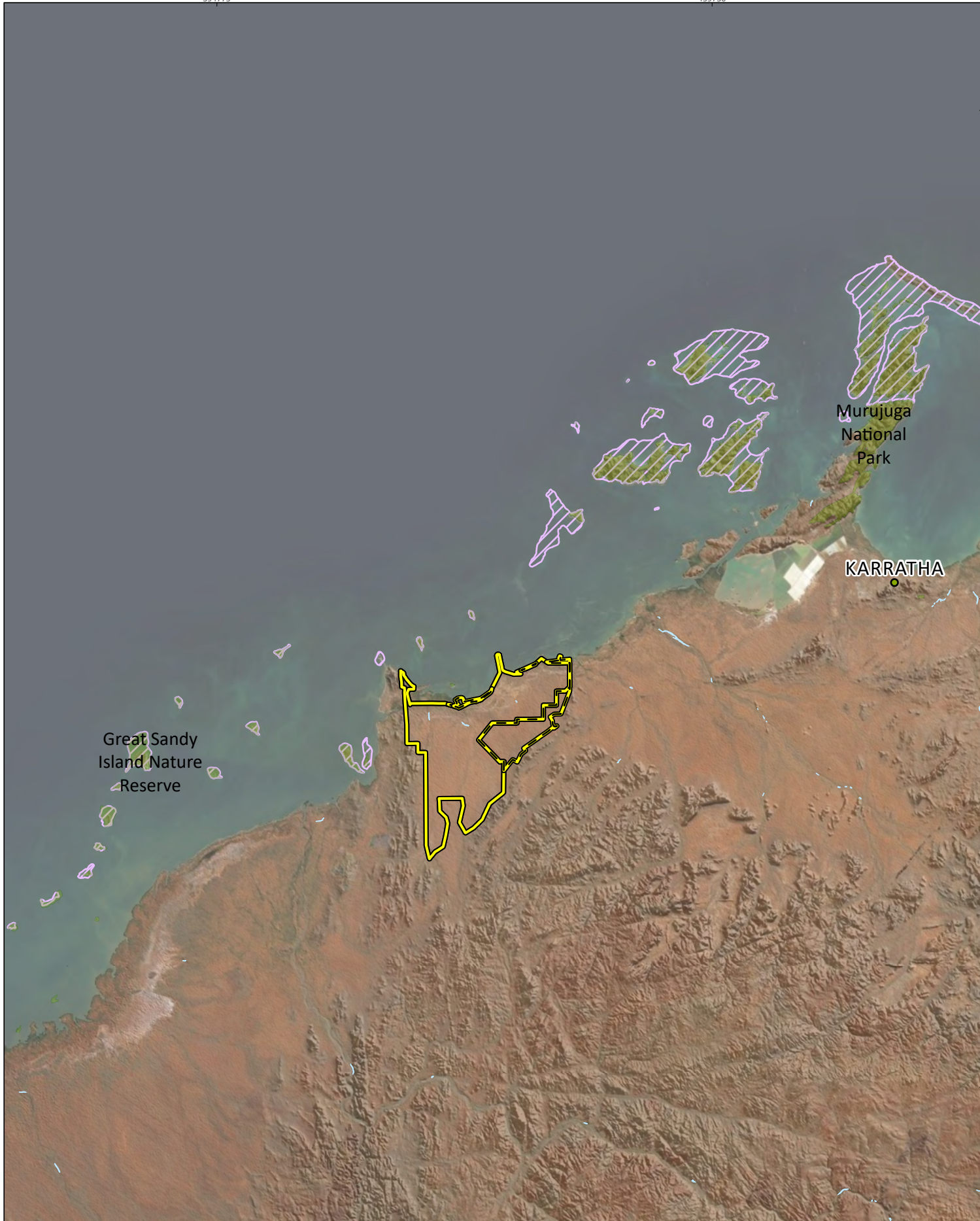
The scope of work for the detailed flora and vegetation survey was as follows:


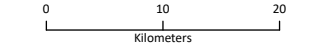
- conduct a detailed flora and vegetation survey to identify and characterise the flora and vegetation of areas that may be directly or indirectly impacted by the Proposal
- prepare a technical report that documents the results of the surveys, including consolidation of the previous desktop and reconnaissance surveys. The technical report will:
 - determine whether any flora species recorded are significant, and provide an analysis of local and regional context, in accordance with Environmental Factor Guideline - Flora and Vegetation
 - determine whether any vegetation identified is significant, and provide an analysis of local and regional context, in accordance with Environmental Factor Guideline - Flora and Vegetation.

1.3 STUDY AREA

The study area occurs in the Eremaean botanical province, covering a coastline extent of more than 22 kilometres (Figure 1-1). The study area is approximately 26,448.9 ha, and is comprised of two regions:

- the Original Study Area (22,092.8 ha), and
- Study Area Expansion (4,356.1 ha)



Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project	
Project No	1306
Date	7/06/2022
Drawn by	BK
Map author	BL
	
	
1:648,500 (at A4) GDA 1994 MGA Zone 50	






-  Study Area (Expanded)
-  Study Area (Original)
-  Lake
-  Environmentally sensitive areas
-  DBCA managed land

Figure 1-1
Project location and study area



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2 LEGISLATIVE CONTEXT

The protection of flora in WA is principally governed by three acts:

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

The BC Act came into full effect on 1 January 2019 and replaced the functions of the *Wildlife Conservation Act 1950* (WC Act).

2.1 COMMONWEALTH

The EPBC Act is administered by the Federal Department of Climate Change, Energy, the Environment and Water (DCCEW) (previously Department of Agriculture, Water and the Environment). The EPBC Act provides for the listing of Threatened flora and Threatened Ecological Communities (TECs) as matters of National Environmental Significance (NES). Under the EPBC Act, actions that have, or are likely to have, a significant impact on a matter of NES, require approval from the Australian Government Minister for the Environment through a formal referral process.

Conservation categories applicable to Threatened flora species under the EPBC Act are as follows:

- Extinct (EX)¹ – there is no reasonable doubt that the last individual has died
- Extinct in the Wild (EW) – taxa known to survive only in captivity
- Critically Endangered (CR) – taxa facing an extremely high risk of extinction in the wild in the immediate future
- Endangered (EN) – taxa facing a very high risk of extinction in the wild in the near future
- Vulnerable (VU) – taxa facing a high risk of extinction in the wild in the medium-term
- Conservation Dependent (CD)¹ – taxa whose survival depends upon ongoing conservation measures; without these measures, a conservation dependent taxon would be classified as Vulnerable, Endangered or Critically Endangered.

Ecological communities are defined as ‘naturally occurring biological assemblages that occur in a particular type of habitat’ (English & Blyth 1997). There are three categories under which ecological communities can be listed as TECs under the EPBC Act: Critically Endangered, Endangered and Vulnerable.

2.2 STATE

2.2.1 Threatened and Priority species

In WA, the BC Act provides for the listing of Threatened flora species (Government of Western Australia 2018a, b)² in the following categories:

¹ Species listed as Extinct and Conservation Dependent are not matters of NES and therefore do not trigger the EPBC Act.

² The *Wildlife Conservation (Specially Protected Fauna) Notice 2018* and the *Wildlife Conservation (Rare Flora) Notice 2018* have been transitioned under regulations 170, 171 and 172 of the *Biodiversity Conservation Regulations 2018* to be the lists of Threatened, Extinct and Specially Protected species under Part 2 of the BC Act.

- Critically Endangered (CR) – species facing an extremely high risk of extinction in the wild in the immediate future³
- Endangered (EN) – species facing a very high risk of extinction in the wild in the near future³
- Vulnerable (VU) – species facing a high risk of extinction in the wild in the medium term future³.

Species may also be listed as specially protected (SP) under the BC Act in one or more of the following categories:

- species of special conservation interest (conservation dependent fauna, CD) – species with a naturally low population, restricted natural range, of special interest to science, or subject to or recovering from a significant population decline or reduction in natural range
- migratory species (Mig.), including birds subject to international agreement
- species otherwise in need of special protection (OS).

The Department of Biodiversity, Conservation and Attractions (DBCA) administers the BC Act and also maintains a non-statutory list of Priority flora. Priority species are still considered to be of conservation significance – that is they may be Threatened – but cannot be considered for listing under the BC Act until there is adequate understanding of threat levels imposed on them. Species on the Priority flora lists are assigned to one of four Priority (P) categories, P1 (highest) – P4 (lowest), based on level of knowledge/concern.

2.2.2 Critical habitat

Under the BC Act, habitat is eligible for listing as critical habitat if it is critical to the survival of a Threatened species or a TEC and its listing is otherwise in accordance with the ministerial guidelines.

2.2.3 Threatened and Priority Ecological Communities

The BC Act provides for the listing of TECs in the following categories:

- Critically Endangered – facing an extremely high risk of becoming eligible for listing as a collapsed ecological community in the immediate future³
- Endangered – facing a very high risk of becoming eligible for listing as a collapsed ecological community in the near future³
- Vulnerable – facing a high risk of becoming eligible for listing as a collapsed ecological community in the medium term future³.

An ecological community may be listed as a collapsed ecological community under the BC Act if there is no reasonable doubt that the last occurrence of the ecological community has collapsed or the ecological community has been so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure.

The DBCA also maintains a non-statutory list of Priority Ecological Communities (PECs), which may become TECs in the future; however, do not currently meet survey criteria or that are not adequately defined. PECs are assigned to one of five categories depending on their priority for survey or definition, with Priority 1 of highest concern and Priority 5 of lowest concern. Though non-statutory, PECs are an environmental factor of merit considered during environmental assessment.

³ As determined in accordance with criteria set out in the ministerial guidelines.

2.2.4 Other significant flora and vegetation

Under the EPA's environmental factor guidelines, flora and vegetation may be considered significant for a range of reasons other than listing as a Threatened or Priority species or ecological community.

In addition to listing as Threatened or Priority, EPA (2016a) identifies the following:

- flora may be significant for
 - local endemism or association with a restricted habitat type (e.g. surface water or groundwater dependent ecosystems)
 - new species or anomalous features that indicate a potential new species
 - representing the range of a species (particularly at the extremes of range, recently discovered range extensions, or isolated outliers of the main range)
 - being unusual species, including restricted subspecies, varieties or naturally occurring hybrids
 - having relictual status, being representative of taxonomic groups that no longer occur widely in the broader landscape
- vegetation may be significant for:
 - having restricted distribution
 - subject to a degree of historical impact from threatening processes
 - having a role as a refuge
 - providing an important function required to maintain ecological integrity of a significant ecosystem.

Provided in the guide for assessment of applications to clear native vegetation (DER 2014) is a scale for assessing the bioregional conservation status of ecological vegetation classes (Table 2-1).

Table 2-1 Bioregional conservation status of ecological vegetation classes

Conservation status	Description
Presumed extinct	Probably no longer present in the bioregion
Endangered*	Less than 10% of pre-European extent remains
Vulnerable*	10-30% of pre-European extent exists
Depleted*	More than 30% and up to 50% pre-European extent exists
Least concern	More than 50% of pre-European extent exists and subject to little or no degradation over a majority of this area

*or a combination of depletion, loss of quality, current threats and rarity gives a comparable status.

2.2.5 Environmentally Sensitive Areas

Under section 51B of the EP Act the Minister for Environment may declare by notice either a specified area of the State or a class of areas of the State to be Environmentally Sensitive Areas (ESAs). ESAs are declared in the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005*, which was gazetted on 8 April 2005 (Government of Western Australia 2005).

ESAs are areas where the vegetation has high conservation value. Several types of areas are declared ESAs including:

- the area covered by vegetation within 50 metres (m) of Threatened flora, to the extent to which the vegetation is continuous with the vegetation in which the Threatened flora is located
- the area covered by a TEC

- a defined wetland (Ramsar wetlands, conservation category wetlands and nationally important wetlands) and the area within 50 m of the wetland
- Bush Forever sites.

2.2.6 Introduced flora

Introduced flora (weeds) pose threats to biodiversity and natural values by successfully out-competing native species for available nutrients, water, space and sunlight; reducing the natural structural and biological diversity by smothering native plants or preventing them from growing back after clearing, fire or other disturbance; replacing the native plants that animals use for shelter, food and nesting; and altering fire regimes, often making fires hotter and more destructive (Australian Weeds Committee 2007).

Management of some weed species is required under Commonwealth or State frameworks. Key classifications for significant introduced flora that are relevant to this report are:

- Declared Pest – the Western Australia *Biosecurity and Agriculture Management Act 2007*, Section 22 makes provision for a plant taxon to be listed as a Declared Pest organism in parts of, or the entire State. Under the *Biosecurity and Agriculture Management Regulations 2013* administered by the Department of Primary Industries and Regional Development (DPIRD), Declared Pests are assigned to one of three control categories that dictate the level of management required (DPIRD 2019).
- Weed of National Significance (WoNS) – high impact, established introduced flora causing major economic, environmental, social and/or cultural impacts in a number of states/territories, and which have strong potential for further spread (Australian Weeds Committee 2012). Management is required in accordance with DPIRD guidelines for particular WoNS.

Throughout this report, introduced flora species are indicated with an asterisk (*).

3 EXISTING ENVIRONMENT

3.1 INTERIM BIOGEOGRAPHIC REGIONALISATION OF AUSTRALIA

The Interim Biogeographic Regionalisation of Australia (IBRA) classifies Australia's landscapes into 'bioregions' and 'subregions' based on climate, geology, landform, native vegetation and species information (DoEE 2016). The study area is located in the Roebourne subregion (PIL04) of the Pilbara bioregion (Figure 3-1) which is characterised Kendrick and Stanley (2001) as:

"Quaternary alluvial and older colluvial coastal and subcoastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *A. pyrifolia* and *A. inaequilatera*. Uplands are dominated by *Triodia* hummock grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands. Samphire, *Sporobolus* and mangal occur on marine alluvial flats and river deltas. Resistant linear ranges of basalts occur across the coastal plains, with minor exposures of granite. Islands are either Quaternary sand accumulations, or composed of basalt or limestone, or combinations of any of these three. Climate is arid (semi-desert) tropical with highly variable rainfall, falling mainly in summer. Cyclonic activity is significant, with several systems affecting the coast and hinterland annually. Subregional area is 2,008,983 ha."

3.2 LAND SYSTEMS AND SURFACE GEOLOGY

DPIRD undertakes land system mapping for WA using a nesting soil-landscape mapping hierarchy (Payne & Schoknecht 2011). While the primary purpose of the mapping is to inform pastoral and agricultural land capability, it is also useful for informing biological assessments. Under this hierarchy, land systems are defined as areas with recurring patterns of landforms, soils, vegetation and drainage (Payne & Leighton 2004).

The study area intersects eight land systems (Table 3-1; Figure 3-2). The study area is dominated by the Horseflat System (62.8%) and the Littoral System (20.1%).

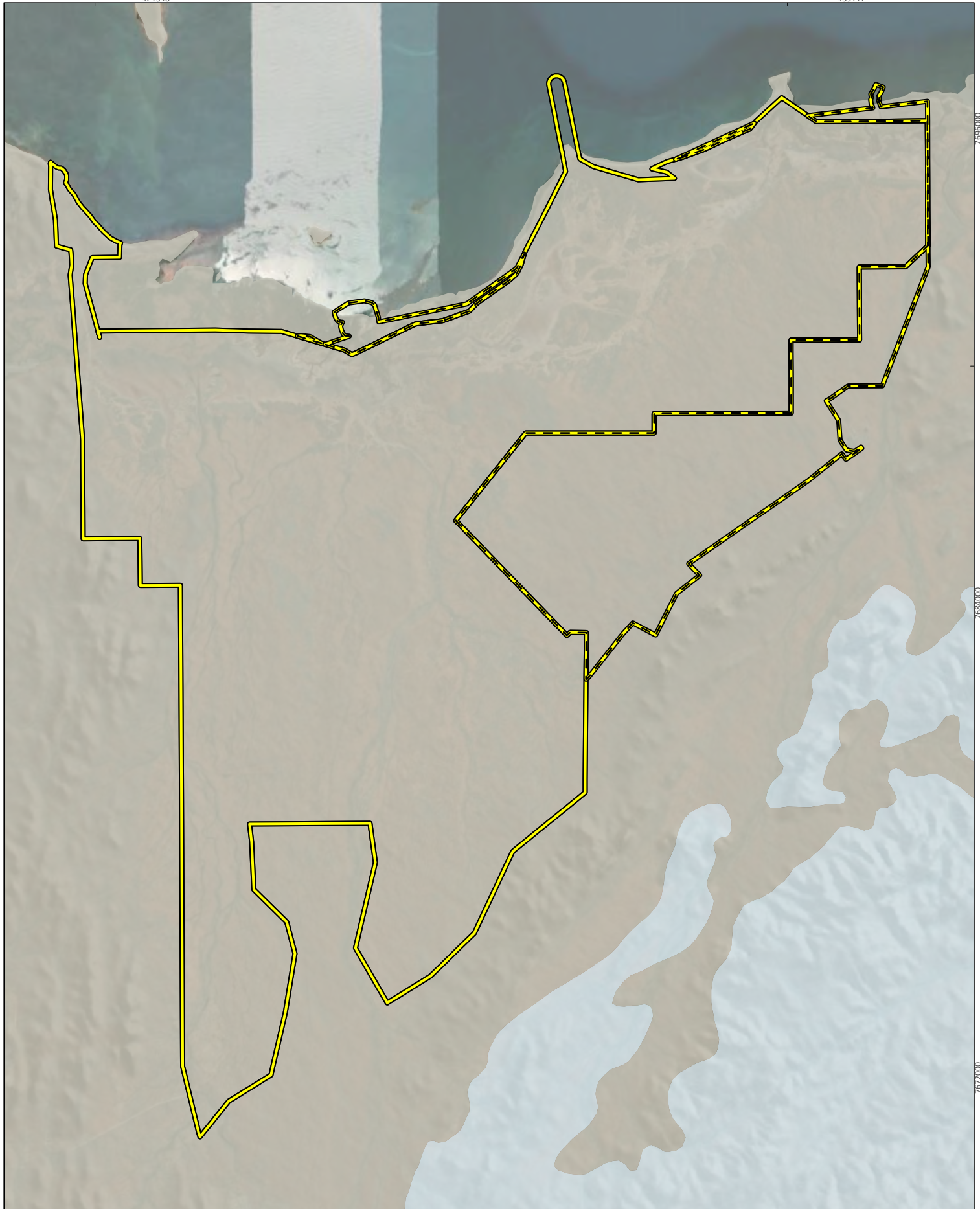
According to the Surface Geology of Australia 1:1,000,000 scale, Western Australia database (Stewart *et al.* 2008) the study area intersects nine geological formations (Table 3-2; Figure 3-3). Two-thirds of the study area (67.9%) is composed of either alluvial or estuarine sediments.

Table 3-1 Land systems and extent in study area

Land system	Description	Area (ha)	% of study area
Horseflat System	Gilgaied clay plains supporting Roebourne Plains grasslands and minor grassy snakewood shrublands.	16,610.6	62.8
Littoral System	Bare coastal mudflats (unvegetated), samphire flats, sandy islands, coastal dunes and beaches, supporting samphire low shrublands, sparse acacia shrublands and mangrove forests.	5,321.0	20.1
Cheerawarra System	Sandy coastal plains and saline clay plains supporting soft and hard spinifex grasslands and minor tussock grasslands.	2,754.3	10.4
Boolgeeda System	Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands.	925.0	3.5
Rocklea System	Basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex and occasionally soft spinifex grasslands with scattered shrubs.	407.3	1.5
Macroy System	Stony plains and occasional tor fields based on granite supporting hard and soft spinifex shrubby grasslands.	194.5	0.7
River System	Narrow, seasonally active flood plains and major river channels supporting moderately close, tall shrublands or woodlands of acacias and fringing communities of eucalypts sometimes with tussock grasses or spinifex.	88.9	0.3
Ruth System	Hills and ridges of volcanic and other rocks supporting shrubby hard spinifex and occasionally soft spinifex grasslands.	39.3	0.1
NA	No land systems description available. Occurs in locations considered to be inundated with ocean.	108.1	0.4
Total Area represented by Land Systems		26,340.8	99.6
Total Area of Study Area		26,448.9	100.0

Table 3-2 Surface geology of the study area, extent by deposit type

Surface geology	Abbreviation	Description	Area (ha)	% of study area
Alluvium 38485	Qa	alluvial sediment	12,292.8	46.5
Estuarine and delta deposits 38489	Qe	estuarine sediment	5,659.0	21.4
Colluvium 38491	Qrc	colluvial sediment	4,348.6	16.4
Eramurra Monzogranite	Agaie	monzogranite	2,270.0	8.6
Dunes 38496	Qd	sand - aeolian, sand - residual	829.1	3.1
Kylena Formation	Abfk	basalt, andesite, rhyolite, dacite, dolerite	589.5	2.2
Roebourne Group	Awr	basalt, komatiite, metaperidotite, chert, banded iron formation	299.5	1.1
Water	water		155.7	0.6
Mount Roe Basalt	Abfr	mafic volcanic, sandstone, limestone, dolerite,	4.8	<0.12
Total			26,448.9	100.0



Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No	1319
Date	7/06/2022
Drawn by	BK
Map author	BL



0 2.5 5
Kilometers

1:123,800 (at A4) GDA 1994 MGA Zone 50





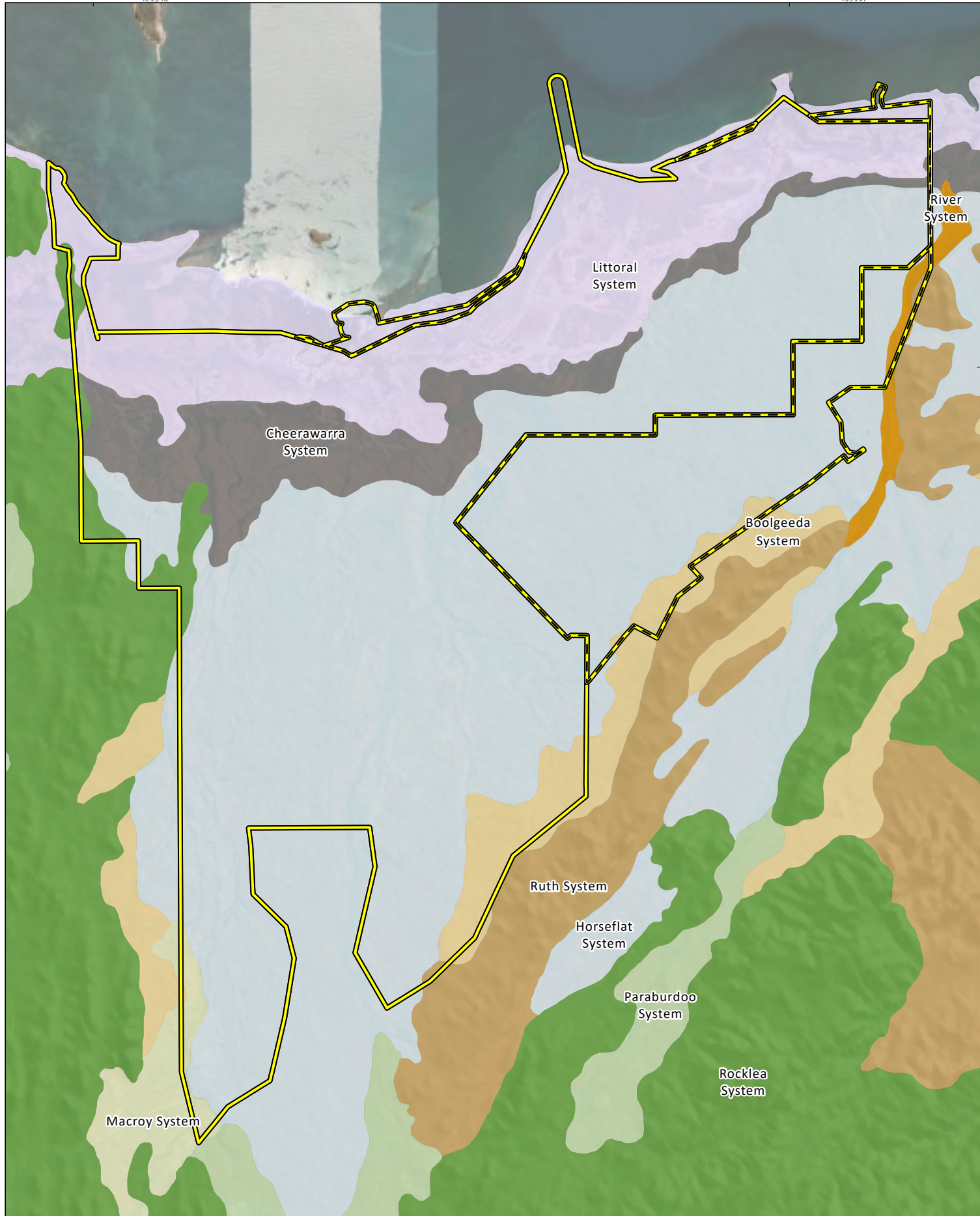
-  Study Area (Expanded)
-  Study Area (Original)
- Region, subregion**
-  Pilbara, Chichester
-  Pilbara, Roebourne

Figure 3-1
Study area in relation to IBRA bioregions and subregions



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Eramurra Solar Salt Project

Project No	1319
Date	7/06/2022
Drawn by	BK
Map author	BL

0 2.5 5
Kilometers

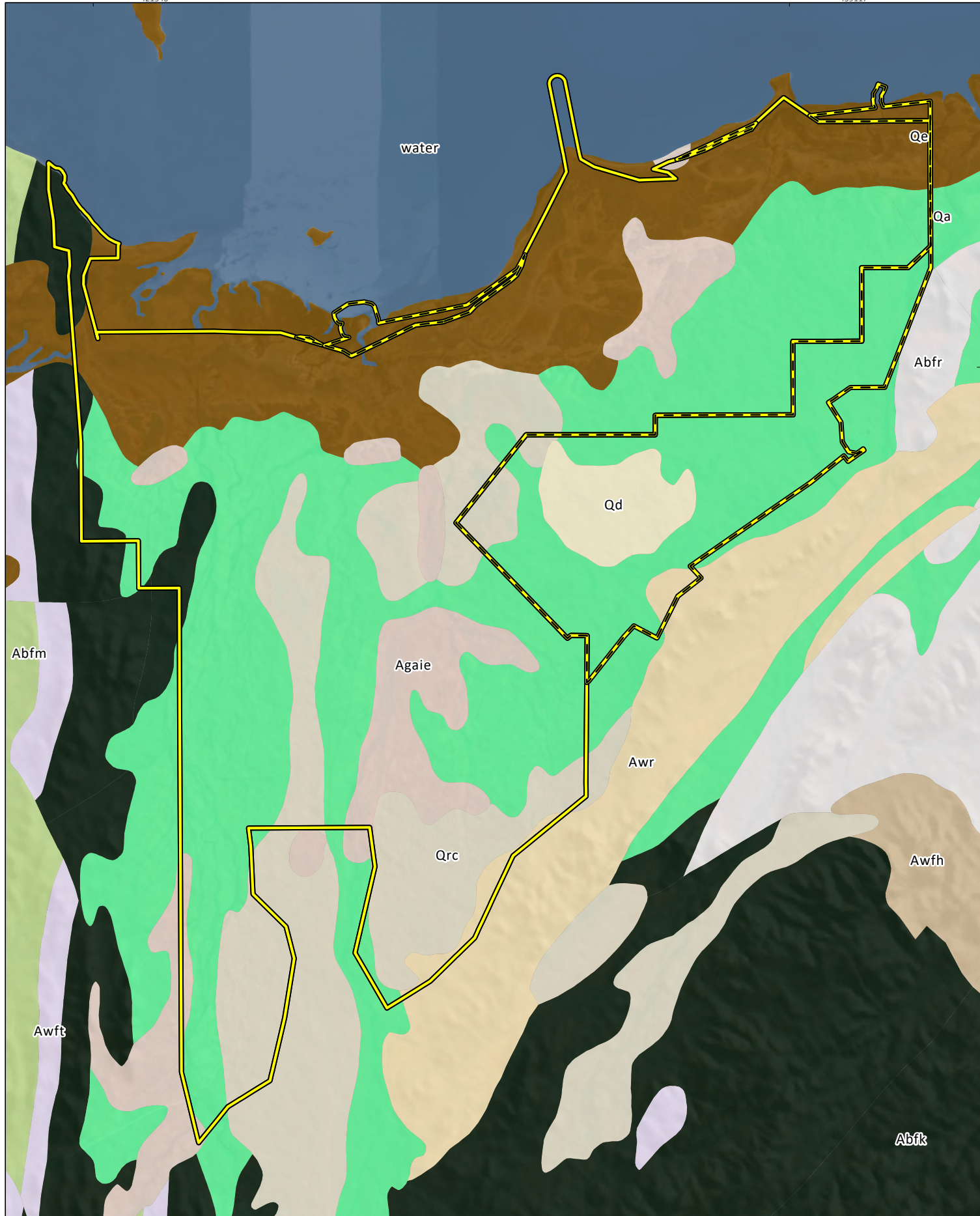
1:123,800 (at A4) GDA 1994 MGA Zone 50

- Study Area (Expanded)
- Study Area (Original)
- Land system**
- Boolgeeda System
- Cheerawarra System
- Horseflat System
- Littoral System
- Macroy System
- Paraburdoo System
- River System
- Rocklea System
- Ruth System

Figure 3-2
Land systems in the study area



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Project No	1319
Date	7/06/2022
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Map author	BL

0 2.5 5
Kilometers

1:123,800 (at A4) GDA 1994 MGA Zone 50

- Study Area (Expanded)
- Study Area (Original)
- Surface geology**
- Abfk
- Abfm
- Abfr
- Awaie
- Awr
- Awfh
- Awft
- Qe
- Qd
- Qa
- Qrc
- water

Figure 3-3
Surface geology in the study area



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3.3 CLIMATE AND WEATHER

The climate of the Roebourne subregion is described as arid (semi-desert) tropical with highly variable rainfall, falling mainly in summer (Kendrick & Stanley 2001). The nearest Bureau of Meteorology (BoM) weather station with comprehensive data collection and recent historic climate data is Mardie (no. 5008), located 31.8km south-west of the southern tip of the study area.

Mardie records the highest mean maximum monthly temperature (37.9°C) in January (lowest in July, 27.8°C) and the lowest minimum mean monthly temperature (12.0°C) in July (highest in February, 25.4°C) (BoM 2022). Average annual rainfall is 276.3 mm with February and March recording the highest monthly averages (62.4 mm and 48.5 mm respectively). The rainfall and temperature data relevant to each survey is summarised in Table 3-3 and Figure 3-4, Figure 3-5, and Figure 3-6.

Table 3-3 Summary of climate and weather data 3 months preceding each field survey (BoM 2022)

Survey dates	Season	Rainfall	Temperature
13 February 2020 (Survey 1)	Summer	Rainfall was negligible and below average in the 3 months (Nov, Dec, Jan) preceding the survey (-36mm/month on average). See Figure 3-4	Both minimum and maximum temperatures were slightly higher (~2°C) than the long-term average. See Figure 3-4
April 2020 (Survey 2)	Autumn	Rainfall was higher in March (+19.5mm) but lower in the two months prior (Jan & Feb) resulting in lower-than-average rainfall over the three months (-9mm/month). See Figure 3-4	Maxima fluctuated around the long-term climate average (within 1.3°C). Minima were slightly higher (1.3°C). See Figure 3-4
September 2020 (Survey 3)	Spring	Rainfall was lower than average in the 3 months prior to survey (-15mm/month on average). See Figure 3-5	Both minimum and maximum temperatures were slightly higher (~2°C) than the long-term average. See Figure 3-5
March – April 2021 (Survey 4)	Autumn	Rainfall was substantially higher in the 3 months (Dec, Jan, Feb) prior to survey (46mm/month on average). See Figure 3-5	Maxima fluctuated around the long-term average (within 3°C). Minima were slightly higher (1.6°C). See Figure 3-5
October 2021 (Survey 5)	Spring	Rainfall was substantially higher in each of the 3 months prior to survey (24mm/month on average). See Figure 3-6	Both minimum and maximum temperatures were slightly higher (~1.2°C) than the long-term average. See Figure 3-6
April 2022 (Survey 6)	Autumn	Rainfall was slightly lower than long term average in the 3 months prior to survey (-11.0mm/month). See Figure 3-6	Minima were slightly higher (0.8°C) and maxima fluctuated around (within 1.5°C) the long-term average temperatures. See Figure 3-6

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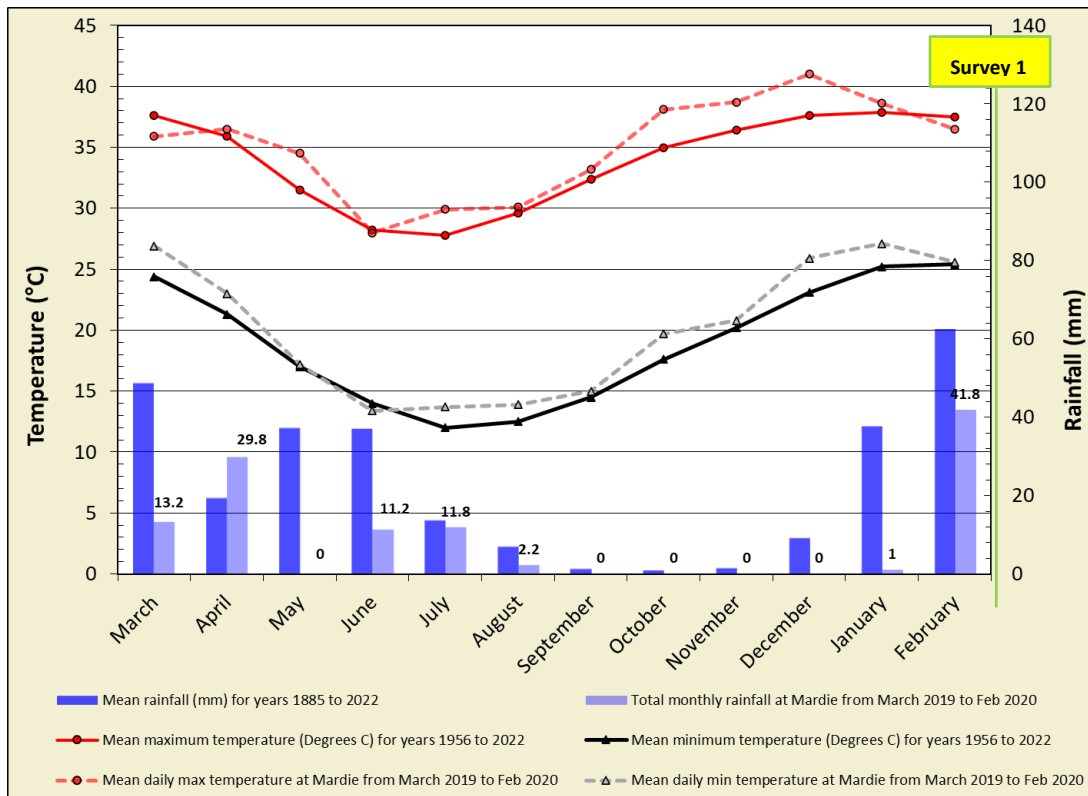


Figure 3-4 Climate and weather data for Mardie (no. 5008) for field survey 1 (BoM 2022)

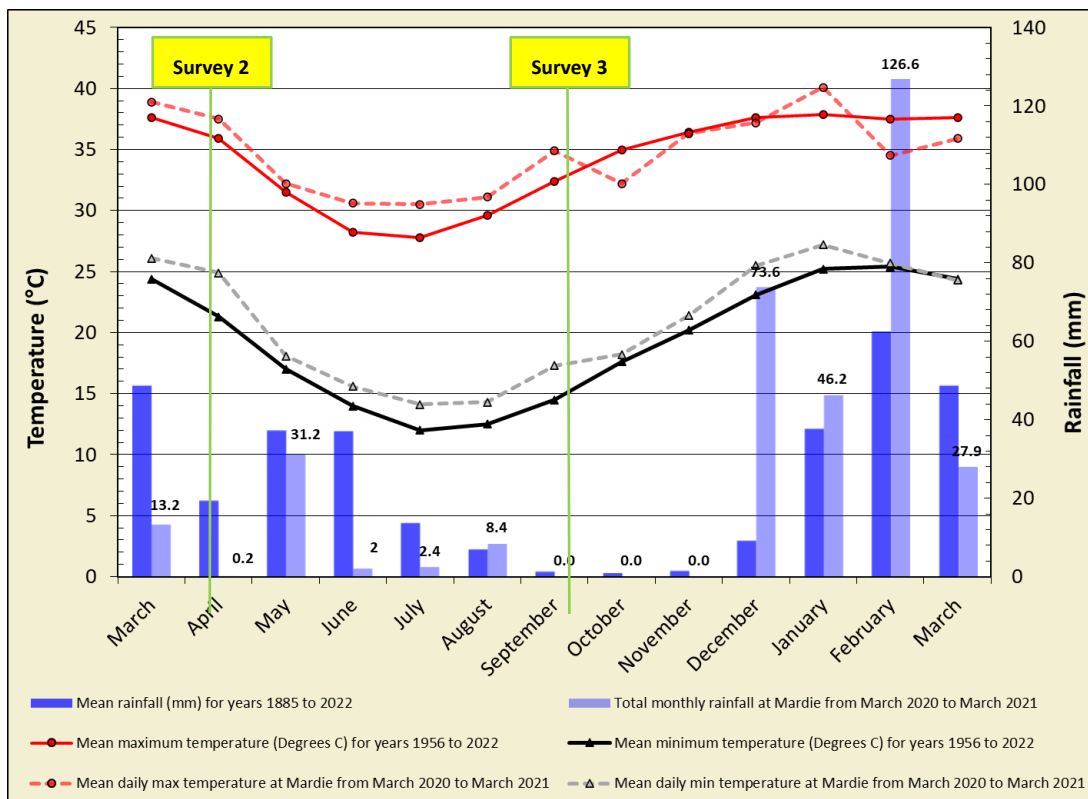


Figure 3-5 Climate and weather data for Mardie (no. 5008) for field surveys 2, 3 and 4 (BoM 2022)

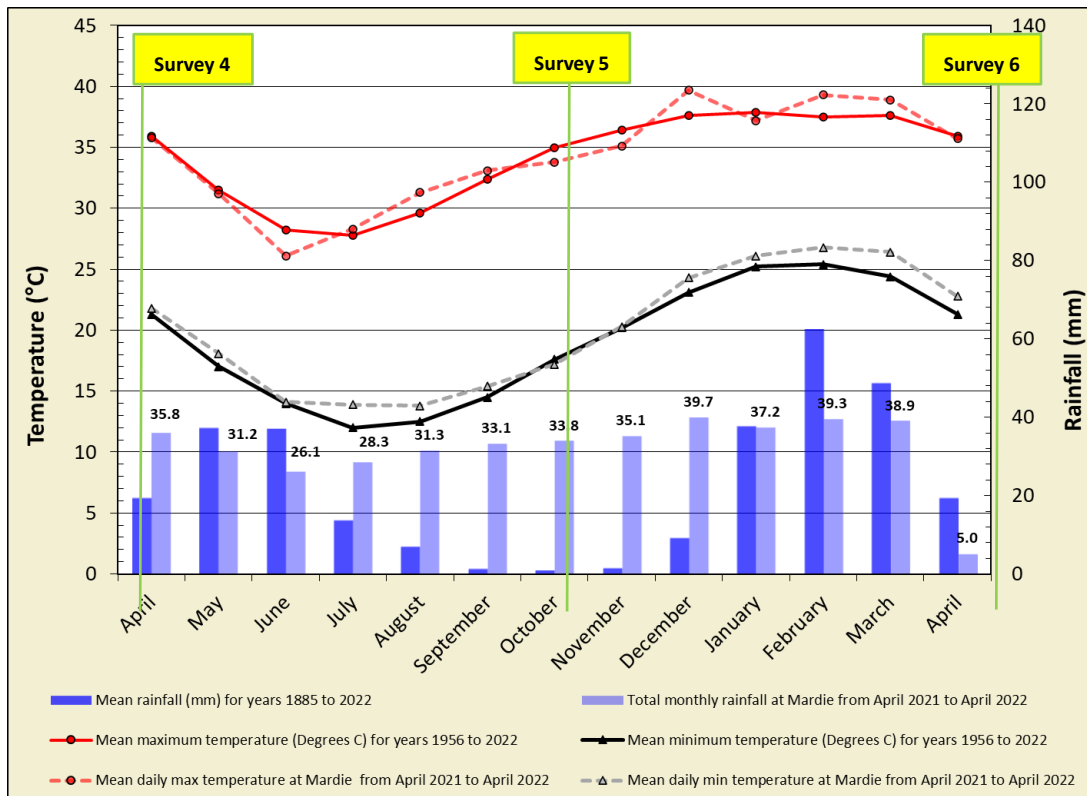


Figure 3-6 Climate and weather data for Mardie (no. 5008) for field surveys 4, 5 and 6 (BoM 2022)

3.4 LAND USE

Over two-thirds (70.1%) of land in the Roebourne subregion is used for grazing of native vegetation (Table 3-4). Of the quarter (26.5%) of land in Primary class 1 (Conservation and natural environments), only about 7% of land is protected with some form of conservation status, since the 8.8% of land classified in the “other minimal use” category is offered no formal protection. Intensive land uses (0.5%) and water bodies of various natural and man-made types (2.9%) make up the remaining relatively small land uses in Roebourne.

Table 3-4 Land Use within the Roebourne IBRA subregion (ABARES 2018)

Land Use Class (Primary and Tertiary)	Area (ha)	Area (%)
1 Conservation and natural environments	530259.7	26.5
1.1.1 Strict nature reserves	11958.2	0.6
1.1.3 National Park	125332.6	6.3
1.1.6 Protected landscape	0.8	< 0.1
1.2.0 Managed resource protection	3.9	< 0.1
1.3.0 Other minimal use	176668.2	8.8
1.3.1 Defence land - natural areas	287.7	< 0.1
1.3.3 Residual native cover	216008.3	10.8
2 Production from relatively natural environments	1402003.8	70.1
2.1.0 Grazing native vegetation	1402003.8	70.1
3 Production from dryland agriculture and plantations	394.6	< 0.1
3.6.1 Degraded land	394.6	< 0.1

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4 Production from irrigated agriculture and plantations	0.4	< 0.1
4.4.1 Irrigated tree fruits	0.4	< 0.1
5 Intensive uses	9118.8	0.5
5.1.1 Production nurseries	26.3	< 0.1
5.2.7 Saleyards/stockyards	7.1	< 0.1
5.3.0 Manufacturing and industrial	1715.1	0.1
5.3.1 General purpose factory	154.6	< 0.1
5.4.1 Urban residential	1891.0	0.1
5.4.2 Rural residential with agriculture	197.4	< 0.1
5.5.1 Commercial services	1057.1	0.1
5.5.2 Public services	117.3	< 0.1
5.5.3 Recreation and culture	909.0	< 0.1
5.6.1 Fuel powered electricity generation	14.1	< 0.1
5.6.5 Electricity substations and transmission	6.9	< 0.1
5.6.6 Gas treatment, storage and transmission	211.2	< 0.1
5.7.1 Airports/aerodromes	250.0	< 0.1
5.7.2 Roads	985.5	< 0.1
5.8.0 Mining	232.6	< 0.1
5.8.2 Quarries	58.0	< 0.1
5.8.3 Tailings	910.2	< 0.1
5.8.4 Extractive industry not in use	11.7	< 0.1
5.9.0 Waste treatment and disposal	9.3	< 0.1
5.9.1 Effluent pond	102.9	< 0.1
5.9.3 Solid garbage	189.3	< 0.1
5.9.5 Sewage/sewerage	62.2	< 0.1
6 Water	58533.5	2.9
6.0.0 Water	18.2	< 0.1
6.1.0 Lake	4554.7	0.2
6.2.1 Reservoir	4.2	< 0.1
6.2.2 Water storage - intensive use/farm dams	7.4	< 0.1
6.2.3 Evaporation basin	16017.0	0.8
6.3.0 River	28280.6	1.4
6.5.0 Marsh/wetland	4520.8	0.2
6.6.0 Estuary/coastal waters	5130.4	0.3
Total	2000310.7	100.0

3.5 CONSERVATION RESERVES AND ESAS

There are no gazetted nature conservation reserves on the mainland which are within or immediately adjacent to the study area. At 69 km to the south-east, the nearest land-based reserve is Millstream Chichester National Park. Offshore however, there are five islands within 10 km of the study area (three to the east of Cape Preston, and two southwest) which belong to the Great Sandy Island Nature Reserve (Class B, R 33831). These are managed by DBCA for the conservation of flora and fauna and are vested with the Conservation Commission of WA. The eastern part of the study area intersects or abuts former portions of Mardie and Karratha Stations (LR3156/104, LR3156/105, LR3156/156, P410036 350) excised in 2015 and proposed for conservation of the Horseflat Land System of the Roebourne Plains PEC (Figure 3-2).

4 METHODS

The flora and vegetation survey was conducted in accordance with relevant survey guidelines and guidance, including:

- EPA Environmental Factor Guideline: Flora and vegetation (EPA 2016a)
- EPA Technical Guidance: Flora and vegetation surveys for Environmental Impact Assessment (EPA 2016b)

4.1 DESKTOP REVIEW

Searches of several biological databases were undertaken to identify and prepare lists of significant flora and vegetation that may occur within the study area (Table 4-1). A literature search was conducted for accessible reports for biological surveys conducted within 40 km of the study area to build on the lists developed from the database searches (Table 4-2).

Table 4-1 Database searches conducted for the desktop review

Database	Target group/s	Search coordinates and extent
Protected Matters Search Tool (DAWE 2020)	EPBC Act Threatened flora, ecological communities	Approximate centre point of study area (116.3072, -20.9183) with 40 km buffer
DBCA Threatened and Priority Flora Database (DBCA 2020c)	Threatened and Priority flora	Study area plus a 40 km buffer
DBCA Threatened and Priority Ecological Communities Database (DBCA 2020b)	TECs and PECs	Study area plus a 40 km buffer
DBCA NatureMap Database (DBCA 2020a)	Flora records	Study area plus a 40 km buffer
IBSA (IBSA 2022)	Previous survey reports	Study area plus a 40 km buffer
EPA Proposal Search (EPA 2022)	Previous survey reports	Study area plus a 40 km buffer

Table 4-2 Survey reports included in the desktop review

Report author	Location relative to study area	Survey description	Project
Phoenix (2021b)	20 km W	Level 2 flora and vegetation survey	Mardie Salt Project
GHD (2019)	33 km NE	Flora and fauna survey	132 kV Line Upgrade Project
GHD (2013)	Overlap	Level 1 Flora and fauna review	Cape Preston East
Biota and Trudgen & Associates (2001)	Overlap	Flora and fauna survey	Austeel Biological Survey – Phase 1
Apache Energy Ltd (2008)	Contained	Public Environmental Review document	Devil Creek Gas Development Project
International Minerals Pty Ltd (2009)	Overlap	Public Environmental Review document	Balmoral South Iron Ore Project
SubSea International Australia Inc (1997)	Contained	Public Environmental Review document	Pipeline Fabrication Site on Mardie Pastoral Lease

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Report author	Location relative to study area	Survey description	Project
Astron Environmental Services Pty Ltd (2018)	40 km NE	Level 1 flora and fauna survey	Burrup Peninsula Interconnector Pipeline
Rio Tinto (2021)	7 Mile study area is 32 km E (the 123-124 km study area is 80km S and was omitted from desktop review)	Level 1 flora and vegetation survey; fauna habitat assessment.	7 Mile and 123-124 km Study Areas
Astron Environmental Services Pty Ltd (2020)	40 km NE	Flora and vegetation survey	Pluto Haul Road Culvert
360 Environmental (2014)	32 km E	Level 2 flora and vegetation survey	Mount Regal, Karratha - Flora, Vegetation and Fauna Assessment
(Maunsell AECOM 2008)	Adjacent	Level 2 flora and vegetation survey	Balmoral South.
Phoenix (2018)	Overlap	Desktop review and Level 1 flora and vegetation survey	Eramurra Industrial Salt Project

4.2 FIELD SURVEY

4.2.1 Survey timing

The surveys were conducted over six visits. Field survey dates are provided in Table 4-3.

Table 4-3 Survey dates

Survey type	Season	Dates
Detailed flora and vegetation survey, original study area, phase 1 ¹	Summer	13 February 2020
Detailed flora and vegetation survey, original study area, phase 1	Autumn	15 – 23 April 2020
Detailed flora and vegetation survey, original study area, phase 2	Spring	17 – 21 September 2020
Detailed flora and vegetation survey, original study area, phase 3	Autumn	26 March – 01 April 2021
Detailed flora and vegetation survey, expanded study area, phase 1 and original study area, phase 2	Spring	11 – 16 October 2021
Detailed flora and vegetation survey, expanded study area, phase 2 and targeted survey	Autumn	08 – 13 April 2022

¹ Survey abandoned due to weather-related access issues

4.2.2 Flora and vegetation

Field methods for the flora and vegetation survey of the study area included:

- surveying of quadrats, relevés and transects (see 4.2.2.1)
- targeted flora searches (4.2.2.2)
- vegetation type and condition mapping (4.2.2.3, 4.2.2.4, 0)
- TEC/PEC assessment (4.2.2.5).

Prior to the commencement of the field survey, data including satellite imagery, survey boundary, and pre-selected vegetation quadrats, transects and relevés were loaded onto electronic field devices. The field survey involved assessing and mapping vegetation boundaries, conducting quadrat, transect and relevé sampling and collecting opportunistic flora specimens. GPS locations of vegetation and condition boundaries, survey sites and flora specimen data were recorded digitally.

4.2.2.1 Quadrats, relevés and transects

Quadrat locations were selected to ensure that an accurate representation of the major vegetation types within the study area were sampled adequately, with a minimum of at least three quadrats per vegetation type where possible. Two methods were used for the selection of quadrat placement within the study area. Preliminary quadrat locations were pre-selected using aerial photography, with selection based on apparent changes in the vegetation visible in the aerial imagery. Final quadrat placement was determined in the field while ground-truthing the study area on foot. Some preliminary quadrats were moved to locations which better represented vegetation types and some quadrats were changed to relevés, where only dominant vegetation was recorded for the purposes of accurate vegetation mapping.

Quadrats and transect survey locations were used to record data to define vegetation types present in the study area. These surveys were supplemented with unbounded relevés where dominant species, soils and topography were recorded to facilitate accurate vegetation mapping.

In accordance with EPA (EPA 2016b) guidance for the Pilbara bioregion, quadrat dimensions were 50 x 50 m.

In total, 92 quadrats (50 m x 50 m), 15 relevés and 21 transects were surveyed across the study area (Figure 4-1; Appendix 1).

The following information was recorded for each quadrat:

- location – the geographic coordinates of all four corners of the quadrat in WGS84 projection
- description of vegetation – a broad description utilising the structural formation and height classes based on National Vegetation Information System (ESCAVI 2003) and in accordance with EPA (2016b) (Appendix 2).
- habitat – a brief description of landform and habitat
- geology – a broad description of surface soil type and rock type
- disturbance history – a description of any observed disturbance including an estimate of time since last fire, weed invasions, soil disturbance, human activity and fauna activity
- vegetation condition – using the condition scale in EPA (2016b) for the Eremaean Botanical Province
- height and percentage foliage cover (PFC) – a visual estimate of cover of total vegetation cover, cover of shrubs and trees >2 m tall, cover of shrubs <2 m, total grass cover and total herb cover and for each species present
- photograph – a colour photograph of the vegetation within each quadrat in a south-easterly direction from the north-west corner of the quadrat
- flora species list – comprehensive list of all flora species recorded within the quadrat.

To ensure accurate taxonomic identification of flora species present within the study area, collections were made of each specimen at least once and each collection was pressed and documented for identification using the WA Herbarium resources.

For each species identified, records on FloraBase and the Australasian Virtual Herbarium were consulted to provide information on known ranges to determine whether the study area represented a range extension for the species.

Relevés were sampled within vegetation units where dominant species, soils and topography were representative of vegetation surveyed in quadrats. Information collected in relevés was the same as for quadrats with the exception that:

- only a single geographic coordinate was recorded
- only prominent flora species were recorded.

Transects were used to sample the riparian vegetation of tidal creeks and samphire communities (*Tecticornia* spp.) that occurred on the tidal mudflats within the study area. The length of the transects and the associated number of quadrats differed between sites depending on the extent of the community being surveyed (Figure 4-2).

Quadrats were placed along the transect to collect data for each suite of *Tecticornia* spp. present. Transect surveys utilised 3 x 3 m quadrats spaced along linear transects and all data recorded for the 50 x 50 m quadrats (above) was recorded.

Where sterile plants (no flowering or fruiting bodies) were present in the quadrat the plant was tagged for recollection in subsequent field trips. All transects were visited in at least 2 different seasons to attempt to collect fertile plant specimens.

4.2.2.2 Targeted flora searches

Targeted searches were undertaken for significant flora (Threatened and Priority), Declared Pests and WoNS. Vegetation was traversed by foot in meandering transects. As the broad habitats within the study area all represented suitable habitat for significant flora from the desktop review initial searches focused on habitats considered likely to support significant flora (coastal dunes, creek systems,

clay/gilgai plains and tidal mudflats), in addition to previously recorded locations of significant plants or populations in close proximity to the study area. Following identification of significant flora in the initial field surveys targeted searches in subsequent surveys focused on the recorded locations of the significant flora and similar habitat within the vicinity of these records.

If a flora species was considered to potentially be a significant species (i.e., similar floristic characteristics and occurring within suitable habitat) the following information was collected:

- GPS coordinates, including population boundary where applicable
- description of the habitat and floristic community in which the potential significant species was located
- population size estimate (i.e., estimated number of individual plants) where applicable
- specimen collection for taxonomic identification and lodgement at the WA Herbarium
- photograph of live plant in situ and description of important details, such as flower colour, height of individual or average height of population.

Following the field survey, the likelihood of occurrence for each significant flora species identified in the desktop review was assessed and assigned to one of three ratings:

- recorded – species recorded within the study area by previous or current survey
- possible – study area within known range of species; potential habitat within the study area, records within 5 km of study area and may not have been detectible during survey (e.g. survey conducted outside flowering period, annual plant survey conducted outside likely period of occurrence, small herbaceous plant in dense vegetation), or entire area of habitat not thoroughly searched
- unlikely – study area outside known range of species and/or no suitable habitat present in study area and/or suitable/potential habitat present but study area considered adequately searched for the species.

4.2.2.3 Vegetation type mapping

Vegetation mapping was undertaken at a scale of 1:10,000 using NVIS sub-association level (L5) for structural descriptions (ESCAVI 2003). The vegetation descriptions from quadrats and relevés from the survey were grouped according to similarity of community structure (i.e., canopy levels), species composition and combination of species and the prevalent community structure (i.e., woodland, shrubland, etc.). The vegetation boundaries were mapped utilising ArcGIS ESRI imagery and from vegetation boundaries recorded on GPS during the field survey.

To support delineation of vegetation types, a cluster analysis was conducted based on species presence weighted by percent cover (dominance) in each quadrat. The fusion strategy for the site classification was flexible UPGMA with a beta value of -0.1 and Bray Curtis association measure in the software package PATN (Belbin 2003). A dendrogram was produced to illustrate the similarities between the vegetation units identified. Statistically distinct vegetation units (the floristic group) classified the vegetation at a local scale. Local scale vegetation units were described at NVIS Level V – Association (ESCAVI 2003). The term ‘vegetation type’ was used for local scale vegetation units in accordance with EPA technical guidance (EPA 2016b).

Preliminary analyses excluding a) weeds, b) annuals, and c) weeds plus annuals produced poor vegetation unit groupings that did not adequately represent vegetation within sites and were also unsuitable for informing meaningful mapping of vegetation types. As such, final analysis included annual and weed species in addition to perennial species. Weed species were retained for analysis due their dominance within some vegetation types. Likewise, annuals were retained as they formed key dominant features of some vegetation types (particularly the tussock grasslands that are widely distributed within the study area).

4.2.2.4 Vegetation condition mapping

The condition of vegetation was mapped across the study area based on the appropriate condition scale for the Eremaean Botanical Province (Trudgen 1988 in EPA 2016b) (Table 4-4). The vegetation condition ratings relate to vegetation structure, the level of disturbance and weed cover at each structural layer and the ability of the vegetation unit to regenerate. Vegetation condition ranges from Excellent being the highest rating to Completely Degraded as the lowest.

Completely cleared areas (e.g. roads, tracks, paddocks) were excluded from condition ratings and mapped as 'cleared'.

4.2.2.5 TEC/PEC assessment

The description and locations provided in the DBCA TEC/PEC database search were compared to observations made in the field and following statistical analysis of significant vegetation types to arrive at conclusions regarding the presence/absence of ecological communities reported in the database searches.

Table 4-4 Vegetation condition rating scale (EPA 2016b)

Condition rating	Description
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.

4.2.2.6 Groundwater dependent ecosystems

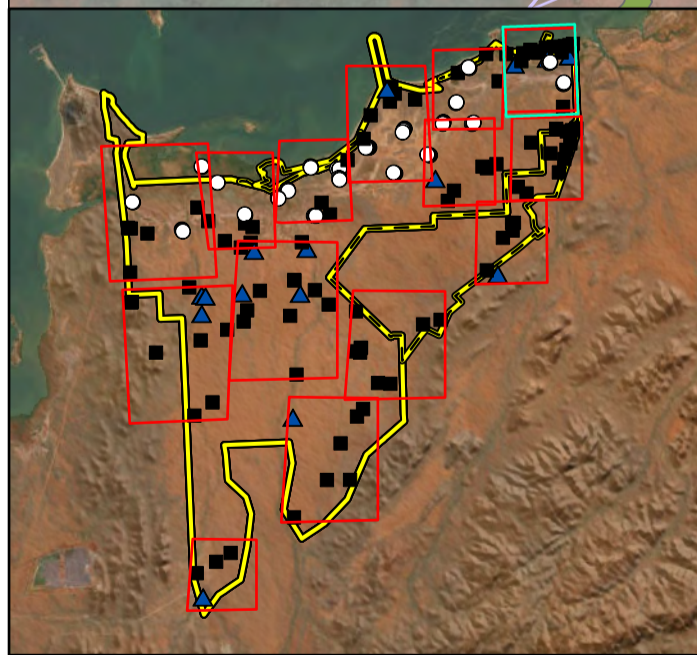
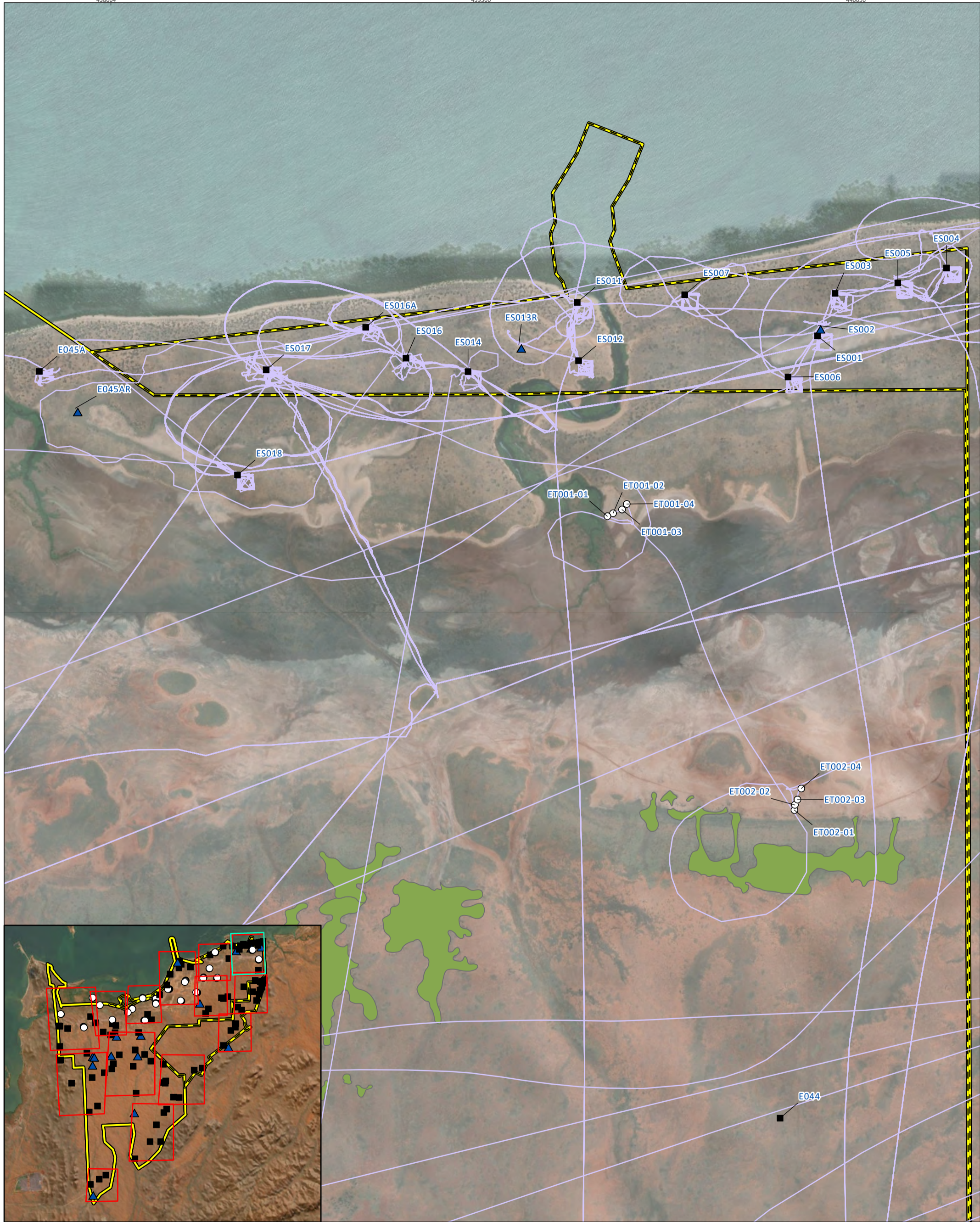
The presence of groundwater dependent ecosystems (GDE's) was determined post-field following identification of groundwater dependent species within the vegetation types delineated for the study area. GDE's were determined by the presence of recognised groundwater dependent species in the vicinity of creeks/ivers and waterbodies.

4.2.2.7 Analysis of survey completeness

In accordance with the Technical Guidance (EPA 2016b), a species accumulation curve by site was constructed to verify that the number of sites surveyed (quadrats and relevés) were sufficient to adequately capture flora present within the Phoenix study area at the time of the survey. The species

accumulation curve was generated by inputting the site-species matrix into Phoenix's proprietary spreadsheet.

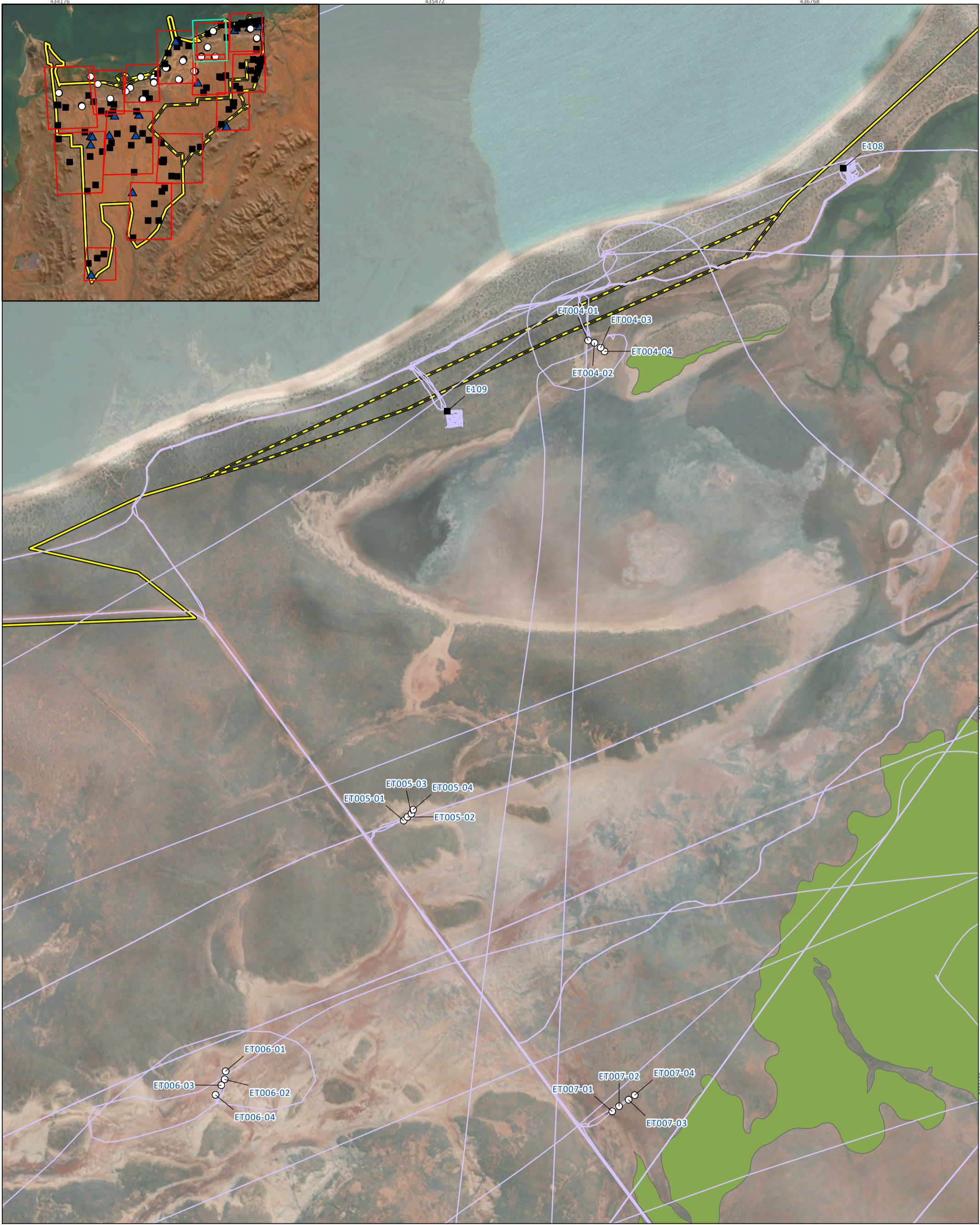
Additionally, in accordance with the Technical Guidance, a minimum of three quadrats per vegetation type were installed, where practicable (subject to available hectares of each vegetation type within the study area and avoidance of pseudo replication within single polygons) during the current survey.


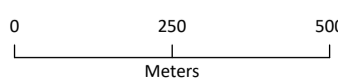






	Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project			<ul style="list-style-type: none"> Study Area (Expanded) Study Area (Original) Survey track Locations visited to verify vegetation mapping boundaries 	Sample site <ul style="list-style-type: none"> Quadrat Relevé Transect Quadrat 	Figure 4-1a Flora and vegetation survey sites	
	Project No 1694 Date 27/11/2024 Drawn by GW Map author GW						
	1:12,000 (at A3)						GDA 1994 MGA Zone 50

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Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project	
Project No	1694
Date	27/11/2024
Drawn by	GW
Map author	GW
	
	
1:12,000 (at A3) GDA 1994 MGA Zone 50	

-  Study Area (Expanded)
-  Study Area (Original)
-  Survey track
-  Locations visited to verify vegetation mapping boundaries



- Sample site**
-  Quadrat
 -  Transect Quadrat

Figure 4-1b
Flora and vegetation survey sites



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Project No	1694
Date	27/11/2024
Drawn by	GW
Map author	GW



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Meters

1:15,000 (at A3)

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- Study Area (Expanded)
- Study Area (Original)
- Survey track
- Locations visited to verify vegetation mapping boundaries


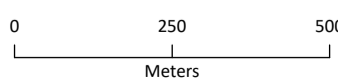
- Sample site**
- Quadrat
 - Relevé
 - Transect Quadrat





Figure 4-1c

Flora and vegetation survey sites





Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project	
Project No	1694
Date	27/11/2024
Drawn by	GW
Map author	GW
	
	
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-  Study Area (Expanded)
-  Study Area (Original)
-  Survey track
-  Locations visited to verify vegetation mapping boundaries



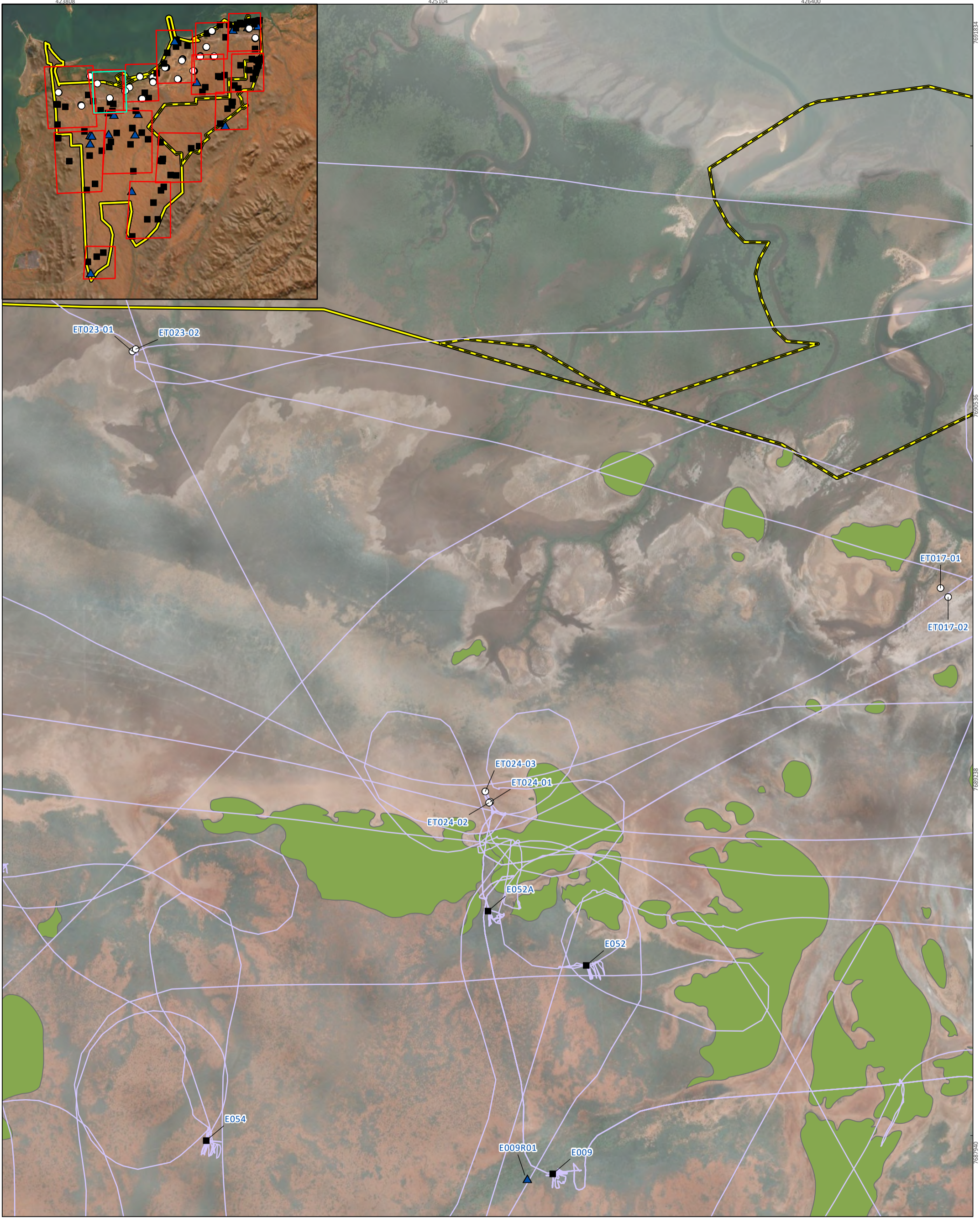

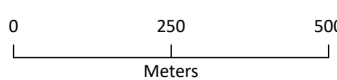
- Sample site**
-  Quadrat
 -  Transect Quadrat





Figure 4-1d
Flora and vegetation survey sites



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Project No	1694
Date	27/11/2024
Drawn by	GW
Map author	GW
	
	
1:12,000 (at A3) GDA 1994 MGA Zone 50	

-  Study Area (Expanded)
-  Study Area (Original)
-  Survey track
-  Locations visited to verify vegetation mapping boundaries





- Sample site**
-  Quadrat
 -  Relevé
 -  Transect Quadrat

Figure 4-1e

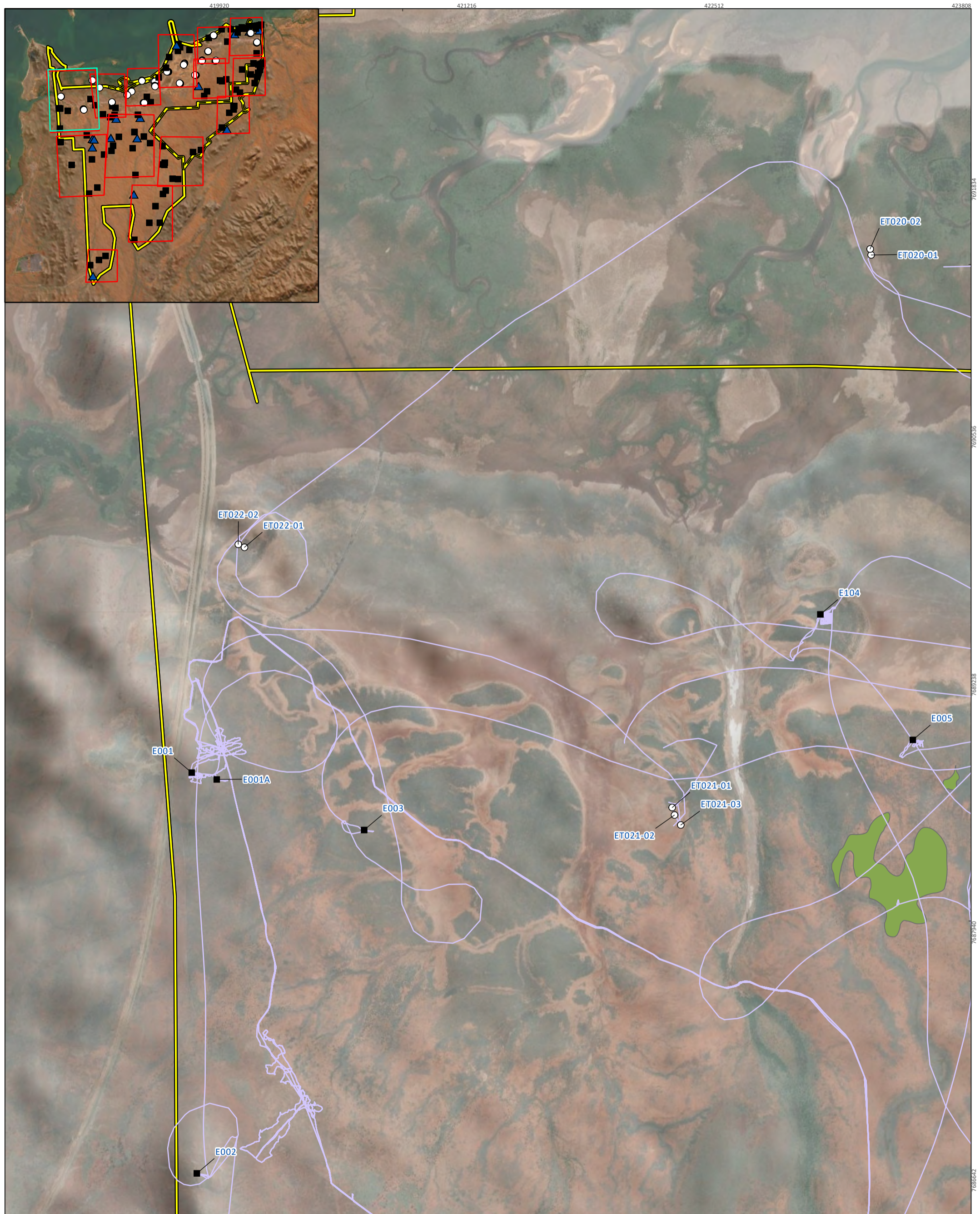
Flora and vegetation survey sites



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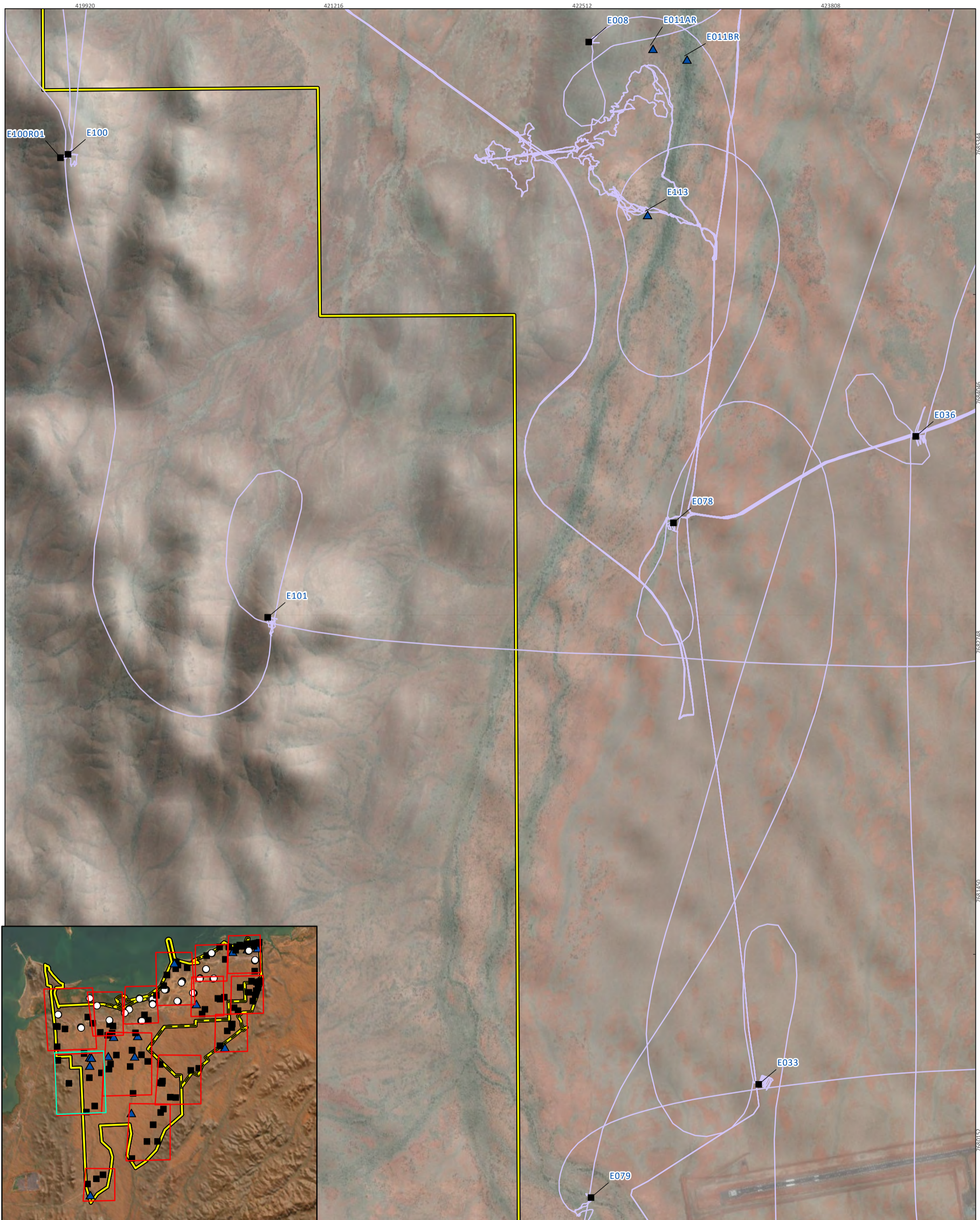
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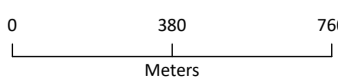





	Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project			<ul style="list-style-type: none"> Study Area (Expanded) Study Area (Original) Survey track Locations visited to verify vegetation mapping boundaries 	<ul style="list-style-type: none"> Sample site Quadrat Transect Quadrat 	Figure 4-1f Flora and vegetation survey sites	
	Project No 1694 Date 27/11/2024 Drawn by GW Map author GW						
	1:18,000 (at A3)						GDA 1994 MGA Zone 50

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P:\Data\Projects\EramurraSalt\1694-ESP-LI-BOT\GIS\Mapping\MapDocuments\1694AllSurveySitesAndEffort.aprx



Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		
Project No	1694	
Date	27/11/2024	
Drawn by	GW	
Map author	GW	
1:18,000 (at A3)		GDA 1994 MGA Zone 50

-  Study Area (Expanded)
-  Study Area (Original)
-  Survey track



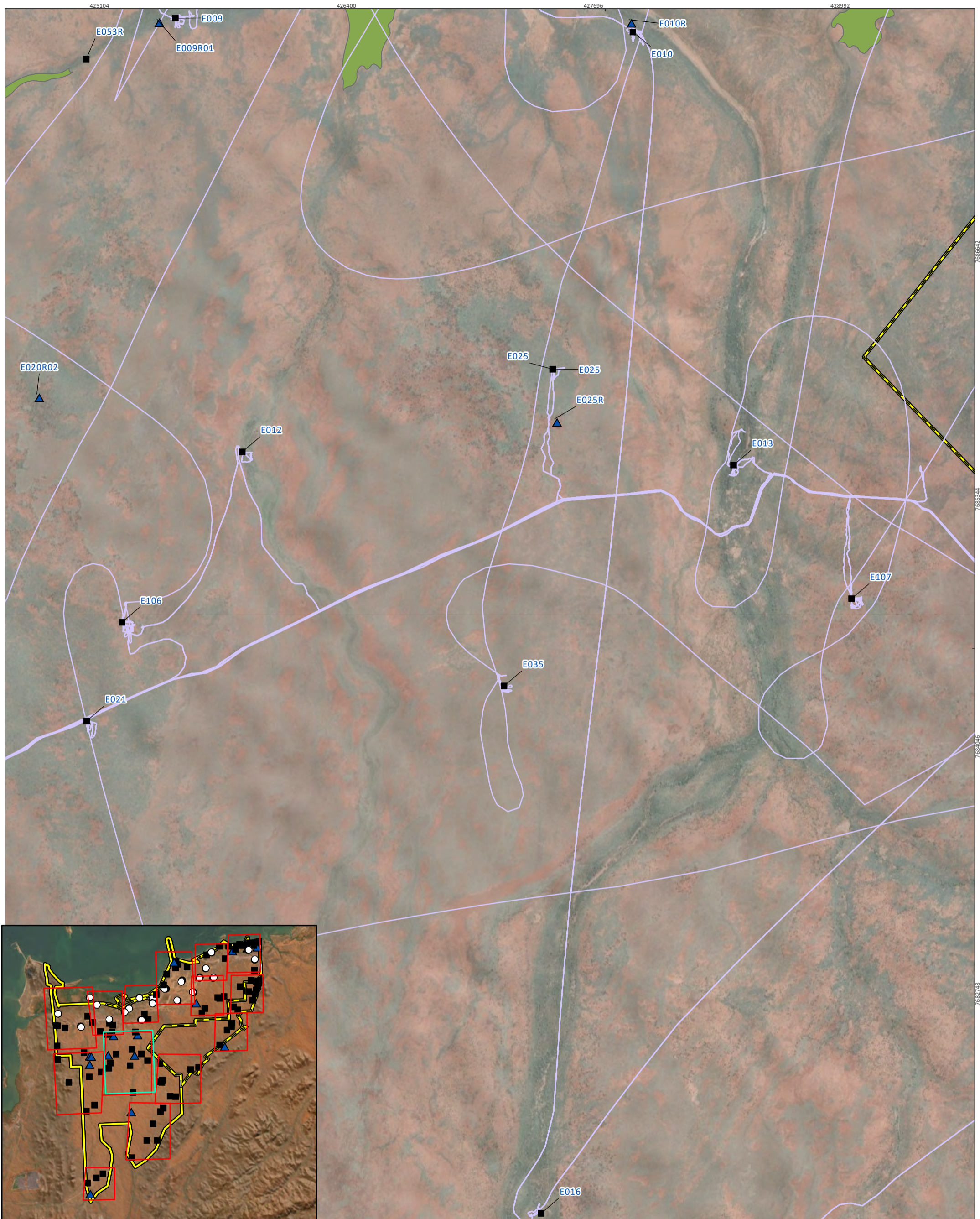
- Sample site**
-  Quadrat
 -  Relevé

Figure 4-1g
Flora and vegetation survey sites



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P:\Data\Projects\EramurraSalt\1694-ESP-LI-BOT\GIS\Mapping\MapDocuments\1694AllSurveySitesAndEffort.aprx



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	Project No 1694 Date 27/11/2024 Drawn by GW Map author GW		
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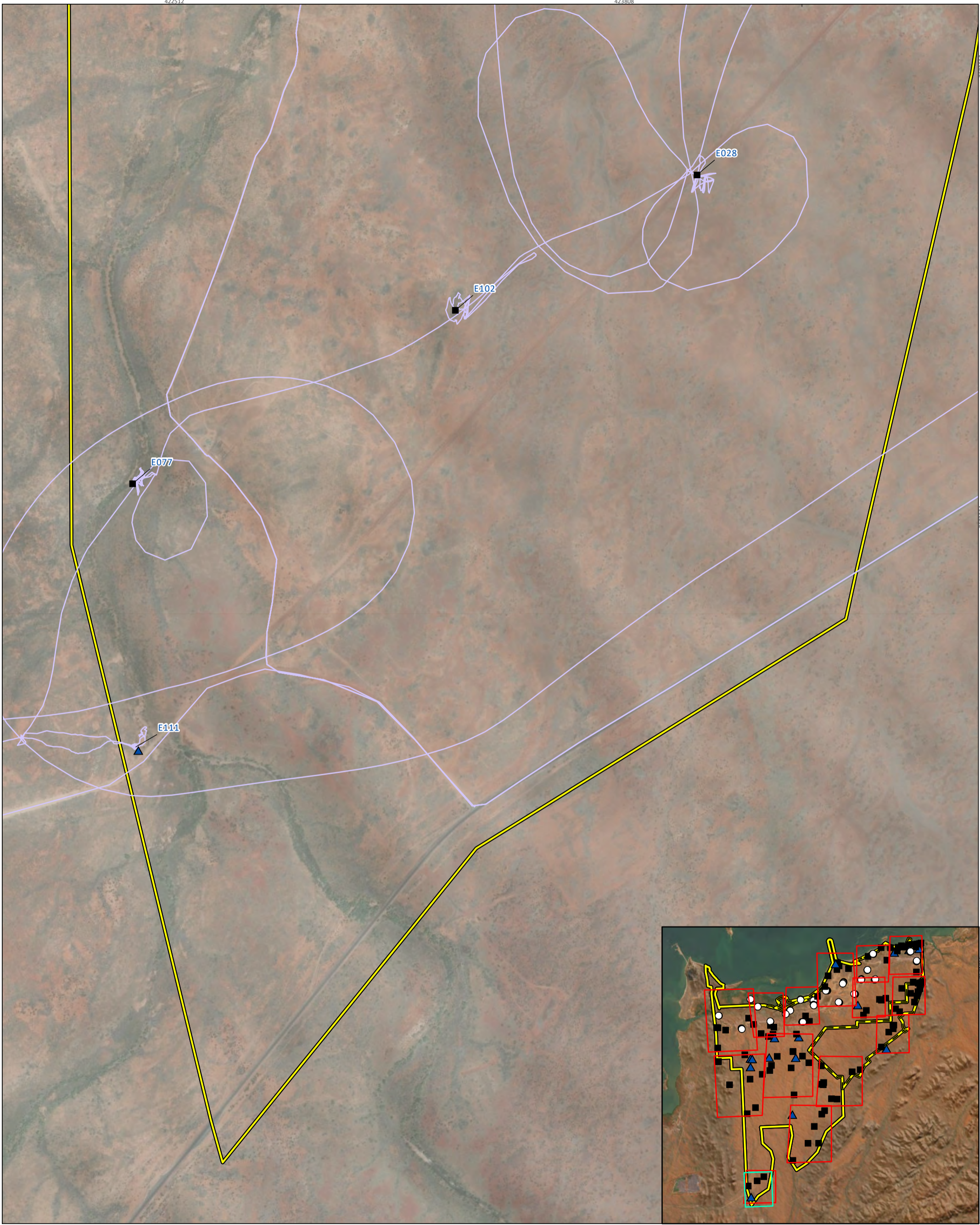
Study Area (Expanded) Study Area (Original) Survey track Locations visited to verify vegetation mapping boundaries	Sample site Quadrat Relevé
---	---

Figure 4-1h

Flora and vegetation survey sites

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Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		
Project No	1694	
Date	27/11/2024	
Drawn by	GW	
Map author	GW	
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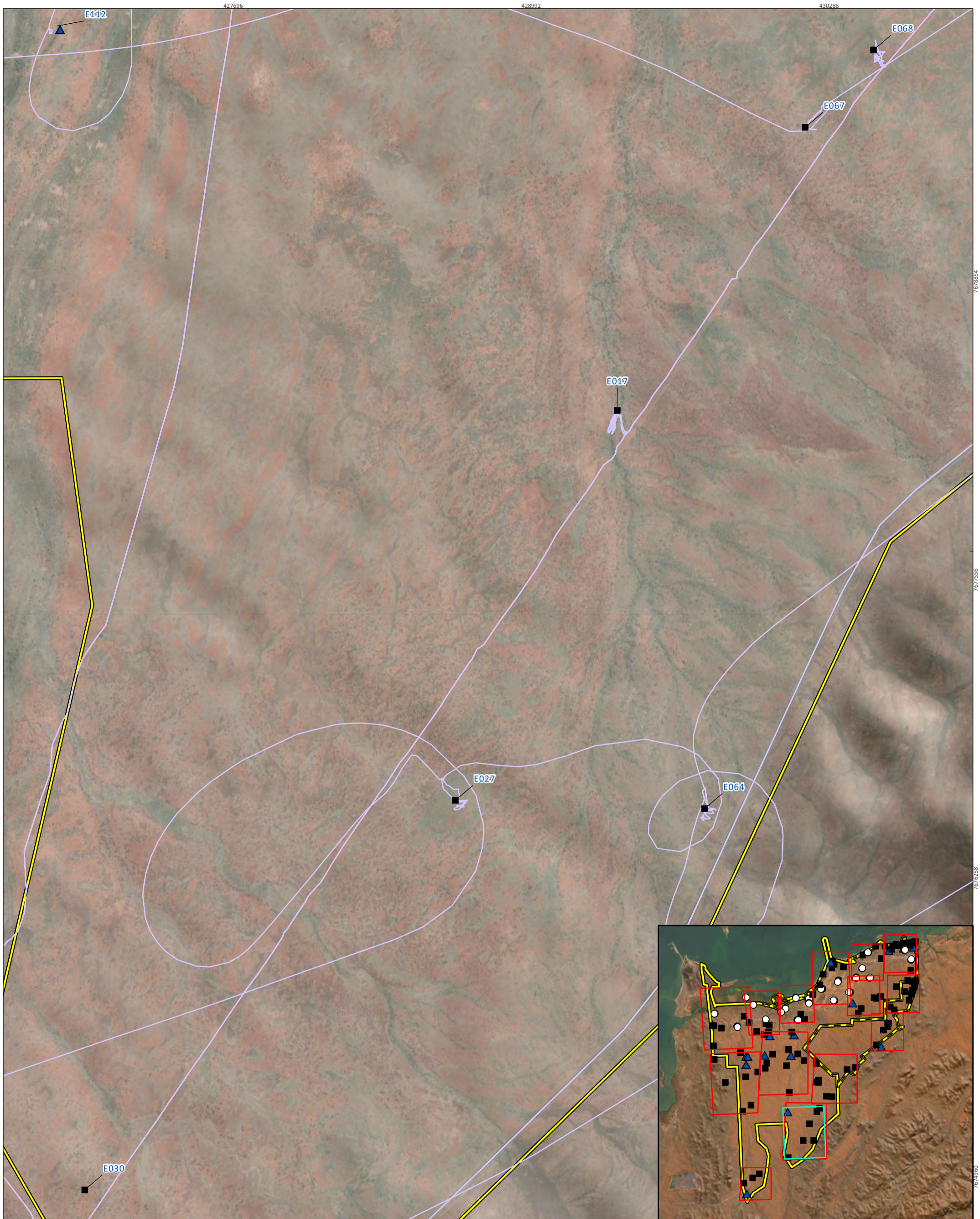
- Study Area (Expanded)
- Study Area (Original)
- Survey track

- Sample site**
- Quadrat
 - Relevé

Figure 4-1i
Flora and vegetation survey sites



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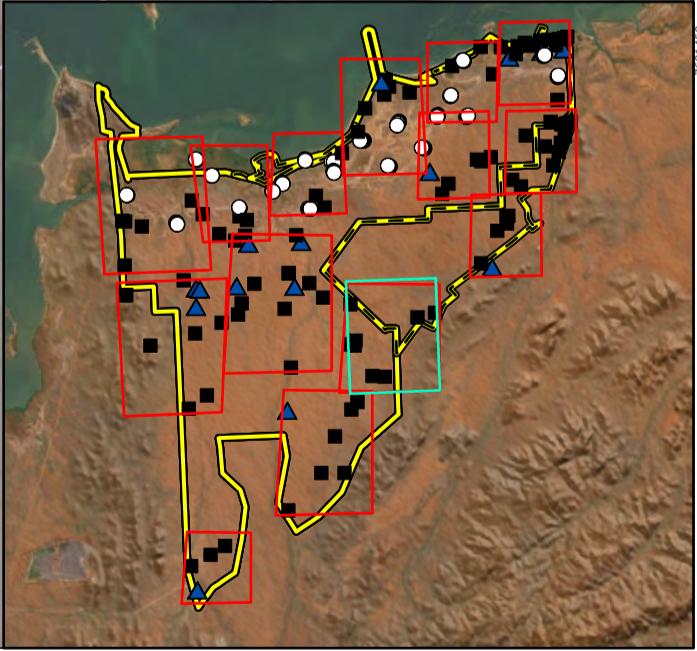
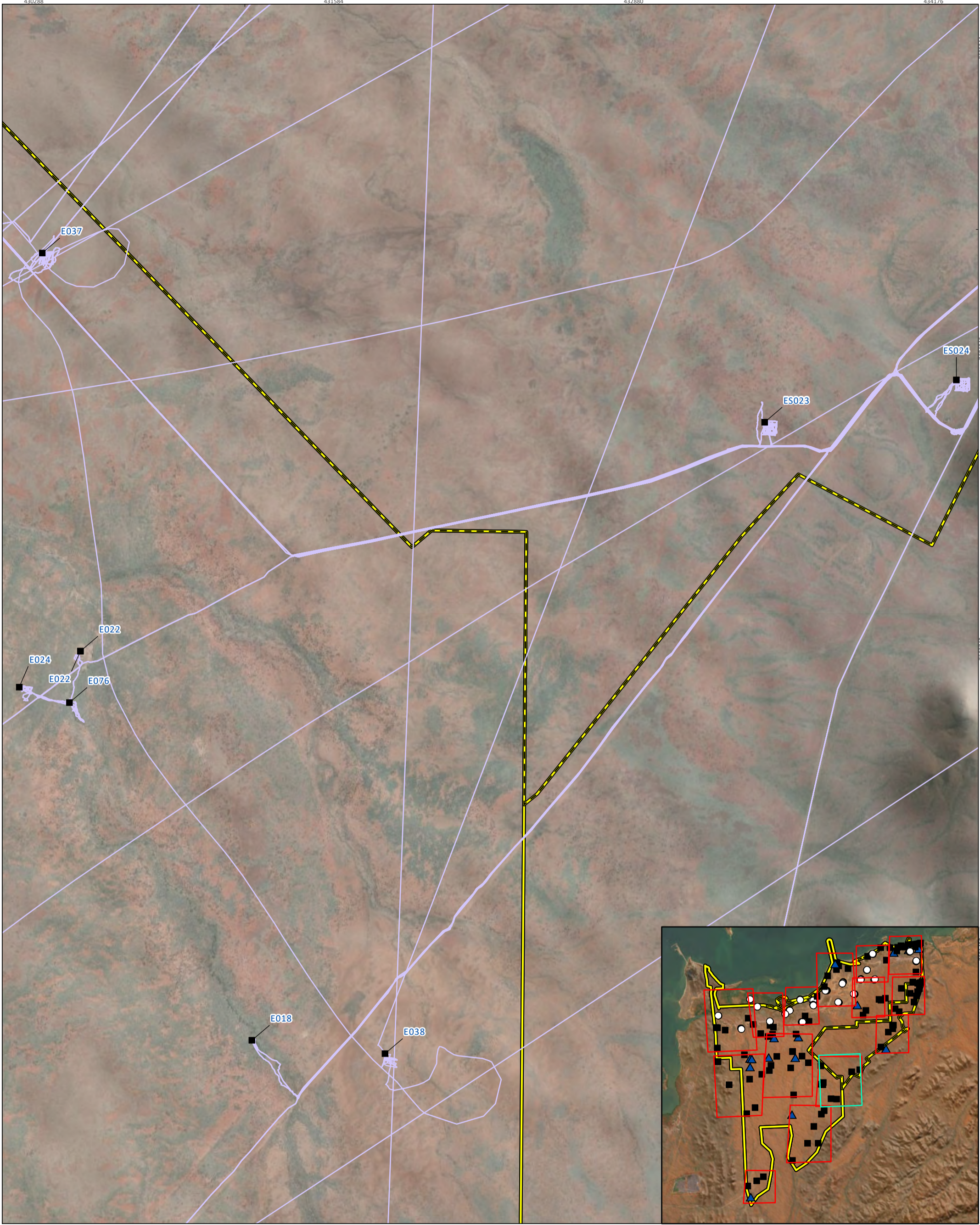
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	Project No	1694	
	Date	27/11/2024	
	Drawn by	GW	
	Map author	GW	
1:15,000 (at A3)		GDA 1994 MGA Zone 50	


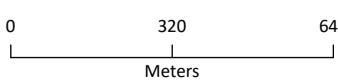
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Study Area (Expanded) Study Area (Original) Survey track	Sample site Quadrat Relevé
--	---

Figure 4-1j

Flora and vegetation survey sites



Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		
Project No	1694	
Date	27/11/2024	
Drawn by	GW	
Map author	GW	
1:15,000 (at A3)		GDA 1994 MGA Zone 50

-  Study Area (Expanded)
-  Study Area (Original)
-  Survey track


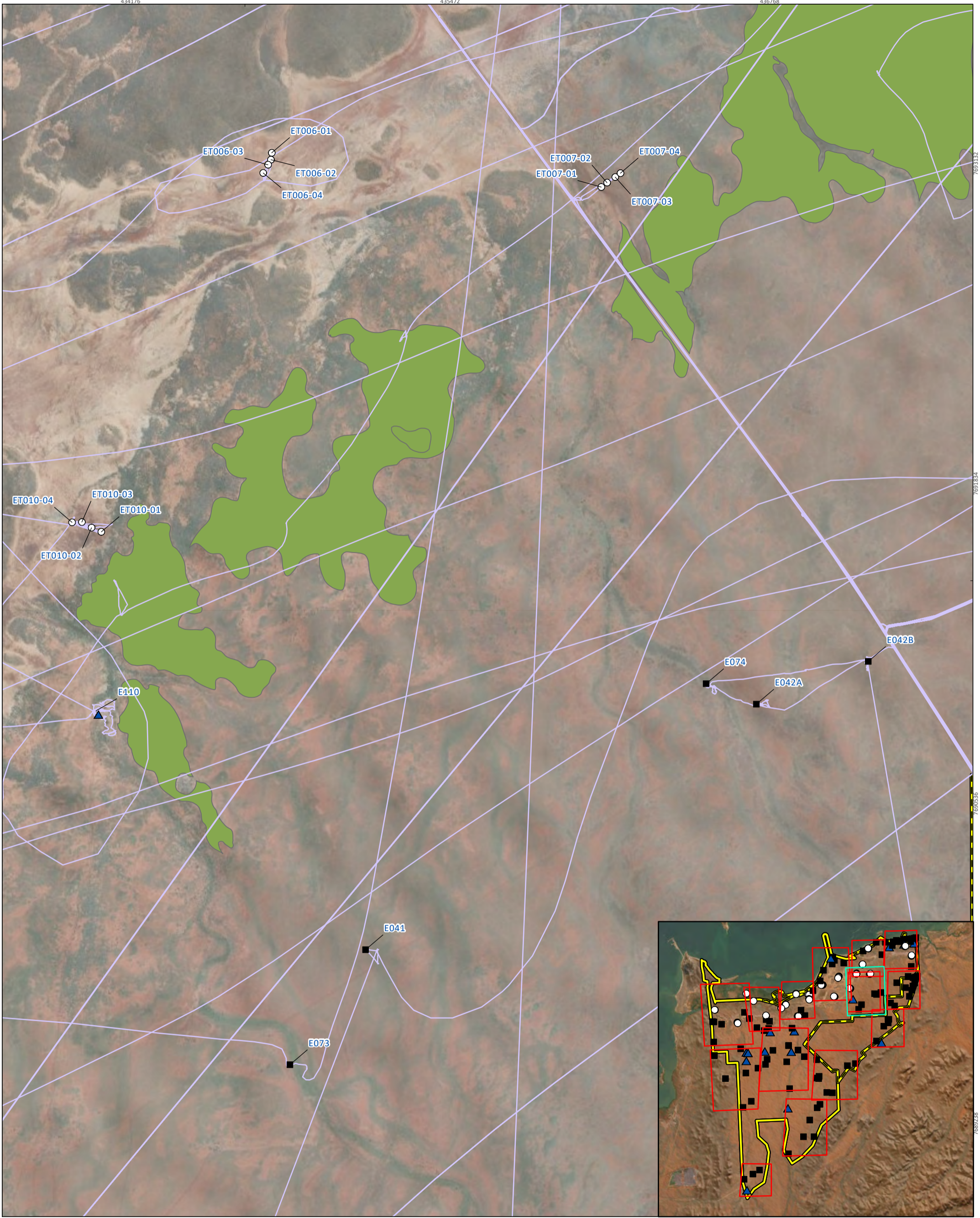

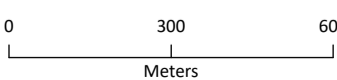
- Sample site**
-  Quadrat





Figure 4-1k
Flora and vegetation survey sites



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Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project	
Project No	1694
Date	27/11/2024
Drawn by	GW
Map author	GW
	
	
1:14,000 (at A3) GDA 1994 MGA Zone 50	

-  Study Area (Expanded)
-  Study Area (Original)
-  Survey track
-  Locations visited to verify vegetation mapping boundaries




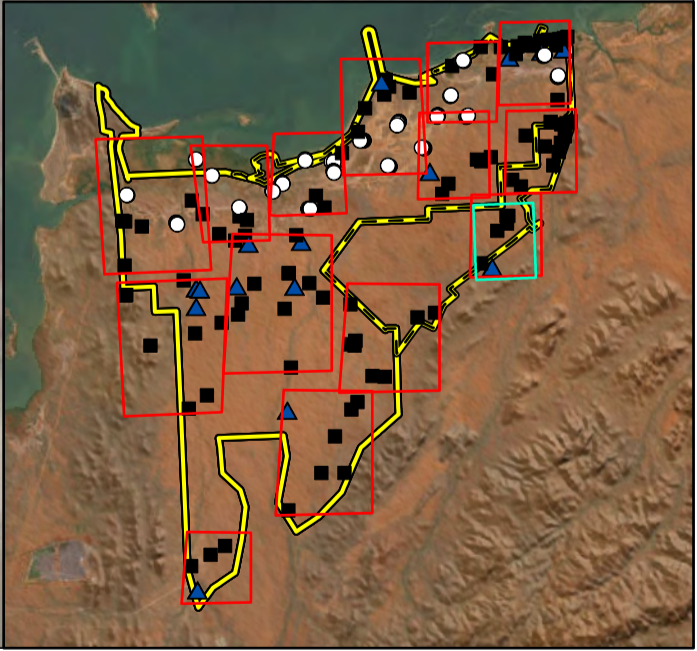
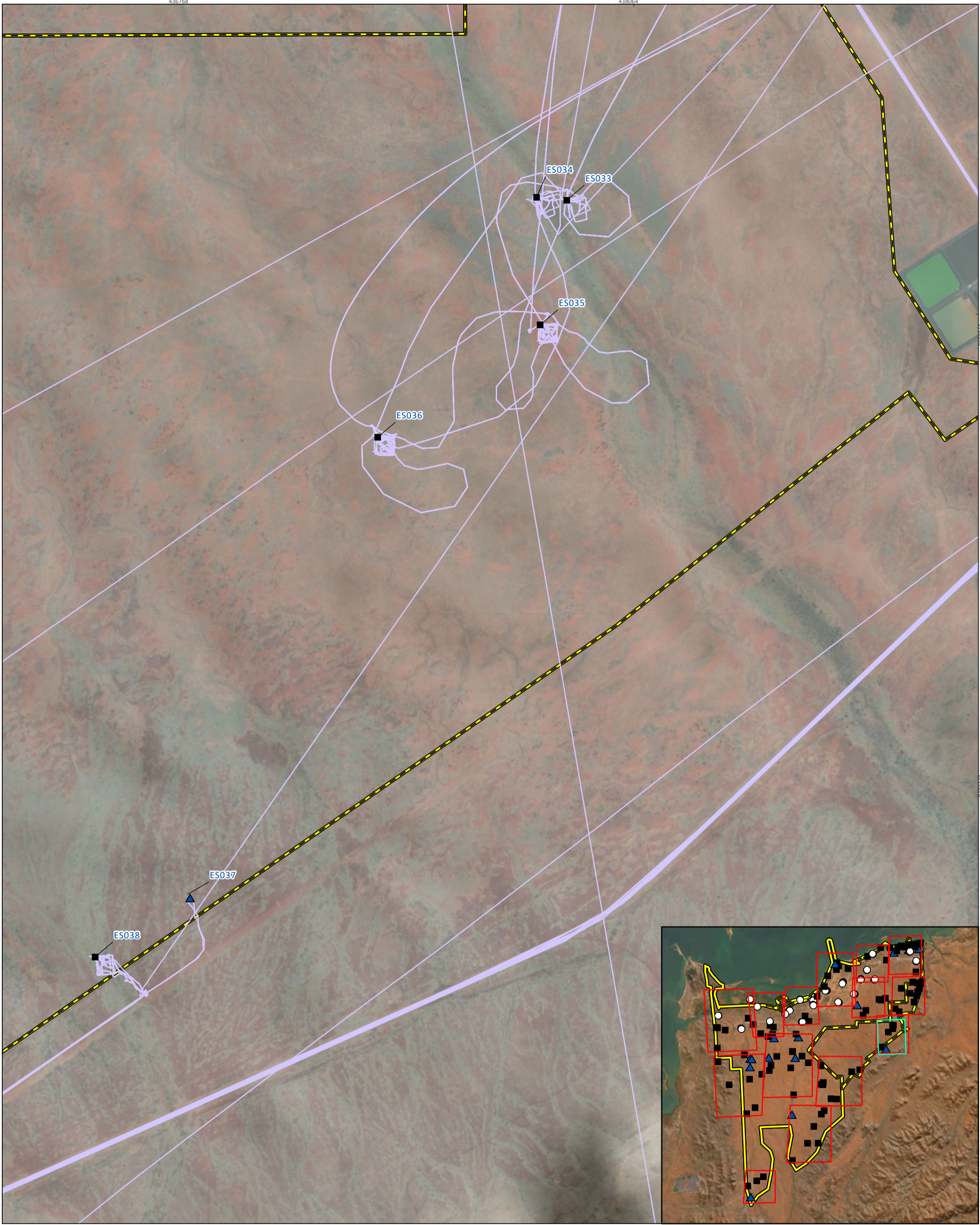
- Sample site**
-  Quadrat
 -  Relevé
 -  Transect Quadrat

Figure 4-1L
Flora and vegetation survey sites





Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		
Project No	1694	
Date	27/11/2024	
Drawn by	GW	
Map author	GW	
1:10,000 (at A3)		GDA 1994 MGA Zone 50

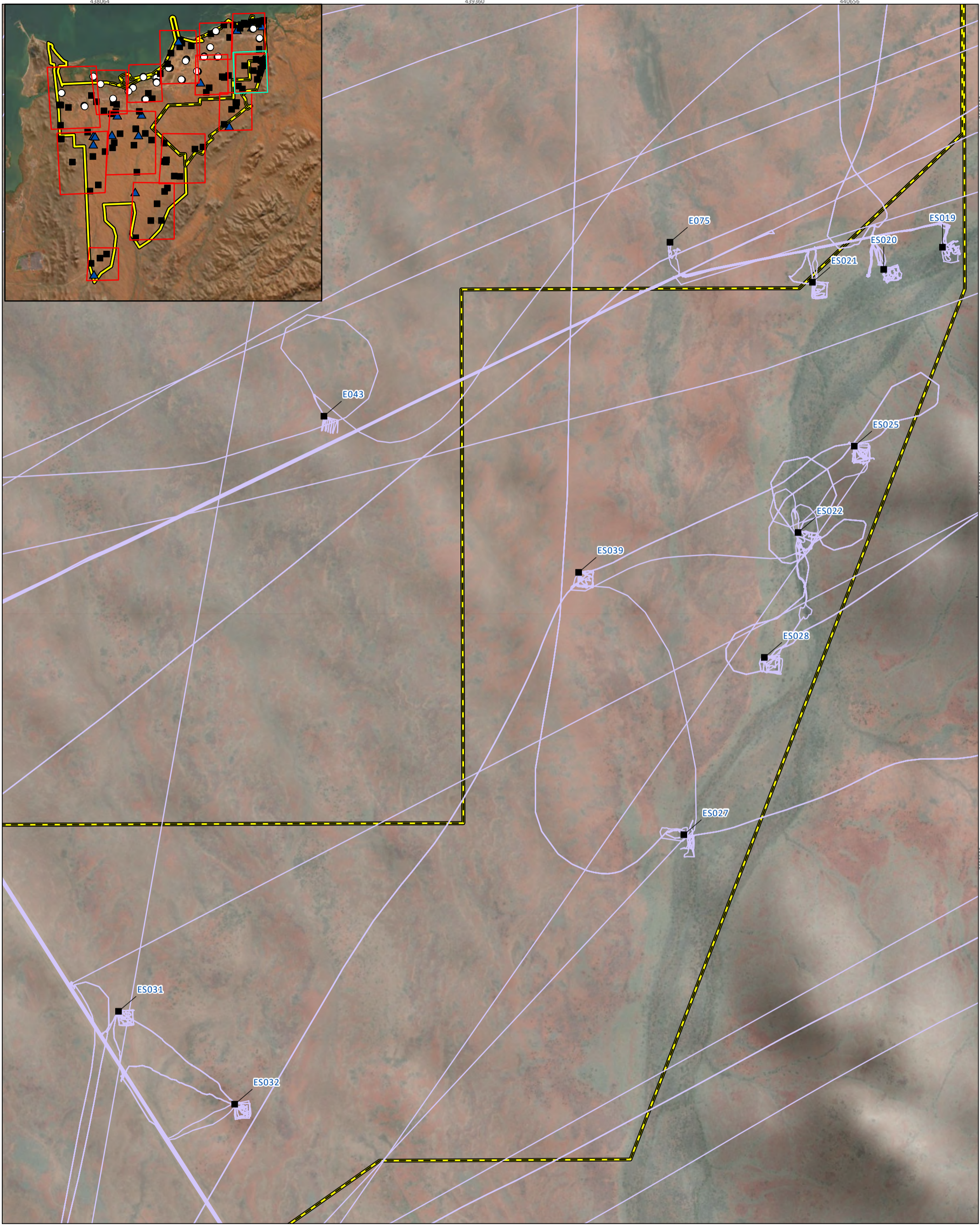
- Study Area (Expanded)
- Study Area (Original)
- Survey track


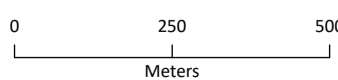
- Sample site**
- Quadrat
 - Relevé




Figure 4-1m
Flora and vegetation survey sites



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Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project	
Project No	1694
Date	27/11/2024
Drawn by	GW
Map author	GW
	
	
1:12,000 (at A3) GDA 1994 MGA Zone 50	

-  Study Area (Expanded)
-  Study Area (Original)
-  Survey track


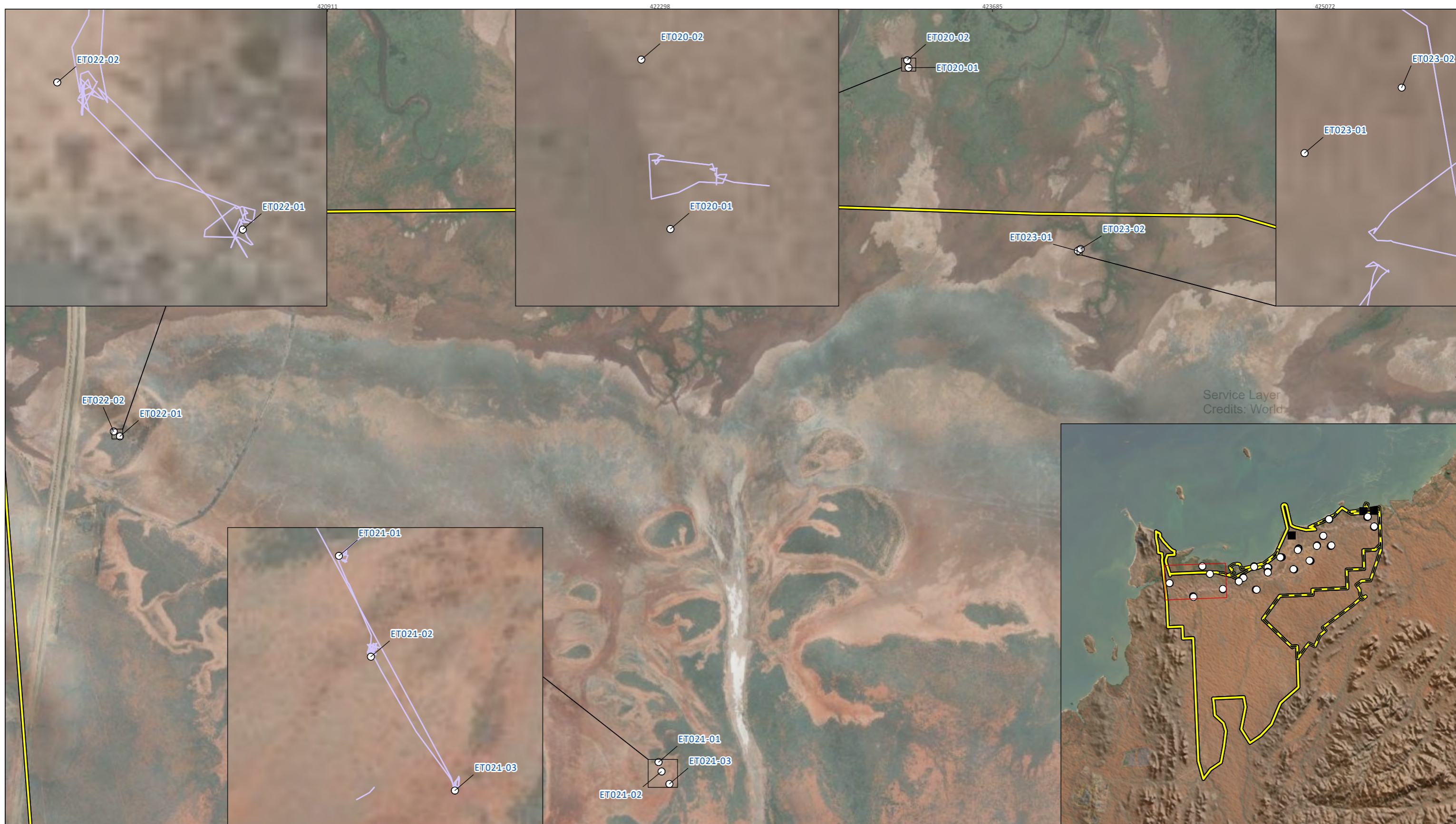
- Sample site**
-  Quadrat

Figure 4-1n
Flora and vegetation survey sites



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	Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		
	Project No	1694	
	Date	28/11/2024	
	Drawn by	BK, GW	
	Map author	DL	
1:15,000 (at A3)		GDA 1994 MGA Zone 50	

- Study Area (Expanded)
- Study Area (Original)
- Survey effort
- Sample site**
- Transect Quadrat

Figure 4-2a
***Tecticornia* survey effort.**



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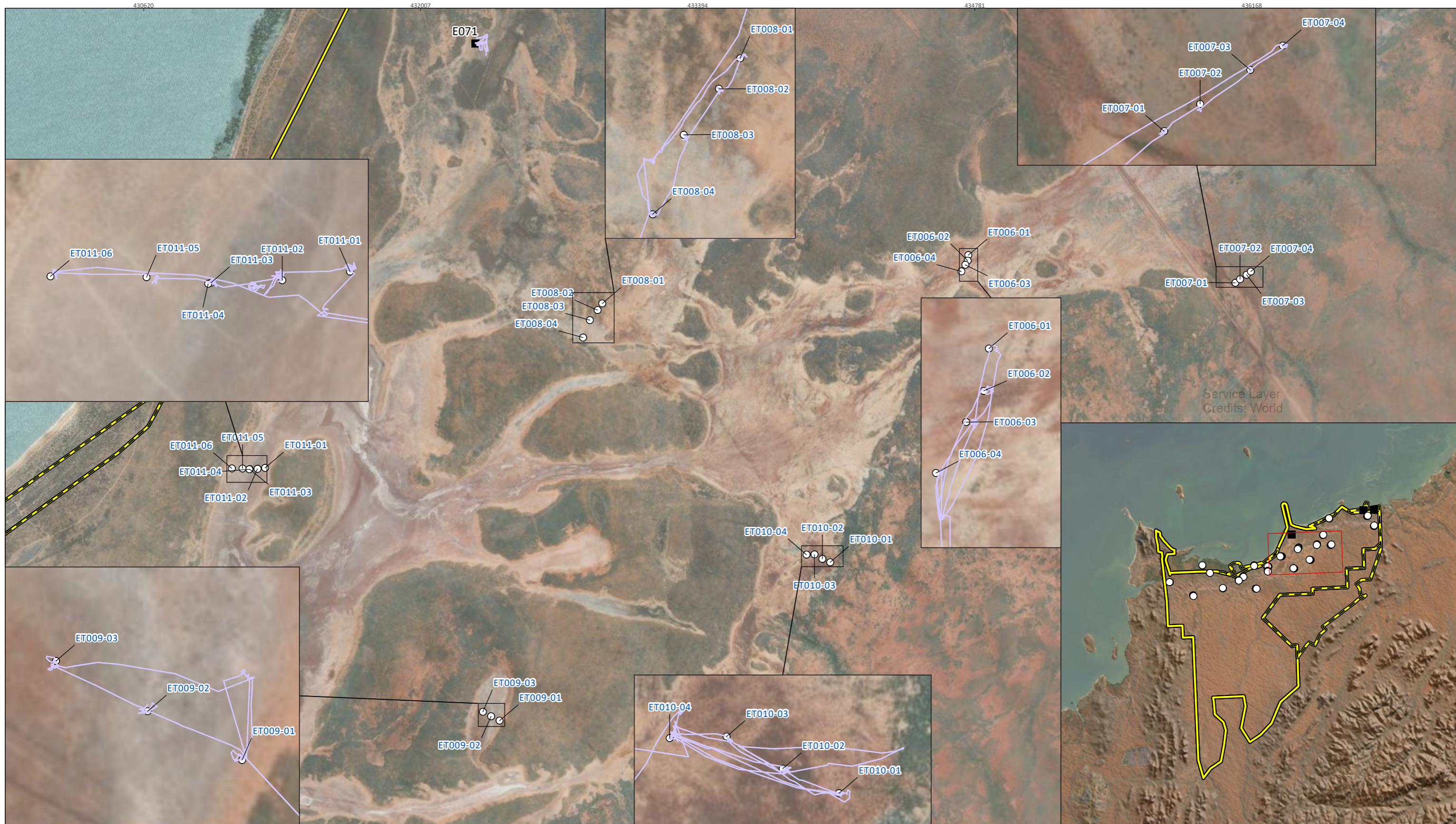
	Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		
	Project No	1694	
	Date	28/11/2024	
	Drawn by	BK, GW	
Map author	DL		
1:15,000 (at A3)		GDA 1994 MGA Zone 50	

- Study Area (Expanded)
- Study Area (Original)
- Survey effort
- Sample site
- Transect Quadrat

Figure 4-2b
***Tecticornia* survey effort.**



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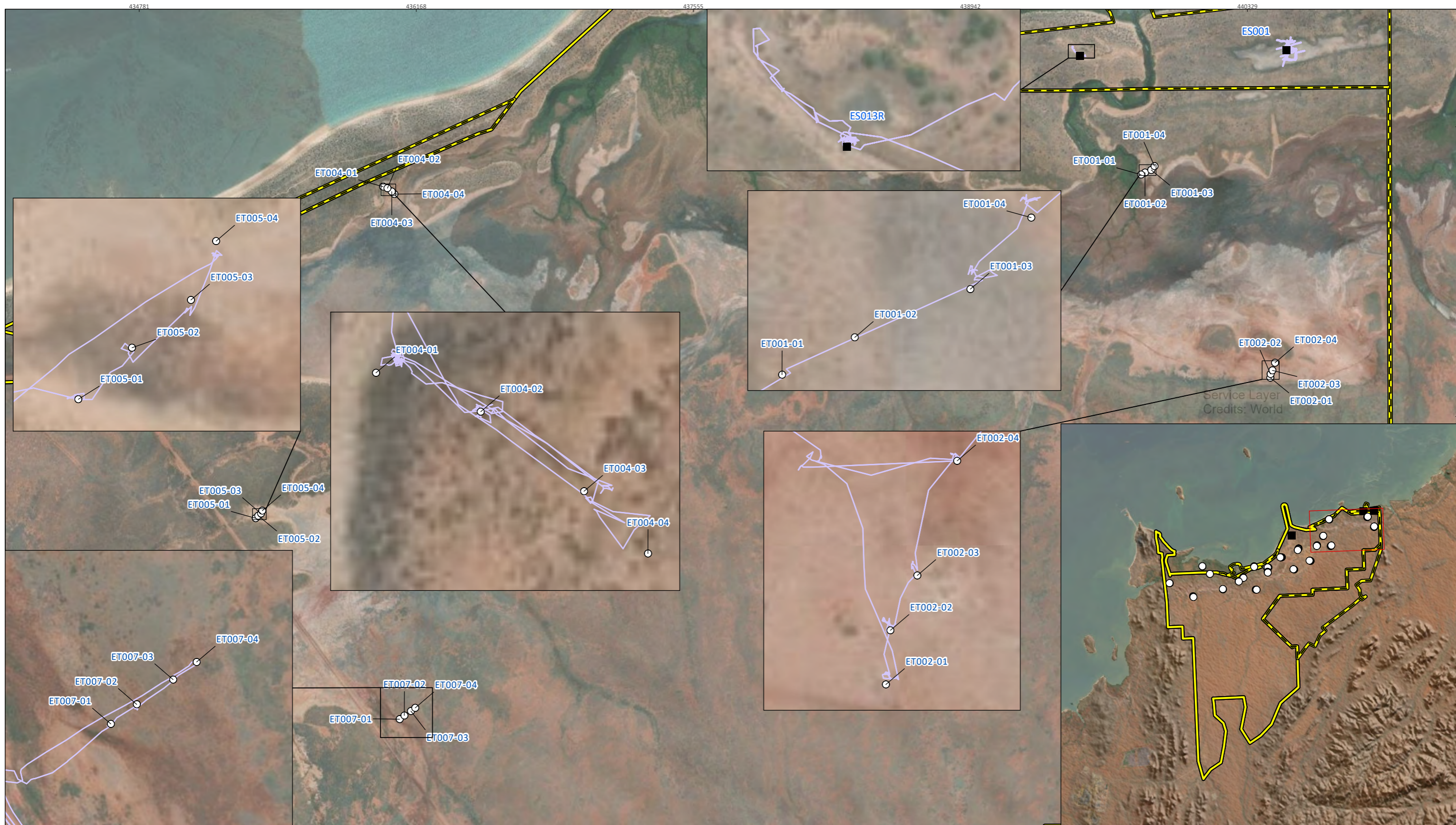
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	Project No	1694	
	Date	27/11/2024	
Map author	BK, GW		
1:18,000 (at A3)		GDA 1994 MGA Zone 50	

- Study Area (Expanded)
- Study Area (Original)
- Survey effort
- Sample site**
 - Quadrat
 - Transect Quadrat

Figure 4-2c
***Tecticornia* survey effort.**



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	Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		
	Project No	1694	
	Date	27/11/2024	
Drawn by	BK, GW		
Map author	DL		
1:18,000 (at A3)		GDA 1994 MGA Zone 50	

- Study Area (Expanded)
- Study Area (Original)
- Survey effort
- Quadrat
- Transect Quadrat

Figure 4-2d
***Tecticornia* survey effort.**



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4.2.3 Survey personnel

The personnel involved in the surveys are listed in Table 4-5. All survey work was carried out under relevant licences issued by DBCA under the BC Act (Table 4-5).

Table 4-5 Survey personnel

Name	Permit	Qualifications	Role/s
Adam Crosby-Clark	Flora taking (biological assessment licence) FB62000349	BSc (Env. Mgt)	Field survey
Brenna Waite	Flora taking (biological assessment licence) FB62000373	BSc (Wildlife & Cons. Biol.); Ma (Cons. Biol.)	Field survey, GIS, mapping, data analysis
Brody Loneragan	Flora taking (biological assessment licence) FB62000296-2	BSc Env. Sci. (Hons)	Field survey, reporting
Dr. Andrew Perkins	Flora taking (biological assessment licence) FB62000181	PhD (Botany), BSc (Hons)	Field survey, taxonomy
Dr. David Leach	Flora taking (biological assessment licence) FB62000045	PhD (Plant Biology), BAppSci (Hons)	Field survey, GIS, mapping, data analysis
Dr. Grant Wells	Scientific or Other Prescribed Purposes Licence no. SL012495	PhD (Botany)	Project management, field survey, taxonomy, report review
Martin Henson	Flora taking (biological assessment licence) FB62000110	BEnvSci (Hons)	Field survey, taxonomy
Nick Tidmarsh	Flora taking (biological assessment licence) FB62000254	BSc (Env. Biology)	Field survey
Shenade Findlay	Flora taking (biological assessment licence) FB62000173	BSc (Wildlife & Cons. Biol.); Ma (Cons. Biol.)	Taxonomy, data analysis, reporting

5 RESULTS

5.1 DESKTOP REVIEW

5.1.1 Flora and vegetation

5.1.1.1 Flora assemblage

The desktop review identified records of 513 flora taxa within the 40 km desktop search extent. For previous studies where this information was available, the number of taxa is shown in Table 5-1 along with the size of each study area and number of sites surveyed.

Table 5-1 Flora assemblages, study area and number of sites reported in previous studies of the desktop review

Survey	Study area (ha)	No. of survey sites ¹	Taxa	Genera	Families
Phoenix (2021b)	4435.9	94 (76 Q + 18 R)	224	120	41
GHD (2019)	210.9	15 Q	133	81	35
GHD (2013)	4502	23 (14 Q + 9 R)	120	NA ²	28
Biota and Trudgen & Associates (2001)	NA	121 Q	426	190	64
Apache Energy Ltd (2008)	NA	NA	173	98	35
Astron Environmental Services Pty Ltd (2018)	21.1	21 R	64	51	28
Rio Tinto (2021)	13.18	2 R	43	39	16
Astron Environmental Services Pty Ltd (2020)	1.17	3 R	53	46	30
360 Environmental (2014)	846	32 Q	144	87	38
Maunsell AECOM (2008)	NA	155 Q	500	196	64

¹ Q = quadrat; R = relevé. Does not include transects and targeted searches.

² NA = not available in report

5.1.1.2 Significant flora

The combined results of the database searches and literature review identified 21 significant flora species within the desktop search extent, this comprised 20 Priority flora and one novel species. No records of Threatened flora were identified within the desktop search extent (Table 5-2, Figure 5-1). 15 priority flora were found from DBCA's database (DBCA 2020c), with a further two species contributed from Nature Map (DBCA 2020a), and three species were recorded only in previous studies. *Goodenia* sp. East Pilbara (formerly known as *Goodenia omearana*) was found in Biota and Trudgen & Associates (2001) and Maunsell AECOM (2008), *Minuria tridens* was found in the Mardie Salt Project (Phoenix 2021b); and *Cucumis* sp. Barrow Island (D.W. Goodall 1264) was recorded in the Cape Preston East project area (GHD 2013).

Two records of significant flora from the DBCA search, *Cucumis* sp. Barrow Island (D.W. Goodall 1264) (P2) and *Goodenia pallida* (P1) occurred within the study area (Figure 5-1).

Phoenix (2021b) recorded significant range extension for three species; *Cassutha aurea* var. *aurea* (~170 km), *Cassutha racemosa* forma *pilosa* (~315 km) and *Dipteracanthus australasicus* subsp. *australasicus* (~170 km) which were subsequently considered locally significant.

Table 5-2 Significant flora identified in the desktop review

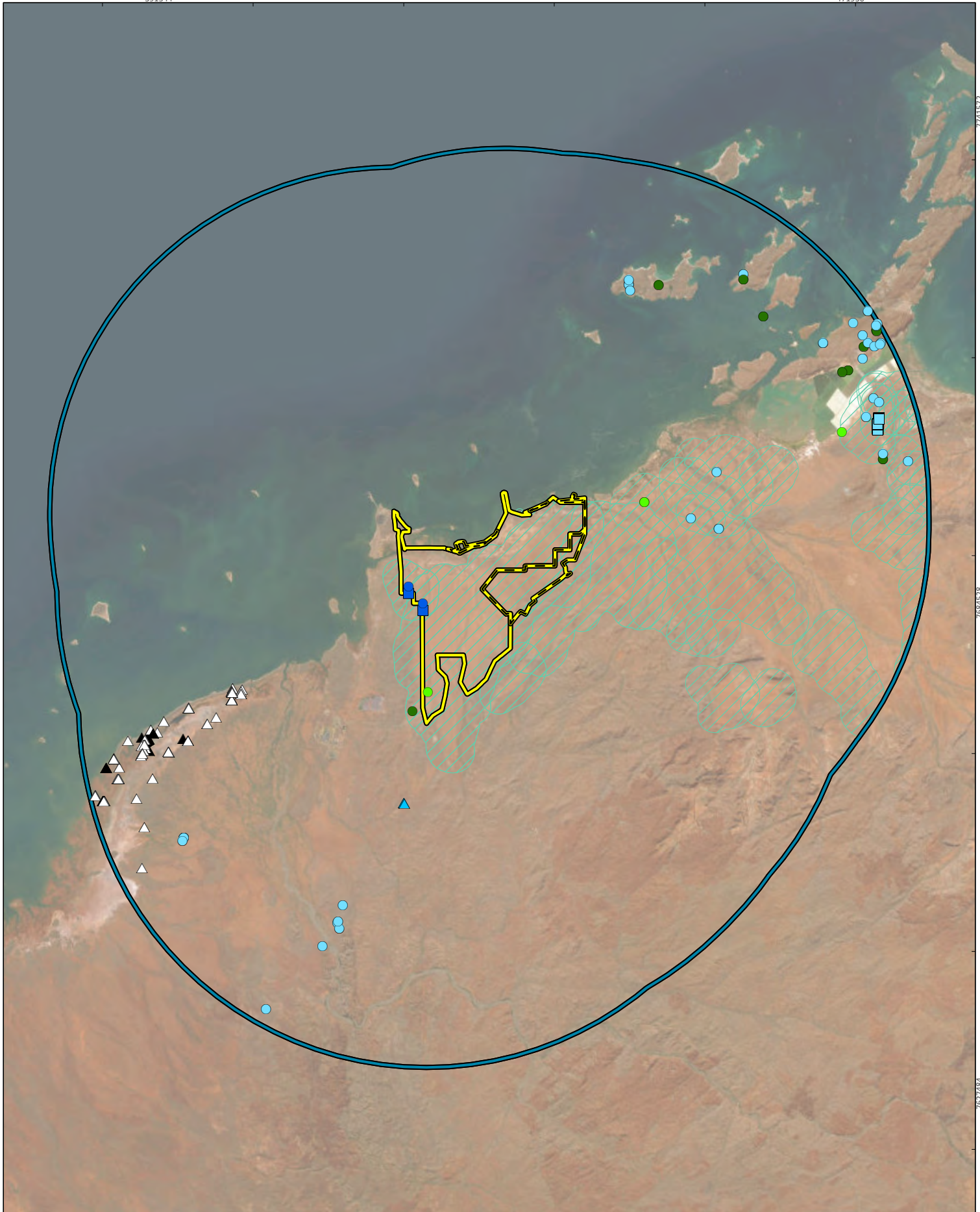
Species	Status (DBCA)	Proximity to study area	Habitat	DBCA database search	Nature Map	Previous surveys ¹
<i>Gomphrena axillaris</i> (R.W.Davis & J.Palmer) formally known as <i>Gomphrena</i> sp. Martins Well (K.F. Kenneally 6116)	P1	31.1 km E	Low shrubland over tussock grassland. Tidal stream zone of saline drainage area into salt ponds. Low red sand dune. 2 records in Florabase (WA Herbarium 1998-).	Y		
<i>Goodenia pallida</i>	P1	Within study area	<i>Acacia</i> shrubland, red soil. 1 record in Florabase (WA Herbarium 1998-).	Y	Y	
<i>Minuria tridens</i>	P1	28.2 km W	Hummock grassland. Chenopod shrubland over grassland. Low coastal dune system adjacent to saline mudflats. Orange-red sand. 10 records in Florabase (WA Herbarium 1998-).			Y
<i>Cucumis</i> sp. Barrow Island	P2	Within study area	Hummock grassland, Red loamy clay, sandplain, limestone plateau. 8 records in Florabase (WA Herbarium 1998-).			Y
<i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>	P3	12.0 km E	Tussock grassland. Woodland, disturbed roadside. Margins of crabhole, plain, bare sandy clay. 5 records in Florabase (WA Herbarium 1998-).	Y	Y	
<i>Corchorus congener</i>	P3	< 40 km	Mixed <i>Acacia</i> shrubland over hummock grassland. Red sand and loam on undulating plains with adjacent limestone outcrops. 28 records in Florabase (WA Herbarium 1998-).		Y	
<i>Dolichocarpa</i> subsp. Hamersley Station (A.A. Mitchell PRP 1479)	P3	16.2 km E	Tussock grassland. Cracking clay, basalt. Gently undulating plain with large surface rocks, flat crabhole plain. 31 records in Florabase (WA Herbarium 1998-).	Y		Y
<i>Euphorbia australis</i> var. <i>glabra</i>	P3	< 40 km	Eucalypt forests/ woodlands and <i>Acacia</i> shrublands over tussock grasslands. Floodplains, alluvial channels. Reddish-brown silt and clay.		Y	

Detailed flora and vegetation survey for the Eramurra Solar Salt Project
Prepared for Leichhardt Salt Pty Ltd

Species	Status (DBCA)	Proximity to study area	Habitat	DBCA database search	Nature Map	Previous surveys ¹
<i>Gomphrena cucullata</i>	P3	15.8 km E	Open, mixed grassland. Red-brown, loam clay. Plain or gentle slope, floodplain. 13 records in Florabase (WA Herbarium 1998-).	Y	Y	
<i>Gomphrena leptophylla</i>	P3	15.6 km E	Open <i>Acacia</i> shrubland over hummock grassland. Mixed grasslands. Sandy floodplain, drainage line. Sandy areas with granite. 8 records in Florabase (WA Herbarium 1998-).	Y	Y	
<i>Goodenia</i> sp. East Pilbara	P3	< 40 km	Hummock grassland with isolated low trees and shrubs. Red-brown clay loam, calcrete and calcareous subsoils. Undulating plains, minor drainage lines.			Y
<i>Gymnanthera cunninghamii</i>	P3	24.8 km N	<i>Corymbia hamersleyana</i> woodland over, <i>Acacia tumida</i> var. <i>pilbarensis</i> sparse shrubland over, <i>Triodia epactia</i> hummock grassland. Rivers, creeks, drainage lines and mound springs in a variety of sandy soils. 40 records in Florabase (WA Herbarium 1998-).	Y	Y	
<i>Owenia acidula</i>	P3	30.8 km SW	<i>Eucalyptus</i> and <i>Corymbia</i> open woodlands over <i>Triodia</i> hummock grasslands. Clay. 13 records in Florabase (WA Herbarium 1998-).	Y		
<i>Stackhousia clementii</i>	P3	36.4 km NE	Low open woodlands and shrublands over tussock grassland. Edges of depression associated with lake, floodplains, loam clay flat, coastal plain. 21 records in Florabase (WA Herbarium 1998-).	Y		
<i>Terminalia supranitifolia</i>	P3	9.7 km S	Scattered low trees over, hummock grassland. Sand. Among basalt rocks. 48 records in Florabase (WA Herbarium 1998-).	Y		Y
<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431)	P3	36.3 km NE	Low open woodland over tussock grassland. Red clay. Clay pan, grass plain. 55 records in Florabase (WA Herbarium 1998-).	Y		Y

Species	Status (DBCA)	Proximity to study area	Habitat	DBCA database search	Nature Map	Previous surveys ¹
<i>Triodia pisoliticola</i>	P3	28.6 km SW	<i>Eucalyptus leucophloia</i> open woodland over mixed shrubland over hummock grassland. Hillside and hilltop, drainage depressions, red brown sandy loam Ironstone pebbles. 62 records in Florabase (WA Herbarium 1998-).	Y		
<i>Vigna triodiophila</i>	P3	39.7 km NE	Low isolated trees of <i>Corymbia hamersleyana</i> over mid sparse <i>Acacia</i> shrublands over low hummock <i>Triodia</i> grasslands. Hillslope, steep upper slope, rockpile ridge in red/brown soil. 16 records in Florabase (WA Herbarium 1998-).	Y		Y
<i>Goodenia nuda</i>	P4	27.6 km W	Open woodland, hummock grassland. Drainage line to floodplain, red brown sandy loam. 113 records in Florabase (WA Herbarium 1998-).	Y	Y	
<i>Rhynchosia bungarensis</i>	P4	1.2 km W	Open woodland of <i>Eucalyptus camaldulensis</i> over, high open shrubland of <i>Acacia tumida</i> over, open tussock grassland of <i>Cymbopogon procerus</i> . Pebbly, shingly coarse sand amongst boulders. Banks of flow line in the mouth of a gully in a valley wall. 83 records in Florabase (WA Herbarium 1998-).	Y	Y	Y
<i>Tecticornia halocnemoides</i> 'ovate seed aggregate'	sp. nov.	20.9 km W	<i>Tecticornia</i> coastal mudflats. Red brown clay loam.			Y

¹Results from previous surveys from the desktop review (Table 4-2)



Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No	1319
Date	28/11/2024
Drawn by	BK
Map author	BL

0 10 20
Kilometers

1:570,400 (at A4) GDA 1994 MGA Zone 50

- Study Area (Expanded)
 - Study Area (Original)
 - TEC/PEC
- Desktop DBCA significant flora**
- P1
 - P2
 - P3
 - P4

- Previous survey significant flora**
- P2 (GHD 2013)
 - P3 (RioTinto 2021)
- Phoenix significant flora**
- T
 - P3
 - sp. nov.

Figure 5-1
Desktop records of significant flora and vegetation

PHOENIX
ENVIRONMENTAL SCIENCES

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5.1.1.3 Introduced flora

The desktop review identified records of 29 introduced species within the desktop search extent, of which seven are a Declared Pest and WoNS (Table 5-3; Appendix 3).

Table 5-3 Desktop records of significant weeds

Species	Declared Pest	WoNS
* <i>Jatropha gossypifolia</i> (Bellyache bush)	Y	Y
* <i>Opuntia stricta</i> (Common prickly pear)	Y	Y
* <i>Parkinsonia aculeata</i>	Y	Y
* <i>Parthenium hysterophorus</i>	Y	Y
* <i>Prosopis glandulosa x velutina</i>	Y	Y
* <i>Prosopis pallida</i> (Mesquite)	Y	Y
* <i>Tamarix aphylla</i> (Athel tree)	Y	Y

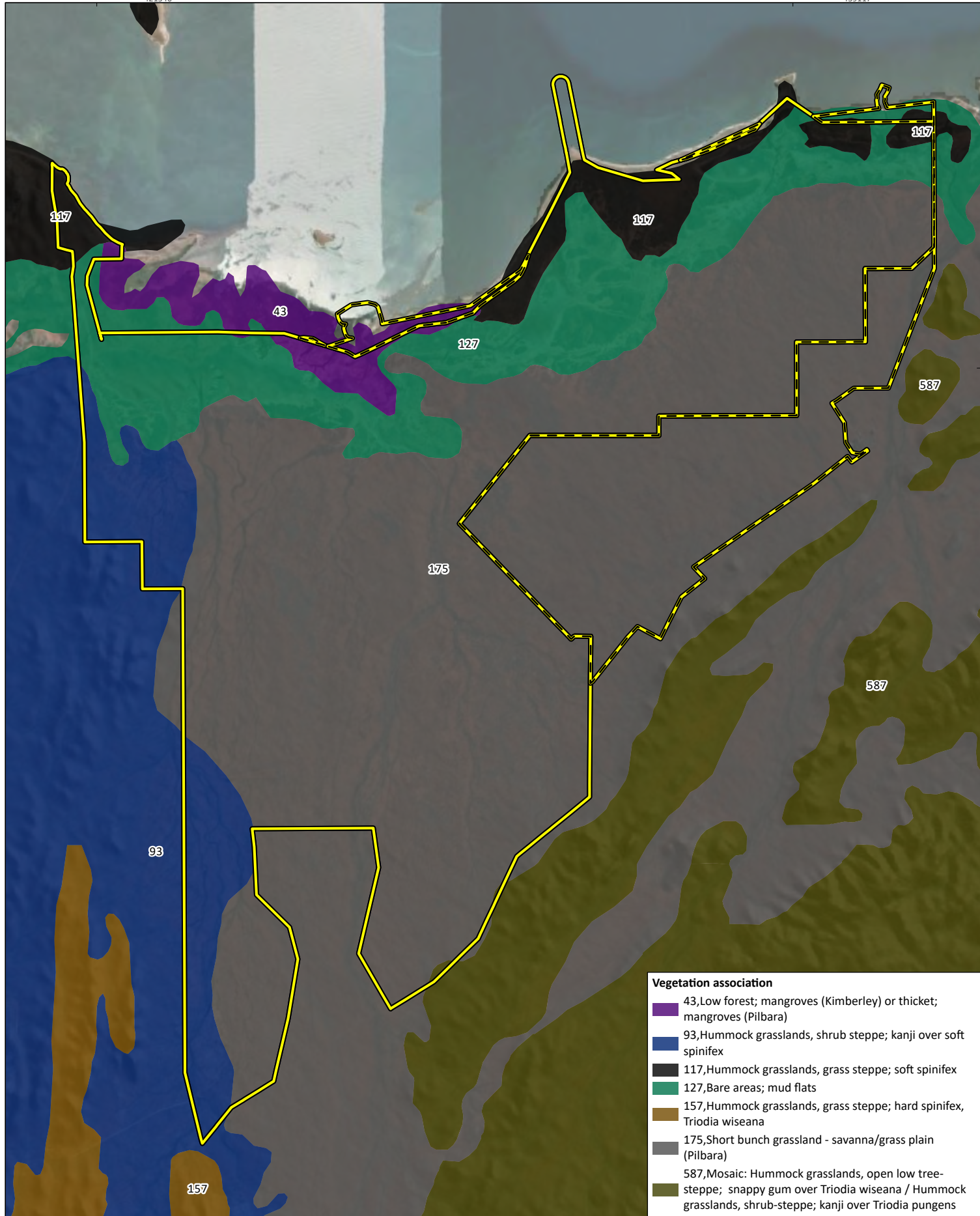
5.1.1.4 Vegetation associations

Regional scale vegetation mapping by Shepherd *et al.* (2002) mapped six vegetation associations in the study area (Table 5-4; Figure 5-2). All vegetation associations are extensively mapped throughout the Roebourne subregion and have over 84% pre-European extent remaining and are therefore assigned the status of least concern (DPIRD 2018); Table 5-4). In desktop reviewed studies:

- GHD (2013) identified seven broad floristic associations and nine vegetation associations, not including highly disturbed areas
- GHD (2019) mapped nine vegetation types for their survey area as well as cleared and/or highly degraded areas with the survey area predominantly located along an existing power line corridor and adjacent access tracks
- Phoenix (2021b) mapped 11 vegetation types within their study area, comprising of hummock grasslands, low to mid shrublands, shrublands dominated by the declared pest **Prosopis glandulosa x velutina* and shrublands of mangroves and samphire
- Biota and Trudgen & Associates (2001) mapped 64 vegetation units of wide ranging floristic and structural variation within the nine Land Systems of the study area, and this was later expanded to 80 vegetation communities Maunsell AECOM (2008)
- Apache Energy Ltd (2008) identified 23 vegetation associations in a study area traversing six Land
- No vegetation mapping was reported in SubSea International Australia Inc (1997)
- 360 Environmental (2014) mapped ten vegetation types in a study area mainly composed of hills and plains, with drainage/ creek lines making up a small portion of landforms
- Six vegetation associations were identified over the 7 Mile study area just south of Karratha (Rio Tinto 2021) although over 50% had been cleared
- Further afield on the Burrup peninsula, two vegetation types were mapped in the small study area at the proposed location for two culverts, and 19 vegetation associations were mapped for the interconnector pipeline study area Astron Environmental Services Pty Ltd (2018).

Table 5-4 State-wide extent of Pre-European vegetation associations present in the study area (DPIRD 2018)

Vegetation association	Pre-European extent (ha)	Current extent (ha)	Remaining (%)	Current extent in DBCA lands (%)	% of study area
43: Low forest; mangroves (Kimberley) or thicket; mangroves (Pilbara)	217,449.3	183,250.1	84.3	36.5	1.3
93: Hummock grasslands, shrub steppe; kanji over soft spinifex	3,044,309.5	3,040,641.0	99.9	2.0	7.4
117: Hummock grasslands, grass steppe; soft spinifex	919,517.0	886,005.8	96.4	14.8	4.6
127: Bare areas; mud flats	737,724.0	697,871.4	94.6	12.3	16.3
175: Short bunch grassland - savanna/grass plain (Pilbara)	526,957.9	524,640.2	99.6	7.7	70.3
587: Mosaic: Hummock grasslands, open low tree-steppe; snappy gum over <i>Triodia wiseana</i> / Hummock grasslands, shrub-steppe; kanji over <i>Triodia pungens</i>	580,728.6	580,697.0	100.0	21.2	0.1

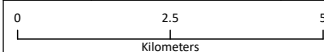


Vegetation association	
	43, Low forest; mangroves (Kimberley) or thicket; mangroves (Pilbara)
	93, Hummock grasslands, shrub steppe; kanji over soft spinifex
	117, Hummock grasslands, grass steppe; soft spinifex
	127, Bare areas; mud flats
	157, Hummock grasslands, grass steppe; hard spinifex, Triodia wiseana
	175, Short bunch grassland - savanna/grass plain (Pilbara)
	587, Mosaic: Hummock grasslands, open low tree-steppe; snappy gum over Triodia wiseana / Hummock grasslands, shrub-steppe; kanji over Triodia pungens



Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No	1319
Date	7/06/2022
Drawn by	BK
Map author	BL



1:123,800 (at A4) GDA 1994 MGA Zone 50

- Study Area (Expanded)
- Study Area (Original)

Figure 5-2
Vegetation associations of the study area



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5.1.1.5 Significant vegetation

The DBCA Threatened and Priority Ecological Communities database search identified no TECs and three PECs within the desktop search extent. Two of these communities intersect the study area (Figure 5-1; Table 5-5):

- *Coastal dune native tussock grassland dominated by Whiteochloa airoides Priority 3(iii)* and,
- *'Horseflat Land System of the Roebourne Plains Priority 3(iii)'*.

The PEC *'Horseflat Land System of the Roebourne Plains Priority 3(iii)'* was found to occur in three of the desktop surveys (360 Environmental 2014; GHD 2019; Phoenix 2021b). The GHD (2019) survey also recorded the presence of the PEC *'Burrup Peninsula rock pile communities (Priority 1)'*. Phoenix (2021b) identified an additional seven vegetation types as locally significant as they had either restricted distribution in the study area and/or represented a refuge for species not recorded elsewhere in the study area.

The PEC *'Roebourne Plains coastal grasslands with gilgai microrelief on cracking clays (Priority 1)'* was found within and adjacent to the 7 Mile study area (Rio Tinto 2021). Biota and Trudgen & Associates (2001) noted significant vegetation as any of the Newman Land System within the study area because it is at the coastward limit of its range. Those areas of the River Land System in good (or better) condition were thought to have significant conservation value because its extent is confined to strips along rivers. At the association/ community level, a further seven vegetation units were deemed to have high conservation value due to possession of high species richness, restricted habitat and/ or low representation within the landscape, despite no availability of regional mapping at this finer resolution. Within surveys on the Burrup peninsula, no vegetation matching the descriptions of two adjacent PECs was located (Astron Environmental Services Pty Ltd 2018, 2020).

Table 5-5 TECs and PECs identified in the desktop review

Community name	Status (DBCA)	Proximity to study area	Description (DBCA 2022)
Roebourne Plains coastal grasslands with gilgai microrelief on deep cracking clays (Roebourne Plains gilgai grasslands)	P1	32.2 km E	<p>These grasslands occur on microrelief on strongly gilgaied self-mulching cracking clays, and emergent depositional surfaces. The grasslands are surrounded by clay plains/flats and sandy coastal and alluvial plains. The gilgai depressions supports ephemeral and perennial tussock grasslands dominated by <i>Sorghum</i> sp. and <i>Eragrostis xerophila</i> (Roebourne Plains grass) along with other native species including <i>Astrebla pectinata</i> (barley Mitchell grass), <i>Eriachne benthamii</i> (swamp wanderrie grass), <i>Chrysopogon fallax</i> (golden beard grass) and <i>Panicum decompositum</i> (native millet).</p> <p>Restricted to the Karratha area, where it has been largely removed. This community differs from the surrounding clay flats of the Horseflat land system which are dominated by <i>Eragrostis xerophila</i> and other perennial tussock grass species (<i>Eragrostis</i> mostly).</p> <p>Threats: grazing, clearing for mining and infrastructure and urban development, weed invasion, basic raw material extraction.</p>
Coastal dune native tussock grassland dominated by <i>Whiteochloa airoides</i>	P3	Within the study area	<p>Tussock grassland of <i>Whiteochloa airoides</i> occurs on the landward side of foredunes, hind dunes or remnant dunes with white or pinkish white medium sands with marine fragments. There may be occasional <i>Spinifex longifolius</i> tussock or <i>Triodia epactia</i> hummock grasses and scattered low shrubs of <i>Olearia</i> sp. Kennedy Range (G. Byrne 66), <i>Scaevola spinescens</i>, <i>S. cunninghamii</i>, <i>Trianthema turgidifolium</i> and <i>Corchorus</i> species (<i>C. walcottii</i>, <i>C. laniflorus</i>).</p> <p>Occurs on Barrow Island, Tent Island and possibly some unaffected littoral areas in west Pilbara.</p> <p>Threats: weed invasion (<i>Cenchrus ciliaris</i>, <i>Aerva javanica</i>), altered fire regimes, grazing, clearing for basic raw material extraction and solar farms.</p>

Community name	Status (DBCAs)	Proximity to study area	Description (DBCAs 2022)
Horseflat Land System of the Roebourne Plains	P3	Within the study area	<p>The Horseflat Land System of the Roebourne Plains are extensive, weakly gilgaied clay plains dominated by tussock grasslands on mostly alluvial non-gilgaied, red clay loams or heavy clay loams. Perennial tussock grasses include <i>Eragrostis xerophila</i> (Roebourne Plains grass) and other <i>Eragrostis</i> spp., <i>Eriachne</i> spp. and <i>Dichanthium</i> spp. The community also supports a suite of annual grasses including <i>Sorghum</i> spp. and rare <i>Astrebla</i> spp.</p> <p>The community extends from Cape Preston to Balla Balla surrounding the towns of Karratha and Roebourne.</p> <p>Threats: grazing, weed invasion, fragmentation, clearing for mining, infrastructure, and solar farms.</p>

5.2 FIELD SURVEY

5.2.1 Flora and vegetation

5.2.1.1 Flora assemblage

A total of 360 flora taxa representing 53 families and 164 genera identified to species level were recorded in the study area during the field surveys (Appendix 4). Species richness ranged from 6 to 75 species amongst quadrats (Appendix 5). The assemblage included 347 native species and 13 introduced species, including 237 perennial species, 94 annual or short-lived species and 29 species that are considered both. The most prominent families recorded were Fabaceae (68 spp.), Poaceae (49 spp.), and Chenopodiaceae (38 spp.).

The near flattening of the species accumulation curve (Figure 5-3) indicates that sufficient sites were surveyed to capture the flora present during the time of the surveys.

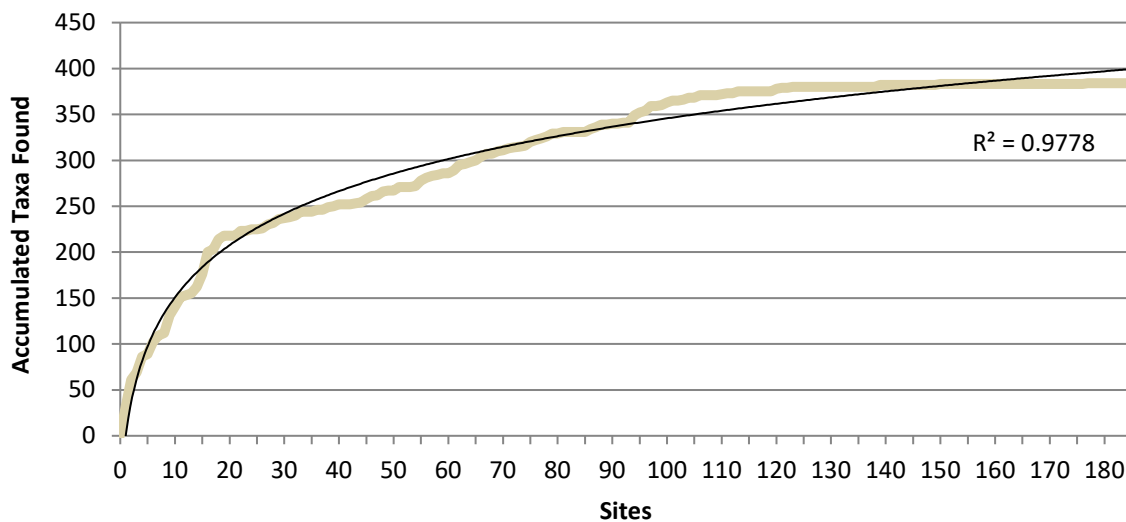


Figure 5-3 Species accumulation curve by survey site (logarithmic trendline represented by thin black line)

5.2.1.2 Significant flora

No Threatened flora were recorded during the survey. A total of three Priority 3 flora were recorded during the field survey (Table 5-6). The desktop records of *Cucumis* sp. Barrow Island (D.W. Goodall 1264) (P2) and *Goodenia pallida* (P3) were visited but no plants of either species were located.

Additional significant flora taxa identified during the survey include; 12 novel species and one species considered a range extension due to being further than 100 km from previous records. Two of the Priority flora are also considered range extensions (Table 5-6; Figure 5-4; Appendix 6), for a total of three range extensions


Two species recorded within the study area are not previously known from the Roebourne subregion; *Notoleptopus decaisnei* var. *decaisnei*, and *Rostellularia adscendens* var. *clementii*. While not deemed as range extensions, these species are new records for the subregion.


The nine sterile *Tecticornia* species listed in Table 5-6 have unresolved taxonomy due to a lack of material, it is therefore not possible to determine if they are a common or significant species and so are listed as novel species until confirmed otherwise.


Bonamia aff. *media*, *Polygala* aff. *galeocephala*, and *Scaevola* aff. *pulchella* represent novel species as the collected specimens do not satisfactorily match known species descriptions or available herbaria material.


The likelihood of occurrence assessment (section 4.2.2.2) for the remaining significant species identified in the desktop review (section 5.1.1.2) determined 11 may possibly occur in the study area and eight are unlikely to occur (Table 5-7).

Table 5-6 Details of significant flora recorded during the field survey

Species	Status	Distribution and ecology	Survey records	Photograph
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3 (DBCA)	Recorded across the Pilbara bioregion, within the Chichester, Fortescue, Hamersley and Roebourne subregions. Recorded on plains, clay tussock grasslands on red brown cracking clay. 31 records in Florabase (WA Herbarium 1998-).	Recorded across three quadrats Within vegetation type Ex This annual species was not present in the second season survey Specimens were lodged at the state herbarium.	 <p>(Phoenix)</p>

Species	Status	Distribution and ecology	Survey records	Photograph
<i>Eremophila forrestii</i> subsp. <i>viridis</i>	P3 (DBCA) ~147 km range extension	Recorded across the Carnarvon, Great Sandy Desert and Pilbara Bioregions. Shrubland over hummock grassland, flats and hardpan. Rocky gullies. 5 records in Florabase (WA Herbarium 1998-).	Recorded within one quadrat Within vegetation type AiEITw Targeted searches conducted at the recorded location and in similar habitat in subsequent field surveys failed to locate any further individuals of this species with all specimens collected identified as the closely related <i>E. forrestii</i> subsp. <i>forrestii</i> Specimen was lodged at the state herbarium.	 <p>(Chevron)</p>


Species	Status	Distribution and ecology	Survey records	Photograph
<i>Rostellularia adscendens</i> var. <i>latifolia</i>	P3 (DBCA) ~130 km range extension	Recorded across the Pilbara bioregion on ironstone soils near creeks and rocky hills. Florabase has 40 records with populations ranging from a few individuals to 50 plants (WA Herbarium 1998-).	Recorded within one quadrat Within vegetation type EvAcCf Targeted searches conducted at the recorded location and in similar habitat in subsequent field surveys failed to locate any further individuals of this species Specimen was lodged at the state herbarium.	 (WA Herbarium 1998-).
<i>Bonamia</i> aff. <i>media</i>	sp. nov.	Taxonomic note: specimen collected has leaf bases attenuating to petiole rather than truncate to cordate (as is seen in <i>B. media</i>).	Recorded within one quadrat Within vegetation type HscllCc Determination of this species as a potential new species was completed post-field surveys and subsequently no targeted searches for this taxon were conducted.	

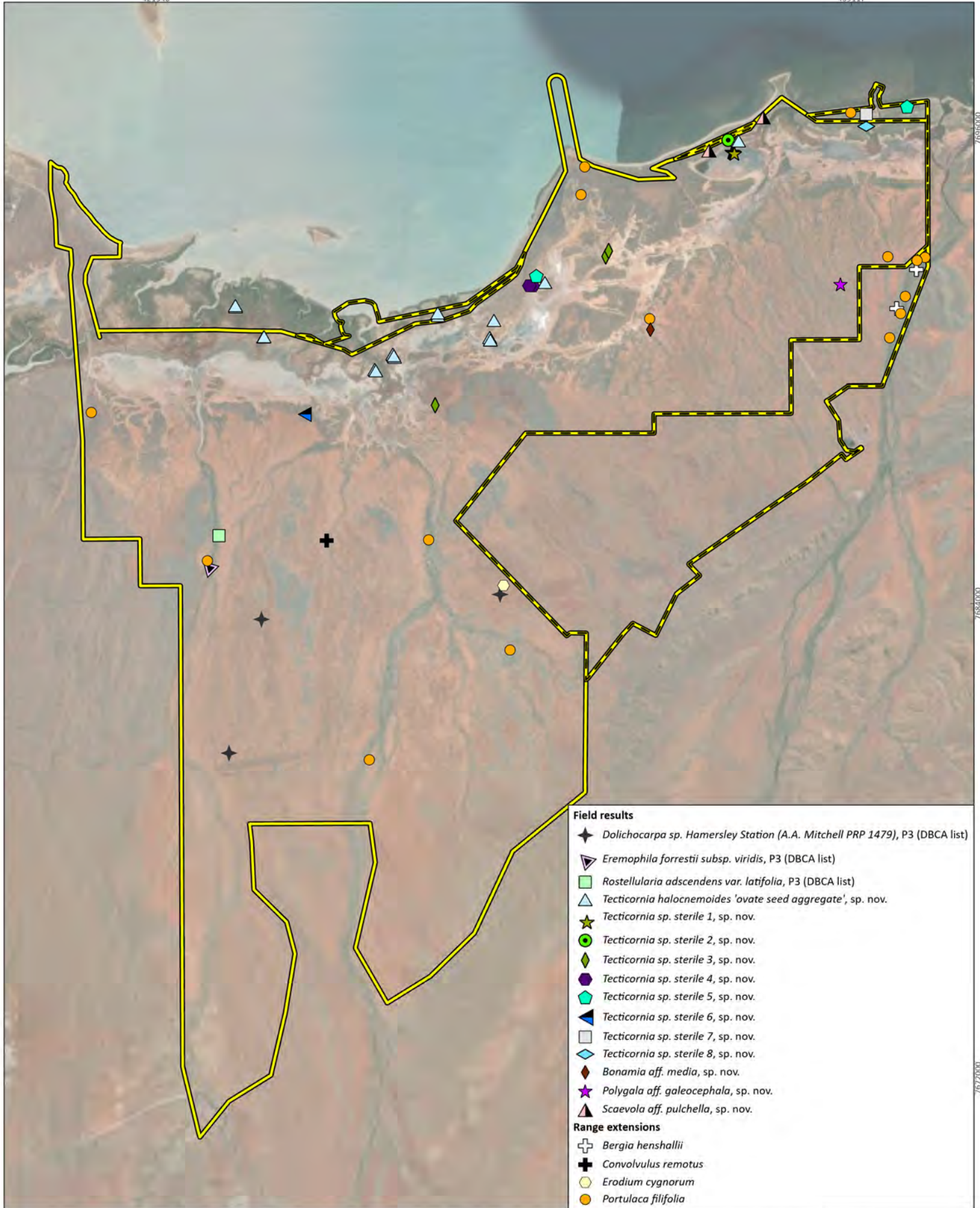
Species	Status	Distribution and ecology	Survey records	Photograph
<i>Polygala aff. galeocephala</i>	sp. nov.	Taxonomic note: specimen collected is hairier than typical and different upright habit rather than prostrate, flowers larger.	Recorded at one quadrat Within vegetation type Ex Determination of this species as a potential new species was completed post-field surveys and subsequently no targeted searches for this taxon were conducted. Specimen was lodged at the state herbarium.	NA
<i>Scaevola aff. pulchella</i>	sp. nov.	Taxonomic note: fruit material on specimen hairier than typical	Recorded across three quadrats Within vegetation type AcAjTe Determination of this species as a potential new species was completed post-field surveys and subsequently no targeted searches for this taxon were conducted. Specimens were lodged at the state herbarium.	 <p>In situ (Phoenix)</p>

Species	Status	Distribution and ecology	Survey records	Photograph
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	Taxonomic note: a known but undescribed taxon (pers. com, Kelly Sheppard, 2 Dec 2020)	Recorded within 27 quadrats across 9 transects Within vegetation type T spp Revisits to some sites were required to collect fertile material of this taxon. Specimens were lodged at the state herbarium.	NA
<i>Tecticornia</i> sp. sterile 1	sp. nov.	Taxonomic note: unresolved taxonomy due to a lack of fertile material	Recorded within four quadrats across four transects Within vegetation type T spp Revisits to recorded sites failed to locate fertile material within the quadrat	NA
<i>Tecticornia</i> sp. sterile 2	sp. nov.	Taxonomic note: unresolved taxonomy due to a lack of fertile material	Recorded within one quadrat across transect site Within vegetation type T spp Revisit to the recorded site failed to locate fertile material within the quadrat	NA

Species	Status	Distribution and ecology	Survey records	Photograph
<i>Tecticornia</i> sp. sterile 3	sp. nov.	Taxonomic note: unresolved taxonomy due to a lack of fertile material	Recorded within three quadrats across two transects Within vegetation type T spp Revisits to recorded sites failed to locate fertile material within the quadrat	NA
<i>Tecticornia</i> sp. sterile 4	sp. nov.	Taxonomic note: unresolved taxonomy due to a lack of fertile material	Recorded within two quadrats across one transects Within vegetation type T spp Revisits to recorded sites failed to locate fertile material within the quadrat	NA
<i>Tecticornia</i> sp. sterile 5	sp. nov.	Taxonomic note: unresolved taxonomy due to a lack of fertile material	Recorded within one quadrat and one <i>Tecticornia</i> transect site Within vegetation type T spp Revisits to recorded sites failed to locate fertile material within the quadrat	NA

Species	Status	Distribution and ecology	Survey records	Photograph
<i>Tecticornia</i> sp. sterile 6	sp. nov.	Taxonomic note: unresolved taxonomy due to a lack of fertile material	Recorded within one quadrat Within vegetation type AssCc Revisits to the recorded site failed to locate fertile material within the quadrat	NA
<i>Tecticornia</i> sp. sterile 7	sp. nov.	Taxonomic note: unresolved taxonomy due to a lack of fertile material	Recorded within one quadrat Within vegetation type T spp Revisits to the recorded site failed to locate fertile material within the quadrat	NA
<i>Tecticornia</i> sp. sterile 8	sp. nov.	Taxonomic note: unresolved taxonomy due to a lack of fertile material	Recorded within one quadrat Within vegetation type T spp Revisits to the recorded site failed to locate fertile material within the quadrat	NA

Species	Status	Distribution and ecology	Survey records	Photograph
<i>Bergia henshallii</i>	~239.8 km range extension	Recorded across the Dampierland, Gibson Desert, Great Sandy Dessert, Ord Victorian Plain, Tanami, and Pilbara Bioregions. Red clay, sand. Flats and dunes. 24 records in Florabase (WA Herbarium 1998-).	Recorded within two quadrats Within vegetation types EcAcTe and Tw Specimen was lodged at the state herbarium.	 <p>(WA Herbarium 1998-).</p>



- Field results**
- ◆ *Dolichocarpa sp. Hammersley Station (A.A. Mitchell PRP 1479)*, P3 (DBC list)
 - ▼ *Eremophila forrestii subsp. viridis*, P3 (DBC list)
 - *Rostellularia adscendens var. latifolia*, P3 (DBC list)
 - △ *Tecticornia halocnemoides 'ovate seed aggregate'*, sp. nov.
 - ★ *Tecticornia sp. sterile 1*, sp. nov.
 - *Tecticornia sp. sterile 2*, sp. nov.
 - ◆ *Tecticornia sp. sterile 3*, sp. nov.
 - ◆ *Tecticornia sp. sterile 4*, sp. nov.
 - ◆ *Tecticornia sp. sterile 5*, sp. nov.
 - ◆ *Tecticornia sp. sterile 6*, sp. nov.
 - *Tecticornia sp. sterile 7*, sp. nov.
 - ◆ *Tecticornia sp. sterile 8*, sp. nov.
 - ◆ *Bonamia aff. media*, sp. nov.
 - ★ *Polygala aff. galeocephala*, sp. nov.
 - ▲ *Scaevola aff. pulchella*, sp. nov.
- Range extensions**
- ⊕ *Bergia henshallii*
 - ⊕ *Convolvulus remotus*
 - *Eradium cygnorum*
 - *Portulaca filifolia*



Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No	1319
Date	21/12/2022
Drawn by	BK
Map author	BL

0 2.5 5
Kilometers

1:123,800 (at A4) GDA 1994 MGA Zone 50

- ▭ Study Area (Expanded)
- ▭ Study Area (Original)

Figure 5-4
Significant flora records from the field survey

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Table 5-7 Likelihood of occurrence for significant flora identified in the desktop review

Species	Status	Likelihood of occurrence	Vegetation types for recorded, likely, possible species
<i>Gomphrena axillaris</i> (R.W.Davis & J.Palmer) formally known as <i>Gomphrena</i> sp. Martins Well (K.F. Kenneally 6116)	P1	Unlikely Study area outside of typical range. Closest record 31.1 km from study area.	
<i>Goodenia pallida</i>	P1	Possible. The only record of the species was found within the study area. Suitable habitat present in the study area.	AbTw
<i>Minuria tridens</i>	P1	Possible. Study area outside of typical range however, suitable habitat occurs within the study area. Closest record is 28.2 km from study area.	Te
<i>Cucumis</i> sp. Barrow Island	P2	Possible. Suitable habitat within the study area. Previously recorded within the study area by GHD ((GHD 2013) however not recorded in DBCA's database results.	AbTw, Te
<i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>	P3	Possible. Study area within typical range. Suitable habitat within the study area. Closest record is 12.0 km from the study area.	Ex
<i>Corchorus congener</i>	P3	Unlikely. Study area unlikely to contain typical habitat of offshore islands.	
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3	Recorded	Ex
<i>Euphorbia australis</i> var. <i>glabra</i>	P3	Possible Suitable habitat within the study area. Closest Florabase record is 83.1 km although it was found within the Nature Map desktop search < 40 km from study area (Phoenix 2018).	EvScSv, EcAcTe, EcAcCs EvAcCf
<i>Gomphrena cucullata</i>	P3	Possible Study area within typical range. Suitable habitat within the study area. Closest record is 15.8 km from the study area.	EvScSv
<i>Gomphrena leptophylla</i>	P3	Possible Study area within typical range. Suitable habitat within the study area. Closest record is 15.6 km from the study area.	Tw, AbTw, AiEITw, Te, and EcAcCs
<i>Goodenia</i> sp. East Pilbara	P3	Unlikely Study area outside of typical distribution and lack of suitable habitat. Closest Florabase record is 205.7 km however, it	

**Detailed flora and vegetation survey for the Eramurra Solar Salt Project
Prepared for Leichhardt Salt Pty Ltd**

Species	Status	Likelihood of occurrence	Vegetation types for recorded, likely, possible species
		was recorded within several km (<5 km) from study area in Biota and Trudgen & Associates (2001)	
<i>Gymnanthera cunninghamii</i>	P3	Possible Study area within typical range. Suitable habitat within the study area. Closest record is 24.8 km from the study area.	EcAcCs, EcAcTe (adequately searched)
<i>Owenia acidula</i>	P3	Unlikely. Study area within typical range. Suitable habitat within the study area, however due the ease of detectability in the field and area of habitat searched, unlikely present. Closest record is 30.8 km from the study area.	
<i>Stackhousia clementii</i>	P3	Possible. Study area within typical range. Suitable habitat within the study area. Closest record is 36.4 km from the study area.	EcAcCs and EcAcTe
<i>Terminalia supranitifolia</i>	P3	Possible. Study area within typical range. Suitable habitat within the study area. Closest record is 9.7 km from the study area.	HscIIcC
<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431)	P3	Unlikely Study area outside of typical distribution and lack of suitable habitat present. Closest record is 36.3 km from the study area.	
<i>Triodia pisoliticola</i>	P3	Unlikely. Study area outside of typical distribution. Closest record is 28.6 km from study area.	
<i>Vigna triodiophila</i>	P3	Unlikely. Study area outside of typical distribution. Closest record is 39.7 km from study area.	
<i>Goodenia nuda</i>	P4	Possible. Study area within typical range. Suitable habitat within the study area. Closest record is 27.6 km from the study area.	EcAsCs, EvAcCf, EcAcTe
<i>Rhynchosia bungarensis</i>	P4	Unlikely. Suitable habitat does not occur within the study area. Closest record is 1.2 km from the study area.	
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	Recorded.	Tspp

5.2.1.3 Introduced flora

Thirteen introduced flora species were recorded during the survey. One introduced species, **Prosopis glandulosa x velutina* is listed as a Declared Pest and WoNS (Table 5-8).

Table 5-8 Introduced flora recorded in the field survey

Family	Taxon	Declared Pest/WoNS
Aizoaceae	<i>*Trianthema portulacastrum</i>	
Amaranthaceae	<i>*Aerva javanica</i>	
Asteraceae	<i>*Flaveria trinervia</i>	
Cucurbitaceae	<i>*Citrullus colocynthis</i>	
Fabaceae	<i>*Prosopis glandulosa x velutina</i>	Y
Fabaceae	<i>*Vachellia farnesiana</i>	
Malvaceae	<i>*Malvastrum americanum</i>	
Malvaceae	<i>*Melochia pyramidata</i>	
Passifloraceae	<i>*Passiflora foetida</i> var. <i>hispida</i>	
Poaceae	<i>*Cenchrus ciliaris</i>	
Poaceae	<i>*Cenchrus setiger</i>	
Poaceae	<i>*Cynodon dactylon</i>	
Portulacaceae	<i>*Portulaca Pilosa</i>	

5.2.1.4 Unidentified flora

A total of 19 specimens collected during the survey could not be identified to species level (Table 5-9), mainly as a result of insufficient taxonomic characters, as plants were sterile (lacking reproductive structures) or reproductive structures were too old/dry or damaged to be useful. The majority of the species possessed characters indicating that they were likely common species but lacked sufficient characters for confirmation of identity. Seven of the 19 unidentified flora have been ruled out as potential Priority species.

Table 5-9 Unidentified taxa recorded during the field survey

Taxon	Comments
<i>Boerhavia</i> sp.	Sterile. No Priority <i>Boerhavia</i> are known in the Pilbara region.
<i>Frankenia</i> sp.	Sterile. No Priority <i>Frankenia</i> are known in the Pilbara region.
<i>Goodeniaceae</i> sp.	Sterile
<i>Hibiscus</i> sp.	Damaged reproductive structures. No Priority <i>Hibiscus</i> are known in the Roebourne subregion.
Indeterminate	Damaged reproductive structures
<i>Lamiaceae</i> sp.	Sterile. No Priority <i>Lamiaceae</i> are known in the Roebourne subregion.
<i>Poaceae</i> sp.	Inflorescence old and dry
<i>Sclerolaena</i> sp.	Damaged reproductive structures, No Priority <i>Sclerolaena</i> are known in the Pilbara region.

Taxon	Comments
<i>Sida</i> sp.	Old dry material, incomplete, One Priority <i>Sida</i> (<i>S.</i> sp. Barlee Range (<i>S.</i> van Leeuwen 1642)) known in the Roebourne subregion, but not known within the local region and study area lacks suitable habitat.
<i>Tecticornia</i> sp. sterile 1	Sterile. Unable to identify to species due to lack of seed.
<i>Tecticornia</i> sp. sterile 2	Sterile. Unable to identify to species due to lack of seed.
<i>Tecticornia</i> sp. sterile 3	Sterile. Unable to identify to species due to lack of seed.
<i>Tecticornia</i> sp. sterile 4	Sterile. Unable to identify to species due to lack of seed.
<i>Tecticornia</i> sp. sterile 5	Sterile. Unable to identify to species due to lack of seed.
<i>Tecticornia</i> sp. sterile 6	Sterile. Unable to identify to species due to lack of seed.
<i>Tecticornia</i> sp. sterile 7	Sterile. Unable to identify to species due to lack of seed.
<i>Tecticornia</i> sp. sterile 8	Sterile. Unable to identify to species due to lack of seed.
<i>Tephrosia</i> sp.	Sterile. One Priority <i>Tephrosia</i> (<i>rosea</i> var. Port Hedland (A.S. George 1114)) known in the Roebourne subregion, but not known within the local region.
<i>Triodia</i> ? <i>epactia</i>	Inflorescence old and dry

5.2.1.5 Vegetation types

Phoenix mapped 98.4% of the study area and the remaining 1.6% has been mapped by O2 Marine (but inclusive within provided mapping dataset).

Phoenix defined seventeen vegetation types (excluding a 'Cleared' and 'Mudflat' unit) for the study area based on the cluster analysis and resulting dendrogram (Figure 5-5). Together, these seventeen vegetation types (Table 5-10; Figure 5-6; site by species table in Appendix 7) can be generalised into the following broad vegetation groups:

- low isolated forbs over closed tussock grassland,
- *Acacia* shrubland over hummock grassland,
- *Acacia* shrubland over tussock grassland,
- low open *Tecticornia* shrubland, occasionally over sparse tussock grassland,
- low sparse to open shrubland of **Aerva javanica* over **Cenchrus* spp. grassland,
- drainage woodlands, variably composed of *Eucalyptus camaldulensis*, *E. victrix* and *Corymbia hamersleyana*,
- exposed granite areas containing isolated shrubs and forbs.

Vegetation type Ex is the dominant vegetation type, covering 44.3 % of the study area. This vegetation type is described as low isolated forbs of *Sida fibulifera*, *Rhynchosia minima*, and *Indigofera trita*, over low tussock grassland to closed tussock grassland of *Eragrostis xerophila*, *Dichanthium sericeum* subsp. *humilius*, and *Sorghum plumosum* (Table 5-10).

Vegetation type AbTw is the second largest covering 15.9 % of the study area. This vegetation type is described as mid sparse to open shrubland of *Acacia bivenosa*, with occasional *A. stellaticeps* and *A. coriacea* (s.l.), over low hummock grassland of *Triodia wiseana* (Table 5-10).

The remaining fifteen vegetation types mapped cover 26.8 % of the study area. A total of 386.7 ha (1.5%) of the study area was mapped as mosaic or complex vegetation types (Table 5-10). A total of 2,637.7 ha (10%) was mapped as devoid of vegetation, either described as cleared or mudflats.

Four vegetation types (EcAcTe, EvScSv, HscIIcC and MmTspSv) are restricted within the study area, each occupying less than 0.1% of the study area (Table 5-10). Where possible, the number of survey sites (quadrats and relevés) complies with the Technical Guidance requirements for three or more sites per vegetation type, with additional sites for widespread vegetation types. Two vegetation types, MmTspSv and HscIIcC, are each represented by two sites due to their limited distribution across the study area.

Vegetation type Tssp. comprised vegetation dominated by *Tecticornia* species predominantly recorded in transect surveys conducted on mudflats but also in 3 quadrat surveys. As half of the *Tecticornia* taxa present could not be identified to species level and unidentified species occurred at almost 30% of sites no detailed analysis to delineate *Tecticornia* vegetation types could be conducted. In addition, it is not possible to distinguish between different *Tecticornia* vegetation types from aerial imagery. Subsequently the *Tecticornia* vegetation has been mapped as a single mosaic.

Review of the distribution of *Tecticornia* taxa identified to a recognised entity level (Table 5-12) determined that each of the taxon recorded at multiple locations were recorded at coastal sites (on the coastal side tidal mudflats and/or associated with tidal mangrove creeks) and inland sites (inland side of tidal mudflats or enclosed clay depressions). *Tecticornia halocnemoides* 'large ovate seed aggregate' was recorded most frequently in coastal areas but was also recorded at inland locations *Tecticornia halocnemoides* subsp. *tenuis* and *T. indica* subsp. *leiostachya* were the most abundant occurring at 79.2% and 75% of the 24 *Tecticornia* sites surveyed respectively.

Vegetation cover of the *Tecticornia* vegetation was higher for coastal areas with recorded mean cover values in quadrats ranging from 12.5 to 80% with an overall average of 31.6% more than double the overall average of inland areas (14.7%) where mean values in quadrats ranged from 3.5 to 66 %. There was no apparent difference in plant heights with plants at both coastal and inland areas typically ranging from 0.1 to 0.5m tall with occasional plants up to 1m tall.

Vegetation types Ex and AxEx were both split by the analysis into two separate locations on the dendrogram (Figure 5-5). However, on investigation these splits were due to wetter and drier versions of each unit, indicated by the presence/absence of species that were both non-dominant and non-structural. As such, for the purposes of this survey these wetter/drier splits were not considered to represent additional and separate vegetation types (Figure 5-5Table 5-10).

The portion of the study area (412.4 ha, 1.6%) mapped by O2 Marine has been combined with the current Phoenix mapping and presented in Table 5-11. O2 Marine mapped a total of twelve units within the study area, comprising of:

- six vegetation units (Am1, Am2, Am3, Rs1, Rs2, Ca),
- two mosaic vegetation units (Am/Ca, RsAm),
- three units devoid of vegetation (Bare sand, Beach and River),
- one unit of 'non-specified'.

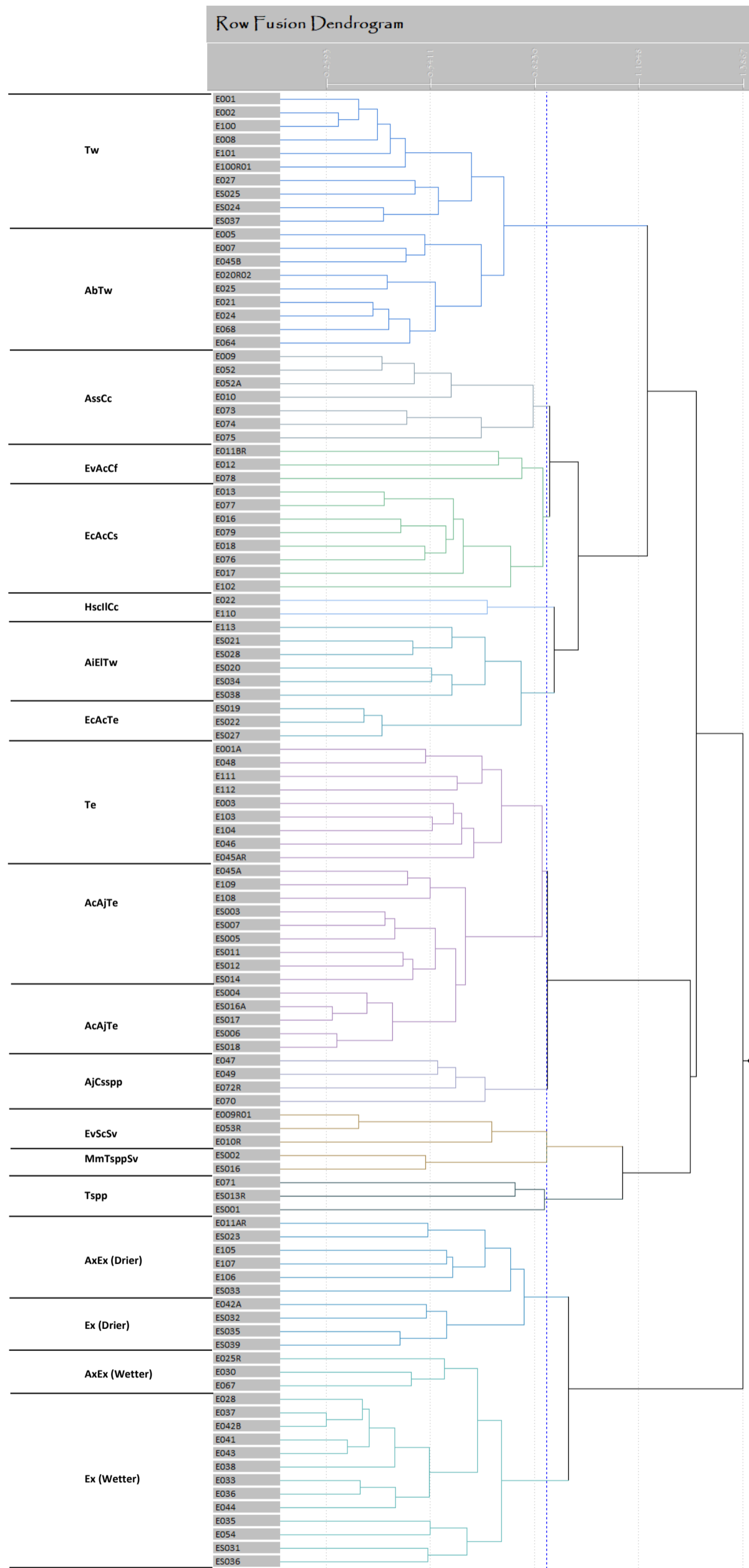

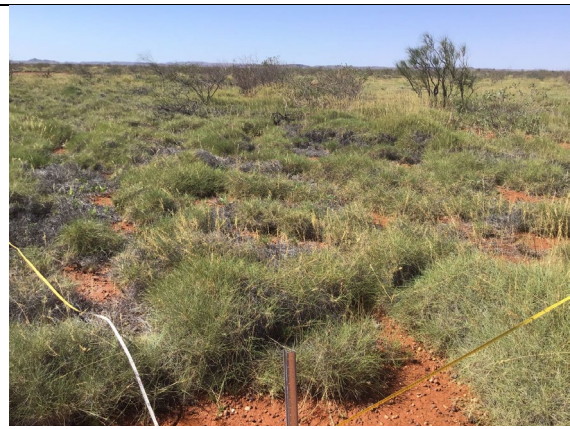
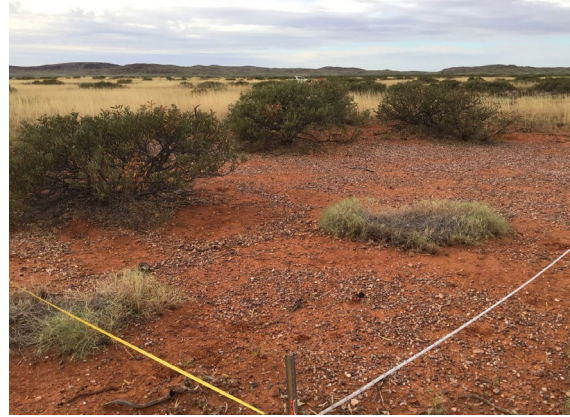






Figure 5-5 Hierarchical clustering (UPGMA) of the flora quadrats of the study area



Table 5-10 Vegetation types, description and extent in the study area



Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
Ex	E042A, ES032, ES035, ES039, E028, E037, E042B, E041, E043, E038, E033, E036, E044, E035, E054, ES031, ES036	Low isolated forbs of <i>Sida fibulifera</i> , <i>Rhynchosia minima</i> , and <i>Indigofera trita</i> , over low tussock grassland to closed tussock grassland of <i>Eragrostis xerophila</i> , <i>Dichanthium sericeum</i> subsp. <i>humilius</i> , and <i>Sorghum plumosum</i> .	11,720.6 ha 44.3%	
AbTw	E005, E007, E045B, E020R02, E025, E021, E024, E068, E064	Mid sparse to open shrubland of <i>Acacia bivenosa</i> , with occasional <i>A. stellaticeps</i> and <i>A. coriacea</i> (s.l.), over low hummock grassland of <i>Triodia wiseana</i> .	4196.4 ha 15.9%	

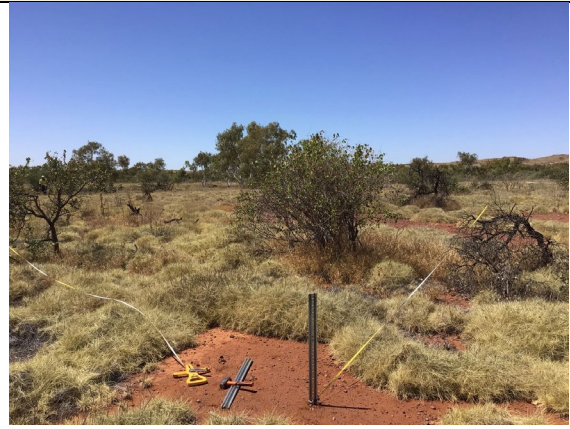

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
AxEx	E011AR, ES023, E105, E106, E107, E025R, E030, E067	Mid sparse shrubland to open shrubland of <i>Acacia xiphophylla</i> , over low isolated forbs of <i>Sida fibulifera</i> , <i>Ptilotus exaltatus</i> , and <i>Rhynchosia minima</i> , over low sparse to open tussock grassland of <i>Eragrostis xerophila</i> , <i>Dichanthium sericeum</i> subsp. <i>humilius</i> , and <i>Aristida contorta</i> .	2927.3 ha 11.1%	
Te	E001A, E048, E111, E112, E003, E103, E104, E046, E045AR	Variably present mid isolated shrubs of <i>Acacia coriacea</i> (s.l.) and <i>A. bivenosa</i> , over mid isolated forbs of <i>Evolvulus alsinoides</i> var. <i>villosicalyx</i> , <i>Arivela viscosa</i> , and <i>Rhynchosia minima</i> , over mid open to closed hummock grassland of <i>Triodia epactia</i> and <i>*Cenchrus ciliaris</i> .	883.6 ha 3.3%	



Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
Tspp	E071, ES001, ES013R, ET001, ET002, ET004, ET005, ET006, ET007, ET008, ET009, ET010, ET011, ET012, ET013, ET014, ET015, ET016, ET017, ET020, ET021, ET022, ET023, ET024	Low open shrubland to shrubland of <i>Tecticornia</i> spp., variably with <i>Surreya diandra</i> and <i>Frankenia pauciflora</i> , over variably present isolated tussock grasses to tussock grassland of <i>Eragrostis falcata</i> and <i>Xerochloa laniflora</i> .	865.4 ha 3.3%	



Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
Tw	E001, E002, E100, E008, E101, E100R01, E027, ES025, ES024, ES037	Isolated low shrubs of <i>Abutilon lepidum</i> , <i>Indigofera monophylla</i> , and <i>Triumfetta clementii</i> , over isolated forbs of <i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i> , <i>Ptilotus auriculifolius</i> or <i>P. clementii</i> , and <i>Evolvulus alsinoides</i> var. <i>villosicalyx</i> , over low hummock grassland of <i>Triodia wiseana</i> .	805.7 ha 3.0%	
AjCspp	E047, E049, E072R, E070	Low sparse to open shrubland of * <i>Aerva javanica</i> and <i>Solanum lasiophyllum</i> , over low sparse grassland to grassland of * <i>Cenchrus</i> spp. with <i>Whiteochloa airoides</i> and/or <i>Sorghum plumosum</i> .	681.4 ha 2.6%	

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
AcAjTe	E045A, E108, E109, ES003, ES007, ES005, ES011, ES012, ES014	Tall sparse shrubland to shrubland of <i>Acacia coriacea</i> (s.l.), <i>A. ligulata</i> , and/or <i>A. sclerosperma</i> subsp. <i>sclerosperma</i> , over low isolated shrubs to open shrubland of <i>Aerva javanica</i> , <i>Corchorus walcottii</i> , and <i>Rhagodia eremaea</i> , over low sparse hummock grassland to hummock grassland of <i>Triodia epactia</i> with <i>Cenchrus ciliaris</i> and <i>Whiteochloa airoides</i> .	246.9 ha 0.9%	
AssCc	E009, E052, E052A, E010, E073, E074, E075	Variably present tall sparse shrubland to shrubland of <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i> , <i>A. coriacea</i> (s.l.), and <i>A. inaequilatera</i> , over low sparse grassland to closed grassland of <i>Cenchrus ciliaris</i> , <i>Dactyloctenium radulans</i> , and <i>C. setiger</i> .	192.6 ha 0.7%	

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
EcAcCs	E013, E077, E016, E079, E018, E076, E017	Mid open woodland to woodland variably composed of <i>Eucalyptus camaldulensis</i> (s.l.), <i>E. victrix</i> , and <i>Corymbia hamersleyana</i> , over tall sparse shrubland to shrubland of <i>Acacia coriacea</i> (s.l.) and <i>A. trachycarpa</i> with occasional stands of <i>Melaleuca glomerata</i> , over mid sparse grassland to grassland of <i>*Cenchrus setiger</i> , <i>Dactyloctenium radulans</i> , and <i>*C. ciliaris</i> .	176.0 ha 0.7%	
TeWa	ES004, ES016A, ES017, ES006, ES018	Low isolated shrubs of <i>*Aerva javanica</i> , <i>Corchorus walcottii</i> , and <i>Indigofera linnaei</i> , over mid open to closed hummock grassland of <i>Triodia epactia</i> , co-dominant with <i>Whiteochloa airoides</i> and some presence of <i>*Cenchrus ciliaris</i> .	117.9 ha 0.4%	

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
AiEITw	E113, ES021, ES028, ES020, ES034, ES038	Tall sparse shrubland of <i>Acacia inaequilatera</i> , with occasional <i>Ipomoea costata</i> and <i>A. coriacea</i> (s.l.), over mid sparse shrubland of <i>Eremophila longifolia</i> , with occasional <i>A. pyriformis</i> var. <i>pyriformis</i> and <i>A. bivenosa</i> , over low open hummock grassland to hummock grassland of <i>Triodia wiseana</i> with * <i>Cenchrus ciliaris</i> and occasional <i>T. epactia</i> .	100.0 ha 0.4%	
EvAcCf	E011BR, E012, E078	Variably present open forest of <i>Eucalyptus victrix</i> and/or <i>E. camaldulensis</i> (s.l.), over tall variably present open shrubland of <i>Acacia coriacea</i> (s.l.), over mid grassland to closed grassland of <i>Chrysopogon fallax</i> , <i>Eriachne flaccida</i> , and <i>Cenchrus</i> spp.	54.6 ha 0.2%	

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
EcAcTe	ES019, ES022, ES027	Low woodland of <i>Eucalyptus camaldulensis</i> (s.l.), over tall open shrubland of <i>Acacia coriacea</i> (s.l.), <i>Melaleuca linophylla</i> , and <i>M. glomerata</i> , over mid open hummock grassland of <i>Triodia epactia</i> with * <i>Cenchrus ciliaris</i> and <i>Eulalia aurea</i> .	25.7 ha 0.1%	
EvScSv	E009R01, E053R, E010R	Mid open woodland to woodland of <i>Eucalyptus victrix</i> and occasional <i>E. camaldulensis</i> (s.l.), over mid to tall open shrubland composed variably of <i>Sesbania cannabina</i> , <i>Acacia sericophylla</i> , or <i>A. coriacea</i> (s.l.), over low open tussock grassland to grassland of <i>Sporobolus virginicus</i> .	7.7 ha <0.1%	

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
HscIIcc	E022, E110	Exposed granite areas containing low isolated shrubs of <i>Hibiscus sturtii</i> var. <i>campylochlamys</i> , over isolated forbs of <i>Indigofera linifolia</i> , <i>Arivela viscosa</i> , and <i>Boerhavia coccinea</i> , over low isolated grasses of * <i>Cenchrus ciliaris</i> , <i>Enneapogon caerulescens</i> , and <i>Sporobolus australasicus</i> .	6.4 ha <0.1%	
MmTsspSv	ES002, ES016	Mid to tall open shrubland to shrubland of <i>Myoporum montanum</i> , <i>Acacia ampliceps</i> , and <i>Rhagodia eremaea</i> , over low isolated chenopod shrubs of <i>Tecticornia</i> spp. and <i>Threlkeldia diffusa</i> , over mid tussock grassland of <i>Sporobolus virginicus</i> with occasional * <i>Cenchrus ciliaris</i> and <i>Triodia epactia</i> .	3.8 ha <0.1%	
Mudflat	NA	Mudflat, generally devoid of vegetation	2,489.7 ha 9.4%	NA
AxEx/Ex	NA	Mosaic of vegetation types AxEx and Ex vegetation types.	300.9 ha 1.1%	NA
Cleared	NA	Areas cleared of vegetation	148.0 ha	NA

Detailed flora and vegetation survey for the Eramurra Solar Salt Project
Prepared for Leichhardt Salt Pty Ltd

Vegetation type	Site/s	Vegetation description	Extent in study area (ha) and % of study area	Representative photograph
			0.6%	
AbTw/AxEx	NA	A complex of vegetation types AbTw and AxEx	23.7 ha 0.1%	NA
HscllCc/AbTw	NA	A complex of vegetation types HscllCc and AbTw	19.3 ha 0.1%	NA
AbTw/Tspp	NA	A complex of vegetation types AbTw and Tspp	19.9 ha 0.1%	NA
Te/Tspp	NA	A complex of the vegetation types Te and Tspp	9.9 ha <0.1%	NA
HscllCc/Ex	NA	A complex of vegetation types HscllCc and Ex	4.0 ha <0.1%	NA
HscllCc/Tspp	NA	A complex of vegetation types HscllCc and Tspp	3.9 ha <0.1%	NA
AbTw/Mudflat	NA	A complex of vegetation type AbTw and mudflat	2.1 ha <0.1%	NA
HscllCc/EcAcCs	NA	A complex of vegetation types HscllCc and EcAcCs	1.9 ha <0.1%	NA
HscllCc/Mudflat	NA	A complex of vegetation type HscllCc and mudflat	1.2 ha <0.1%	NA
Total			26,050.1 ha 98.4%	

Table 5-11 O2 Marine vegetation types, description and extent mapped in the study area

Vegetation type	Vegetation description	Extent in study area (ha)	% of study area
Am3	<i>Avicennia marina</i> (scattered)	188.4 ha	0.7%
Am2	<i>Avicennia marina</i> closed canopy (landward edge)	65.1 ha	0.2%
River	River	22.6 ha	0.1%
Rs/Am	<i>Rhizophora stylosa</i> / <i>Avicennia marina</i> (closed canopy mixed)	14.3 ha	0.1%
Am/Ca	<i>Avicennia marina</i> / <i>Ceriops australis</i> (scattered)	13.6 ha	0.1%
Am1	<i>Avicennia marina</i> (seaward edge)	10.8 ha	<0.1%
Rs1	<i>Rhizophora stylosa</i> (continuous cover)	5.5 ha	<0.1%
Rs2	<i>Rhizophora stylosa</i> (scattered)	1.1 ha	<0.1%
Sand	Bare sand	0.9 ha	<0.1%
Beach	Beach	16.4 ha	<0.1%
Not specified	Vegetation not defined	73.6 ha	0.3%
Ca	<i>Ceriops australis</i> (scattered)	0.1 ha	<0.1%
Total		412.4 ha	1.6%

Table 5-12 *Tecticornia* taxa distribution

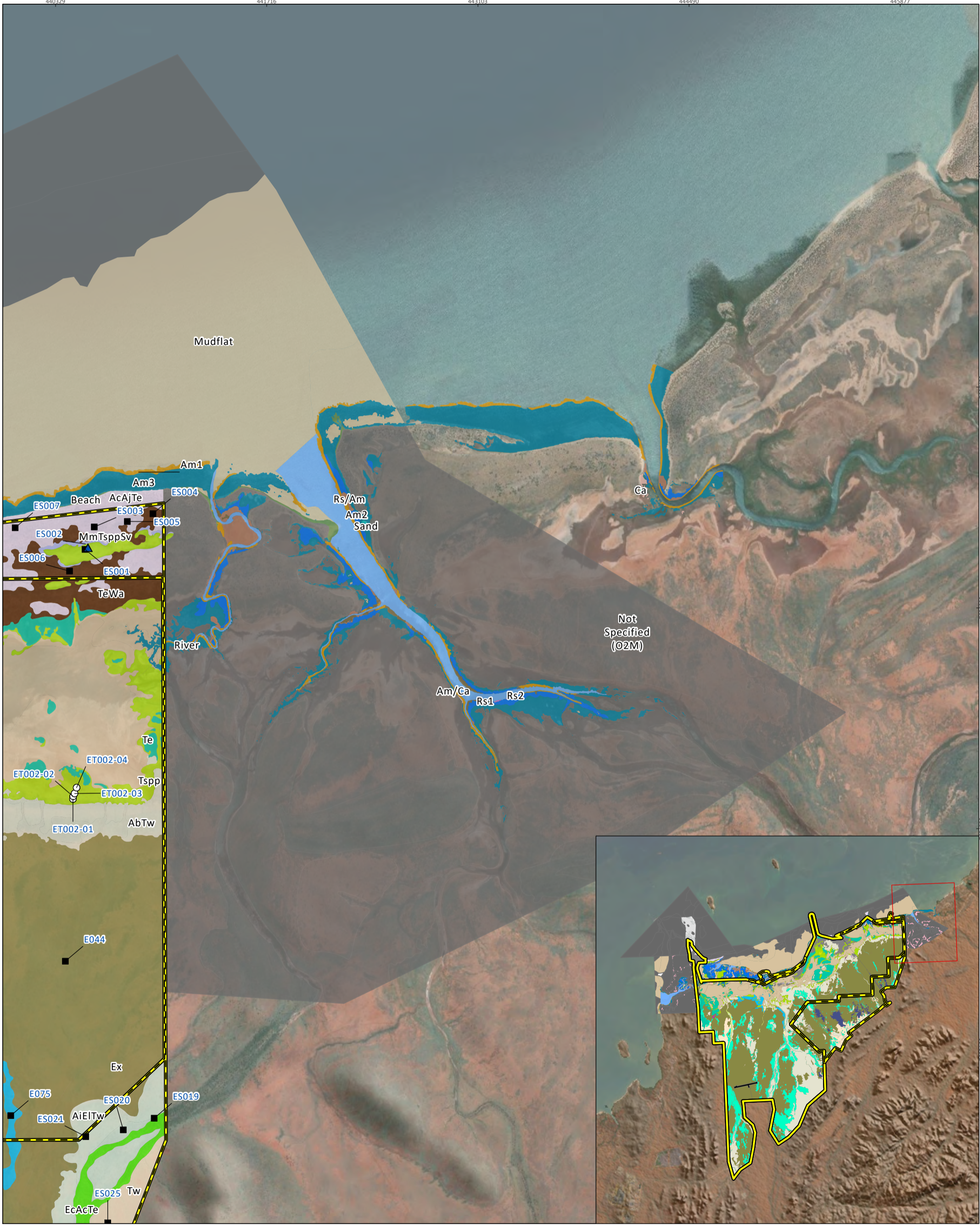
Species	No. sites recorded	% sites recorded	No. Inland sites	No. Coastal sites
<i>Tecticornia indica</i> subsp. <i>leiostrachya</i>	18	75	12	6
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>	19	79.2	12	7
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>	8	33.3	4	4
<i>Tecticornia auriculata</i>	9	37.5	5	4
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	9	37.5	2	7
<i>Tecticornia pruinosa</i>	3	12.5	1	2
<i>Tecticornia indica</i> subsp. <i>bidens</i>	3	12.5	2	1
<i>Tecticornia pterygosperma</i> subsp. <i>denticulata</i>	1	4.2	0	1


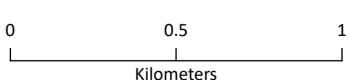
5.2.1.6 Vegetation condition

Remnant vegetation in the study area was recorded to be in Excellent to Completely Degraded condition (Figure 5-7) with the majority (76.8%) in Excellent condition (Table 5-13). Excellent condition ranks the vegetation as pristine or nearly so with no signs of damage caused by human activities since European settlement. Areas recorded as Good to Degraded were due to disturbances such as grazing and/or aggressive weeds. Weed species were a dominant factor within several vegetation types, in particular vegetation types AjCspp and AcAjTe.

Table 5-13 Vegetation condition – extent of each condition rating in study area

Condition rating	Area (ha)	% of study area	Vegetation types
Excellent	20,307.8	76.8	Tspp, AbTw, AssCc, AbTw/Mudflat, AbTw/Tspp, Tw, HscIIcC, AxEx, AxEx/Ex, Ex, HscIIcC/AbTw, HscIIcC/Tspp, HscIIcC/Mudflat, HscIIcC/Ex, MmTsppSv, AbTw/AxEx
Very Good	1,253.8	4.7	TeWa, Tw, HscIIcC, EcAcCs, AssCc, EvAcCf, Te/Tspp, Te, AbTw, AxEx, EvScSv, MmTsppSv, HscIIcC/AbTw, HscIIcC/Ex, HscIIcC/EcAcCs, Ex, AiEITw
Good	1,714.9	6.5	AcAjTe, AjCspp, Te, EvAcCf, EcAcCs, AiEITw, EvScSv, AssCc, EcAcTe, Ex, AbTw, Tw, AxEx
Poor	118.5	0.4	EvAcCf, Te, MmTsppSv, AssCc, AiEITw
Degraded	3.7	<0.1	AcAjTe and AjCspp
Completely Degraded	148.0	0.6	Cleared




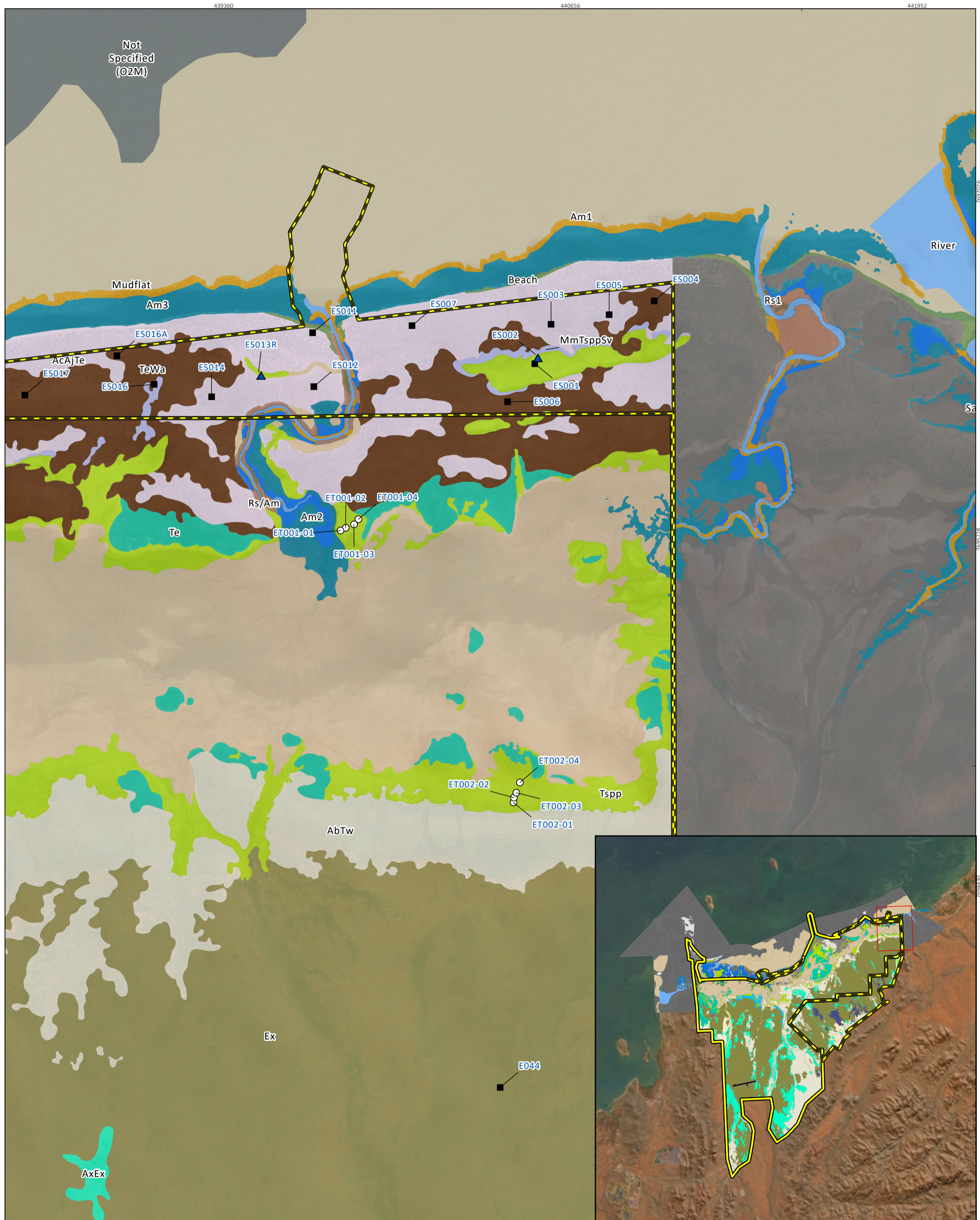
Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project	
Project No	1694
Date	23/10/2024
Drawn by	BK, GW
Map author	DL
	
	
1:22,800 (at A3) GDA 1994 MGA Zone 50	

Study Area (Expanded)	Am1	Mudflat	Te
Study Area (Original)	Am2	Not Specified (O2M)	TeWa
Vegetation type	Am3	River	Tspp
AbTw	Beach	Rs/Am	Tw
AcAjTe	Ca	Rs1	Sample site
AiEITw	EcAcTe	Rs2	Quadrat
Am/Ca	Ex	Sand	Relevé
	MmTspSv		Transect Quadrat

Figure 5-6a

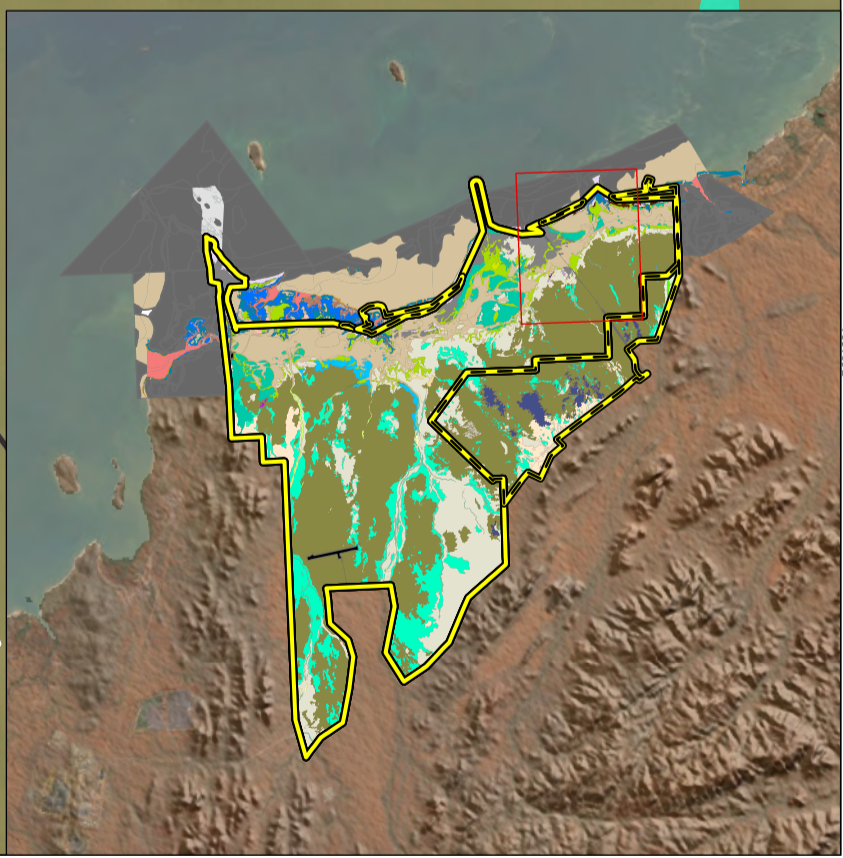
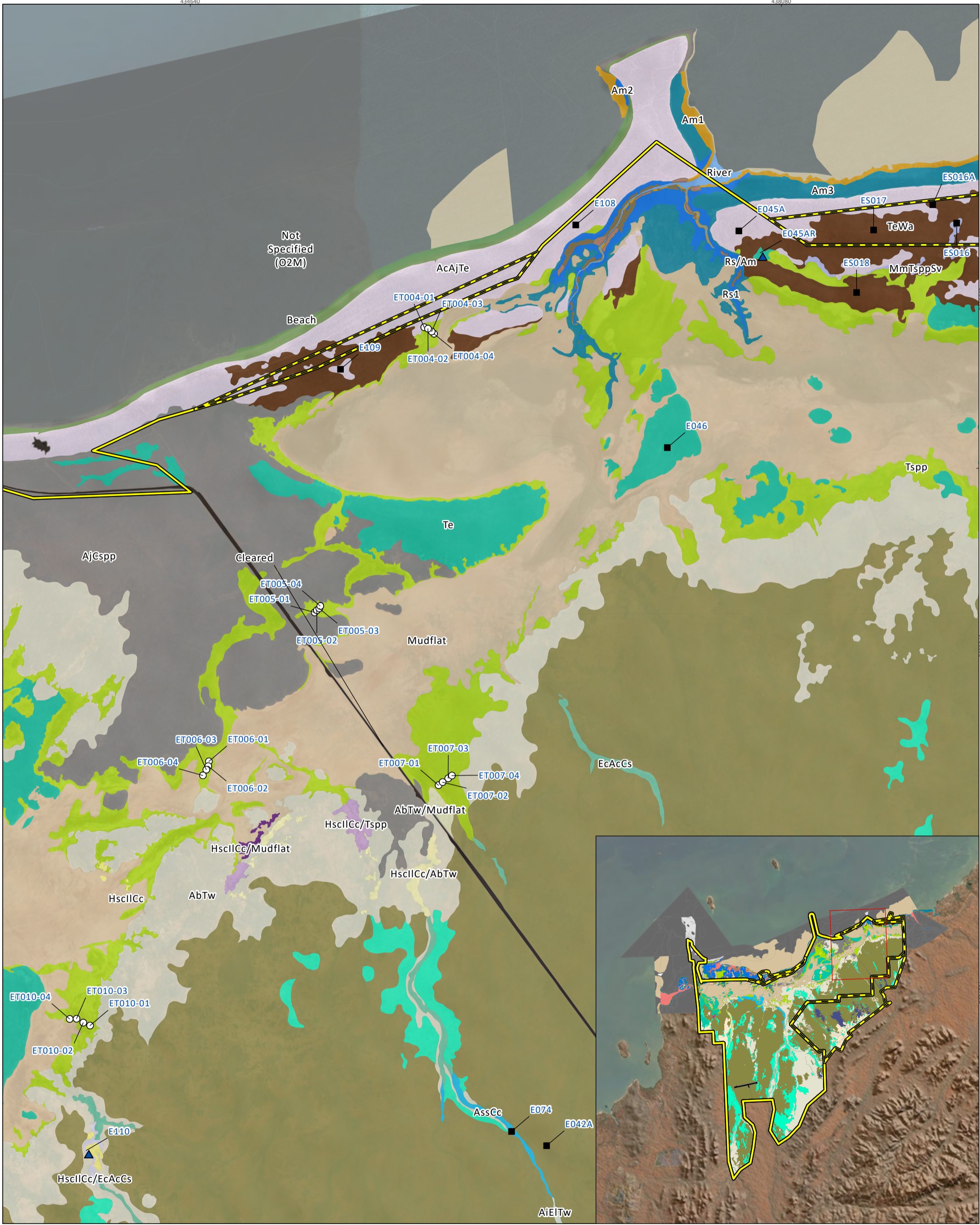
Vegetation types recorded in the field survey





	Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		Study Area (Expanded) Study Area (Original)	Am2 Am3 AxEx Beach Ex MmTspP Mudflat	Not Specified (O2M) River Rs/Am Rs1 Te TeWa	TspP Sample site Quadrat Relevé Transect Quadrat	Figure 5-6b Vegetation types recorded in the field survey
	Project No 1694 Date 23/10/2024 Drawn by BK, GW Map author DL		Vegetation type AbTw AcAjTe Am1	Not Specified (O2M) River Rs/Am Rs1 Te TeWa	TspP Sample site Quadrat Relevé Transect Quadrat		
			1:12,900 (at A3) GDA 1994 MGA Zone 50				

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Project No 1694
 Date 23/10/2024
 Drawn by BK, GW
 Map author DL

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 Kilometers

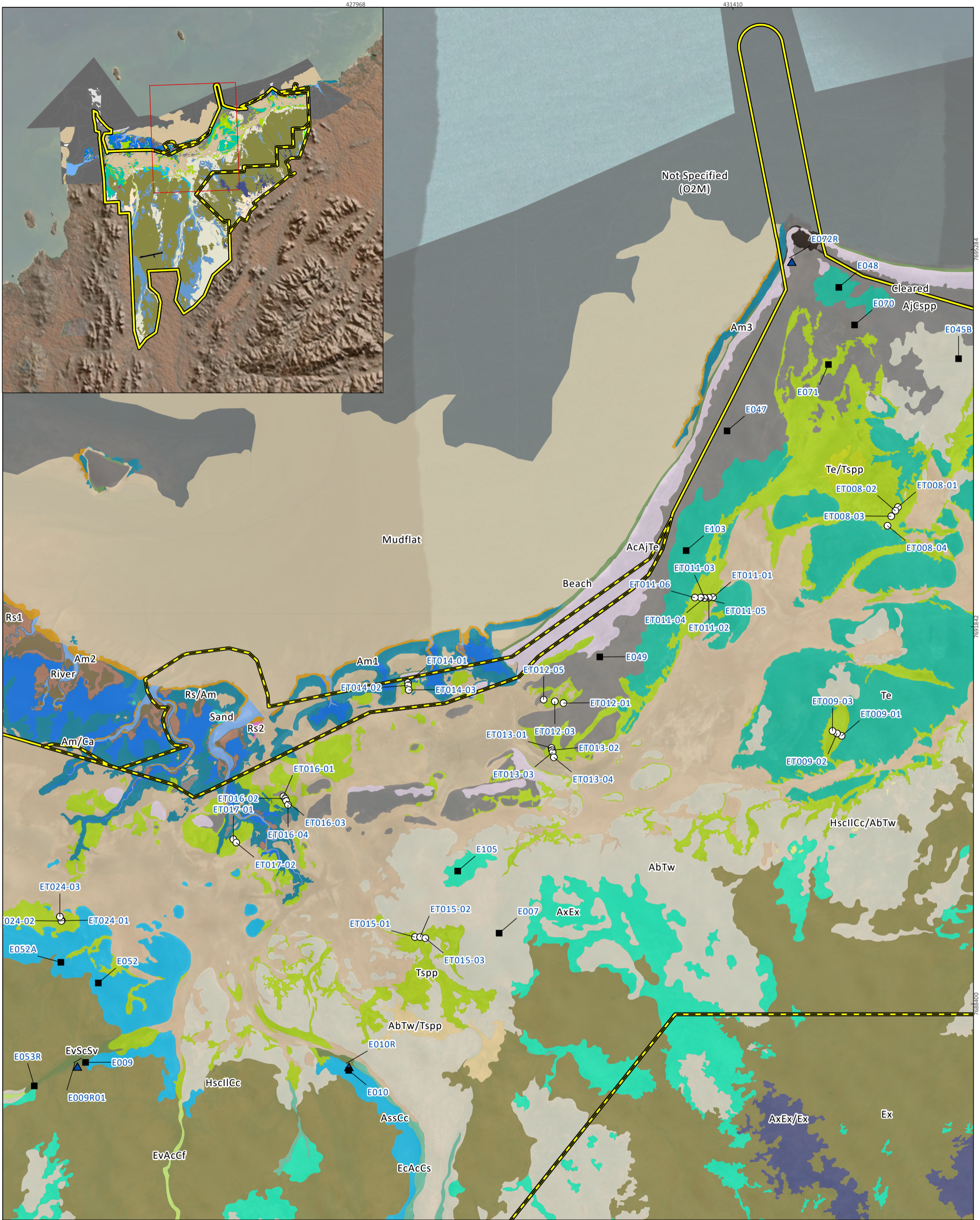
1:20,200 (at A3) GDA 1994 MGA Zone 50

Study Area (Expanded)	AjCspp	EcAcCs	HscIIc/Tspp	Te
Study Area (Original)	Am1	Ex	MmTsppSv	TeWa
Vegetation type	Am2	HscIIc	Mudflat	Tspp
AbTw	Am3	HscIIc/AbTw	Not Specified (O2M)	Quadrat
AbTw/Mudflat	AssCc	HscIIc/EcAcCs	River	Relevé
AcAjTe	AxEx	HscIIc/Mudflat	Rs/Am	Transect Quadrat
AiEITw	Beach	HscIIc/Mudflat	Rs1	
	Cleared			

Figure 5-6c
Vegetation types recorded in the field survey



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Project No 1694
 Date 24/10/2024
 Drawn by BK, GW
 Map author DL

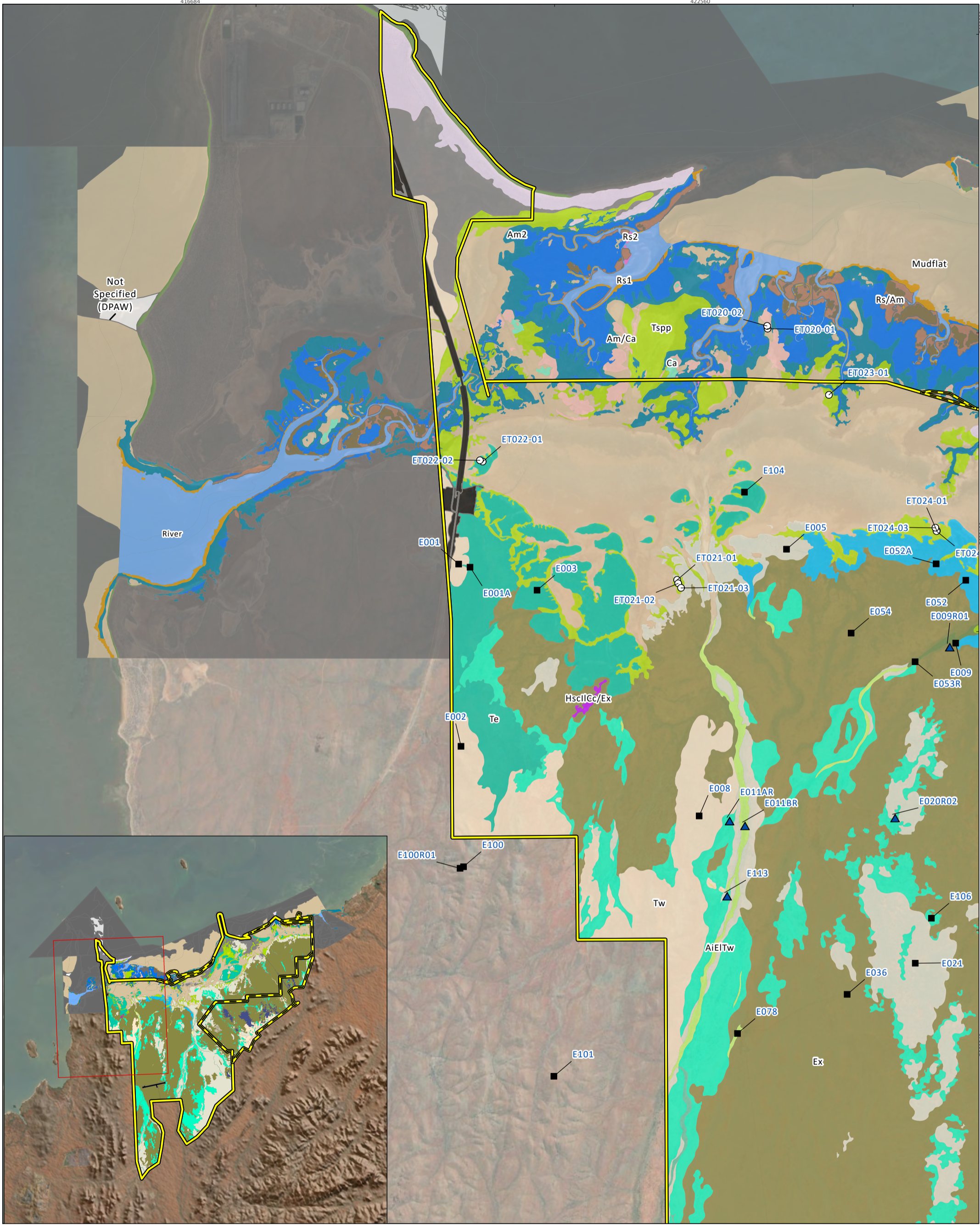
0 0.5 1
 Kilometers

1:31,500 (at A3) GDA 1994 MGA Zone 50

Study Area (Expanded)	Am/Ca	Ca	Mudflat	Te
Study Area (Original)	Am1	Cleared	Not Specified (O2M)	Te/Tspp
AbTw	Am2	EcAcCs	River	Tspp
AbTw/Tspp	Am3	EvAcCf	Rs/Am	Sample site
AcAjTe	AssCc	EvScSv	Rs1	Quadrat
AjCspp	AxEx	Ex	Rs2	Relevé
	Beach	HsclCc	Sand	Transect Quadrat
		HsclCc/AbTw		

Figure 5-6d
Vegetation types recorded in the field survey

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Leichhardt Industrial Pty Ltd
 Eramurra Solar Salt Project

Project No	1649
Date	24/10/2024
Drawn by	BK, GW
Map author	DL

0 0.8 1.6
 Kilometers

1:40,000 (at A3) GDA 1994 MGA Zone 50

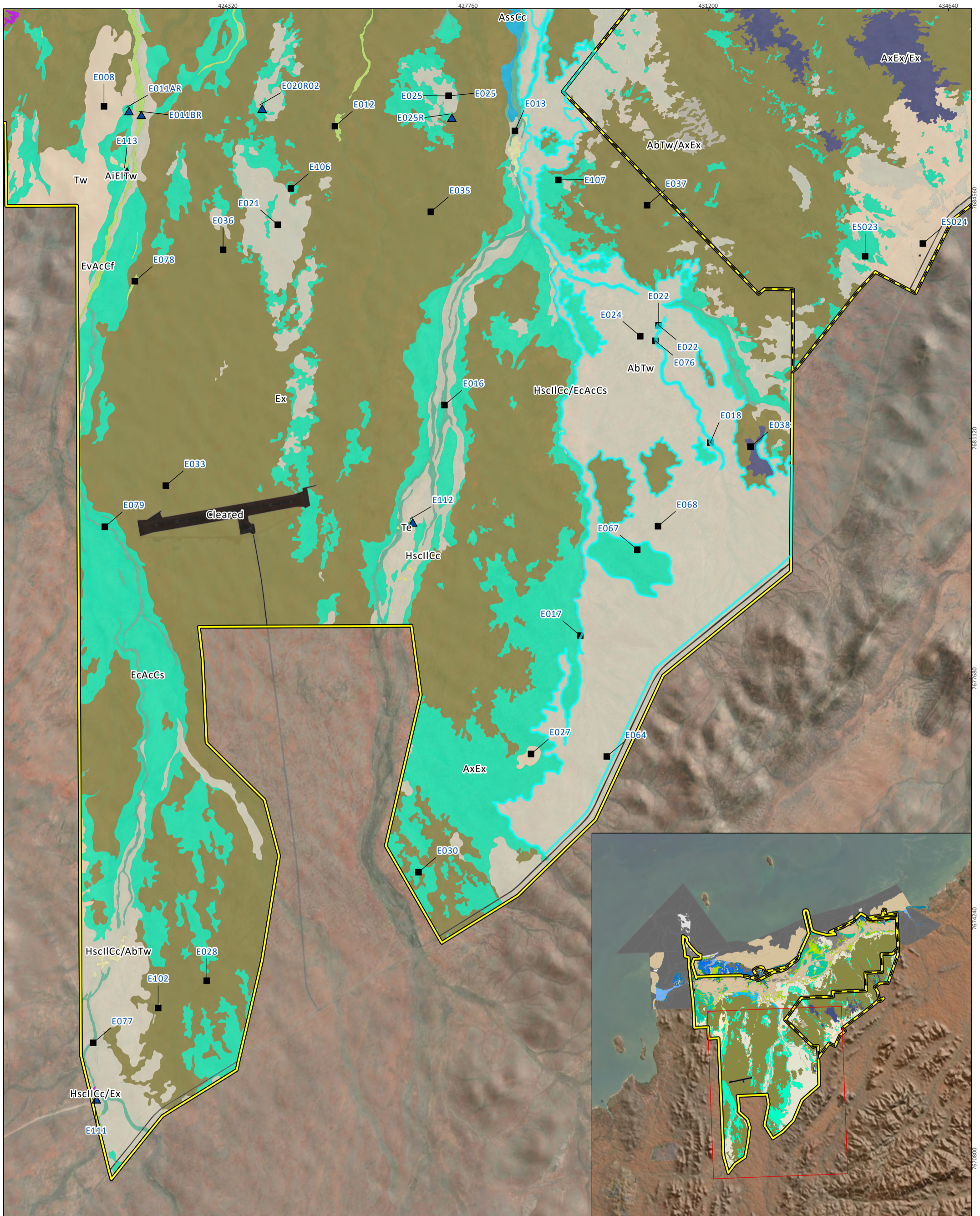
Study Area (Expanded)	Am1	EvAcCf	Not Specified (GHD)	Te
Study Area (Original)	Am2	EvScSv	Not Specified (O2M)	Tsp
Vegetation type	Am3	Ex	River	Tw
AbTw	AssCc	HscIIcC	Rs/Am	
AcAjTe	AxEx	HscIIcC/Ex	Rs1	
AiEITw	Beach	Mudflat	Rs2	
AjCspp	Ca	Not		
Am/Ca	Cleared	Specified (DPAW)		
	EcAcCs			

Figure 5-6e
Vegetation types recorded in the field survey

Legend:
 ■ Quadrat
 ▲ Relevé
 ○ Transect Quadrat

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P:\Data\Projects\EramurraSalt\1694-ESP-LI-BOT\GIS\MapDocuments\Figures\1694FigureUpdatesFrom1319.aprx



Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No	1694
Date	24/10/2024
Drawn by	BK, GW
Map author	DL

0 1 2
Kilometers

1:49,300 (at A3) GDA 1994 MGA Zone 50

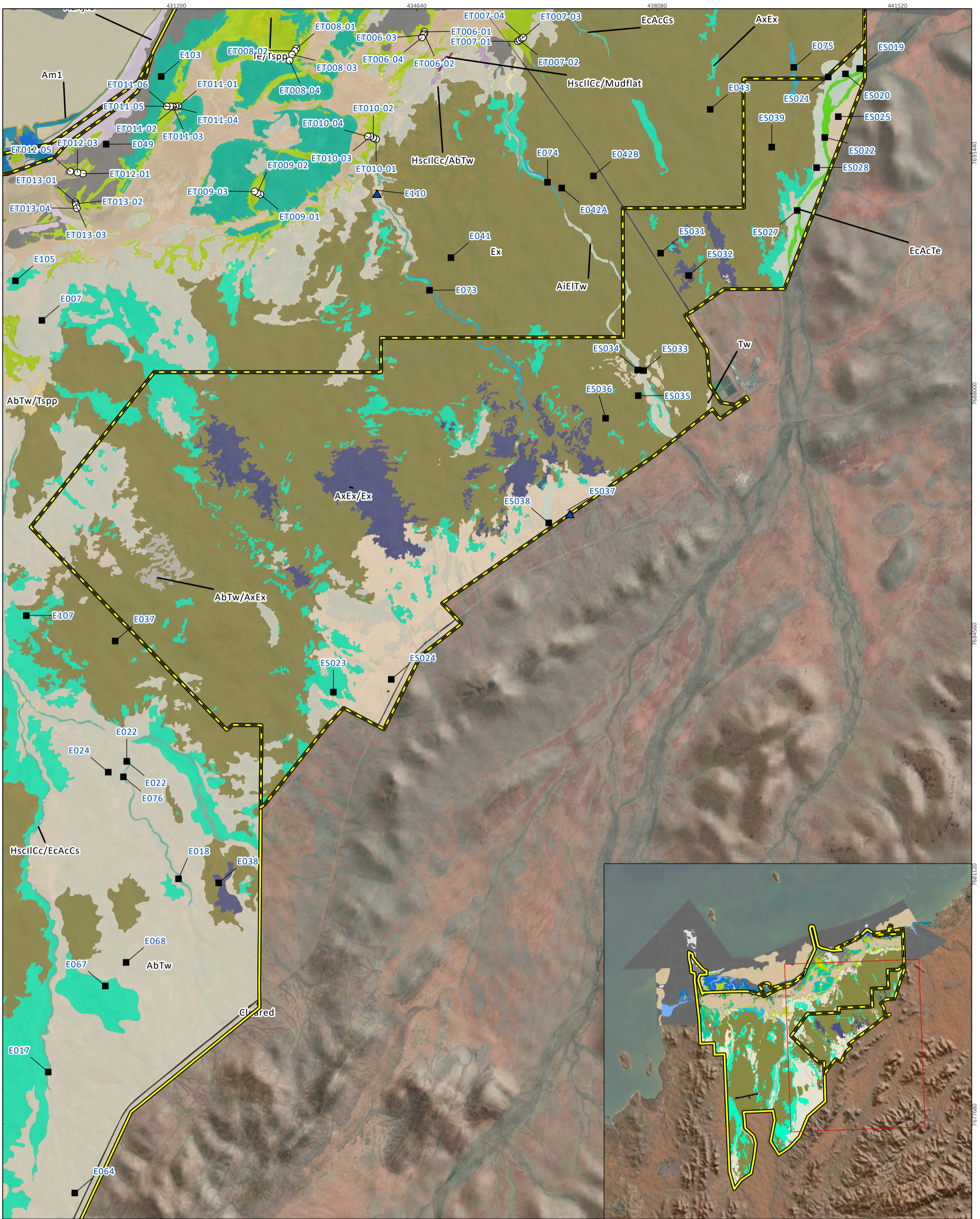
Study Area (Original)	AiElTw	EvAcCf	HscIIcC/Ex
Study Area (Expanded)	AssCc	Ex	Te
Vegetation type	AxEx	HscIIcC	Tw
AbTw	AxEx/Ex	HscIIcC/AbTw	Sample site
AbTw/AxEx	Cleared	HscIIcC/EcAcCs	Quadrat
	EcAcCs	HscIIcC/EcAcCs	Relevé

Figure 5-6f
Vegetation types recorded in the field survey



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P:\Data\Projects\EramurraSalt\1694-ESP-LI-BOT\GIS\MapDocuments\Figures\1694FigureUpdatesFrom1319.aprx



Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No 1694
Date 24/10/2024
Drawn by BK, GW
Map author DL

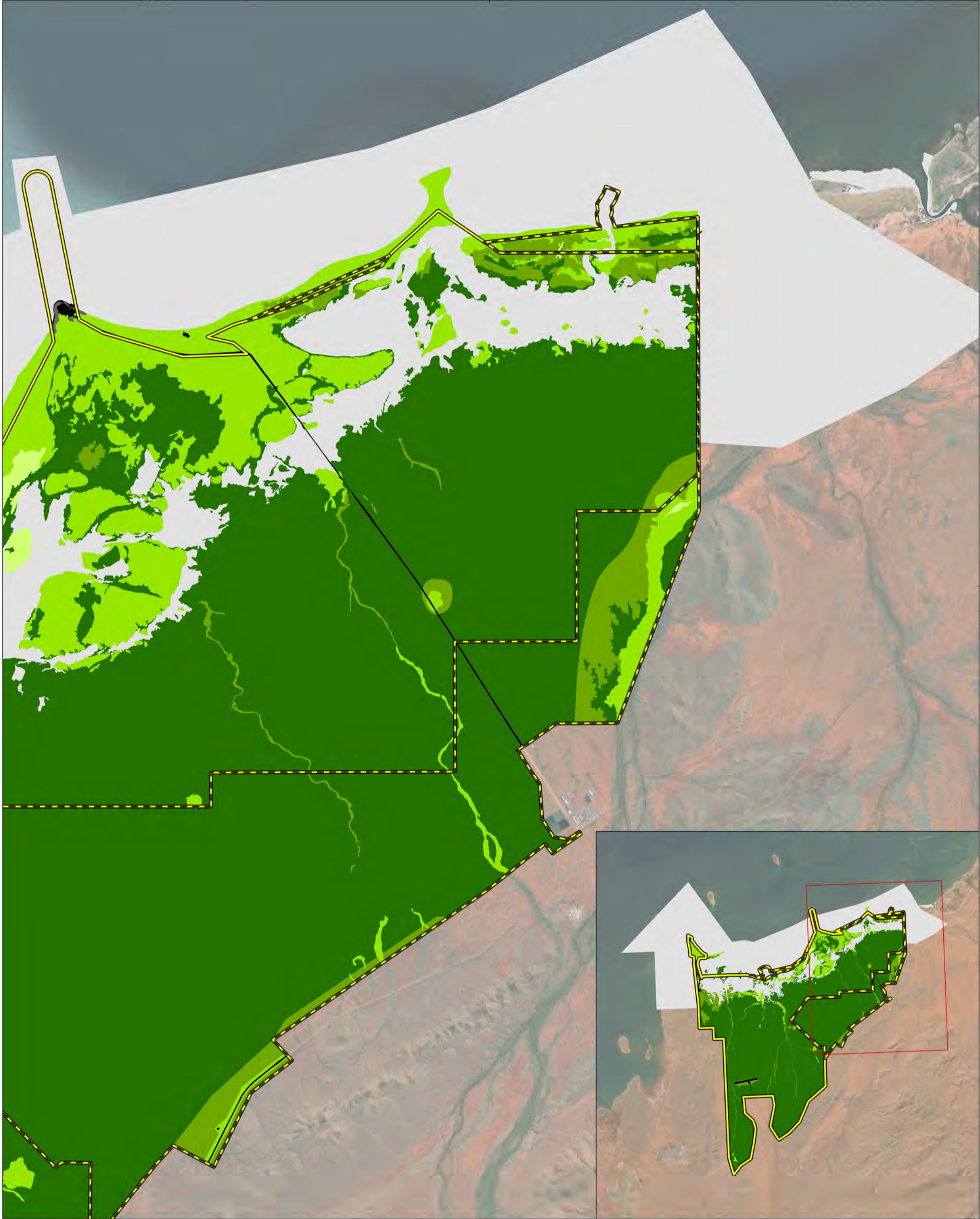
0 1 2
Kilometers

1:49,300 (at A3) GDA 1994 MGA Zone 50

Study Area (Original)	Am1	Ex	Rs1
Study Area (Expanded)	Am2	HscIIcC	Te
Vegetation type	Am3	HscIIcC/AbTw	Te/Tspp
AbTw	AssCc	HscIIcC/EcAcCs	Tspp
AbTw/AxEx	AxEx	HscIIcC/Mudflat	Tw
AbTw/Mudflat	AxEx/Ex	HscIIcC/Tspp	Sample site
AbTw/Tspp	Beach	Mudflat	Quadrat
AcAJTe	Cleared	Not Specified (O2M)	Relevé
AiEITw	EcAcCs	River	Transect Quadrat
AjCspp	EcAcTe	Rs/Am	

Figure 5-6g
Vegetation types recorded in the field survey





Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No	1319
Date	21/12/2022
Drawn by	BK
Map author	DL

0 1 2
Kilometers

1:49,300 (at A3) GDA 1994 MGA Zone 50

Study Area (Expanded)
 Study Area (Original)

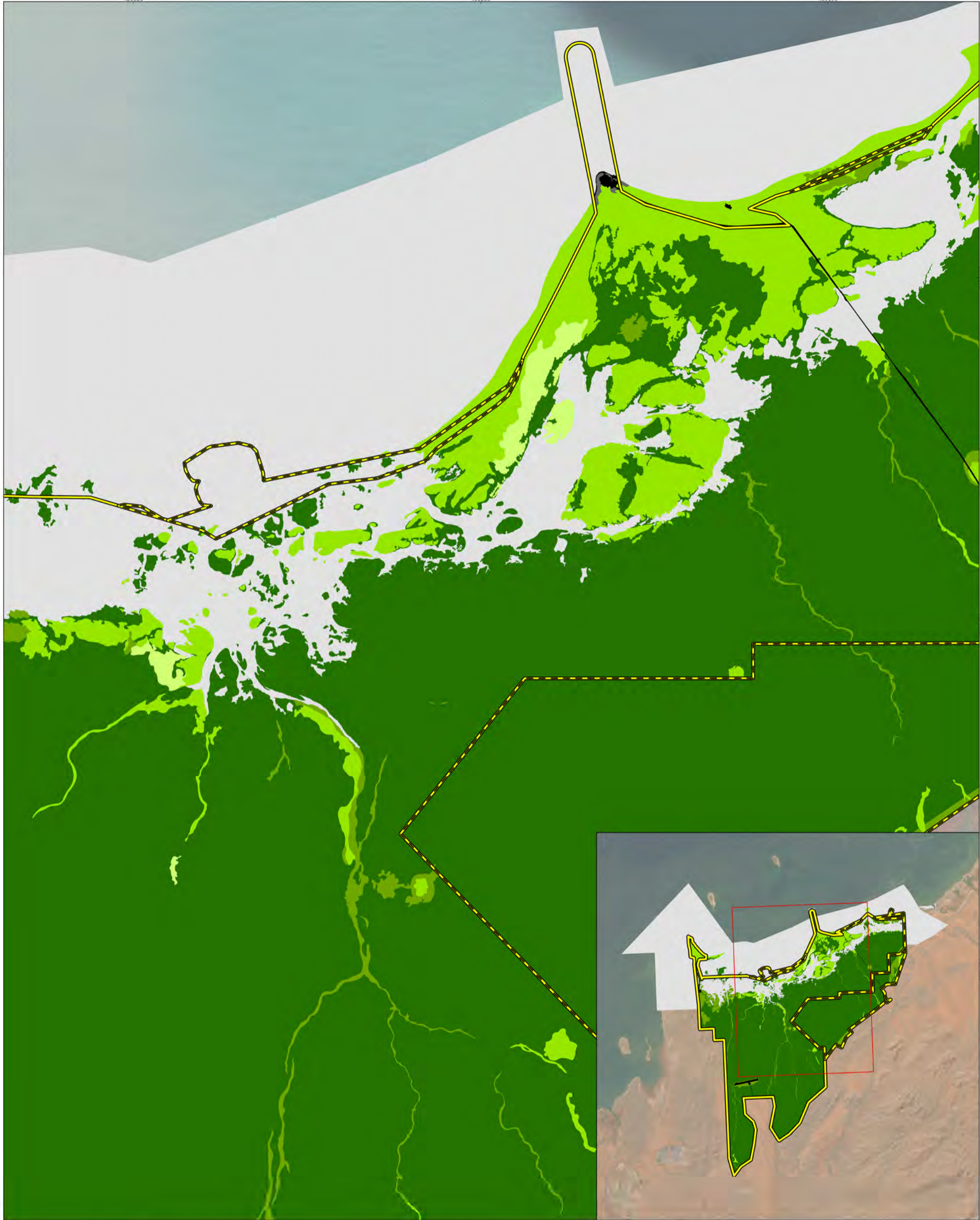
Vegetation condition

- Excellent
- Very good
- Good
- Poor
- Degraded
- Completely degraded
- NA

Figure 5-7a
Vegetation condition in the study area



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Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No 1319
Date 21/12/2022
Drawn by BK
Map author DL



0 1 2
Kilometers

1:49,300 (at A3)

GDA 1994 MGA Zone 50

- Study Area (Expanded)
- Study Area (Original)
- Vegetation condition**
- Excellent
- Very good
- Good
- Poor
- Degraded
- Completely degraded
- NA

Figure 5-7b

Vegetation condition in the study area



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7684260

7684301

7684332



Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		
Project No	1319	
Date	21/12/2022	
Drawn by	BK	
Map author	DL	
1:49,300 (at A3)		GDA 1994 MGA Zone 50

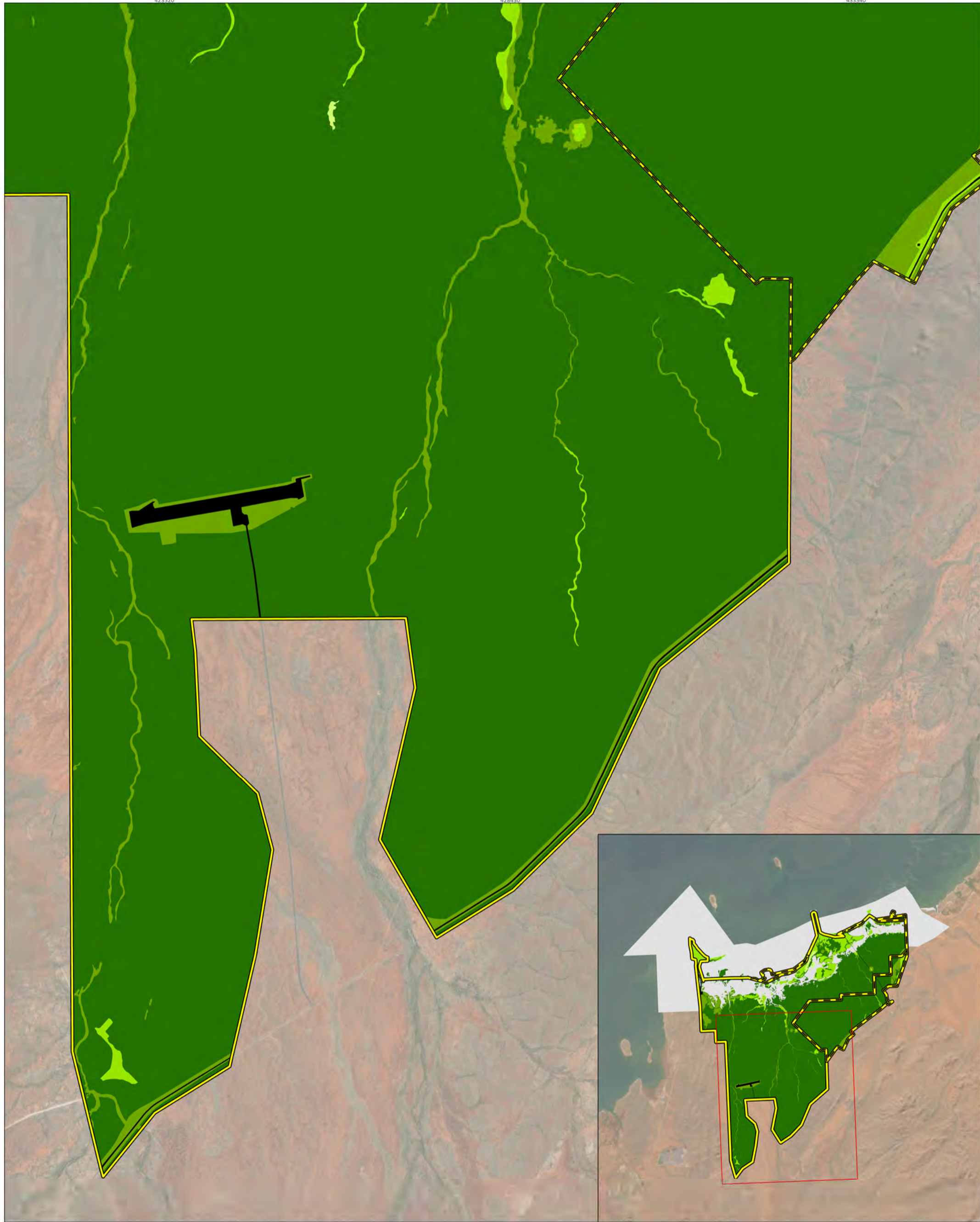
- Study Area (Expanded)
- Study Area (Original)

- Vegetation condition**
- Excellent
 - Very good
 - Good
 - Poor
 - Completely degraded
 - NA

Figure 5-7c
Vegetation condition in the study area

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7683185

7683270

7683355



Leichhardt Industrial Pty Ltd Eramurra Solar Salt Project		
Project No	1319	
Date	21/12/2022	
Drawn by	BK	
Map author	DL	
1:49,300 (at A3)		GDA 1994 MGA Zone 50

- Study Area (Expanded)
- Study Area (Original)

- Vegetation condition**
- Excellent
 - Very good
 - Good
 - Poor
 - Completely degraded

Figure 5-7d
Vegetation condition in the study area



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5.2.1.7 Significant vegetation

No TECs were recorded in the study area. Two vegetation types, Ex and TeWa, are considered to have regional significance (TeWa concurrently locally significant) and ten vegetation types are considered locally significant (Table 5-14).

Two PECs were recorded in the study area (Figure 5-8). The PEC 'Horseflat Land System of the Roebourne Plains Priority 3(iii)' community occupied 11,873.1 ha of the study area and is described by DBCA (2022) as:

"The Horseflat Land System of the Roebourne Plains extensive are weakly gilgaied clay plains dominated by tussock grasslands on mostly alluvial non-gilgaied, red clay loams or heavy clay loams. Perennial tussock grasses include *Eragrostis xerophila* (Roebourne Plains grass) and other *Eragrostis* spp., *Eriachne* spp. and *Dichanthium* spp. The community also supports a suite of annual grasses including *Sorghum* spp. and rare *Astrebla* spp. The community extends from Cape Preston to Balla Balla surrounding the towns of Karratha and Roebourne".

A minority proportion of the vegetation mapped for the study area consist of a mosaic of complex vegetation types. Areas where the PEC vegetation type (Ex) occurs as an element of the mosaic are considered as significant vegetation as a precaution (Table 5-14).

The PEC 'Coastal dune native tussock grassland dominated by *Whiteochloa airoides* Priority 3(iii)' community occupied 117.9 ha of the study area (vegetation type TeWa) and is described by DBCA (2022) as:

"Tussock grassland of *Whiteochloa airoides* occurs on the landward side of fore dunes, hind dunes or remnant dunes with white or pinkish white medium sands with marine fragments. There may be occasional *Spinifex longifolius* tussock or *Triodia epactia* hummock grasses and scattered low shrubs of *Olearia* sp. Kennedy Range (G. Byrne 66), *Scaevola spinescens*, *S. cunninghamii*, *Trianthema turgidifolium* and *Corchorus* species (*C. walcottii*, *C. laniflorus*)".

An additional 4.1 ha of the PEC 'Coastal dune native tussock grassland dominated by *Whiteochloa airoides* Priority 3(iii)' has been mapped outside of the study area (Figure 5-8).

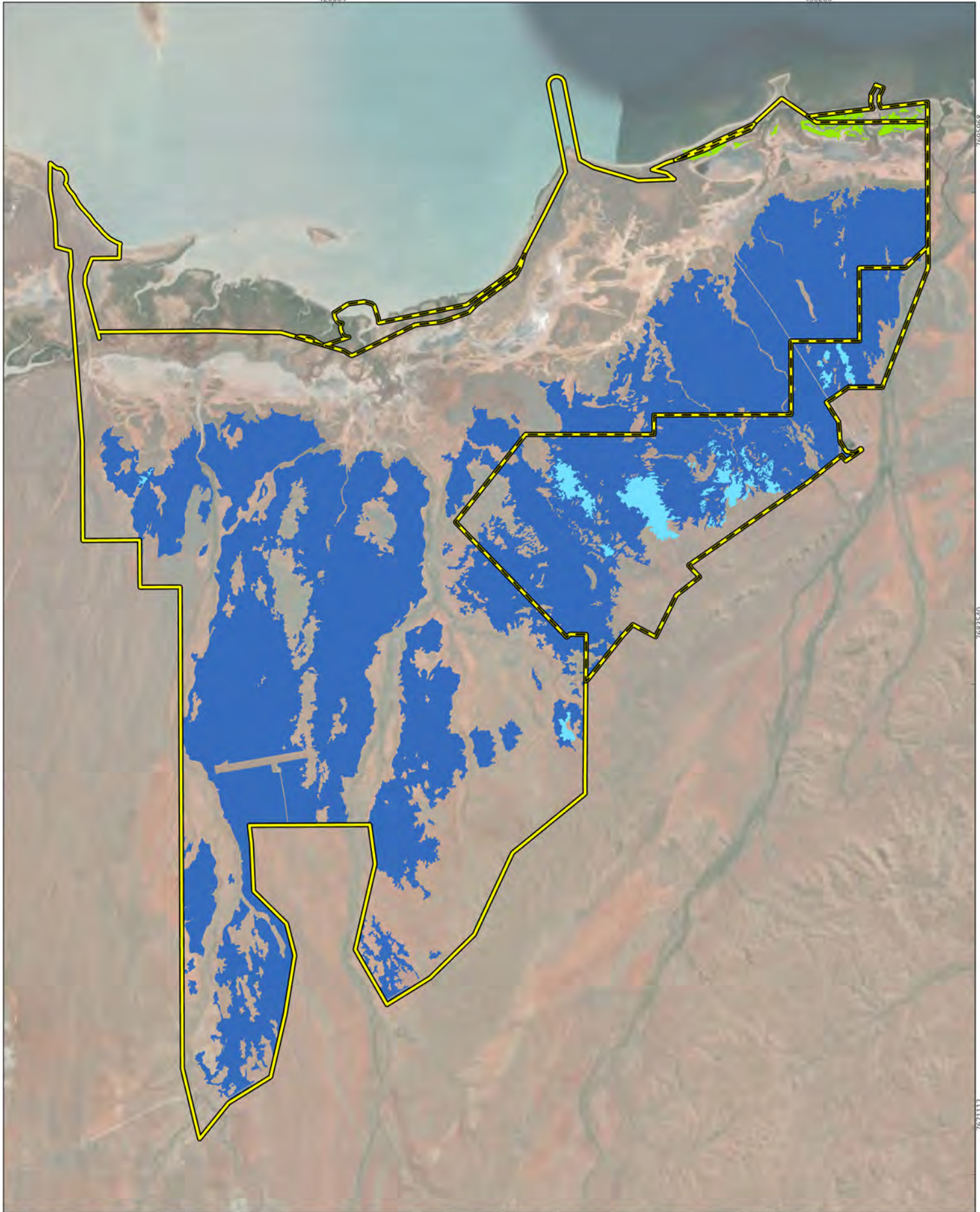
A total of six vegetation types, covering 12,987.5 ha are considered locally significant as habitat for significant flora. Three vegetation types, covering 17.9 ha are considered restricted within the study area (Table 5-14).

5.2.1.8 Groundwater dependent ecosystems

There were 4 vegetation types within the study area that may represent GDE's due to the presence of either *Eucalyptus camaldulensis* or *E. victrix* (Table 5-15) that were associated with creek systems (Figure 5-9). Combined the 4 vegetation types represent 1.1% of the study area.

Table 5-14 Significant vegetation types in the study area

Vegetation type	Significance	Level of significance
Ex	11,720.6 ha represents the PEC ' <i>Horseflat Land System of the Roebourne Plains Priority 3(iii)</i> ' and habitat for: <ul style="list-style-type: none"> • <i>Dolichocarpa</i> sp. Hamersley Station (P3) • <i>Polygala</i> aff. <i>galeocephala</i> (sp. nov.) 	Regionally and locally significant
TeWa	117.9 ha represents the PEC ' <i>Coastal dune native tussock grassland dominated by Whiteochloa airoides Priority 3(iii)</i> '	Regionally significant
AxEx/Ex	Half (150.5 ha) of the mosaic represents the PEC ' <i>Horseflat Land System of the Roebourne Plains Priority 3(iii)</i> '	Locally significant
HsllCc/Ex	Half (2.0 ha) of the mosaic represents the PEC ' <i>Horseflat Land System of the Roebourne Plains Priority 3(iii)</i> '	Locally significant
Tspp	865.4 ha represents habitat for <ul style="list-style-type: none"> • <i>Tecticornia halocnemoides</i> 'large ovate seed aggregate' (sp. nov.) • <i>Tecticornia</i> sp. sterile 1 (sp. nov.) • <i>Tecticornia</i> sp. sterile 2 (sp. nov.) • <i>Tecticornia</i> sp. sterile 3 (sp. nov.) • <i>Tecticornia</i> sp. sterile 4 (sp. nov.) • <i>Tecticornia</i> sp. sterile 5 (sp. nov.) • <i>Tecticornia</i> sp. sterile 7 (sp. nov.) • <i>Tecticornia</i> sp. sterile 8 (sp. nov.) 	Locally significant
AcAjTe	246.9 ha represents habitat for <ul style="list-style-type: none"> • <i>Scaevola</i> aff. <i>pulchella</i> (sp. nov.) 	Locally significant
AiElTw	100.0 ha represents habitat for <ul style="list-style-type: none"> • <i>Eremophila forrestii</i> subsp. <i>viridis</i> (P3) 	Locally significant
EvAcCf	54.6 ha represents habitat for <ul style="list-style-type: none"> • <i>Rostellularia adscendens</i> var. <i>latifolia</i> (P3) 	Locally significant
EvScSv	7.7 ha represents restricted vegetation community	Locally significant
HsllCc	6.4 ha represents restricted vegetation community and also represents habitat for <ul style="list-style-type: none"> • <i>Bonamia</i> aff. <i>media</i> 	Locally significant
MmTspSv	3.8 ha represents restricted vegetation community	Locally significant



Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No	1306
Date	21/12/2022
Drawn by	BK
Map author	DL

1:124,000 (at A4) GDA 1994 MGA Zone 50

- Study Area (Expanded)
- Study Area (Original)
- Priority Ecological Community**
- Horseflat land system of the Roebourne Plains (~50% of area as mosaic component)
- Horseflat land system of the Roebourne Plains
- Coastal dune native tussock grassland dominated by *Whiteochloa airoides*

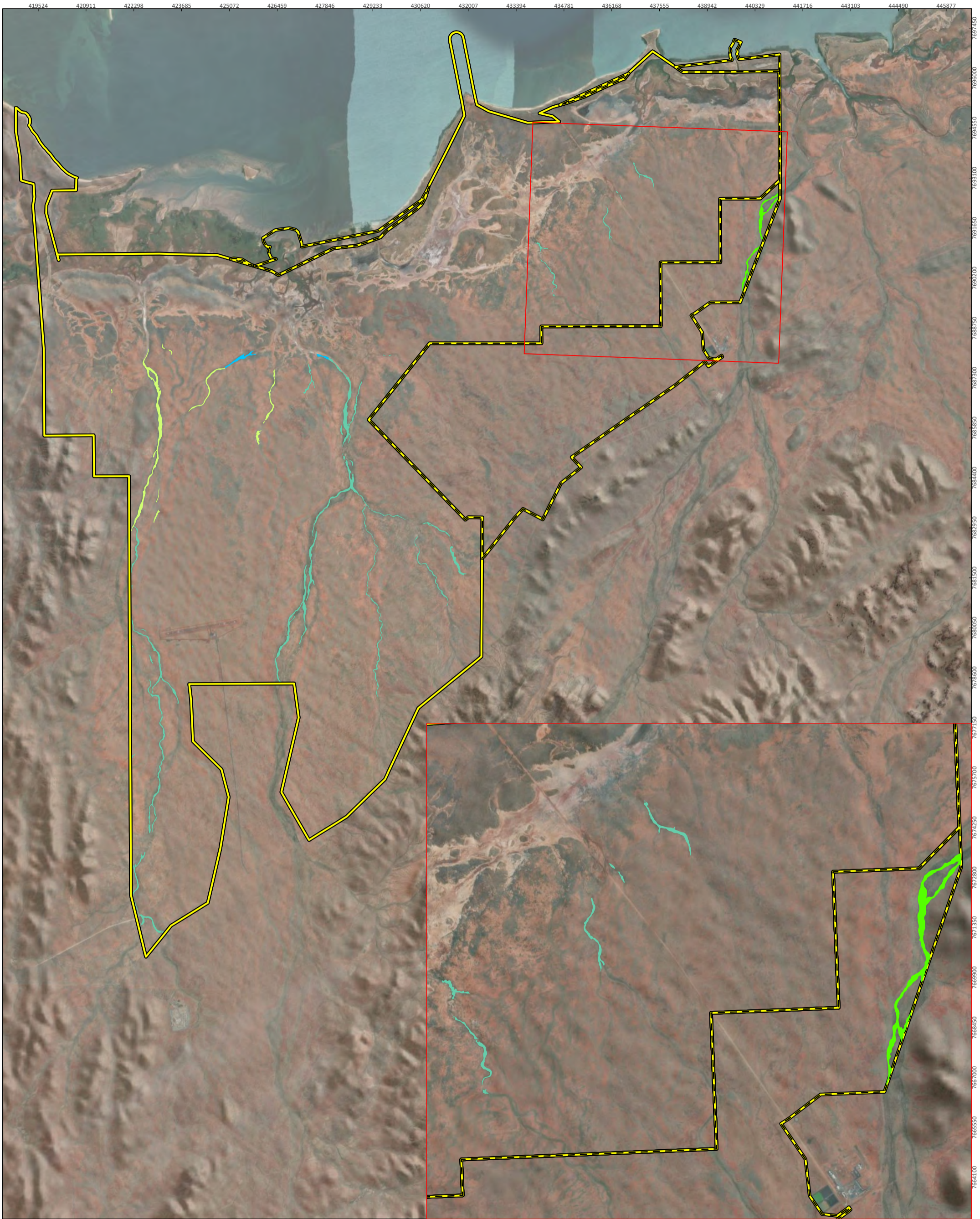
Figure 5-8
PECs recorded in the survey



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Table 5-15 Potential GDE vegetation types recorded in the study area

Vegetation type	% of study area
EcAcCs	0.7
EvAcCf	0.2
EcAcTe	0.1
EvScSv	0.1





Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No	1694
Date	27/11/2024
Drawn by	BK, GW
Map author	DL



0 2 4
Kilometers

1:100,000 (at A3) GDA 1994 MGA Zone 50

 Study Area (Expanded)
 Study Area (Original)

Vegetation type





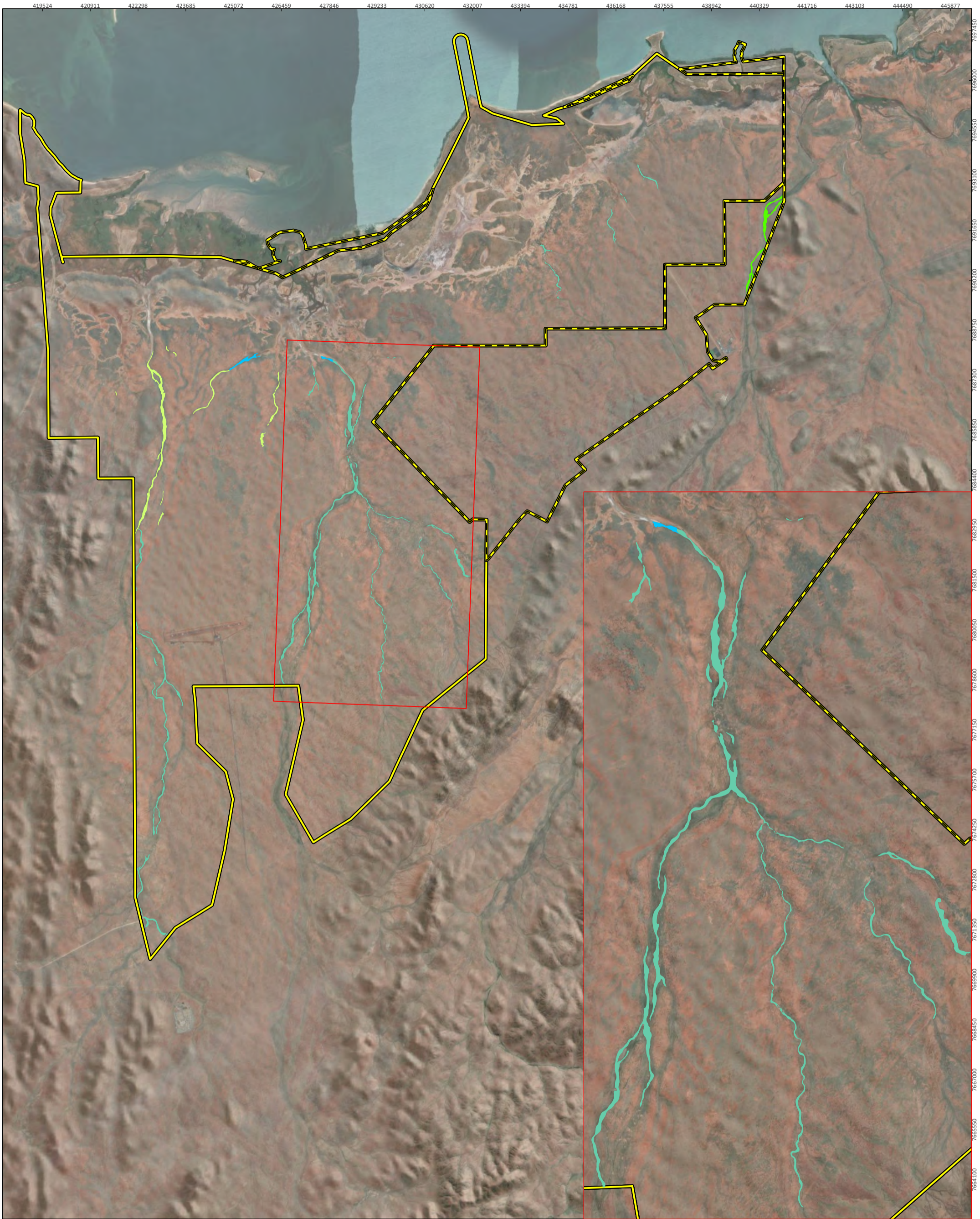
-  EcAcCs
-  EcAcTe
-  EvAcCf
-  EvScSv

Figure 5-9a

**Vegetation types
potentially representing
GDE**



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Leichhardt Industrial Pty Ltd
Eramurra Solar Salt Project

Project No	1694
Date	27/11/2024
Drawn by	BK, GW
Map author	DL



0 2 4
Kilometers

1:100,000 (at A3)

GDA 1994 MGA Zone 50

- Study Area (Expanded)
- Study Area (Original)

Vegetation type

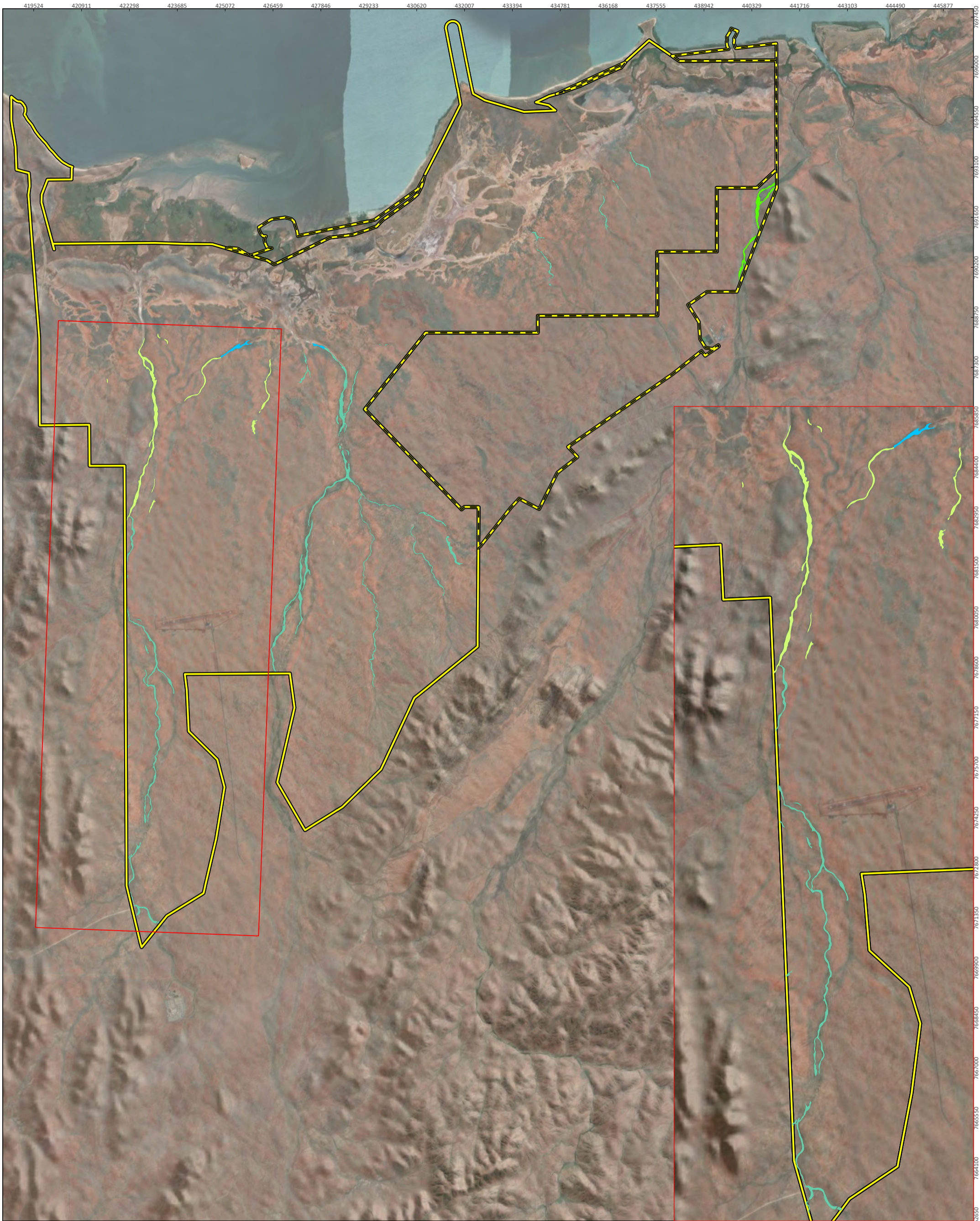
- EcAcCs
- EcAcTe
- EvAcCf
- EvScSv

Figure 5-9b

**Vegetation types
potentially representing
GDE**



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
Project No 1694
Date 27/11/2024
Drawn by BK, GW
Map author DL



0 2 4
Kilometers

1:100,000 (at A3)

GDA 1994 MGA Zone 50

 Study Area (Expanded)
 Study Area (Original)

Vegetation type





-  EcAcCs
-  EcAcTe
-  EvAcCf
-  EvScSv

Figure 5-9c

**Vegetation types
potentially representing
GDE**



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5.3 SURVEY LIMITATIONS

The limitations of the flora and vegetation survey have been considered in accordance with EPA (2016b, c) (Table 5-16).

Table 5-16 Consideration of potential survey limitations

Limitations	Comments
Availability of contextual information at a regional and local scale	Not a limitation. Previous reports were available combined with database searches to provide adequate background to the flora and vegetation survey.
Competency/experience of the team carrying out the survey	Not a limitation. The survey team possessed the required experience in the Pilbara region to satisfy the Technical Guidance.
Scope and completeness	Minor limitation. A detailed level survey was appropriate for the study area and the proponent's proposed works. The scope of the survey adequately covered the requirements of a detailed survey and was completed. Track files from some field surveys were not uploaded to the database and subsequently the entirety of survey effort was not recorded and cannot be displayed on the report figures.
Proportion of flora and fauna recorded and/or collected, any identification issues	Not a limitation. Flattening of the accumulation curve demonstrates adequate number of sites to capture the flora of the study area. Due to the dry conditions for some field visits 26 flora specimens were unable to be identified completely but are unlikely to represent known significant flora identified in the desktop review.
Access within the study area	Not a limitation. Access within the study area, including the use of helicopters, was adequate to allow full surveys of the study area.
Timing, rainfall, season	Not a limitation. The surveys field visits were conducted at appropriate timing and seasons as per the requirements of Technical Guidance.
Disturbance that may have affected the results of the survey	Not a limitation. There were no notable recent disturbances that may have impacted the results of the survey.

6 DISCUSSION

6.1 FLORA AND VEGETATION

The current survey recorded 360 flora taxa, representing 70% of the species identified in the desktop assessment from a study area of 0.05% of the desktop search area extent. The number of species recorded in the current study area (26,448.9 ha) compares favourably to other surveys within close proximity to this Project; following the general trend of a smaller increase in flora taxa recorded as the size of the study area increases: Astron Environmental Services Pty Ltd (2020) recorded 46 taxa in a 1.2 ha study area, Rio Tinto (2021) recorded 53 taxa in a 13.1 ha study area, GHD (2019) recorded 133 taxa in 210.9 ha, 360 Environmental (2014) recorded 144 taxa in 846 ha, (Phoenix 2021b) recorded 224 taxa in 4,435.9 ha.

6.1.1 Significant flora

No Threatened flora were recorded during the survey.

A total of three Priority species were recorded within the study area. Another species was deemed significant as it had not been recorded from the local region before (>100 km from known records) and was therefore considered significant as a range extension. An additional 12 taxa recorded within the study area considered significant as novel or potentially novel taxa.

The desktop review identified twenty Priority flora to occur within the local vicinity (within 40 km). Of these, one Priority 3 species was recorded during the field survey; *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479). The remaining 19 significant flora identified by desktop review were not found during the field survey. Of these, eight were assessed as unlikely to occur and 11 as possibly occurring within the study area. The 11 significant flora species determined as possible to occur in the study area may not have been found during the survey due to a combination of factors:

- they may not occur within the study area
- impracticality of searching all 26,448.9 ha of the study area
- focus of targeted searches on key habitats in preference of others, i.e. those considered to have highest potential for Priority flora presence.

Due to these factors, the presence of populations of the 11 significant flora cannot be ruled out. However, the potential habitat of these 'possible' significant flora species are not restricted to the study area.

None of the Priority flora recorded by the survey are endemic to the study area and all have distributions that extend regionally throughout the Pilbara bioregion and some to other bioregions. Two Priority 3 species, *Eremophila forrestii* subsp. *viridis* (P3) and *Rostellularia adscendens* var. *latifolia* (P3), were not identified within the desktop review and represent extensions to the known range of each species (147 km and 130 km, respectively).

The record for *Eremophila forrestii* subsp. *viridis* represents only the seventh record for the species in Western Australia (WA Herbarium 1998) and only the second record for the species in the Pilbara bioregion/Roebourne subregion. The record also represents the northernmost extent for the species. There is little information available regarding population sizes for the species with plant frequency for the previous record in the Roebourne subregion recorded as occasional, a record of 6-20 plants in the Cape Range subregion and a comment of common in the Great Victoria Desert bioregion. A single record of this species was recorded in the study area and a subsequent revisit to the location for targeted searches at the record and in nearby similar habitat failed to locate any further individuals. As there are few records for the species and the population size for the species overall is unknown the record in the study area is considered to have a high importance at both the local and regional scale.

The record for *Rostellularia adscendens* var. *latifolia* represents the first for the Roebourne subregion and the 49th for the Pilbara bioregion (WA Herbarium 1998). There are 18 records of population size with 14 indicating 10 or less plants and a highest count of 93 individuals indicating potential overall low numbers for the species. The species was identified post-field for the current survey and a revisit at this location failed to relocate the species and targeted searches failed to locate any further plants. As the first record for the Roebourne subregion and a large range extension for a species with potentially low overall population size, the population at the Project is considered of high local and regional importance.

Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479) has 38 previous records in the Pilbara bioregion including records in the Roebourne subregion. There are few (9) records of population size, five of which indicate that the species as common in the area. The number of plants present in the study area was estimated at several hundred with a recorded cover value of 0.75% at one location where it was common within and outside of the survey quadrat. The species was recorded in vegetation type Ex that represents a Priority 3 PEC and covered 11,873.1 ha of the study area. There is therefore a considerable area of suitable habitat for this species and it is likely that the population within the study area may number in the thousands of individuals. Subsequently the population in the study area is considered to have high local significance. As the species has a broad distribution in the Pilbara bioregion with previous records in the Roebourne subregion the population in the study area is not considered regionally significant.

The specimen collected and identified as *Bonamia* aff. *media* had leaf bases that differed from the description for *Bonamia media* which it most closely resembles and was considered a potential new species and subsequently a significant species displaying anomalous features.

The specimen collected and identified as *Polygala* aff. *galeocephala* resembles *Polygala galeocephala* with a few noticeable differences; the specimen collected is generally hairier than the typical *P. galeocephala*, has an upright habit rather than prostrate, and has larger than typical fruit. The study area is outside the known range for *P. galeocephala* with the nearest known record 230.7 km distant. Due to the lack of identification, this specimen is therefore considered significant as either a range extension or a possible new taxon.

The specimens collected and identified as *Scaevola* aff. *pulchella* contains fruiting material that is hairier than typical for *Scaevola pulchella*. The study area is 117.2 kms from the nearest known record of *S. pulchella*. These specimens are therefore considered significant as either a range extension or possible new taxon.

Further collections of each of each of the potentially new species would facilitate determination of whether they do represent previously undescribed species. All species would be considered of high local and regional significance as new species. Should it be determined that *Polygala* aff. *galeocephala* is *Polygala galeocephala*, and *Scaevola* aff. *pulchella* is *Scaevola pulchella*, both species would have a high importance at the local level as range extensions but less importance at the regional level as both species have previously been recorded for the Roebourne bioregion.

The novel species *Tecticornia halocnemoides* 'large ovate seed aggregate' (ThLOSA) recorded during the survey is a known but undescribed taxon (pers.com, Kelly Sheppard, 2 Dec 2020). This taxon was identified by Phoenix (Phoenix 2021b) during a previous survey 22.2 km west of the study area. Phoenix (2021b) recorded populations of this species up to 90 kms across coastal samphire shrublands. During the current survey ThLOSA was recorded across nine transects within vegetation type T spp. Phoenix have also recorded the species in surveys conducted in the Murchison (Phoenix 2022 in prep), Little Sandy Desert (Phoenix 2021a, 2022) and Great Victoria Desert (Phoenix 2023) bioregions. The populations at the Project are subsequently considered to have local importance as they represent the northernmost extent of the known distribution of the species at the present time but it is apparent from recent surveys that the species has a broad distribution in Western Australia.

An additional nine *Tecticornia* taxa have unresolved taxonomy due to a lack of material, it is therefore not possible to determine if they are a common or conservation significant species and so are listed as novel species until confirmed otherwise. Later collection of additional fertile material would likely resolve the identity, but is complicated by the need for seasonal conditions favourable to these *Tecticornia*. Notably, all taxa that were not identifiable following the first visit but were identifiable following recollection in subsequent visits were determined to be common, unthreatened species.

Bergia henshallii has previously been recorded in the Roebourne sub-region (WA Herbarium 1998) but the study area represents the westernmost records for the species, a considerable distance from the nearest known record. In addition, the species was recorded in riparian vegetation of creek systems, a different habitat to that recorded previously as the species is most regularly recorded in plains and sand dunes with some records in damp depressions and on lake edges (WA Herbarium 1998). As the species has been recorded previously. It is therefore considered that the plants in the study area be considered of high local significance due to isolation from previous records and presence in a unique habitat for the species.

6.1.2 Introduced flora

The Declared Pest and WoNS, **Prosopis glandulosa x velutina* was recorded within one quadrat. This introduced species is allocated to the category 2 (C2) - eradication category (DPIRD 2021). This identifies organisms which should be eradicated from part or all of Western Australia, at the state-wide scale. Management for this species may be required.

6.1.3 Vegetation

The 17 vegetation types mapped for the survey area are generally representative of the broader vegetation associations described by Shepherd et al. (2002) and previous surveys conducted in close proximity to the study area.

Two vegetation types, Ex and TeWa, are considered to have regional significance as Priority Ecological Communities. The vegetation type Ex represents the PEC 'Horseflat Land System of the Roebourne Plains Priority 3(iii)' community. As a precaution, the vegetation mosaics containing the vegetation type, Ex, are also considered as significant vegetation, this includes; AxEx/Ex and HscllCc/Ex. The PEC 'Horseflat Land System of the Roebourne Plains Priority 3(iii)' community occupies 11,873.1 ha of the study area.

A total of 97.6 % of the vegetation across the 'Horseflat' PEC was recorded in Excellent condition with negligible signs of disturbance. The remaining 2.4% was recorded in Very Good and Good condition with disturbances noted from the presence of weed species or grazing. The Ex vegetation type is considered regionally significant, and the mosaic or complex vegetation types AxEx/Ex and HscllCc/Ex considered locally significant for the Project as they contain components of the PEC. Aerial imagery and the DBCA desktop search results (DBCA 2020b) indicate that this PEC also occurs outside the study area (up to 150 kms east), however the proportional impacts are beyond the scope of this survey.

The vegetation type TeWa represents the PEC 'Coastal dune native tussock grassland dominated by *Whiteochloa airoides* Priority 3(iii)' community, occupying 117.9 ha of the study area. As a PEC this vegetation type is considered regionally significant. All sites within this vegetation type were recorded to be in Very Good condition, with minor disturbances recorded due to the presence of occasional weeds. The DBCA (DBCA 2020b) records of this PEC are restricted within the local region of the study area, occurring mainly on nearby offshore islands and coastal dunes to the east, therefore Phoenix recommends avoidance or minimisation of impacts to these vegetation types.

A total of five vegetation types are considered locally significant for the Project as they represent habitat for significant flora (including Ex). An additional three vegetation types have a restricted distribution across the Project, each occupying less than 0.1% of the study area.

Vegetation types providing potential habitat for Priority flora identified in the likelihood assessment as possible to occur in the study area (but not found by the survey) are displayed in Table 6-1 below. Suitable habitat was identified for 11 Priority species, including *Goodenia pallida* (P1) and *Minuria tridens* (P1). The vegetation type EcAcCs, is regarded as potential habitat for five Priority 3 species recorded in the desktop assessment.

Just over 1% of the study area comprises vegetation that may potentially represent GDE. Potential GDE was restricted to the riparian zone of creeks within the study area.

Table 6-1 Vegetation types of potential habitat for desktop Priority flora deemed as possible to occur within the study area

Potential habitat	<i>Goodenia pallida</i> (P1)	<i>Minuria tridens</i> (P1)	<i>Cucumis</i> sp. Barrow Island (D.W. Goodall 1264) (P2)	<i>Atriplex lindleyi</i> subsp. <i>conduplicata</i> (P3)	<i>Euphorbia australis</i> var. <i>glabra</i> (P3)	<i>Gomphrena cucullata</i> (P3)	<i>Gomphrena leptophylla</i> (P3)	<i>Gymnanthera cunninghamii</i> (P3)	<i>Stackhousia clementii</i> (P3)	<i>Terminalia supranitifolia</i> (P3)	<i>Goodenia nuda</i> (P4)
Ex				✓							
AbTw	✓		✓				✓				
AxEx											
Te		✓	✓				✓				
Tspp											
Tw							✓				
AjCspp											
AcAjTe											
AssCc											
EcAcCs					✓		✓	✓	✓		✓
TeWa											
AiEITw							✓				
EvAcCf					✓						✓
EcAcTe					✓				✓		✓
EvScSv					✓	✓					
HsllCc										✓	
MmTsppSv											

The majority of the native vegetation in the study area was recorded to be in Excellent condition with no obvious signs of damage caused by human activities since European settlement. The areas recorded as Good to Degraded were due to obvious signs of disturbances such as grazing and/or invasive weeds. A small portion of the vegetation was recorded to be Poor (0.4%) and Degraded (<0.1%) due to the high presence of weed infestations altering species composition and vegetation structure.

6.2 CONCLUSION

This survey conducted over a 24 month period has identified the flora and vegetation values of the study area for the Eramurra Salt Project.

Of the 17 vegetation types defined, none were found to represent Threatened Ecological Communities. Two Priority Ecological Communities were recorded within the study area. Vegetation type Ex (and portions of areas mapped as mosaics) covering 11,873.1 ha (44.9 %) of the study area is considered the 'Horseflat Land System of the Roebourne Plains Priority 3(iii)' PEC, and vegetation type TeWa covering 117.9 ha (0.4 %) is considered the 'Coastal dune native tussock grassland dominated by *Whiteochloa airoides* Priority 3(iii)' PEC. Both of these PECs are known to occur outside of the study area, though an assessment of proportions is beyond the scope of this survey. Eight vegetation types are considered locally significant for the Project as either habitat for significant flora (Ex, Tspp, AcAjTe, AiElTw and EvAcCf vegetation types) or have restricted distribution within the study area (EvScSv, HscllCc and MmTsppSv vegetation types).

The majority of the vegetation in the study area was recorded to be in Excellent condition with negligible signs of damage caused by human activities since European settlement. A small portion of the vegetation was recorded to be Poor and Degraded due to the high presence of weed infestations altering the vegetation structure and composition. The Declared Pest and WoNS **Prosopis glandulosa* x *velutina* was recorded within one quadrat. This introduced species is allocated to the category 2 (C2) - eradication category.

Three Priority 3 flora were recorded within the study area; *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3), *Eremophila forrestii* subsp. *viridis* (P3) and *Rostellularia adscendens* var. *latifolia* (P3). Of these, *E. forrestii* subsp. *viridis* (P3) and *R. adscendens* var. *latifolia* (P3) are also range extensions not previously recorded within the local region. Four other species recorded during the field surveys are also deemed significant as range extensions though do not hold a conservation ranking. All of the Priority flora identified for the Project exist regionally. An additional 12 taxa recorded within the study area considered significant as novel taxa or as potential novel taxa. Though not recorded by the survey, suitable habitat was identified for 11 Priority species, including *Goodenia pallida* (P1) and *Minuria tridens* (P1).

While this survey provides a baseline of flora and vegetation for the study area, proposed impacts and (their proportions) are expected to vary depending on the Project's footprint and/or development envelope. Phoenix recommends that proposed development of the Project accounts for the values identified by this survey in order to reduce proportional impacts where appropriate.

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Detailed flora and vegetation survey for the Eramurra Solar Salt Project
Prepared for Leichhardt Salt Pty Ltd

Appendix 1 Survey site locations

Site name	Sample type	Latitude	Longitude
E001	Quadrat	-20.8995	116.2286
E001A	Quadrat	-20.8999	116.2299
E002	Quadrat	-20.9185	116.2288
E003	Quadrat	-20.9023	116.2373
E005	Quadrat	-20.8981	116.2649
E007	Quadrat	-20.8975	116.32
E008	Quadrat	-20.9259	116.2551
E009	Quadrat	-20.908	116.2836
E009R01	Relevé	-20.908	116.2827
E010	Quadrat	-20.9087	116.3067
E010R	Relevé	-20.9082	116.3065
E011AR	Relevé	-20.926	116.2582
E011BR	Relevé	-20.9265	116.2599
E012	Quadrat	-20.9286	116.2869
E013	Quadrat	-20.9293	116.3117
E016	Quadrat	-20.9647	116.3018
E017	Quadrat	-20.9947	116.3204
E018	Quadrat	-20.9697	116.3385
E020R02	Relevé	-20.9258	116.2766
E021	Quadrat	-20.9413	116.279
E022	Quadrat	-20.9545	116.3314
E024	Quadrat	-20.9559	116.3288
E025	Quadrat	-20.9247	116.3026
E025R	Relevé	-20.9271	116.3027
E027	Quadrat	-21.0099	116.3136
E028	Quadrat	-21.0391	116.2687
E030	Quadrat	-21.0252	116.298
E033	Quadrat	-20.975	116.2634
E035	Quadrat	-20.9397	116.3001
E036	Quadrat	-20.9445	116.2714
E037	Quadrat	-20.9391	116.3295
E038	Quadrat	-20.9703	116.3445
E041	Quadrat	-20.8901	116.3768
E042A	Quadrat	-20.8807	116.3916
E042B	Quadrat	-20.8791	116.3959
E043	Quadrat	-20.8706	116.412
E044	Quadrat	-20.8565	116.4267
E045A	Quadrat	-20.8326	116.4025
E045AR	Relevé	-20.8338	116.4037
E045B	Quadrat	-20.8503	116.3605
E046	Quadrat	-20.844	116.3985
E047	Quadrat	-20.8562	116.3402

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Site name	Sample type	Latitude	Longitude
E048	Quadrat	-20.8444	116.35
E049	Quadrat	-20.8748	116.3289
E052	Quadrat	-20.9015	116.2848
E052A	Quadrat	-20.8997	116.2815
E053R	Quadrat	-20.9099	116.2791
E054	Quadrat	-20.9069	116.2721
E064	Quadrat	-21.0103	116.324
E067	Quadrat	-20.9836	116.3283
E068	Quadrat	-20.9805	116.3312
E070	Quadrat	-20.8475	116.3514
E071	Quadrat	-20.8507	116.3491
E072R	Relevé	-20.8419	116.3457
E073	Quadrat	-20.8938	116.3733
E074	Quadrat	-20.8799	116.3896
E075	Quadrat	-20.8652	116.4235
E076	Quadrat	-20.9565	116.3309
E077	Quadrat	-21.0471	116.253
E078	Quadrat	-20.9485	116.2593
E079	Quadrat	-20.9803	116.255
E100	Quadrat	-20.931	116.229
E100R01	Quadrat	-20.9312	116.2286
E101	Quadrat	-20.9529	116.2389
E103	Quadrat	-20.866	116.3365
E104	Quadrat	-20.8922	116.2603
E105	Quadrat	-20.8924	116.3164
E106	Quadrat	-20.9366	116.2808
E107	Quadrat	-20.9357	116.3177
E108	Quadrat	-20.8323	116.3934
E109	Quadrat	-20.8398	116.3802
E110R	Relevé	-20.8808	116.3658
E111R	Relevé	-21.0539	116.2531
E112R	Relevé	-20.9795	116.2971
E113R	Relevé	-20.9339	116.2579
ES001	Quadrat	-20.8316	116.4284
ES002R	Relevé	-20.8313	116.4284
ES003	Quadrat	-20.8303	116.429
ES004	Quadrat	-20.8295	116.4327
ES005	Quadrat	-20.8299	116.431
ES006	Quadrat	-20.8329	116.4274
ES007	Quadrat	-20.8303	116.424
ES011	Quadrat	-20.8305	116.4204
ES012	Quadrat	-20.8323	116.4204
ES013R	Relevé	-20.8318	116.4184

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Site name	Sample type	Latitude	Longitude
ES014	Quadrat	-20.8327	116.4168
ES016	Quadrat	-20.8322	116.4147
ES016A	Quadrat	-20.8313	116.4134
ES017	Quadrat	-20.8326	116.41
ES018	Quadrat	-20.8359	116.4091
ES019	Quadrat	-20.8654	116.4326
ES020	Quadrat	-20.866	116.4307
ES021	Quadrat	-20.8664	116.4283
ES022	Quadrat	-20.8742	116.4278
ES023	Quadrat	-20.9457	116.3599
ES024	Quadrat	-20.9441	116.3678
ES025	Quadrat	-20.8716	116.4296
ES027	Quadrat	-20.8837	116.4239
ES028	Quadrat	-20.8781	116.4266
ES031	Quadrat	-20.8891	116.4051
ES032	Quadrat	-20.892	116.409
ES034	Quadrat	-20.9042	116.4019
ES035	Quadrat	-20.9075	116.402
ES036	Quadrat	-20.9104	116.3975
ES037R	Relevé	-20.9223	116.3922
ES038	Quadrat	-20.9239	116.3896
ES039	Quadrat	-20.8755	116.4205
ET001-01	Transect-Quadrat	-20.8372	116.4214
ET001-02	Transect-Quadrat	-20.8371	116.4216
ET001-03	Transect-Quadrat	-20.8369	116.4219
ET001-04	Transect-Quadrat	-20.8368	116.422
ET002-01	Transect-Quadrat	-20.8464	116.4276
ET002-02	Transect-Quadrat	-20.8462	116.4275
ET002-03	Transect-Quadrat	-20.846	116.4276
ET002-04	Transect-Quadrat	-20.8457	116.4278
ET004-01	Transect-Quadrat	-20.8376	116.3849
ET004-02	Transect-Quadrat	-20.8377	116.3851
ET004-03	Transect-Quadrat	-20.8378	116.3853
ET004-04	Transect-Quadrat	-20.838	116.3854
ET005-01	Transect-Quadrat	-20.8526	116.3787
ET005-02	Transect-Quadrat	-20.8525	116.3788
ET005-03	Transect-Quadrat	-20.8524	116.379
ET005-04	Transect-Quadrat	-20.8522	116.379
ET006-01	Transect-Quadrat	-20.8604	116.3728
ET006-02	Transect-Quadrat	-20.8606	116.3727
ET006-03	Transect-Quadrat	-20.8608	116.3726
ET006-04	Transect-Quadrat	-20.8611	116.3724
ET007-01	Transect-Quadrat	-20.8617	116.3856

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Site name	Sample type	Latitude	Longitude
ET007-02	Transect-Quadrat	-20.8615	116.3858
ET007-03	Transect-Quadrat	-20.8613	116.3861
ET007-04	Transect-Quadrat	-20.8612	116.3863
ET008-01	Transect-Quadrat	-20.8625	116.3551
ET008-02	Transect-Quadrat	-20.8628	116.3549
ET008-03	Transect-Quadrat	-20.8633	116.3545
ET008-04	Transect-Quadrat	-20.864	116.3542
ET009-01	Transect-Quadrat	-20.8813	116.3501
ET009-02	Transect-Quadrat	-20.8812	116.3497
ET009-03	Transect-Quadrat	-20.8809	116.3493
ET010-01	Transect-Quadrat	-20.8743	116.366
ET010-02	Transect-Quadrat	-20.8741	116.3657
ET010-03	Transect-Quadrat	-20.8739	116.3653
ET010-04	Transect-Quadrat	-20.8739	116.3649
ET011-01	Transect-Quadrat	-20.8699	116.3389
ET011-02	Transect-Quadrat	-20.8699	116.3385
ET011-03	Transect-Quadrat	-20.8699	116.3381
ET011-04	Transect-Quadrat	-20.8699	116.3381
ET011-05	Transect-Quadrat	-20.8699	116.3378
ET011-06	Transect-Quadrat	-20.8699	116.3373
ET012-01	Transect-Quadrat	-20.8786	116.3257
ET012-02	Transect-Quadrat	-20.8785	116.3254
ET012-03	Transect-Quadrat	-20.8784	116.325
ET012-04	Transect-Quadrat	-20.8783	116.3245
ET012-05	Transect-Quadrat	-20.8783	116.324
ET013-01	Transect-Quadrat	-20.8822	116.3246
ET013-02	Transect-Quadrat	-20.8824	116.3247
ET013-03	Transect-Quadrat	-20.8826	116.3247
ET013-04	Transect-Quadrat	-20.883	116.3248
ET014-01	Transect-Quadrat	-20.8768	116.3121
ET014-02	Transect-Quadrat	-20.877	116.3121
ET014-03	Transect-Quadrat	-20.8774	116.3121
ET015-01	Transect-Quadrat	-20.8978	116.3126
ET015-02	Transect-Quadrat	-20.8978	116.313
ET015-03	Transect-Quadrat	-20.8979	116.3135
ET016-01	Transect-Quadrat	-20.8862	116.3011
ET016-02	Transect-Quadrat	-20.8863	116.3013
ET016-03	Transect-Quadrat	-20.8865	116.3013
ET016-04	Transect-Quadrat	-20.8868	116.3015
ET017-01	Transect-Quadrat	-20.8897	116.2967
ET017-02	Transect-Quadrat	-20.8899	116.2969
ET020-01	Transect-Quadrat	-20.8752	116.263
ET020-02	Transect-Quadrat	-20.8749	116.2629

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Site name	Sample type	Latitude	Longitude
ET021-01	Transect-Quadrat	-20.9013	116.2528
ET021-02	Transect-Quadrat	-20.9016	116.2529
ET021-03	Transect-Quadrat	-20.9021	116.2532
ET022-01	Transect-Quadrat	-20.8889	116.2313
ET022-02	Transect-Quadrat	-20.8887	116.231
ET023-01	Transect-Quadrat	-20.8821	116.2697
ET023-02	Transect-Quadrat	-20.882	116.2698
ET024-01	Transect-Quadrat	-20.8963	116.2816
ET024-02	Transect-Quadrat	-20.8963	116.2816
ET024-03	Transect-Quadrat	-20.896	116.2814

Appendix 2 NVIS hierarchy

Western Australia Current Practice			National Standard		
Hierarchy of terms	Brief description in WA	Indicative scale	NVIS Level	Description	NVIS structural/floristic components required
Vegetation formation	Structure and growth form – e.g. Forest, Woodland.	1:5 000 000	I	Class	Dominant growth form for the ecologically or structurally dominant stratum.
Vegetation sub-formation	Structural and dominant vegetation layer - Eucalypt Forest, Banksia Woodland	1:2 500 000 I	II	Structural Formation	Dominant growth form, cover and height for the ecologically or structurally dominant stratum.
Vegetation association	Structural form and dominant species – e.g. Medium woodland; York gum (<i>Eucalyptus loxophleba</i>) & Wandoo	1:1 000 000 to 1:250 000	III	Broad Floristic Formation	Dominant growth form, cover, height and dominant land cover genus for the uppermost or dominant stratum.
Vegetation complex	Structural and floristic description linked to geomorphology – e.g. Quindalup Complex.	1:250 000 to 1:100 000	IV	Sub-Formation	Dominant growth form, cover, height and dominant genus and Family for the three traditional strata. (i.e. Upper, Mid and Ground).
Vegetation type	Floristic definition by strata with structural detail. Often represented with a code and floristic description.	1:100 000 to 1:10 000	V	Association	Dominant growth form, height, cover and up to 3 species for the three traditional strata. (i.e. Upper, Mid and Ground).
Plant community	Basic unit of vegetation classification, site specific and highly localised with detailed floristics for each stratum.	1:10 000	VI	Sub-Association	Dominant growth form, height, cover and up to 5 species for all layers/ strata.
Floristic Community Type	Floristic composition definition; e.g. Northern banksia woodlands over herb rich shrublands on the Swan Coastal Plain.	No absolute scale			

Appendix 3 Introduced flora identified in the desktop review

Species	Declared Pest	WoNS
* <i>Aerva javanica</i> (Kapok bush)		
* <i>Arctotheca calendula</i> (Cape weed)		
* <i>Argemone ochroleuca</i> (Mexican poppy)		
* <i>Bidens bipinnata</i> (Beggars tick)		
* <i>Cenchrus ciliaris</i> (Buffel grass)		
* <i>Cenchrus setiger</i> (Birdwood grass)		
* <i>Chloris barbata</i> (Purpletop chloris)		
* <i>Chloris virgata</i> (Feathertop Rhodes Grass)		
* <i>Citrullus amarus</i> (formerly known as <i>C. lanatus</i>)		
* <i>Cyperus polystachyos</i> (Bunchy sedge)		
* <i>Datura leichhardtii</i> (Native thornapple)		
* <i>Flaveria trinervia</i> (Speedy weed)		
* <i>Jatropha gossypifolia</i> (Bellyache bush)	Y	Y
* <i>Malvastrum americanum</i> (Spiked malvastrum)		
* <i>Melochia pyramidata</i>		
* <i>Opuntia stricta</i> (Common prickly pear)	Y	Y
* <i>Parkinsonia aculeata</i>	Y	Y
* <i>Parthenium hysterophorus</i>	Y	Y
* <i>Passiflora foetida</i> var. <i>hispida</i> (Stinking passion flower)		
* <i>Physalis angulata</i>		
* <i>Prosopis glandulosa</i> x <i>velutina</i>	Y	Y
* <i>Prosopis pallida</i> (Mesquite)	Y	Y
* <i>Pseudognaphalium luteoalbum</i> (Jersey cudweed)		
* <i>Setaria italica</i> (Italian millet)		
* <i>Setaria verticillata</i> (Whorled pigeon grass)		
* <i>Stylosanthes hamata</i> (Verano stylo)		
* <i>Tamarix aphylla</i> (Athel tree)	Y	Y
* <i>Tribulus terrestris</i> (Caltrop)		
* <i>Vachellia farnesiana</i> (Mimosa bush)		

Appendix 4 Flora species inventory

Family	Species	Status
Acanthaceae	<i>Avicennia marina</i>	
Acanthaceae	<i>Dicladantha forrestii</i>	
Acanthaceae	<i>Rostellularia adscendens</i> var. <i>clementii</i>	
Acanthaceae	<i>Rostellularia adscendens</i> var. <i>latifolia</i>	P3 (DBCAs); Range extension
Aizoaceae	* <i>Trianthema portulacastrum</i>	Weed
Aizoaceae	<i>Sesuvium portulacastrum</i>	
Aizoaceae	<i>Trianthema pilosum</i>	
Aizoaceae	<i>Trianthema triquetrum</i>	
Aizoaceae	<i>Trianthema turgidifolium</i>	
Aizoaceae	<i>Zaleya galericulata</i> subsp. <i>galericulata</i>	
Amaranthaceae	* <i>Aerva javanica</i>	Weed
Amaranthaceae	<i>Achyranthes aspera</i>	
Amaranthaceae	<i>Alternanthera denticulata</i>	
Amaranthaceae	<i>Alternanthera nana</i>	
Amaranthaceae	<i>Alternanthera nodiflora</i>	
Amaranthaceae	<i>Amaranthus undulatus</i>	
Amaranthaceae	<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>	
Amaranthaceae	<i>Gomphrena canescens</i>	
Amaranthaceae	<i>Gomphrena cunninghamii</i>	
Amaranthaceae	<i>Gomphrena leptoclada</i>	
Amaranthaceae	<i>Ptilotus aevroides</i>	
Amaranthaceae	<i>Ptilotus auriculifolius</i>	
Amaranthaceae	<i>Ptilotus axillaris</i>	
Amaranthaceae	<i>Ptilotus carinatus</i>	
Amaranthaceae	<i>Ptilotus clementii</i>	
Amaranthaceae	<i>Ptilotus divaricatus</i>	
Amaranthaceae	<i>Ptilotus exaltatus</i>	
Amaranthaceae	<i>Ptilotus fusiformis</i>	
Amaranthaceae	<i>Ptilotus gomphrenoides</i>	
Amaranthaceae	<i>Ptilotus helipteroides</i>	
Amaranthaceae	<i>Ptilotus murrayi</i>	
Amaranthaceae	<i>Ptilotus obovatus</i>	
Amaranthaceae	<i>Ptilotus polystachyus</i>	
Amaranthaceae	<i>Ptilotus xerophilus</i>	
Amaranthaceae	<i>Surreya diandra</i>	
Apocynaceae	<i>Cynanchum floribundum</i>	
Apocynaceae	<i>Cynanchum viminalis</i> subsp. <i>australe</i>	
Araliaceae	<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	
Asteraceae	* <i>Flaveria trinervia</i>	Weed
Asteraceae	<i>Centipeda minima</i> subsp. <i>macrocephala</i>	
Asteraceae	<i>Chrysocephalum gilesii</i>	
Asteraceae	<i>Leiocarpa semicalva</i> subsp. <i>semicalva</i>	

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Family	Species	Status
Asteraceae	<i>Pentalepis trichodesmoides</i> subsp. <i>trichodesmoides</i>	
Asteraceae	<i>Pluchea rubelliflora</i>	
Asteraceae	<i>Pterocaulon sphacelatum</i>	
Asteraceae	<i>Pterocaulon sphaeranthoides</i>	
Asteraceae	<i>Rhodanthe floribunda</i>	
Asteraceae	<i>Streptoglossa adscendens</i>	
Asteraceae	<i>Streptoglossa bubakii</i>	
Asteraceae	<i>Streptoglossa decurrens</i>	
Asteraceae	<i>Streptoglossa liatroides</i>	
Asteraceae	<i>Streptoglossa odora</i>	
Bignoniaceae	<i>Dolichandrone occidentalis</i>	
Boraginaceae	<i>Ehretia saligna</i> var. <i>saligna</i>	
Boraginaceae	<i>Euploca conocarpa</i>	
Boraginaceae	<i>Euploca cunninghamii</i>	
Boraginaceae	<i>Euploca heterantha</i>	
Boraginaceae	<i>Euploca inexplicita</i>	
Boraginaceae	<i>Heliotropium crispatum</i>	
Boraginaceae	<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	
Brassicaceae	<i>Lepidium pedicellosum</i>	
Brassicaceae	<i>Lepidium pholidogynum</i>	
Brassicaceae	<i>Lepidium platypetalum</i>	
Capparaceae	<i>Capparis spinosa</i> subsp. <i>nummularia</i>	
Caryophyllaceae	<i>Polycarpaea longiflora</i>	
Chenopodiaceae	<i>Atriplex bunburyana</i>	
Chenopodiaceae	<i>Atriplex codonocarpa</i>	
Chenopodiaceae	<i>Dissocarpus paradoxus</i>	
Chenopodiaceae	<i>Dysphania kalpari</i>	
Chenopodiaceae	<i>Enchylaena tomentosa</i>	
Chenopodiaceae	<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	
Chenopodiaceae	<i>Maireana tomentosa</i>	
Chenopodiaceae	<i>Maireana tomentosa</i> subsp. <i>tomentosa</i>	
Chenopodiaceae	<i>Maireana triptera</i>	
Chenopodiaceae	<i>Neobassia astrocarpa</i>	
Chenopodiaceae	<i>Rhagodia eremaea</i>	
Chenopodiaceae	<i>Rhagodia latifolia</i>	
Chenopodiaceae	<i>Rhagodia preissii</i> subsp. <i>obovata</i>	
Chenopodiaceae	<i>Salsola australis</i>	
Chenopodiaceae	<i>Sclerolaena bicornis</i> var. <i>bicornis</i>	
Chenopodiaceae	<i>Sclerolaena costata</i>	
Chenopodiaceae	<i>Sclerolaena densiflora</i>	
Chenopodiaceae	<i>Sclerolaena diacantha</i>	
Chenopodiaceae	<i>Sclerolaena glabra</i>	
Chenopodiaceae	<i>Sclerolaena hostilis</i>	

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Family	Species	Status
Chenopodiaceae	<i>Sclerolaena</i> sp.	
Chenopodiaceae	<i>Tecticornia auriculata</i>	
Chenopodiaceae	<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.
Chenopodiaceae	<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>	
Chenopodiaceae	<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>	
Chenopodiaceae	<i>Tecticornia indica</i> subsp. <i>bidens</i>	
Chenopodiaceae	<i>Tecticornia indica</i> subsp. <i>leiostachya</i>	
Chenopodiaceae	<i>Tecticornia pruinosa</i>	
Chenopodiaceae	<i>Tecticornia pterygosperma</i> subsp. <i>denticulata</i>	
Chenopodiaceae	<i>Tecticornia</i> sp. sterile 1	local sig., potential sp. nov.
Chenopodiaceae	<i>Tecticornia</i> sp. sterile 2	local sig., potential sp. nov.
Chenopodiaceae	<i>Tecticornia</i> sp. sterile 3	local sig., potential sp. nov.
Chenopodiaceae	<i>Tecticornia</i> sp. sterile 4	local sig., potential sp. nov.
Chenopodiaceae	<i>Tecticornia</i> sp. sterile 5	local sig., potential sp. nov.
Chenopodiaceae	<i>Tecticornia</i> sp. sterile 6	local sig., potential sp. nov.
Chenopodiaceae	<i>Tecticornia</i> sp. sterile 7	local sig., potential sp. nov.
Chenopodiaceae	<i>Tecticornia</i> sp. sterile 8	local sig., potential sp. nov.
Chenopodiaceae	<i>Threlkeldia diffusa</i>	
Cleomaceae	<i>Arivela viscosa</i>	
Commelinaceae	<i>Murdannia graminea</i>	
Convolvulaceae	<i>Bonamia</i> aff. <i>media</i>	sp. nov.
Convolvulaceae	<i>Bonamia erecta</i>	
Convolvulaceae	<i>Bonamia linearis</i>	
Convolvulaceae	<i>Bonamia pilbarensis</i>	
Convolvulaceae	<i>Convolvulus remotus</i>	
Convolvulaceae	<i>Cuscuta victoriana</i>	
Convolvulaceae	<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	
Convolvulaceae	<i>Ipomoea coptica</i>	
Convolvulaceae	<i>Ipomoea costata</i>	
Convolvulaceae	<i>Ipomoea lonchophylla</i>	
Convolvulaceae	<i>Ipomoea muelleri</i>	
Convolvulaceae	<i>Ipomoea polymorpha</i>	
Convolvulaceae	<i>Operculina aequisepala</i>	
Convolvulaceae	<i>Polymeria ambigua</i>	
Convolvulaceae	<i>Polymeria calycina</i>	
Cucurbitaceae	* <i>Citrullus colocynthis</i>	Weed
Cucurbitaceae	<i>Cucumis melo</i>	
Cucurbitaceae	<i>Cucumis picrocarpus</i>	
Cucurbitaceae	<i>Cucumis variabilis</i>	
Cucurbitaceae	<i>Trichosanthes cucumerina</i>	
Cyperaceae	<i>Bulbostylis barbata</i>	
Cyperaceae	<i>Bulbostylis turbinata</i>	
Cyperaceae	<i>Cyperus bifax</i>	

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Family	Species	Status
Cyperaceae	<i>Cyperus bulbosus</i>	
Cyperaceae	<i>Cyperus iria</i>	
Cyperaceae	<i>Cyperus squarrosus</i>	
Cyperaceae	<i>Cyperus vaginatus</i>	
Cyperaceae	<i>Fimbristylis dichotoma</i>	
Cyperaceae	<i>Fimbristylis littoralis</i>	
Cyperaceae	<i>Fimbristylis microcarya</i>	
Cyperaceae	<i>Schoenoplectiella dissachantha</i>	
Elatinaceae	<i>Bergia ammannioides</i>	
Elatinaceae	<i>Bergia henshallii</i>	Range extension
Elatinaceae	<i>Bergia pedicellaris</i>	
Euphorbiaceae	<i>Adriana tomentosa</i> var. <i>tomentosa</i>	
Euphorbiaceae	<i>Euphorbia australis</i> var. <i>australis</i>	
Euphorbiaceae	<i>Euphorbia australis</i> var. <i>subtomentosa</i>	
Euphorbiaceae	<i>Euphorbia biconvexa</i>	
Euphorbiaceae	<i>Euphorbia boophthona</i>	
Euphorbiaceae	<i>Euphorbia careyi</i>	
Euphorbiaceae	<i>Euphorbia myrtoides</i>	
Euphorbiaceae	<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	
Euphorbiaceae	<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>	
Fabaceae	* <i>Prosopis glandulosa</i> x <i>velutina</i>	Weed (WoNS)
Fabaceae	* <i>Vachellia farnesiana</i>	Weed
Fabaceae	<i>Acacia adsurgens</i>	
Fabaceae	<i>Acacia ampliceps</i>	
Fabaceae	<i>Acacia ancistrocarpa</i>	
Fabaceae	<i>Acacia arida</i>	
Fabaceae	<i>Acacia bivenosa</i>	
Fabaceae	<i>Acacia coriacea</i> subsp. <i>coriacea</i>	
Fabaceae	<i>Acacia coriacea</i> subsp. <i>pendens</i>	
Fabaceae	<i>Acacia elachantha</i>	
Fabaceae	<i>Acacia inaequilatera</i>	
Fabaceae	<i>Acacia ligulata</i>	
Fabaceae	<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	
Fabaceae	<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>	
Fabaceae	<i>Acacia sericophylla</i>	
Fabaceae	<i>Acacia stellaticeps</i>	
Fabaceae	<i>Acacia synchronicia</i>	
Fabaceae	<i>Acacia trachycarpa</i>	
Fabaceae	<i>Acacia xiphophylla</i>	
Fabaceae	<i>Aeschynomene indica</i>	
Fabaceae	<i>Alysicarpus muelleri</i>	
Fabaceae	<i>Canavalia rosea</i>	
Fabaceae	<i>Crotalaria medicaginea</i> var. <i>neglecta</i>	

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Family	Species	Status
Fabaceae	<i>Crotalaria novae-hollandiae</i> subsp. <i>novae-hollandiae</i>	
Fabaceae	<i>Cullen cinereum</i>	
Fabaceae	<i>Cullen graveolens</i>	
Fabaceae	<i>Cullen lachnostachys</i>	
Fabaceae	<i>Cullen martinii</i>	
Fabaceae	<i>Cullen pogonocarpum</i>	
Fabaceae	<i>Desmodiopsis campylocaulon</i>	
Fabaceae	<i>Erythrina vespertilio</i>	
Fabaceae	<i>Grona muelleri</i>	
Fabaceae	<i>Indigastrum parviflorum</i>	
Fabaceae	<i>Indigofera colutea</i>	
Fabaceae	<i>Indigofera georgei</i>	
Fabaceae	<i>Indigofera linifolia</i>	
Fabaceae	<i>Indigofera linnaei</i>	
Fabaceae	<i>Indigofera monophylla</i>	
Fabaceae	<i>Indigofera trita</i>	
Fabaceae	<i>Indigofera trita</i> subsp. <i>trita</i>	
Fabaceae	<i>Isotropis atropurpurea</i>	
Fabaceae	<i>Neptunia dimorphantha</i>	
Fabaceae	<i>Petalostylis labicheoides</i>	
Fabaceae	<i>Rhynchosia minima</i>	
Fabaceae	<i>Senna artemisioides</i> subsp. <i>helmsii</i>	
Fabaceae	<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	
Fabaceae	<i>Senna ferraria</i>	
Fabaceae	<i>Senna glutinosa</i> subsp. <i>chatelainiana</i>	
Fabaceae	<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	
Fabaceae	<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	
Fabaceae	<i>Senna glutinosa</i> subsp. <i>x luerssenii</i>	
Fabaceae	<i>Senna hamersleyensis</i>	
Fabaceae	<i>Senna notabilis</i>	
Fabaceae	<i>Senna venusta</i>	
Fabaceae	<i>Sesbania cannabina</i>	
Fabaceae	<i>Swainsona formosa</i>	
Fabaceae	<i>Swainsona pterostylis</i>	
Fabaceae	<i>Tephrosia clementii</i>	
Fabaceae	<i>Tephrosia densa</i>	
Fabaceae	<i>Tephrosia rosea</i> var. <i>clementii</i>	
Fabaceae	<i>Tephrosia</i> sp.	
Fabaceae	<i>Tephrosia</i> sp. B Kimberley Flora (C.A. Gardner 7300)	
Fabaceae	<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)	
Fabaceae	<i>Tephrosia</i> sp. Northern (K.F. Kenneally 11950)	
Fabaceae	<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	
Fabaceae	<i>Tephrosia supina</i>	

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Fabaceae	<i>Tephrosia uniovulata</i>	
Fabaceae	<i>Vigna lanceolata</i> var. <i>lanceolata</i>	
Frankeniaceae	<i>Frankenia pauciflora</i>	
Frankeniaceae	<i>Frankenia</i> sp.	
Geraniaceae	<i>Erodium cygnorum</i>	
Goodeniaceae	<i>Goodenia lamprosperma</i>	
Goodeniaceae	<i>Goodenia microptera</i>	
Goodeniaceae	<i>Goodenia muelleriana</i>	
Goodeniaceae	<i>Goodenia pasqua</i>	
Goodeniaceae	Goodeniaceae sp.	
Goodeniaceae	<i>Scaevola</i> aff. <i>pulchella</i>	sp. nov.
Goodeniaceae	<i>Scaevola crassifolia</i>	
Goodeniaceae	<i>Scaevola cunninghamii</i>	
Goodeniaceae	<i>Scaevola spinescens</i>	
Lamiaceae	Indeterminate sp.	
Lauraceae	<i>Cassytha capillaris</i>	
Lauraceae	<i>Cassytha filiformis</i>	
Lythraceae	<i>Ammannia baccifera</i>	
Lythraceae	<i>Ammannia multiflora</i>	
Malvaceae	* <i>Malvastrum americanum</i>	Weed
Malvaceae	* <i>Melochia pyramidata</i>	Weed
Malvaceae	<i>Abutilon amplum</i>	
Malvaceae	<i>Abutilon cryptopetalum</i>	
Malvaceae	<i>Abutilon fraseri</i> subsp. <i>fraseri</i>	
Malvaceae	<i>Abutilon lepidum</i>	
Malvaceae	<i>Abutilon malvifolium</i>	
Malvaceae	<i>Abutilon oxycarpum</i> subsp. Prostrate (A.A. Mitchell PRP 1266)	
Malvaceae	<i>Corchorus crozophorifolius</i>	
Malvaceae	<i>Corchorus tectus</i>	
Malvaceae	<i>Corchorus trilocularis</i>	
Malvaceae	<i>Corchorus walcottii</i>	
Malvaceae	<i>Gossypium australe</i>	
Malvaceae	<i>Hibiscus brachysiphonius</i>	
Malvaceae	<i>Hibiscus</i> sp.	
Malvaceae	<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	
Malvaceae	<i>Lawrenia viridigrisea</i>	
Malvaceae	<i>Melhania oblongifolia</i>	
Malvaceae	<i>Sida arsiniata</i>	
Malvaceae	<i>Sida cardiophylla</i>	
Malvaceae	<i>Sida echinocarpa</i>	
Malvaceae	<i>Sida fibulifera</i>	
Malvaceae	<i>Sida intricata</i>	
Malvaceae	<i>Sida rohlena</i> subsp. <i>rohlena</i>	

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Family	Species	Status
Malvaceae	<i>Sida</i> sp.	
Malvaceae	<i>Sida spinosa</i>	
Malvaceae	<i>Triumfetta chaetocarpa</i>	
Malvaceae	<i>Triumfetta clementii</i>	
Malvaceae	<i>Triumfetta maconochieana</i>	
Malvaceae	<i>Waltheria indica</i>	
Marsileaceae	<i>Marsilea drummondii</i>	
Marsileaceae	<i>Marsilea exarata</i>	
Marsileaceae	<i>Marsilea hirsuta</i>	
Menispermaceae	<i>Tinospora smilacina</i>	
Molluginaceae	<i>Glinus lotoides</i>	
Molluginaceae	<i>Hypertelis cerviana</i>	
Molluginaceae	<i>Trigastrotheca molluginea</i>	
Moraceae	<i>Ficus aculeata</i> var. <i>indecora</i>	
Myrtaceae	<i>Corymbia hamersleyana</i>	
Myrtaceae	<i>Eucalyptus camaldulensis</i>	
Myrtaceae	<i>Eucalyptus camaldulensis</i> subsp. <i>obtusata</i>	
Myrtaceae	<i>Eucalyptus leucophloia</i>	
Myrtaceae	<i>Eucalyptus victrix</i>	
Myrtaceae	<i>Melaleuca glomerata</i>	
Myrtaceae	<i>Melaleuca linophylla</i>	
Nyctaginaceae	<i>Boerhavia burbridgeana</i>	
Nyctaginaceae	<i>Boerhavia coccinea</i>	
Nyctaginaceae	<i>Boerhavia gardneri</i>	
Nyctaginaceae	<i>Boerhavia paludosa</i>	
Nyctaginaceae	<i>Boerhavia repleta</i>	
Nyctaginaceae	<i>Boerhavia</i> sp.	
Nyctaginaceae	<i>Commicarpus australis</i>	
Oleaceae	<i>Jasminum didymum</i> subsp. <i>lineare</i>	
Orobanchaceae	<i>Striga curviflora</i>	
Passifloraceae	* <i>Passiflora foetida</i> var. <i>hispida</i>	Weed
Phrymaceae	<i>Mimulus gracilis</i>	
Phyllanthaceae	<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	
Phyllanthaceae	<i>Nellica maderaspatensis</i>	
Phyllanthaceae	<i>Notoleptopus decaisnei</i>	
Phyllanthaceae	<i>Notoleptopus decaisnei</i> var. <i>decaisnei</i>	
Plantaginaceae	<i>Stemodia grossa</i>	
Plantaginaceae	<i>Stemodia kingii</i>	
Plumbaginaceae	<i>Muellerolimon salicorniaceum</i>	
Poaceae	* <i>Cenchrus ciliaris</i>	Weed
Poaceae	* <i>Cenchrus setiger</i>	Weed
Poaceae	* <i>Cynodon dactylon</i>	Weed
Poaceae	<i>Aristida contorta</i>	

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Family	Species	Status
Poaceae	<i>Aristida holathera</i>	
Poaceae	<i>Aristida hygrometrica</i>	
Poaceae	<i>Aristida latifolia</i>	
Poaceae	<i>Astrebla pectinata</i>	
Poaceae	<i>Chloris pectinata</i>	
Poaceae	<i>Chrysopogon fallax</i>	
Poaceae	<i>Cymbopogon ambiguus</i>	
Poaceae	<i>Dactyloctenium radulans</i>	
Poaceae	<i>Dichanthium fecundum</i>	
Poaceae	<i>Dichanthium sericeum</i> subsp. <i>humilius</i>	
Poaceae	<i>Digitaria ctenantha</i>	
Poaceae	<i>Diplachne fusca</i> subsp. <i>fusca</i>	
Poaceae	<i>Enneapogon caeruleus</i>	
Poaceae	<i>Eragrostis cumingii</i>	
Poaceae	<i>Eragrostis eriopoda</i>	
Poaceae	<i>Eragrostis falcata</i>	
Poaceae	<i>Eragrostis tenellula</i>	
Poaceae	<i>Eragrostis xerophila</i>	
Poaceae	<i>Eriachne flaccida</i>	
Poaceae	<i>Eriachne mucronata</i>	
Poaceae	<i>Eriachne obtusa</i>	
Poaceae	<i>Eriachne pulchella</i> subsp. <i>dominii</i>	
Poaceae	<i>Eriachne tenuiculmis</i>	
Poaceae	<i>Eulalia aurea</i>	
Poaceae	<i>Iseilema membranaceum</i>	
Poaceae	<i>Leptochloa digitata</i>	
Poaceae	<i>Panicum decompositum</i>	
Poaceae	<i>Paspalidium clementii</i>	
Poaceae	<i>Paspalidium rarum</i>	
Poaceae	<i>Paspalidium tabulatum</i>	
Poaceae	Poaceae sp.	
Poaceae	<i>Setaria dielsii</i>	
Poaceae	<i>Sorghum plumosum</i>	
Poaceae	<i>Spinifex longifolius</i>	
Poaceae	<i>Sporobolus australasicus</i>	
Poaceae	<i>Sporobolus virginicus</i>	
Poaceae	<i>Themeda triandra</i>	
Poaceae	<i>Triodia ?epactia</i>	
Poaceae	<i>Triodia angusta</i>	
Poaceae	<i>Triodia epactia</i>	
Poaceae	<i>Triodia wiseana</i>	
Poaceae	<i>Whiteochloa airoides</i>	
Poaceae	<i>Xerochloa barbata</i>	

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Family	Species	Status
Poaceae	<i>Xerochloa laniflora</i>	
Poaceae	<i>Yakirra australiensis</i>	
Polygalaceae	<i>Polygala</i> aff. <i>galeocephala</i>	sp. nov.
Polygalaceae	<i>Polygala glaucifolia</i>	
Polygalaceae	<i>Polygala isingii</i>	
Portulacaceae	* <i>Portulaca pilosa</i>	Weed
Portulacaceae	<i>Portulaca conspicua</i>	
Portulacaceae	<i>Portulaca filifolia</i>	
Portulacaceae	<i>Portulaca oleracea</i>	
Proteaceae	<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>	
Proteaceae	<i>Hakea loreus</i> subsp. <i>loreus</i>	
Pteridaceae	<i>Cheilanthes contigua</i>	
Rubiaceae	<i>Dolichocarpa crouchiana</i>	
Rubiaceae	<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3
Rubiaceae	<i>Synaptantha tillaeacea</i> var. <i>hispidula</i>	
Rubiaceae	<i>Synaptantha tillaeacea</i> var. <i>tillaeacea</i>	
Santalaceae	<i>Santalum acuminatum</i>	
Santalaceae	<i>Santalum lanceolatum</i>	
Scrophulariaceae	<i>Eremophila forrestii</i> subsp. <i>forrestii</i>	
Scrophulariaceae	<i>Eremophila forrestii</i> subsp. <i>viridis</i>	P3 (DBCA); Range extension
Scrophulariaceae	<i>Eremophila longifolia</i>	
Scrophulariaceae	<i>Myoporum montanum</i>	
Solanaceae	<i>Nicotiana heterantha</i>	
Solanaceae	<i>Nicotiana occidentalis</i> subsp. <i>obliqua</i>	
Solanaceae	<i>Solanum cleistogamum</i>	
Solanaceae	<i>Solanum dioicum</i>	
Solanaceae	<i>Solanum diversiflorum</i>	
Solanaceae	<i>Solanum horridum</i>	
Solanaceae	<i>Solanum lasiophyllum</i>	
Surianaceae	<i>Stylobasium spathulatum</i>	
Unknown	Indeterminate sp.	
Violaceae	<i>Afrohybanthus aurantiacus</i>	Weed
Zygophyllaceae	<i>Tribulus cistoides</i>	
Zygophyllaceae	<i>Tribulus hirsutus</i>	
Zygophyllaceae	<i>Tribulus macrocarpus</i>	
Zygophyllaceae	<i>Tribulus occidentalis</i>	

Appendix 5 Flora survey site descriptions

Site details			
Site	E001	Position (WGS84)	-20.89953, 116.228619
Slope	moderate	Topography	hill slope
Soil colour	BLK	Soil texture	ALUV
Rock cover (%)	0	Rock type	granite - outcropping

Observation details - visit 1 (20 Apr 2020)			
Sample description	Scattered shrubs of <i>Acacia inaequilatera</i> over an open, low shrubland of <i>Solanum lasiophyllum</i> and <i>Trachymene oleracea</i> subsp. <i>oleracea</i> over an open hummock grassland of <i>Triodia wiseana</i> .		
Habitat	spinifex grassland		
Disturbance	Grazing-low		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	97	Tree cover (%)	0.5
Shrub cover (%)	0	Grass cover (%)	95
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	20-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	28-Mar-2021	50m x 50m	Brody Loneragan

Species (32)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		80	0.4		
<i>Acacia inaequilatera</i>		1	2		
<i>Solanum lasiophyllum</i>		0.5	0.3		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		0.2	0.2		
<i>Ehretia saligna</i> var. <i>saligna</i>		0.1	1.5		
<i>Cucumis variabilis</i>		0.1	0.4		
<i>Goodenia muelleriana</i>		0.1	0.4		
<i>Scaevola spinescens</i>		0.1	0.4		
<i>Eremophila longifolia</i>		0.1	0.3		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.3		
<i>Ptilotus auriculifolius</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.3		
<i>Solanum diversiflorum</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Tribulus hirsutus</i>		0.1	0.2		
<i>Euphorbia careyi</i>		0.1	0.2		
<i>Trigastrotheca molluginea</i>		0.1	0.15		
<i>Polymeria ambigua</i>		0.1	0.1		
<i>Tephrosia</i> sp. NW Eremaean (<i>S. van Leeuwen et al. PBS 0356</i>)		0.1	0.1		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Boerhavia coccinea</i>					
<i>Acacia bivenosa</i>				0.1	1.8
<i>Cymbopogon ambiguus</i>				0.1	1
<i>Enneapogon caeruleus</i>				0.1	0.4
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.3
<i>Abutilon lepidum</i>				0.1	0.3
<i>Polygala isingii</i>				0.1	0.05
<i>Ptilotus exaltatus</i>				0.1	0.4
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.5
<i>Indigofera monophylla</i>				0.5	0.3

Site details			
Site	E001A	Position (WGS84)	-20.89986, 116.229877
Slope	gentle	Topography	undulating plain
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (20 Apr 2020)			
Sample description	Tall open shrubland of <i>Acacia coriacea</i> , <i>A. bivenosa</i> and <i>A. inaequilatera</i> over a mid open shrubland of <i>Eremophila longifolia</i> and <i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i> over a low shrybland of		
Habitat	shrubland		
Disturbance	Grazing-medium, Weed infestation		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	95	Tree cover (%)	1
Shrub cover (%)	0.5	Grass cover (%)	92
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	20-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	28-Mar-2021	50m x 50m	Brody Loneragan

Species (44)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		70	0.4		
<i>Acacia bivenosa</i>		2	1.5		
<i>Eriachne tenuiculmis</i>		2	0.4		
<i>Eragrostis eriopoda</i>		2	0.3		
<i>Acacia inaequilatera</i>		1	2		
* <i>Aerva javanica</i>	Weed	1	0.4		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		1	0.3		
<i>Trianthema pilosum</i>		1	0.1		
<i>Boerhavia gardneri</i>		0.3	0.2		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		0.2	1.8		
<i>Goodenia microptera</i>		0.2	0.3		
<i>Trigastrotheca molluginea</i>		0.2	0.1		
<i>Eremophila longifolia</i>		0.1	0.5		
<i>Gossypium australe</i>		0.1	0.5		
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>		0.1	0.5		
<i>Hibiscus</i> sp.		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Portulaca filifolia</i>	Range extension	0.1	0.3		
<i>Cassytha capillaris</i>		0.1	0.3		
<i>Cucumis variabilis</i>		0.1	0.3		
<i>Tephrosia supina</i>		0.1	0.3		
<i>Solanum lasiophyllum</i>		0.1	0.3		
<i>Rhynchosia minima</i>		0.1	0.2		
<i>Ipomoea muelleri</i>		0.1	0.2		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.2		
<i>Portulaca oleracea</i>		0.1	0.2		
<i>Bonamia linearis</i>		0.1	0.2		
<i>Bulbostylis barbata</i>		0.1	0.15		
<i>Hypertelis cerviana</i>		0.1	0.1		
<i>Ipomoea polymorpha</i>		0.1	0.1		
<i>Polymeria ambigua</i>				0.1	0.2
<i>Waltheria indica</i>				0.5	0.3
<i>Triumfetta clementii</i>				0.1	0.25
<i>Aristida contorta</i>				1	0.6
<i>Tephrosia rosea</i> var. <i>clementii</i>				0.1	0.25
<i>Solanum diversiflorum</i>				0.1	0.3
<i>Indigofera linnaei</i>				0.1	0.2
<i>Ptilotus polystachyus</i>				0.1	0.3
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>				0.1	0.3

<i>Corchorus walcottii</i>		0.1	0.3
<i>Melhania oblongifolia</i>		0.1	0.3
* <i>Cenchrus ciliaris</i>	Weed	10	0.5
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3
<i>Sida intricata</i>		0.1	0.1

Site details			
Site	E002	Position (WGS84)	-20.9185, 116.22878
Slope	moderate	Topography	hill slope
Soil colour	red-brown	Soil texture	sandy clay, rocks
Rock cover (%)	0	Rock type	granite - outcropping, granite - rocks

Observation details - visit 1 (22 Apr 2020)			
Sample description	Hummock grassland of <i>Triodia wiseana</i> over a low shrubland of <i>Ptilotus auriculifolius</i> , <i>Acacia bivenosa</i> and <i>Solanum lasiophyllum</i> .		
Habitat	spinifex grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	60	Tree cover (%)	0.1
Shrub cover (%)	0.1	Grass cover (%)	90
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	22-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	28-Mar-2021	50m x 50m	Brody Loneragan

Species (26)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		60	0.3		
<i>Acacia bivenosa</i>		0.1	1.2		
<i>Solanum lasiophyllum</i>		0.1	0.4		
<i>Indigofera monophylla</i>		0.1	0.3		
<i>Crotalaria novae-hollandiae</i> subsp. <i>novae-hollandiae</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3		
<i>Ptilotus fusiformis</i>		0.1	0.3		
<i>Ptilotus auriculifolius</i>		0.1	0.3		
<i>Goodenia lamprosperma</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Abutilon lepidum</i>		0.1	0.3		
<i>Boerhavia coccinea</i>		0.1	0.2		
<i>Euphorbia careyi</i>		0.1	0.2		
<i>Gomphrena cunninghamii</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		0.1	0.2		
<i>Tephrosia</i> sp. NW Eremaean (<i>S. van Leeuwen et al. PBS 0356</i>)		0.1	0.15		
<i>Tribulus hirsutus</i>		0.1	0.15		
<i>Paspalidium rarum</i>		0.1	0.15		
<i>Cucumis variabilis</i>		0.1			
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>				0.1	0.15
<i>Polymeria ambigua</i>				0.1	
<i>Ptilotus exaltatus</i>				0.1	0.3
<i>Rhynchosia minima</i>				0.1	
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>				0.1	0.3
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.5

Site details			
Site	E003	Position (WGS84)	-20.902287, 116.23729
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (20 Apr 2020)			
Sample description	Open grassland of <i>Cenchrus ciliaris</i> and <i>Eriachne tenuiculmis</i> over a hummock grassland of <i>Triodia epactia</i> and <i>T. angusta</i> .		
Habitat	grassland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	95	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	94
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	20-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	28-Mar-2021	50m x 50m	Brody Loneragan

Species (27)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	50	0.6		
<i>Triodia epactia</i>		20	0.3		
<i>Triodia angusta</i>		5	0.5		
<i>Eriachne tenuiculmis</i>		1	0.6		
<i>Eragrostis falcata</i>		0.1	0.5		
<i>Rhagodia eremaea</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Ptilotus auriculifolius</i>		0.1	0.3		
<i>Salsola australis</i>		0.1	0.3		
<i>Pterocaulon sphacelatum</i>		0.1	0.3		
<i>Threlkeldia diffusa</i>		0.1	0.3		
<i>Heliotropium crispatum</i>		0.1	0.2		
<i>Tribulus hirsutus</i>		0.1	0.2		
<i>Indigofera linnaei</i>		0.1	0.2		
<i>Indigofera colutea</i>		0.1	0.15		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Trianthema turgidifolium</i>		0.1	0.1		
<i>Sclerolaena glabra</i>				0.1	0.4
<i>Streptoglossa bubakii</i>				0.1	0.3
<i>Stemodia grossa</i>				0.1	0.25
<i>Fimbristylis dichotoma</i>				0.1	0.15
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.25
<i>Solanum cleistogamum</i>				0.1	0.3
<i>Waltheria indica</i>				0.3	0.5
<i>Dactyloctenium radulans</i>				0.1	0.15
<i>Frankenia pauciflora</i>				0.1	0.25

Site details			
Site	E005	Position (WGS84)	-20.898142, 116.264949
Slope	negligible	Topography	plain
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (20 Apr 2020)			
Sample description	Tall open shrubland of <i>Acacia bivenosa</i> , <i>Senna glutinosa</i> subsp. <i>pruinosa</i> and <i>A. sclerosperma</i> subsp. <i>sclerosperma</i> over an open shrubland <i>Eremophila forrestii</i> subsp. <i>forrestii</i> , <i>Scaevola</i>		
Habitat	shrubland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	90	Tree cover (%)	25
Shrub cover (%)	3	Grass cover (%)	80
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	20-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	28-Mar-2021	50m x 50m	Martin Henson

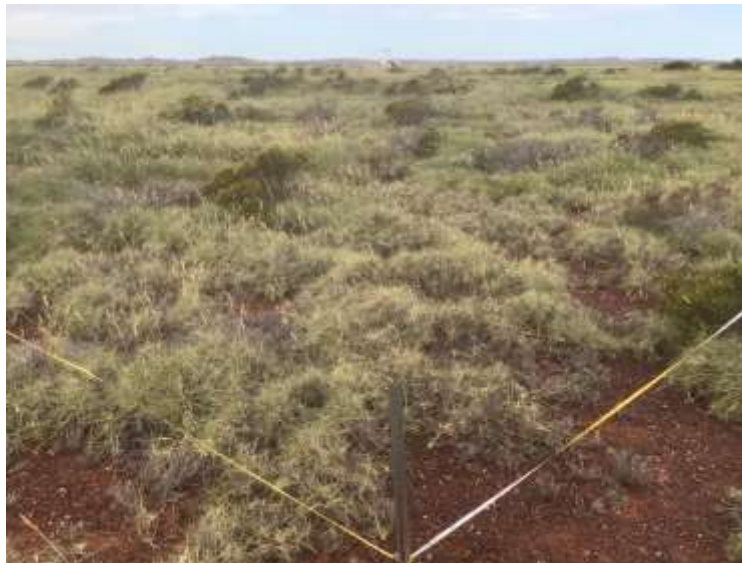
Species (39)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		70	0.4		
<i>Acacia bivenosa</i>		30	2.5		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>		2	1.5		
<i>Cassytha capillaris</i>		2			
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		1	1.8		
<i>Senna glutinosa</i> subsp. <i>x luerssenii</i>		0.1	1.2		
<i>Chrysopogon fallax</i>		0.1	1		
<i>Whiteochloa airoides</i>		0.1	1		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		0.1	0.5		
<i>Triumfetta clementii</i>		0.1	0.4		
<i>Scaevola spinescens</i>		0.1	0.4		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		0.1	0.4		
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.3		
<i>Ptilotus auriculifolius</i>		0.1	0.3		
<i>Nellica maderaspatensis</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Corchorus walcottii</i>		0.1	0.3		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>		0.1	0.3		
<i>Solanum lasiophyllum</i>		0.1	0.3		
<i>Salsola australis</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.25		
<i>Euploca heterantha</i>		0.1	0.2		
<i>Boerhavia gardneri</i>		0.1	0.2		
<i>Paspalidium rarum</i>		0.1	0.15		
<i>Triodia epactia</i>				1	0.3
<i>Acacia coriacea</i> subsp. <i>coriacea</i>				0.1	1
<i>Themeda triandra</i>				0.1	0.6
<i>Tephrosia</i> sp. NW Eremaean (<i>S. van Leeuwen et al. PBS 0356</i>)				0.1	0.2
<i>Streptoglossa decurrens</i>				0.1	0.8
<i>Euphorbia boophthona</i>				0.1	0.4
<i>Ptilotus clementii</i>				0.1	0.3
<i>Ptilotus exaltatus</i>				0.1	0.15
<i>Abutilon lepidum</i>				0.1	0.3
* <i>Cenchrus ciliaris</i>	Weed			0.1	0.5
<i>Melhaniania oblongifolia</i>				0.1	0.3
<i>Ptilotus obovatus</i>				0.1	0.3
<i>Gossypium australe</i>				0.1	0.3

Stemodia grossa

0.1 0.15

Site details			
Site	E007	Position (WGS84)	-20.897493, 116.319983
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone, granite - rocks

Observation details - visit 1 (21 Apr 2020)			
Sample description	Open shrubland of <i>Acacia stellaticeps</i> , <i>Abutilon lepidum</i> and <i>Corchorus walcottii</i> over <i>Tephrosia clementii</i> , <i>Goodenia muelleriana</i> and <i>Indifogera linifolia</i> .		
Habitat	shrubland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	95	Tree cover (%)	0
Shrub cover (%)	4	Grass cover (%)	90
Herb cover (%)	0.1		

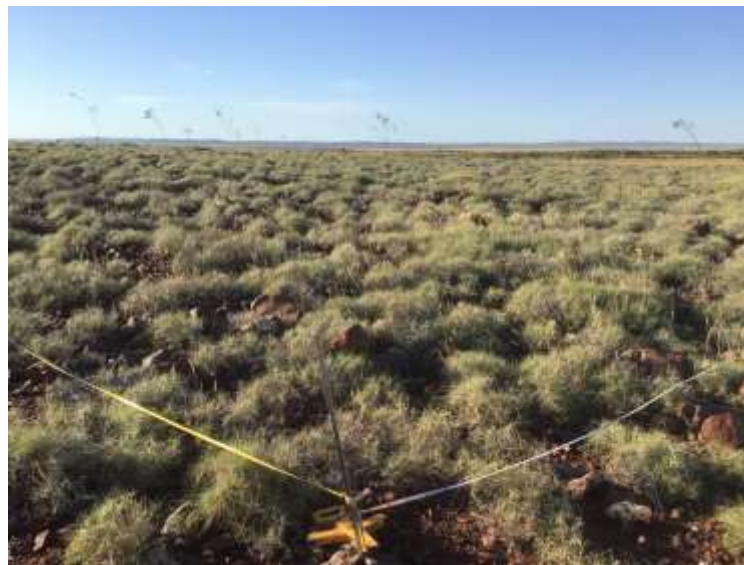


Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	21-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	15-Oct-2021	50m x 50m	Martin Henson

Species (33)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		70	0.4		
<i>Acacia stellaticeps</i>		5	1		
<i>Tephrosia clementii</i>		1	0.3		
<i>Paspalidium rarum</i>		1	0.15		
<i>Abutilon lepidum</i>		0.2	0.5		
<i>Corchorus walcottii</i>		0.1	0.4		
<i>Senna notabilis</i>		0.1	0.3		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		0.1	0.3		
<i>Goodenia muelleriana</i>		0.1	0.3		
<i>Melhania oblongifolia</i>		0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>		0.1	0.3		
<i>Goodenia pasqua</i>		0.1	0.3		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>		0.1	0.3		
<i>Solanum lasiophyllum</i>		0.1	0.3		
<i>Euphorbia boophthona</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.25		
<i>Solanum diversiflorum</i>		0.1	0.2		
<i>Stemodia grossa</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Trigastrotheca molluginea</i>		0.1	0.2		
<i>Bulbostylis barbata</i>		0.1	0.1		
<i>Polymeria ambigua</i>		0.1	0.1		
<i>Tribulus hirsutus</i>		0.1	0.1		
<i>Indigofera monophylla</i>				0.1	0.15
<i>Ptilotus clementii</i>				0.1	0.3
<i>Ptilotus exaltatus</i>				0.1	0.3
<i>Ptilotus obovatus</i>				0.1	0.2
<i>Cynanchum viminale</i> subsp. <i>australe</i>				0.1	0.3
<i>Sorghum plumosum</i>				0.1	0.5
<i>Streptoglossa decurrens</i>				0.1	1
<i>Pterocaulon sphacelatum</i>				0.1	0.2

Site details			
Site	E008	Position (WGS84)	-20.925862, 116.255132
Slope	gentle	Topography	hill top
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	granite - outcropping, granite - rocks

Observation details - visit 1 (23 Apr 2020)			
Sample description	Closed hummock grassland of <i>Triodia wiseana</i> with scattered tall shrubs of <i>Senna glutinosa</i> subsp. <i>glutinosa</i> and mixed herbs.		
Habitat	spinifex grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	80	Tree cover (%)	1
Shrub cover (%)	0	Grass cover (%)	79
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	23-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	29-Mar-2021	50m x 50m	Martin Henson

Species (22)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		50	0.3		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>		0.1	3		
<i>Indigofera linifolia</i>		0.1	0.3		
<i>Indigofera monophylla</i>		0.1	0.3		
<i>Ptilotus auriculifolius</i>		0.1	0.3		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.2		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		0.1	0.2		
<i>Portulaca oleracea</i>		0.1	0.15		
<i>Euphorbia biconvexa</i>		0.1	0.15		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.15		
<i>Paspalidium rarum</i>		0.1	0.15		
<i>Gomphrena cunninghamii</i>		0.1	0.1		
<i>Tephrosia</i> sp. NW Eremaean (<i>S. van Leeuwen et al. PBS 0356</i>)		0.1	0.1		
<i>Dolichocarpa crouchiana</i>		0.1	0.1		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	0.1		
<i>Polymeria ambigua</i>		0.1	0.1		
<i>Tribulus hirsutus</i>		0.1			
<i>Ptilotus clementii</i>				0.1	0.3
<i>Abutilon lepidum</i>				0.1	0.3
<i>Ptilotus exaltatus</i>				0.1	0.25
<i>Rhynchosia minima</i>				0.1	
<i>Euploca inexplicita</i>				0.1	0.1

Site details			
Site	E009	Position (WGS84)	-20.907998, 116.283645
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (21 Apr 2020)			
Sample description	Tall scattered shrubs of <i>Acacia coriacea</i> subsp. <i>coriacea</i> and <i>A. sclerosperma</i> subsp. <i>sclerosperma</i> over grassland of * <i>Cenchrus ciliaris</i> , <i>Triodia angusta</i> and * <i>Cenchrus setiger</i> .		
Habitat	open woodland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	90	Tree cover (%)	10
Shrub cover (%)	0.5	Grass cover (%)	85
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	21-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	16-Oct-2021	50m x 50m	Martin Henson

Species (41)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	50	0.8		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		5	3		
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		5	2.5		
<i>Chrysopogon fallax</i>		5	1.5		
<i>Triodia angusta</i>		3	0.4		
<i>Xerochloa barbata</i>		3	0.3		
<i>Dactyloctenium radulans</i>		2	0.2		
<i>*Cenchrus setiger</i>	Weed	1	0.8		
<i>Eragrostis xerophila</i>		1	0.3		
<i>Indigofera linifolia</i>		1	0.15		
<i>Tribulus occidentalis</i>		1	0.1		
<i>Trianthema turgidifolium</i>		0.75	0.2		
<i>Ipomoea lonchophylla</i>		0.5			
<i>Atriplex bunburyana</i>		0.3	0.3		
<i>*Vachellia farnesiana</i>	Weed	0.1	1.2		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	1		
<i>Scaevola spinescens</i>		0.1	1		
<i>Myoporum montanum</i>		0.1	0.5		
<i>Alysicarpus muelleri</i>		0.1	0.5		
<i>Portulaca oleracea</i>		0.1	0.3		
<i>Sesbania cannabina</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Hibiscus brachysiphonius</i>		0.1	0.3		
<i>Goodenia pasqua</i>		0.1	0.3		
<i>*Malvastrum americanum</i>	Weed	0.1	0.3		
<i>Solanum lasiophyllum</i>		0.1	0.2		
<i>Streptoglossa liatroides</i>		0.1	0.2		
<i>Gomphrena cunninghamii</i>		0.1	0.2		
<i>Rhynchosia minima</i>		0.1			
<i>Cucumis variabilis</i>		0.1			
<i>Cassytha filiformis</i>				2	
<i>Eremophila longifolia</i>				0.5	1
<i>Pluchea rubelliflora</i>				0.1	0.2
<i>Ptilotus exaltatus</i>				0.1	0.3
<i>Rhagodia eremaea</i>				0.1	0.3
<i>Salsola australis</i>				0.1	0.15
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.2
<i>Solanum diversiflorum</i>				0.1	0.2
<i>Sporobolus virginicus</i>				0.1	0.15

<i>Triodia epactia</i>	0.2	0.3
<i>Ptilotus divaricatus</i>	0.1	0.2

Site details			
Site	E009R01	Position (WGS84)	-20.908034, 116.282714
Slope	negligible	Topography	drainage line
Soil colour	red-brown	Soil texture	loamy sand
Rock cover (%)	0	Rock type	

Observation details - visit 1 (21 Apr 2020)			
Sample description	Open woodland of <i>Eucalyptus vitrix</i> over <i>Sesbania cannabina</i> over <i>Sporobolus virginicus</i> and <i>Setaria dielsii</i> .		
Habitat	woodland		
Disturbance	Grazing-medium		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	11	Tree cover (%)	10
Shrub cover (%)	1	Grass cover (%)	1
Herb cover (%)	1		

Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	21-Apr-2020	unbounded	Martin Henson

Species (13)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eucalyptus victrix</i>		40	10		
<i>Sporobolus virginicus</i>		40	0.3		
<i>Sesbania cannabina</i>		30	1		
<i>Cyperus iria</i>		1	0.3		
<i>Sida rohlenae</i> subsp. <i>rohlenae</i>		0.1	0.5		
<i>Setaria dielsii</i>		0.1	0.5		
<i>Rostellularia adscendens</i> var. <i>clementii</i>		0.1	0.3		
<i>Alternanthera nodiflora</i>		0.1	0.3		
<i>Achyranthes aspera</i>		0.1	0.3		
<i>Ptilotus gomphrenoides</i>		0.1	0.2		
<i>Poaceae</i> sp.		0.1	0.2		
<i>Dactyloctenium radulans</i>		0.1	0.2		
<i>Operculina aequisejala</i>		0.1	0.1		

Site details			
Site	E009R02	Position (WGS84)	-20.9081, 116.282251
Slope		Topography	
Soil colour		Soil texture	
Rock cover (%)	0	Rock type	

Observation details - visit 1 (21 Apr 2020)			
Sample description	Closed Triodia scurfy grassland with mixed herbs. Species list is missing Triodia scurfy.		
Habitat	spinifex grassland		
Disturbance			
Vegetation condition	Good	Fire age	
Total veg. cover (%)		Tree cover (%)	
Shrub cover (%)		Grass cover (%)	
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	21-Apr-2020	unbounded	Martin Henson

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Sesuvium portulacastrum</i>		0.5	0.2		

Site details			
Site	E010	Position (WGS84)	-20.908749, 116.306732
Slope	negligible	Topography	seasonally wet area
Soil colour	red-brown	Soil texture	clay, alluvium
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (22 Apr 2020)			
Sample description	Scattered <i>Eucalyptus vitrix</i> over shrubland of <i>Acacia coriacea</i> subsp. <i>coriacea</i> , <i>A. sericophylla</i> and <i>Salsola australis</i> over grassland of <i>Dactyloctenium radulans</i> , * <i>Cenchrus setiger</i> and <i>Triodia a</i>		
Habitat	shrubland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	94	Tree cover (%)	12
Shrub cover (%)	8	Grass cover (%)	80
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	22-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	16-Oct-2021	50m x 50m	Martin Henson

Species (34)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Dactyloctenium radulans</i>		50	0.1		
* <i>Cenchrus setiger</i>	Weed	12	1		
<i>Triodia angusta</i>		10	0.4		
<i>Acacia sericophylla</i>		8	2.5		
* <i>Cenchrus ciliaris</i>	Weed	8	0.5		
<i>Sporobolus virginicus</i>		5	0.4		
<i>Salsola australis</i>		2	0.5		
<i>Eucalyptus victrix</i>		1	10		
<i>Triodia epactia</i>		0.2	0.3		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.2	0.3		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		0.1	1.5		
<i>Chrysopogon fallax</i>		0.1	1		
<i>Eriachne flaccida</i>		0.1	0.6		
<i>Chloris pectinata</i>		0.1	0.5		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Atriplex bunburyana</i>		0.1	0.3		
<i>Swainsona pterostylis</i>		0.1	0.3		
<i>Frankenia pauciflora</i>		0.1	0.3		
* <i>Flaveria trinervia</i>	Weed	0.1	0.3		
<i>Corchorus trilocularis</i>		0.1	0.2		
<i>Iseilema membranaceum</i>		0.1	0.2		
* <i>Malvastrum americanum</i>	Weed	0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.1		
<i>Trianthema turgidifolium</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1			
* <i>Citrullus colocynthis</i>	Weed	0.1			
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusata</i>				1	10
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.15
<i>Pterocaulon sphacelatum</i>				0.1	0.3
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				5	1
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>				0.1	0.15
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>				8	1.8
<i>Acacia ligulata</i>				0.1	1.5
<i>Heliotropium crispatum</i>				0.1	0.15

Site details			
Site	E010R	Position (WGS84)	-20.908165, 116.306538
Slope	negligible	Topography	drainage line
Soil colour	red-orange	Soil texture	loamy sand
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (22 Apr 2020)			
Sample description	Shrubland of <i>Salsola australis</i> , <i>A. sericophylla</i> and <i>A. coriacea</i> subsp. <i>pendens</i> .		
Habitat	shrubland		
Disturbance	Grazing-medium		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	70	Tree cover (%)	20
Shrub cover (%)	30	Grass cover (%)	30
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	22-Apr-2020	unbounded	Martin Henson

Species (13)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Salsola australis</i>		30	1		
<i>Sporobolus virginicus</i>		30	0.8		
<i>Acacia sericophylla</i>		20	3		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		1	4		
<i>Poaceae</i> sp.		1	0.9		
* <i>Trianthema portulacastrum</i>	Weed	1	0.1		
<i>Cassytha capillaris</i>		0.3			
<i>Trianthema turgidifolium</i>		0.1	1		
<i>Sesbania cannabina</i>		0.1	1		
<i>Frankenia pauciflora</i>		0.1	0.3		
<i>Alternanthera nodiflora</i>		0.1	0.3		
<i>Portulaca oleracea</i>		0.1	0.2		
<i>Dactyloctenium radulans</i>		0.1	0.1		

Site details			
Site	E011AR	Position (WGS84)	-20.926025, 116.258229
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	gravel / alluvial, sand, loamy sand
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (22 Apr 2020)			
Sample description	Shrubland of <i>Acacia xiphophylla</i> , <i>A. inaequilatera</i> and <i>Eremophila forrestii</i> subsp. <i>forrestii</i> over <i>Eragrostis xerophila</i> .		
Habitat	shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	30	Tree cover (%)	0.1
Shrub cover (%)	30	Grass cover (%)	5
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	22-Apr-2020	unbounded	Martin Henson

Species (8)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Acacia xiphophylla</i>		30	1.6		
<i>Triodia wiseana</i>		10	0.4		
<i>Eragrostis xerophila</i>		1	0.3		
<i>Acacia inaequilatera</i>		0.5	2		
<i>Xerochloa barbata</i>		0.2	0.3		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		0.1	1.8		
<i>Acacia synchronicia</i>		0.1	1.8		
<i>Dactyloctenium radulans</i>		0.1	0.1		

Site details			
Site	E011BR	Position (WGS84)	-20.926537, 116.259934
Slope	negligible	Topography	drainage line
Soil colour	red-orange	Soil texture	sandy loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (23 Apr 2020)			
Sample description	Woodland of <i>Eucalyptus vitrix</i> over scattered shrubs of <i>Acacia coriacea</i> subsp. <i>pendens</i> over grassland of <i>*Cenchrus setiger</i> , <i>Chrysopogon fallax</i> , <i>*Cenchrus ciliaris</i> and <i>*Citrullus colocynthis</i>		
Habitat	woodland		
Disturbance	Grazing-medium, Weed infestation		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	75	Tree cover (%)	40
Shrub cover (%)	1	Grass cover (%)	60
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	23-Apr-2020	unbounded	Martin Henson

Species (19)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eucalyptus victrix</i>		40	12		
* <i>Cenchrus setiger</i>	Weed	40	1		
<i>Chrysopogon fallax</i>		10	1		
* <i>Cenchrus ciliaris</i>	Weed	5	0.8		
<i>Sporobolus australasicus</i>		1	1		
* <i>Citrullus colocynthis</i>	Weed	1			
<i>Dichanthium fecundum</i>		0.3	1		
<i>Rostellularia adscendens</i> var. <i>latifolia</i>	Range extension	0.3	0.2		
* <i>Malvastrum americanum</i>	Weed	0.2	0.4		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		0.1	2		
* <i>Vachellia farnesiana</i>	Weed	0.1	1.5		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	0.5		
<i>Indigofera linifolia</i>		0.1	0.4		
<i>Sida spinosa</i>		0.1	0.4		
<i>Stemodia kingii</i>		0.1	0.3		
<i>Dicladantha forrestii</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Rhynchosia minima</i>		0.1			
<i>Vigna lanceolata</i> var. <i>lanceolata</i>		0.1			

Site details			
Site	E012	Position (WGS84)	-20.92857, 116.286926
Slope	negligible	Topography	drainage line
Soil colour	red-brown	Soil texture	sandy clay, clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (23 Apr 2020)			
Sample description	Tall open shrubland of <i>Acacia coriacea</i> subsp. <i>pendens</i> and <i>Hakea chordophylla</i> over shrubland of <i>Ptilotus gomphrenoides</i> , <i>Arivela viscosa</i> and <i>Senna artemisioides</i> subsp. <i>oligophylla</i> over grass		
Habitat	riparian zone		
Disturbance	Grazing-medium, Weed infestation		
Vegetation condition	Poor	Fire age	
Total veg. cover (%)	65	Tree cover (%)	2
Shrub cover (%)	0.1	Grass cover (%)	60
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	23-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	14-Oct-2021	50m x 50m	Martin Henson

Species (49)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	50	0.4		
<i>Corchorus trilocularis</i>		20	0.3		
<i>Indigofera linifolia</i>		15	0.3		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		10	3		
<i>Ptilotus gomphrenoides</i>		10	0.25		
<i>*Cenchrus setiger</i>	Weed	5	1		
<i>Chrysopogon fallax</i>		2	1.2		
<i>Streptoglossa liatroides</i>		2	0.3		
<i>Hakea loreus</i> subsp. <i>loreus</i>		1	3		
<i>Arivela viscosa</i>		1	1		
<i>Sporobolus australasicus</i>		1	1		
<i>Eriachne flaccida</i>		1	0.8		
<i>Boerhavia gardneri</i>		1	0.5		
<i>Cullen pogonocarpum</i>		1	0.4		
<i>Iseilema membranaceum</i>		1	0.3		
<i>Sida rohlenae</i> subsp. <i>rohlenae</i>		1	0.3		
<i>Alternanthera nodiflora</i>		1	0.3		
<i>Euploca conocarpa</i>		1	0.15		
<i>Ipomoea coptica</i>		1			
<i>Xerochloa barbata</i>		0.5	0.3		
<i>Mimulus gracilis</i>		0.5	0.15		
<i>Tribulus occidentalis</i>		0.5	0.1		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.2	0.4		
<i>Neptunia dimorphantha</i>		0.2	0.2		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		0.1	1		
<i>Ptilotus xerophilus</i>		0.1	0.5		
<i>Euphorbia biconvexa</i>		0.1	0.4		
<i>Sida fibulifera</i>		0.1	0.4		
<i>Solanum lasiophyllum</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3		
<i>Portulaca oleracea</i>		0.1	0.2		
<i>Abutilon oxycarpum</i> subsp. <i>Prostrate</i> (A.A. Mitchell PRP 1266)		0.1	0.15		
<i>Rhynchosia minima</i>		0.1			
<i>Cucumis variabilis</i>		0.1			
<i>*Malvastrum americanum</i>	Weed			0.1	0.3
<i>Convolvulus remotus</i>	Range extension			0.1	
<i>Acacia ligulata</i>				1	1.2
<i>Bonamia pilbarensis</i>				0.1	0.2

<i>*Vachellia farnesiana</i>	Weed	0.1	1.1
<i>Trigastrotheca molluginea</i>		0.1	0.15
<i>Streptoglossa decurrens</i>		0.1	0.4
<i>Eremophila longifolia</i>		0.1	1.5
<i>Pterocaulon sphacelatum</i>		0.1	1
<i>Erythrina vespertilio</i>		0.1	1
<i>Goodenia lamprosperma</i>		2	0.25
<i>Senna artemisioides</i> subsp. <i>helmsii</i>		0.1	0.3
<i>Ipomoea muelleri</i>		0.1	
<i>Ptilotus exaltatus</i>		0.1	0.4
<i>Eragrostis xerophila</i>		40	0.3

Site details			
Site	E013	Position (WGS84)	-20.929298, 116.311717
Slope	gentle	Topography	river
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	calcrete, granite - rocks

Observation details - visit 1 (20 Apr 2020)			
Sample description	River and drainage line of open woodland of <i>Eucalyptus victric</i> , over tall shrubland of <i>Melaleuca glomerata</i> and, <i>Acacia trachycarpa</i> , over patchy grassland of <i>*Cenchrus setiger</i> .		
Habitat	riparian zone		
Disturbance	Grazing-medium, Weed infestation		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	30	Tree cover (%)	5
Shrub cover (%)	30	Grass cover (%)	20
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	20-Apr-2020	50m x 50m	David Leach
Quadrat	2	14-Oct-2021	50m x 50m	Martin Henson

Species (75)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Melaleuca glomerata</i>		23	4		
* <i>Cenchrus setiger</i>	Weed	15	0.6		
<i>Triodia epactia</i>		15	0.4		
<i>Acacia trachycarpa</i>		10	3.5		
<i>Eucalyptus victrix</i>		5	7.5		
* <i>Malvastrum americanum</i>	Weed	5	0.4		
<i>Cyperus bifax</i>		4	0.5		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		3	4		
<i>Acacia bivenosa</i>		2.5	1.75		
<i>Operculina aequisejala</i>		1	2		
<i>Triodia wiseana</i>		1	0.5		
<i>Dactyloctenium radulans</i>		1	0.1		
<i>Sesbania cannabina</i>		0.5	1.8		
<i>Eriachne obtusa</i>		0.5	0.5		
<i>Sclerolaena hostilis</i>		0.25	0.2		
<i>Tribulus hirsutus</i>		0.25	0.2		
<i>Ipomoea costata</i>		0.25	0.15		
<i>Corymbia hamersleyana</i>		0.1	5		
<i>Eucalyptus camaldulensis</i>		0.1	3		
* <i>Vachellia farnesiana</i>	Weed	0.1	1.5		
<i>Chrysopogon fallax</i>		0.1	1		
<i>Scaevola spinescens</i>		0.1	1		
<i>Chloris pectinata</i>		0.1	0.4		
<i>Cassytha capillaris</i>		0.1	0.4		
<i>Nicotiana heterantha</i>		0.1	0.4		
<i>Eragrostis tenellula</i>		0.1	0.4		
<i>Arivela viscosa</i>		0.1	0.4		
* <i>Aerva javanica</i>	Weed	0.1	0.4		
<i>Corchorus walcottii</i>		0.1	0.3		
<i>Alternanthera nodiflora</i>		0.1	0.3		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.3		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.3		
<i>Pterocaulon sphacelatum</i>		0.1	0.3		
<i>Fimbristylis microcarya</i>		0.1	0.3		
<i>Amaranthus undulatus</i>		0.1	0.3		
<i>Stemodia grossa</i>		0.1	0.3		
<i>Sporobolus australasicus</i>		0.1	0.3		
<i>Solanum diversiflorum</i>		0.1	0.3		
<i>Sida fibulifera</i>		0.1	0.2		

<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.2
* <i>Portulaca pilosa</i>	Weed	0.1	0.2
<i>Ptilotus polystachyus</i>		0.1	0.2
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.2
<i>Boerhavia coccinea</i>		0.1	0.2
<i>Cucumis variabilis</i>		0.1	0.2
<i>Heliotropium crispatum</i>		0.1	0.2
<i>Euphorbia biconvexa</i>		0.1	0.2
<i>Striga curviflora</i>		0.1	0.2
<i>Ptilotus exaltatus</i>		0.1	0.2
<i>Indigofera linifolia</i>		0.1	0.2
<i>Corchorus trilocularis</i>		0.1	0.2
<i>Tribulus occidentalis</i>		0.1	0.15
<i>Xerochloa laniflora</i>		0.1	0.15
<i>Tephrosia supina</i>		0.1	0.15
<i>Notoleptopus decaisnei</i> var. <i>decaisnei</i>	Range extension	0.1	0.15
<i>Ipomoea coptica</i>		0.1	0.1
<i>Dysphania kalpari</i>		0.1	0.1
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.05
<i>Goodenia microptera</i>		0.1	0.05
<i>Marsilea drummondii</i>		0.1	0.05
<i>Nellica maderaspatensis</i>			0.1 0.3
* <i>Cenchrus ciliaris</i>	Weed		0.1
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>			2 1.8
<i>Waltheria indica</i>			0.1 0.3
<i>Adriana tomentosa</i> var. <i>tomentosa</i>			0.1 1
<i>Vigna lanceolata</i> var. <i>lanceolata</i>			0.1
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>			0.1 1.5
<i>Themeda triandra</i>			1 0.3
<i>Ipomoea muelleri</i>			0.5 1
<i>Notoleptopus decaisnei</i>			0.1 0.3
<i>Melaleuca linophylla</i>			2 2
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>			0.1 0.15
<i>Euphorbia boophthona</i>			0.1 0.25
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i>			10 10
<i>Pluchea rubelliflora</i>			0.1 0.3

Site details			
Site	E016	Position (WGS84)	-20.964727, 116.301841
Slope	gentle	Topography	drainage line
Soil colour	brown, whitish	Soil texture	sand
Rock cover (%)	0	Rock type	granite - outcropping, granite - rocks

Observation details - visit 1 (22 Apr 2020)			
Sample description	Riparian zone of <i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i> and <i>E. vitrix</i> woodland over tall shrubland of <i>Acacia bivenosa</i> , <i>A. coriacea</i> subsp. <i>pendens</i> and <i>Abutilon lepidum</i> over <i>Sesbania ca</i>		
Habitat	riparian zone		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	50	Tree cover (%)	20
Shrub cover (%)	5	Grass cover (%)	50
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	22-Apr-2020	50m x 50m	David Leach
Quadrat	2	16-Oct-2021	50m x 50m	Martin Henson

Species (49)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		40	0.4		
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusata</i>		15	15		
<i>Eucalyptus victrix</i>		5	10		
<i>Acacia bivenosa</i>		5	1.75		
* <i>Cenchrus setiger</i>	Weed	5	0.4		
<i>Triodia wiseana</i>		5	0.3		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		1	3		
<i>Acacia trachycarpa</i>		0.5	1.8		
<i>Sesbania cannabina</i>		0.5	0.5		
<i>Ptilotus polystachyus</i>		0.5	0.2		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		0.1	2		
<i>Ehretia saligna</i> var. <i>saligna</i>		0.1	1		
<i>Eulalia aurea</i>		0.1	0.5		
<i>Chrysopogon fallax</i>		0.1	0.5		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		0.1	0.5		
<i>Digitaria ctenantha</i>		0.1	0.4		
<i>Abutilon lepidum</i>		0.1	0.3		
<i>Indigofera monophylla</i>		0.1	0.3		
<i>Ptilotus clementii</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Amaranthus undulatus</i>		0.1	0.3		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Tephrosia supina</i>		0.1	0.3		
<i>Boerhavia coccinea</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Cucumis variabilis</i>		0.1	0.2		
<i>Sida spinosa</i>		0.1	0.2		
<i>Heliotropium crispatum</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Notoleptopus decaisnei</i> var. <i>decaisnei</i>	Range extension	0.1	0.2		
<i>Tephrosia supina</i>		0.1	0.2		
<i>Solanum diversiflorum</i>		0.1	0.2		
<i>Stemodia grossa</i>		0.1	0.1		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Xerochloa laniflora</i>		0.1	0.1		
<i>Ipomoea muelleri</i>		0.1	0.1		
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.1		

<i>Dactyloctenium radulans</i>	0.1	0.1	
<i>Waltheria indica</i>		0.2	0.8
<i>Vigna lanceolata</i> var. <i>lanceolata</i>		0.1	0.2
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.3
<i>Aristida contorta</i>		0.1	0.2
<i>Sporobolus australasicus</i>		0.1	0.3
<i>Chrysopogon fallax</i>		0.1	1
<i>Nellica maderaspatensis</i>		0.1	0.3
<i>Solanum horridum</i>		0.1	0.2

Site details			
Site	E017	Position (WGS84)	-20.994653, 116.32041
Slope	gentle	Topography	drainage line
Soil colour	red-brown	Soil texture	sand
Rock cover (%)	0	Rock type	calcrete, granite - rocks

Observation details - visit 1 (21 Apr 2020)			
Sample description	Scattered <i>Corymbia hamersleyana</i> over tall shrubland of <i>Acacia trachycarpa</i> and <i>Operculina aequisejala</i> over <i>A. pyrifolia</i> var. <i>pyrifolia</i> and <i>Senna artemisioides</i> subsp. <i>oligophylla</i> over		
Habitat	riparian zone		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	80	Tree cover (%)	7.5
Shrub cover (%)	15	Grass cover (%)	35
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	21-Apr-2020	50m x 50m	David Leach
Quadrat	2	12-Oct-2021	50m x 50m	Martin Henson

Species (53)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia angusta</i>		11	0.6		
* <i>Cenchrus setiger</i>	Weed	10	0.4		
<i>Acacia trachycarpa</i>		5	2.5		
<i>Corymbia hamersleyana</i>		2.5	10		
<i>Operculina aequisejala</i>		0.1	1.5		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		0.1	1		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		0.1	1		
<i>Acacia sericophylla</i>		0.1	0.7		
<i>Scaevola spinescens</i>		0.1	0.4		
<i>Sesbania cannabina</i>		0.1	0.4		
<i>Abutilon amplum</i>		0.1	0.4		
<i>Indigofera monophylla</i>		0.1	0.4		
<i>Melhania oblongifolia</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.3		
<i>Cullen cinereum</i>		0.1	0.3		
<i>Corchorus walcottii</i>		0.1	0.3		
<i>Bonamia erecta</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.3		
<i>Abutilon fraseri</i> subsp. <i>fraseri</i>		0.1	0.3		
<i>Cucumis variabilis</i>		0.1	0.3		
<i>Setaria dielsii</i>		0.1	0.3		
<i>Stemodia grossa</i>		0.1	0.2		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		0.1	0.2		
<i>Tribulus hirsutus</i>		0.1	0.2		
<i>Alysicarpus muelleri</i>		0.1	0.2		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.2		
<i>Ptilotus polystachyus</i>		0.1	0.2		
<i>Triumfetta clementii</i>		0.1	0.2		
<i>Boerhavia coccinea</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Grona muelleri</i>		0.1	0.2		
<i>Solanum diversiflorum</i>		0.1	0.2		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.2		
<i>Rhynchosia minima</i>		0.1	0.2		
<i>Tephrosia supina</i>		0.1	0.15		
<i>Heliotropium crispatum</i>		0.1	0.15		

<i>Sporobolus australasicus</i>		0.1	0.15
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.1
* <i>Flaveria trinervia</i>	Weed	0.1	0.1
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>			0.1 1
<i>Waltheria indica</i>			0.1 0.4
<i>Triumfetta maconochieana</i>			0.1 0.3
<i>Themeda triandra</i>			1 0.6
<i>Tephrosia uniovulata</i>			0.1 0.8
<i>Stylobasium spathulatum</i>			0.1 0.5
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>			0.1 1.8
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>			0.1 0.25
<i>Jasminum didymum</i> subsp. <i>lineare</i>			0.1 1.2
<i>Senna notabilis</i>			0.1 0.3
<i>Swainsona formosa</i>			0.5 0.3

Site details			
Site	E018	Position (WGS84)	-20.969746, 116.338454
Slope	gentle	Topography	drainage line
Soil colour	brown, whitish	Soil texture	sandy loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (19 Apr 2020)			
Sample description	Drainage woodland of <i>Eucalyptus victrix</i> and <i>Corymbia hamersleyana</i> , and <i>Acacia sericophylla</i> , over <i>Triodia angusta</i> and <i>T. wiseana</i> . and * <i>Cenchrus setiger</i> .		
Habitat	riparian zone		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	80	Tree cover (%)	50
Shrub cover (%)	5	Grass cover (%)	40
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	19-Apr-2020	50m x 50m	David Leach
Quadrat	2	12-Oct-2021	50m x 50m	Martin Henson

Species (51)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eucalyptus victrix</i>		30	15		
<i>Triodia angusta</i>		6	0.5		
* <i>Cenchrus setiger</i>	Weed	6	0.4		
<i>Corymbia hamersleyana</i>		2.5	7		
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		1.5	4		
<i>Acacia sericophylla</i>		1	4		
<i>Triodia wiseana</i>		1	0.5		
<i>Setaria dielsii</i>		1	0.5		
<i>Acacia bivenosa</i>		0.5	3		
<i>Dactyloctenium radulans</i>		0.5	0.1		
<i>Petalostylis labicheoides</i>		0.1	1		
<i>Portulaca oleracea</i>		0.1	0.8		
* <i>Vachellia farnesiana</i>	Weed	0.1	0.5		
<i>Adriana tomentosa</i> var. <i>tomentosa</i>		0.1	0.5		
<i>Abutilon amplum</i>		0.1	0.5		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.45		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Ipomoea costata</i>		0.1	0.4		
<i>Eragrostis xerophila</i>		0.1	0.4		
<i>Abutilon lepidum</i>		0.1	0.4		
<i>Ptilotus exaltatus</i>		0.1	0.35		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Melhania oblongifolia</i>		0.1	0.3		
<i>Cassytha capillaris</i>		0.1	0.3		
<i>Tephrosia supina</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.3		
* <i>Flaveria trinervia</i>	Weed	0.1	0.25		
<i>Solanum lasiophyllum</i>		0.1	0.2		
<i>Abutilon fraseri</i> subsp. <i>fraseri</i>		0.1	0.2		
<i>Ptilotus carinatus</i>		0.1	0.2		
<i>Xerochloa laniflora</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Sporobolus australasicus</i>		0.1	0.2		
<i>Rhynchosia minima</i>		0.1	0.2		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Cucumis variabilis</i>		0.1	0.2		
<i>Solanum diversiflorum</i>		0.1	0.15		
<i>Ptilotus polystachyus</i>		0.1	0.15		
<i>Ptilotus helipteroides</i>		0.1	0.15		

<i>Paspalidium rarum</i>	0.1	0.1	
<i>Euphorbia australis</i> var. <i>australis</i>	0.1	0.1	
<i>Tribulus occidentalis</i>	0.1	0.1	
<i>Corchorus trilocularis</i>	0.1	0.1	
<i>Bonamia pilbarensis</i>	0.1	0.05	
<i>Euphorbia boophthona</i>	0.1	0.05	
<i>Ehretia saligna</i> var. <i>saligna</i>		0.1	1
<i>Capparis spinosa</i> subsp. <i>nummularia</i>		0.1	0.5
<i>Streptoglossa decurrens</i>		0.1	0.3
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.3
<i>Themeda triandra</i>		2	0.3
<i>Pterocaulon sphacelatum</i>		0.1	0.4

Site details			
Site	E020R02	Position (WGS84)	-20.925793, 116.27657
Slope		Topography	
Soil colour		Soil texture	
Rock cover (%)	0	Rock type	

Observation details - visit 1 (23 Apr 2020)			
Sample description	Shrubland of <i>Acacia bivenosa</i> over a hummock grassland of <i>Triodia wiseana</i> .		
Habitat	shrubland		
Disturbance			
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	60	Tree cover (%)	0
Shrub cover (%)	30	Grass cover (%)	60
Herb cover (%)	1		

Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	23-Apr-2020	unbounded	Martin Henson

Species (13)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		60	1		
<i>Acacia bivenosa</i>		20	1.5		
<i>Sorghum plumosum</i>		1	1.5		
<i>Solanum lasiophyllum</i>		0.5	0.35		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.5	0.3		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.3		
<i>Cucumis variabilis</i>		0.1	0.2		
<i>Triumfetta clementii</i>		0.1	0.1		
<i>Senna notabilis</i>		0.1	0.1		
<i>Notoleptopus decaisnei</i>		0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.1		
<i>Alysicarpus muelleri</i>		0.1	0.1		
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.05		

Site details			
Site	E021	Position (WGS84)	-20.941296, 116.279007
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	loam
Rock cover (%)	0	Rock type	siltstone / mudstone

Observation details - visit 1 (23 Apr 2020)			
Sample description	Mid to tall open shrubland of <i>Acacia bivenosa</i> , over hummock grassland of <i>Triodia wiseana</i> with mixed herbs.		
Habitat	shrubland		
Disturbance	Not recorded		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	60	Tree cover (%)	7.5
Shrub cover (%)	15	Grass cover (%)	50
Herb cover (%)	2.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	23-Apr-2020	50m x 50m	David Leach

Species (35)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		60	0.4		
<i>Acacia bivenosa</i>		17.5	2.25		
<i>Ptilotus polystachyus</i>		1	0.15		
<i>Portulaca oleracea</i>		0.5	0.025		
<i>Triumfetta clementii</i>		0.25	0.2		
<i>Hakea loreus</i> subsp. <i>loreus</i>		0.1	2.25		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		0.1	0.6		
<i>Arivela viscosa</i>		0.1	0.35		
<i>Corchorus walcottii</i>		0.1	0.3		
* <i>Cenchrus setiger</i>	Weed	0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.25		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.25		
<i>Indigofera trita</i>		0.1	0.2		
<i>Abutilon lepidum</i>		0.1	0.2		
<i>Ptilotus helipteroides</i>		0.1	0.2		
<i>Solanum diversiflorum</i>		0.1	0.2		
<i>Themeda triandra</i>		0.1	0.2		
<i>Alysicarpus muelleri</i>		0.1	0.2		
<i>Cucumis variabilis</i>		0.1	0.2		
<i>Notoleptopus decaisnei</i> var. <i>decaisnei</i>	Range extension	0.1	0.15		
<i>Boerhavia coccinea</i>		0.1	0.15		
<i>Aristida contorta</i>		0.1	0.15		
<i>Euploca conocarpa</i>		0.1	0.15		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.15		
<i>Melhania oblongifolia</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1	0.15		
<i>Tribulus hirsutus</i>		0.1	0.15		
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.1		
<i>Enneapogon caerulescens</i>		0.1	0.1		
<i>Stemodia grossa</i>		0.1	0.1		
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)		0.1	0.1		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		0.1	0.1		
<i>Trianthema triquetrum</i>		0.1	0.1		
<i>Polygala glaucifolia</i>		0.1	0.05		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>		0	1		

Site details			
Site	E022	Position (WGS84)	-20.954531, 116.331394
Slope		Topography	
Soil colour		Soil texture	
Rock cover (%)	0	Rock type	

Observation details - visit 1 (20 Apr 2020)			
Sample description	Scattered grasses of <i>*Cenchrus ciliaris</i> , <i>Sporobolus australasicus</i> and <i>Fimbristylis dichotoma</i> with scattered shrubs of <i>Corchorus walcottii</i> and <i>Portulaca filifolia</i> .		
Habitat	rockland		
Disturbance			
Vegetation condition	Excellent	Fire age	unsure
Total veg. cover (%)	1	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	0.5
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	20-Apr-2020	50m x 50m	David Leach
Quadrat	2	14-Oct-2021	50m x 50m	Martin Henson

Species (19)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	0.1	0.2		
<i>Portulaca filifolia</i>	Range extension	0.1	0.15		
<i>Corchorus walcottii</i>		0.1	0.15		
<i>Aristida contorta</i>		0.1	0.1		
<i>Boerhavia coccinea</i>		0.1	0.1		
<i>Sporobolus australasicus</i>		0.1	0.1		
<i>Fimbristylis dichotoma</i>		0.1	0.1		
<i>Enneapogon caeruleus</i>		0.1	0.05		
<i>Indigofera linifolia</i>		0.1	0.05		
<i>*Portulaca pilosa</i>	Weed	0.1	0.05		
<i>Solanum horridum</i>		0.1	0.05		
<i>Acacia inaequilatera</i>				0.1	1
<i>Ptilotus exaltatus</i>				0.1	0.5
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>				0.1	1.8
<i>Cynanchum viminale</i> subsp. <i>australe</i>				0.1	0.4
<i>Streptoglossa decurrens</i>				0.1	0.4
<i>Arivela viscosa</i>				0.1	0.15
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.5
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>				0.1	0.2

Site details			
Site	E024	Position (WGS84)	-20.955926, 116.328847
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	calcrete, granite - rocks, siltstone / mudstone

Observation details - visit 1 (20 Apr 2020)			
Sample description	Mid open woodland of <i>Acacia bivenosa</i> over <i>Triodia wiseana</i> with mixed herbs.		
Habitat	shrubland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	65	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	65
Herb cover (%)	2.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	20-Apr-2020	50m x 50m	David Leach

Species (31)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		65	0.6		
<i>Acacia bivenosa</i>		10	2		
<i>Tribulus hirsutus</i>		1	0.15		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.5	0.2		
<i>Euphorbia australis</i> var. <i>australis</i>		0.25	0.1		
<i>Scaevola spinescens</i>		0.1	0.4		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Indigastrium parviflorum</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Corchorus walcottii</i>		0.1	0.25		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.25		
<i>Ptilotus clementii</i>		0.1	0.25		
<i>Abutilon lepidum</i>		0.1	0.25		
<i>Notoleptopus decaisnei</i> var. <i>decaisnei</i>	Range extension	0.1	0.2		
<i>Alysicarpus muelleri</i>		0.1	0.2		
<i>Cullen pogonocarpum</i>		0.1	0.2		
<i>Lepidium platypetalum</i>		0.1	0.2		
<i>Ptilotus polystachyus</i>		0.1	0.2		
<i>Rhynchosia minima</i>		0.1	0.2		
<i>Solanum diversiflorum</i>		0.1	0.2		
<i>Tephrosia</i> sp. clay soils (<i>S. van Leeuwen et al. PBS 0273</i>)		0.1	0.2		
<i>Sporobolus australasicus</i>		0.1	0.15		
<i>Enneapogon caeruleus</i>		0.1	0.15		
<i>Indigofera trita</i>		0.1	0.15		
<i>Aristida contorta</i>		0.1	0.1		
<i>Dactyloctenium radulans</i>		0.1	0.1		
<i>Euphorbia biconvexa</i>		0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.1		
<i>Grona muelleri</i>		0.1	0.1		
<i>Stemodia grossa</i>		0.1	0.1		
<i>Goodenia muelleriana</i>		0.1	0.05		

Site details			
Site	E025	Position (WGS84)	-20.924717, 116.302612
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	ferrous - ironstone, granite - rocks

Observation details - visit 1 (22 Apr 2020)			
Sample description	Open shrubland of <i>Acacia bivenosa</i> and <i>Hakea chordophylla</i> over <i>Triodia wiseana</i> .		
Habitat	shrubland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	90	Tree cover (%)	25
Shrub cover (%)	1	Grass cover (%)	85
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	22-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	14-Oct-2021	50m x 50m	Martin Henson

Species (28)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		70	0.4		
<i>Acacia bivenosa</i>		30	1.8		
<i>Tribulus hirsutus</i>		1	0.1		
<i>Hakea loreus</i> subsp. <i>loreus</i>		0.1	2.5		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1.5		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.4		
<i>Myoporum montanum</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Cullen pogonocarpum</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Abutilon lepidum</i>		0.1	0.3		
<i>Nellica maderaspatensis</i>		0.1	0.25		
<i>Notoleptopus decaisnei</i>		0.1	0.2		
<i>Ptilotus auriculifolius</i>		0.1	0.2		
<i>Polymeria ambigua</i>		0.1	0.1		
<i>Tribulus occidentalis</i>		0.1	0.1		
<i>Indigofera colutea</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1			
<i>Cucumis variabilis</i>		0.1			
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>				0.1	0.2
<i>Scaevola spinescens</i>				0.1	1
<i>Cynanchum viminalis</i> subsp. <i>australe</i>				0.1	0.4
<i>Tephrosia clementii</i>				0.1	0.2
<i>Bonamia pilbarensis</i>				0.1	0.1
<i>Hakea loreus</i> subsp. <i>loreus</i>				0.1	2

Site details			
Site	E025R	Position (WGS84)	-20.927068, 116.302694
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	gravel / alluvial, clay
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (22 Apr 2020)			
Sample description	Open shrubland of <i>Acacia xiphophylla</i> over a grassland of <i>Eragrostis xerophila</i> , <i>Iseilema membranaceum</i> and <i>Aristida contorta</i> .		
Habitat	shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	50	Tree cover (%)	20
Shrub cover (%)	0	Grass cover (%)	50
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	22-Apr-2020	unbounded	Martin Henson

Species (22)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Acacia xiphophylla</i>		20	2		
<i>Eragrostis xerophila</i>		20	0.5		
<i>Iseilema membranaceum</i>		15	0.25		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		10	0.3		
<i>Streptoglossa adscendens</i>		2	0.1		
<i>Aristida contorta</i>		0.2	0.2		
<i>Euploca heterantha</i>		0.2	0.1		
<i>Portulaca oleracea</i>		0.2	0.1		
<i>Rhagodia eremaea</i>		0.1	1		
<i>Chrysopogon fallax</i>		0.1	1		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Sida rohlenae</i> subsp. <i>rohlenae</i>		0.1	0.3		
<i>Ptilotus helipteroides</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.25		
<i>Xerochloa barbata</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Dactyloctenium radulans</i>		0.1	0.15		
<i>Sporobolus australasicus</i>		0.1	0.15		
<i>Neptunia dimorphantha</i>		0.1	0.1		
<i>Cucumis variabilis</i>		0.1			
<i>Rhynchosia minima</i>		0.1			

Site details			
Site	E027	Position (WGS84)	-21.00994, 116.313564
Slope	moderate	Topography	hill top
Soil colour	red-brown	Soil texture	loam
Rock cover (%)	0	Rock type	siltstone / mudstone

Observation details - visit 1 (21 Apr 2020)			
Sample description	<i>Triodia wisiana</i> spinifex grassland with isolated herbs of <i>Ptilotus clementii</i> , <i>Indigofera monophyla</i> and <i>Arivela viscosa</i> .		
Habitat	spinifex grassland		
Disturbance	Weed infestation		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	40	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	40
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	21-Apr-2020	50m x 50m	David Leach
Quadrat	2	28-Mar-2021	50m x 50m	Brody Loneragan

Species (30)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		40	0.4		
<i>Aristida contorta</i>		0.25	0.3		
<i>Indigofera monophylla</i>		0.1	0.4		
<i>Abutilon lepidum</i>		0.1	0.4		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.4		
<i>Bonamia pilbarensis</i>		0.1	0.35		
<i>Ptilotus helipteroides</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Ptilotus clementii</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.25		
<i>Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)</i>		0.1	0.2		
<i>Bulbostylis turbinata</i>		0.1	0.15		
<i>Ptilotus polystachyus</i>		0.1	0.15		
<i>Tribulus hirsutus</i>		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.05		
<i>Euploca inexplicita</i>				0.1	0.1
<i>Crotalaria novae-hollandiae</i> subsp. <i>novae-hollandiae</i>				0.1	0.3
<i>Eriachne pulchella</i> subsp. <i>dominii</i>				0.1	0.15
<i>Acacia xiphophylla</i>				0.1	1.2
<i>Acacia ancistrocarpa</i>				0.1	0.18
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.3
<i>Ptilotus auriculifolius</i>				0.5	0.3
<i>Ptilotus exaltatus</i>				0.1	0.3
<i>Rhynchosia minima</i>				0.1	
<i>Sida arsiniata</i>				0.1	0.3
<i>Solanum lasiophyllum</i>				0.1	0.3
<i>Swainsona formosa</i>				0.1	0.3
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.5
<i>Triumfetta clementii</i>				0.1	0.2
<i>Nellica maderaspatensis</i>				0.1	0.25

Site details			
Site	E028	Position (WGS84)	-21.039149, 116.268747
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	granite - rocks, siltstone / mudstone

Observation details - visit 1 (22 Apr 2020)			
Sample description	Tussock grassland of <i>Sorghum plumosum</i> , <i>Eragrostis xerophila</i> , and <i>Dactyloctenium radulans</i> , with mixed herbs.		
Habitat	grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	55	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	55
Herb cover (%)	3		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	22-Apr-2020	50m x 50m	David Leach
Quadrat	2	20-Sep-2020	50m x 50m	Shenade Findlay

Species (32)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Sorghum plumosum</i>		45	1		
<i>Eragrostis xerophila</i>		5	0.2		
<i>Ptilotus carinatus</i>		2	0.15		
<i>Euploca conocarpa</i>		1	0.15		
<i>Dactyloctenium radulans</i>		1	0.1		
<i>Streptoglossa liatroides</i>		0.5	0.15		
<i>Boerhavia paludosa</i>		0.1	0.4		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Cyperus iria</i>		0.1	0.25		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.15		
<i>Ptilotus gomphrenoides</i>		0.1	0.15		
<i>Indigofera trita</i>		0.1	0.15		
<i>Corchorus trilocularis</i>		0.1	0.15		
<i>Ptilotus exaltatus</i>		0.1	0.15		
<i>Grona muelleri</i>		0.1	0.1		
<i>Aristida contorta</i>		0.1	0.1		
<i>Ipomoea lonchophylla</i>		0.1	0.1		
<i>Xerochloa laniflora</i>		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Pterocaulon sphacelatum</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Tribulus occidentalis</i>		0.1	0.1		
<i>Goodenia pascua</i>		0.1	0.05		
<i>Neptunia dimorphantha</i>		0.1	0.05		
<i>Indigofera linnaei</i>				0.1	0.1
<i>Panicum decompositum</i>				0.1	0.3
<i>Sida rohlenae</i> subsp. <i>rohlenae</i>				0.1	0.4
<i>Trianthema triquetrum</i>				0.1	0.1
<i>Trianthema turgidifolium</i>				0.1	0.1

Site details			
Site	E030	Position (WGS84)	-21.025181, 116.297982
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (21 Apr 2020)			
Sample description	Low open shrubland of <i>Acacia xiphophylla</i> , over tussock grassland of <i>Eragrostis xerophila</i> , <i>Sorghum plumosum</i> , and <i>Dicanthium sericeum</i> subsp. <i>humilis</i> .		
Habitat	shrubland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	37.5	Tree cover (%)	0
Shrub cover (%)	15	Grass cover (%)	30
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	21-Apr-2020	50m x 50m	David Leach
Quadrat	2	19-Sep-2020	50m x 50m	Shenade Findlay

Species (33)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Acacia xiphophylla</i>		15	1		
<i>Eragrostis xerophila</i>		3.5	0.2		
<i>Sorghum plumosum</i>		1	0.9		
<i>Dactyloctenium radulans</i>		1	0.1		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.5	0.15		
<i>Maireana triptera</i>		0.1	0.4		
<i>Boerhavia paludosa</i>		0.1	0.3		
<i>Panicum decompositum</i>		0.1	0.3		
<i>Alysicarpus muelleri</i>		0.1	0.25		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Ptilotus carinatus</i>		0.1	0.2		
<i>Ipomoea lonchophylla</i>		0.1	0.15		
<i>Indigofera linifolia</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1	0.15		
<i>Euploca conocarpa</i>		0.1	0.15		
<i>Heliotropium crispatum</i>		0.1	0.15		
<i>Hibiscus brachysiphonius</i>		0.1	0.1		
<i>Neptunia dimorphantha</i>		0.1	0.1		
<i>Abutilon malvifolium</i>		0.1	0.1		
<i>Pterocaulon sphacelatum</i>		0.1	0.1		
<i>Xerochloa laniflora</i>		0.1	0.1		
<i>Ptilotus exaltatus</i>		0.1	0.1		
<i>Sclerolaena costata</i>		0.1	0.1		
<i>Tribulus hirsutus</i>		0.1	0.1		
<i>Tribulus occidentalis</i>		0.1	0.1		
<i>Operculina aequisejala</i>		0.1	0.1		
<i>Euphorbia biconvexa</i>		0.1	0.05		
<i>Sporobolus australasicus</i>		0.1	0.05		
<i>Ptilotus helipteroides</i>				0.1	0.1
<i>Salsola australis</i>				0.1	0.5
<i>Sclerolaena diacantha</i>				0.1	0.1
<i>Streptoglossa liatroides</i>				0.1	0.2
<i>Threlkeldia diffusa</i>				0.1	0.3

Site details			
Site	E033	Position (WGS84)	-20.975018, 116.263391
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (23 Apr 2020)			
Sample description	Tussock grassland of <i>Eragrostis xerophila</i> , <i>Xerochloa laniflora</i> with mixed herbs.		
Habitat	grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	60	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	60
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	23-Apr-2020	50m x 50m	David Leach
Quadrat	2	20-Sep-2020	50m x 50m	Shenade Findlay

Species (24)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		30	0.3		
<i>Xerochloa laniflora</i>		2.5	0.1		
<i>Euploca conocarpa</i>		2.5	0.1		
<i>Indigofera trita</i>		1	0.15		
<i>Boerhavia paludosa</i>		0.1	0.4		
<i>Corchorus trilocularis</i>		0.1	0.3		
<i>Indigostrum parviflorum</i>		0.1	0.2		
<i>Ptilotus exaltatus</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.15		
<i>Ipomoea lonchophylla</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1	0.15		
<i>Tribulus occidentalis</i>		0.1	0.15		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3 (DBCA list)	0.1	0.1		
<i>Pterocaulon sphacelatum</i>		0.1	0.1		
<i>Grona muelleri</i>		0.1	0.1		
<i>Dactyloctenium radulans</i>		0.1	0.1		
<i>Salsola australis</i>		0.1	0.05		
<i>Ptilotus gomphrenoides</i>				0.1	0.2
<i>Indigofera linnaei</i>				1	0.3
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.4	0.3
<i>Sida fibulifera</i>				0.1	0.2
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>				0.4	0.1
<i>Iseilema membranaceum</i>				0.4	0.15

Site details			
Site	E035	Position (WGS84)	-20.939718, 116.300086
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (23 Apr 2020)			
Sample description	Grassland of delicate hilltop grass and <i>Eragrostis xerophilla</i> over scattered herbs of <i>Streptaglossa liatroides</i> , <i>Rhynchosia minima</i> and <i>Ptilotus carinatus</i> .		
Habitat	grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	60	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	55
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	23-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	19-Sep-2020	50m x 50m	Shenade Findlay

Species (17)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		30	0.3		
<i>Xerochloa barbata</i>		10	0.3		
<i>Euploca heterantha</i>		10	0.2		
<i>Eragrostis xerophila</i>		5	0.3		
<i>Sida fibulifera</i>		1	0.3		
<i>Streptoglossa liatroides</i>		0.2	0.3		
<i>Ptilotus carinatus</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Indigofera trita</i>		0.1	0.3		
<i>Rhynchosia minima</i>		0.1	0.3		
<i>Grona muelleri</i>		0.1	0.1		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.1		
<i>Ptilotus exaltatus</i>				0.1	0.2
<i>Goodenia pascua</i>				0.1	0.2
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.2
<i>Threlkeldia diffusa</i>				0.1	0.1
<i>Ptilotus aervoides</i>				0.1	0.1

Site details			
Site	E036	Position (WGS84)	-20.944511, 116.271428
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (23 Apr 2020)			
Sample description	Tussock grassland of <i>Eragrostis xerophila</i> with mixed herbs.		
Habitat	grassland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	67.5	Tree cover (%)	67.5
Shrub cover (%)	0	Grass cover (%)	67
Herb cover (%)	2		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	23-Apr-2020	50m x 50m	David Leach
Quadrat	2	20-Sep-2020	50m x 50m	Shenade Findlay

Species (26)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		50	0.3		
<i>Euploca conocarpa</i>		2.5	0.2		
<i>Ptilotus gomphrenoides</i>		2	0.25		
<i>Pterocaulon sphacelatum</i>		2	0.15		
<i>Portulaca oleracea</i>		1	0.1		
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3 (DBCA list)	0.75	0.1		
<i>Panicum decompositum</i>		0.1	0.6		
<i>Sida fibulifera</i>		0.1	0.3		
<i>Corchorus trilocularis</i>		0.1	0.2		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Neptunia dimorphantha</i>		0.1	0.2		
<i>Ptilotus carinatus</i>		0.1	0.2		
<i>Stemodia kingii</i>		0.1	0.2		
* <i>Cynodon dactylon</i>	Weed	0.1	0.2		
<i>Abutilon malvifolium</i>		0.1	0.15		
<i>Ipomoea lonchophylla</i>		0.1	0.15		
<i>Euphorbia biconvexa</i>		0.1	0.15		
<i>Indigofera trita</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Dactyloctenium radulans</i>		0.1	0.1		
<i>Paspalidium clementii</i>				0.1	0.25
<i>Indigofera linnaei</i>				0.5	0.2
<i>Ptilotus exaltatus</i>				0.1	0.3
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.15
<i>Nellica maderaspatensis</i>				0.1	0.15

Site details			
Site	E037	Position (WGS84)	-20.939064, 116.329459
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (20 Apr 2020)			
Sample description	Grassland of <i>Sorghum timorese</i> and <i>Eragrostis xerophila</i> with mixed herbs.		
Habitat	grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	70	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	70
Herb cover (%)	2		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	20-Apr-2020	50m x 50m	David Leach
Quadrat	2	20-Sep-2020	50m x 50m	Shenade Findlay

Species (29)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Sorghum plumosum</i>		60	1		
<i>Eragrostis xerophila</i>		30	0.3		
<i>Xerochloa laniflora</i>		1	0.2		
<i>Euploca conocarpa</i>		1	0.15		
<i>Operculina aequisejala</i>		0.25	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Ptilotus carinatus</i>		0.1	0.2		
<i>Ipomoea lonchophylla</i>		0.1	0.15		
<i>Pterocaulon sphacelatum</i>		0.1	0.15		
<i>Ptilotus exaltatus</i>		0.1	0.15		
<i>Indigofera linifolia</i>		0.1	0.1		
<i>Dactyloctenium radulans</i>		0.1	0.1		
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3 (DBCA list)	0.1	0.1		
<i>Cucumis picroparpus</i>		0.1	0.1		
* <i>Flaveria trinervia</i>	Weed	0.1	0.1		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Goodenia pasqua</i>		0.1	0.05		
<i>Nellica maderaspatensis</i>		0.1	0.05		
<i>Aristida contorta</i>				0.1	0.1
<i>Rhodanthe floribunda</i>				0.1	0.05
<i>Erodium cygnorum</i>				0.1	0.1
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.1
<i>Enneapogon caerulescens</i>				0.1	0.05
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>				0.1	0.1
<i>Senna hamersleyensis</i>				0.1	0.2
<i>Trianthema turgidifolium</i>				0.1	0.05
<i>Bonamia pilbarensis</i>				0.1	0.05
<i>Portulaca oleracea</i>				0.1	0.1

Site details			
Site	E038	Position (WGS84)	-20.970299, 116.344467
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	loam
Rock cover (%)	0	Rock type	calcrete, ferrous - ironstone

Observation details - visit 1 (19 Apr 2020)			
Sample description	Low open to scattered shrubland of <i>Acacia xiphophylla</i> , over grassland of <i>Eragrostis xerophila</i> , <i>Eriachne obtusa</i> , and <i>Xerochloa laniflora</i> with mixed herbs.		
Habitat	shrubland		
Disturbance	Grazing-low, Vehicle tracks, Weed infestation		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	35	Tree cover (%)	0
Shrub cover (%)	2.5	Grass cover (%)	35
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	19-Apr-2020	50m x 50m	David Leach
Quadrat	2	20-Sep-2020	50m x 50m	Shenade Findlay

Species (36)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		25	0.2		
<i>Xerochloa laniflora</i>		15	0.2		
<i>Acacia xiphophylla</i>		2.5	1.2		
<i>Sorghum plumosum</i>		2	1		
<i>Eragrostis tenellula</i>		1	0.5		
<i>Eriachne obtusa</i>		1	0.5		
<i>Euploca conocarpa</i>		1	0.15		
<i>Dactyloctenium radulans</i>		1	0.1		
<i>Boerhavia paludosa</i>		0.1	0.4		
<i>Neptunia dimorphantha</i>		0.1	0.3		
<i>Sida fibulifera</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Streptoglossa liatroides</i>		0.1	0.2		
<i>Ptilotus gomphrenoides</i>		0.1	0.2		
<i>Ptilotus exaltatus</i>		0.1	0.15		
<i>Aristida contorta</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1	0.15		
<i>Tephrosia supina</i>		0.1	0.15		
<i>Cucumis picrocarpus</i>		0.1	0.1		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Stemodia kingii</i>		0.1	0.1		
<i>Euphorbia biconvexa</i>		0.1	0.1		
<i>Salsola australis</i>		0.1	0.1		
<i>Ptilotus aervoides</i>		0.1	0.1		
<i>Sporobolus australasicus</i>		0.1	0.05		
<i>Enneapogon caeruleus</i>		0.1	0.05		
<i>Abutilon lepidum</i>		0.1	0.05		
<i>Corchorus trilocularis</i>		0.1	0.05		
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.075
<i>Trianthema triquetrum</i>				0.1	0.02
<i>Trianthema turgidifolium</i>				0.1	0.02
<i>Ptilotus carinatus</i>				0.1	0.3
<i>Triodia wiseana</i>				0.1	0.25
<i>Eriachne flaccida</i>				0.5	0.5

Site details			
Site	E041	Position (WGS84)	-20.890103, 116.376751
Slope	negligible	Topography	plain
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	ferrous - ironstone

Observation details - visit 1 (18 Apr 2020)			
Sample description	Tussock grassland of <i>Eragrostis xerophila</i> with <i>Ptilotus exaltatus</i> , <i>Rhyncarhena minima</i> , and <i>Operculina aequisejala</i> .		
Habitat	grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	70	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	70
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	18-Apr-2020	50m x 50m	David Leach
Quadrat	2	21-Sep-2020	50m x 50m	Shenade Findlay

Species (24)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		65	0.3		
<i>Sorghum plumosum</i>		5	1		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		1	0.1		
<i>Xerochloa laniflora</i>		0.5	0.2		
<i>Rhynchosia minima</i>		0.5	0.1		
<i>Ptilotus exaltatus</i>		0.25	0.2		
<i>Boerhavia paludosa</i>		0.1	0.4		
<i>Euphorbia biconvexa</i>		0.1	0.15		
<i>Operculina aequisepala</i>		0.1	0.1		
<i>Indigofera trita</i>		0.1	0.1		
<i>Salsola australis</i>		0.1	0.1		
<i>Abutilon lepidum</i>		0.1	0.05		
<i>Ptilotus carinatus</i>				0.5	0.15
<i>Indigofera linnaei</i>				0.1	0.1
<i>Dactyloctenium radulans</i>				0.1	0.15
<i>Euploca conocarpa</i>				0.5	0.15
<i>Portulaca oleracea</i>				0.1	0.2
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.3
<i>Sida fibulifera</i>				0.1	0.2
<i>Solanum lasiophyllum</i>				0.1	0.15
<i>Streptoglossa liatroides</i>				0.1	0.15
<i>Trianthema turgidifolium</i>				0.1	0.15
<i>Tribulus occidentalis</i>				0.1	0.3
<i>Panicum decompositum</i>				0.1	0.1

Site details			
Site	E042A	Position (WGS84)	-20.880656, 116.391563
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	sandy loam
Rock cover (%)	0	Rock type	ferrous - ironstone

Observation details - visit 1 (17 Apr 2020)			
Sample description	Stony plain of mixed grasses, including <i>Eragrostis xerophilla</i> , <i>Aristida contorta</i> and <i>Sorghum plumosum</i> .		
Habitat	grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	15
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	17-Apr-2020	50m x 50m	David Leach
Quadrat	2	12-Oct-2021	50m x 50m	Adam Crosby-Clarke

Species (24)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Xerochloa laniflora</i>		10	0.25		
<i>Eragrostis xerophila</i>		4	0.25		
<i>Portulaca oleracea</i>		1	0.05		
<i>Sorghum plumosum</i>		0.1	0.5		
<i>Neptunia dimorphantha</i>		0.1	0.2		
<i>Aristida contorta</i>		0.1	0.15		
<i>Salsola australis</i>		0.1	0.15		
<i>Alysicarpus muelleri</i>		0.1	0.1		
<i>Ptilotus carinatus</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Atriplex codonocarpa</i>		0.1	0.05		
<i>Acacia xiphophylla</i>		0	1.5		
<i>Rhodanthe floribunda</i>				0.1	0.1
<i>Ptilotus exaltatus</i>				0.1	0.2
* <i>Cenchrus ciliaris</i>	Weed			0.1	0.6
<i>Acacia ligulata</i>				0.5	1.6
<i>Panicum decompositum</i>				0.1	0.2
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.3
<i>Indigofera linifolia</i>				0.1	0.1
<i>Sclerolaena densiflora</i>				0.1	0.1
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>				0.1	0.9
<i>Sclerolaena glabra</i>				1	0.2
<i>Sida fibulifera</i>				0.1	0.2
<i>Ptilotus aervoides</i>				0.1	0.1

Site details			
Site	E042B	Position (WGS84)	-20.879104, 116.395933
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (17 Apr 2020)			
Sample description	Tussock grassland of <i>Sorghum plumosum</i> , <i>Eragrostis xerophila</i> , <i>Xerochloa laniflora</i> , with a diverse mix of herbs.		
Habitat	grassland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	80	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	75
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	17-Apr-2020	50m x 50m	David Leach
Quadrat	2	12-Oct-2021	50m x 50m	Adam Crosby-Clarke

Species (26)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Sorghum plumosum</i>		50	1.4		
<i>Eragrostis xerophila</i>		50	0.3		
<i>Euploca conocarpa</i>		2.5	0.2		
<i>Xerochloa laniflora</i>		1	0.2		
<i>Boerhavia paludosa</i>		0.1	0.5		
<i>Indigofera linifolia</i>		0.1	0.3		
<i>Ipomoea lonchophylla</i>		0.1	0.2		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Rhynchosia minima</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Portulaca oleracea</i>		0.1	0.2		
<i>Dactyloctenium radulans</i>		0.1	0.15		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.15		
<i>Grona muelleri</i>		0.1	0.15		
<i>Neptunia dimorphantha</i>		0.1	0.15		
<i>Operculina aequisejala</i>		0.1	0.15		
<i>Ptilotus exaltatus</i>		0.1	0.15		
<i>Streptoglossa liatroides</i>		0.1	0.15		
<i>Tribulus occidentalis</i>		0.1	0.15		
<i>Abutilon malvifolium</i>		0.1	0.1		
<i>Ptilotus carinatus</i>		0.1	0.1		
<i>Indigofera trita</i>		0.1	0.1		
<i>Salsola australis</i>				0.1	0.3
<i>Enneapogon caeruleus</i>				0.1	0.1
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.2
<i>Aristida contorta</i>				0.1	0.1

Site details			
Site	E043	Position (WGS84)	-20.87064, 116.412038
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	sandy loam
Rock cover (%)	0	Rock type	ferrous - ironstone

Observation details - visit 1 (18 Apr 2020)			
Sample description	Mixed grassland of <i>Eriachne caerulescnes</i> and <i>Aristida contorta</i> with mixed herbs of <i>Goodenia pasqua</i> , <i>Euphorbia careyi</i> and <i>Sida fibulifera</i> .		
Habitat	grassland		
Disturbance	Livestock tracks		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	0.1	Grass cover (%)	30
Herb cover (%)	1.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	18-Apr-2020	50m x 50m	David Leach
Quadrat	2	21-Sep-2020	50m x 50m	Shenade Findlay

Species (33)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		30	0.2		
<i>Euploca conocarpa</i>		2	0.15		
<i>Streptoglossa liatroides</i>		1	0.2		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		1	0.15		
<i>Rhynchosia minima</i>		0.5	0.1		
<i>Dactyloctenium radulans</i>		0.5	0.1		
<i>Sida fibulifera</i>		0.5	0.1		
<i>Ptilotus exaltatus</i>		0.25	0.15		
<i>Aristida contorta</i>		0.25	0.1		
<i>Sorghum plumosum</i>		0.1	0.8		
<i>Boerhavia paludosa</i>		0.1	0.35		
<i>Sclerolaena hostilis</i>		0.1	0.3		
<i>Salsola australis</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Goodenia pascua</i>		0.1	0.2		
<i>Hibiscus brachysiphonius</i>		0.1	0.2		
<i>Tephrosia</i> sp. (E043)		0.1	0.15		
<i>Indigofera trita</i>		0.1	0.15		
<i>Polygala</i> aff. <i>galeocephala</i>	sp. nov.	0.1	0.1		
<i>Neptunia dimorphantha</i>		0.1	0.1		
<i>Pterocaulon sphacelatum</i>		0.1	0.1		
<i>Euphorbia careyi</i>		0.1	0.05		
<i>Portulaca oleracea</i>		0.1	0.05		
<i>Enneapogon caeruleascens</i>		0.1	0.05		
<i>Indigofera linnaei</i>				0.1	0.15
<i>Xerochloa laniflora</i>				0.1	0.15
<i>Ptilotus aevoides</i>				0.1	0.05
<i>Ptilotus carinatus</i>				0.1	0.1
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.3
<i>Tribulus occidentalis</i>				0.1	0.2
<i>Maireana tomentosa</i>				0.1	0.1

Site details			
Site	E044	Position (WGS84)	-20.85645, 116.426712
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	ferrous - ironstone

Observation details - visit 1 (19 Apr 2020)			
Sample description	Open tussock grassland of <i>Eragrostis xerophila</i> , <i>Xerochloa laniflora</i> , and <i>Eriachne obtusa</i> , with mix of herbs.		
Habitat	grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	65	Tree cover (%)	0
Shrub cover (%)	0.1	Grass cover (%)	65
Herb cover (%)	2.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	19-Apr-2020	50m x 50m	David Leach
Quadrat	2	19-Sep-2020	50m x 50m	Shenade Findlay

Species (30)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		50	0.3		
<i>Xerochloa laniflora</i>		30	0.2		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		10	0.15		
<i>Ptilotus gomphrenoides</i>		0.5	0.2		
<i>Sclerolaena hostilis</i>		0.25	0.2		
<i>Indigofera trita</i>		0.25	0.2		
<i>Euploca conocarpa</i>		0.25	0.15		
<i>Eriachne obtusa</i>		0.1	0.4		
<i>Paspalidium clementii</i>		0.1	0.2		
<i>Iseilema membranaceum</i>		0.1	0.2		
<i>Abutilon malvifolium</i>		0.1	0.2		
<i>Neptunia dimorphantha</i>		0.1	0.2		
<i>Ptilotus clementii</i>		0.1	0.2		
<i>Solanum diversiflorum</i>		0.1	0.2		
<i>Sida fibulifera</i>		0.1	0.15		
<i>Portulaca oleracea</i>		0.1	0.15		
<i>Ptilotus exaltatus</i>		0.1	0.15		
<i>Pterocaulon sphacelatum</i>		0.1	0.15		
<i>Corchorus trilocularis</i>		0.1	0.15		
<i>Cyperus iria</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Ipomoea optica</i>		0.1	0.1		
<i>Salsola australis</i>		0.1	0.1		
<i>Bulbostylis turbinata</i>		0.1	0.1		
<i>Dactyloctenium radulans</i>		0.1	0.1		
<i>Atriplex codonocarpa</i>		0.1	0.05		
<i>Nellica maderaspatensis</i>				0.1	0.2
<i>Sclerolaena diacantha</i>				0.1	0.1
<i>Ptilotus murrayi</i>				0.1	0.1
<i>Sclerolaena glabra</i>				0.1	0.2

Site details			
Site	E045A	Position (WGS84)	-20.832606, 116.402509
Slope	gentle	Topography	sand dune
Soil colour	yellow	Soil texture	sand
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (19 Apr 2020)			
Sample description	Open shrubland of <i>Acacia coriacea</i> subsp. <i>coriacea</i> , <i>Corchorus walcottii</i> and <i>Santalum lanceolatum</i> over a grassland of <i>Whiteochloa airoides</i> , * <i>Cenchrus ciliaris</i> and <i>Triodia epactia</i> .		
Habitat	shrubland		
Disturbance	Grazing-medium, Weed infestation		
Vegetation condition	Poor	Fire age	
Total veg. cover (%)	50	Tree cover (%)	5
Shrub cover (%)	5	Grass cover (%)	40
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	19-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	15-Oct-2021	50m x 50m	Martin Henson

Species (20)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	70	0.5		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		7	3		
<i>Whiteochloa airoides</i>		3	1		
<i>Triodia epactia</i>		2	1.3		
<i>Corchorus walcottii</i>		1	1		
<i>Santalum lanceolatum</i>		0.25	2		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>		0.1	1.5		
<i>Rhagodia eremaea</i>		0.1	1		
<i>Eragrostis eriopoda</i>		0.1	0.5		
<i>Adriana tomentosa</i> var. <i>tomentosa</i>		0.1	0.4		
<i>Amaranthus undulatus</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.2		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.15		
<i>Indigofera linifolia</i>		0.1	0.1		
<i>Euphorbia myrtoides</i>		0.1	0.1		
<i>Ipomoea polymorpha</i>		0.1	0.1		
<i>Tribulus occidentalis</i>		0.1	0.05		
<i>Euphorbia boophthona</i>				0.1	0.5
<i>Swainsona formosa</i>				0.1	0.2
<i>Indigofera linnaei</i>				0.1	0.2

Site details			
Site	E045AR	Position (WGS84)	-20.833765, 116.403698
Slope		Topography	sand dune
Soil colour		Soil texture	
Rock cover (%)	0	Rock type	

Observation details - visit 1 (19 Apr 2020)			
Sample description	Closed grassland of <i>Triodia epactia</i> , * <i>Cenchrus ciliaris</i> and <i>Eriachne tenuiculmis</i> .		
Habitat			
Disturbance	Weed infestation		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	75	Tree cover (%)	0
Shrub cover (%)	0.1	Grass cover (%)	75
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	19-Apr-2020	unbounded	Martin Henson

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		75	0.5		
* <i>Cenchrus ciliaris</i>	Weed	5	0.8		
<i>Eriachne tenuiculmis</i>		1	0.5		
* <i>Vachellia farnesiana</i>	Weed	0.1	1.5		

Site details			
Site	E045B	Position (WGS84)	-20.850295, 116.360494
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (19 Apr 2020)			
Sample description	Scattered shrubs of <i>Acacia bivenosa</i> and <i>A. stellaticeps</i> over a mixed grassland of <i>Triodia wieana</i> , <i>Chrysopogon fallax</i> and <i>Sorghum plumosum</i> with a diverse understory of herbs.		
Habitat	grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	97	Tree cover (%)	5
Shrub cover (%)	3	Grass cover (%)	89
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	19-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	11-Oct-2021	50m x 50m	Martin Henson

Species (38)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		75	0.5		
<i>Acacia bivenosa</i>		5	1.2		
<i>Chrysopogon fallax</i>		3	1		
<i>Sorghum plumosum</i>		2	1.2		
<i>Acacia stellaticeps</i>		1	0.5		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		0.5	1.8		
<i>Corchorus walcottii</i>		0.3	0.5		
<i>Stemodia grossa</i>		0.3	0.1		
<i>Scaevola spinescens</i>		0.2	1		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>		0.1	1.5		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>		0.1	1.5		
<i>Cynanchum viminale</i> subsp. <i>australe</i>		0.1	1		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		0.1	1		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>		0.1	1		
<i>Indigofera monophylla</i>		0.1	0.5		
<i>Sclerolaena hostilis</i>		0.1	0.4		
<i>Goodenia muelleriana</i>		0.1	0.4		
<i>Gossypium australe</i>		0.1	0.4		
<i>Nellica maderaspatensis</i>		0.1	0.3		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Tephrosia</i> sp. NW Eremaean (<i>S. van Leeuwen et al. PBS 0356</i>)		0.1	0.3		
<i>Sporobolus australasicus</i>		0.1	0.25		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.2		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		0.1	0.2		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	0.2		
<i>Senna notabilis</i>		0.1	0.2		
<i>Solanum diversiflorum</i>		0.1	0.2		
<i>Aristida contorta</i>		0.1	0.15		
<i>Trianthema turgidifolium</i>		0.1	0.15		
<i>Dactyloctenium radulans</i>		0.1	0.1		
<i>Paspalidium rarum</i>		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Goodenia microptera</i>				0.1	0.3
<i>Solanum lasiophyllum</i>				0.1	0.4
<i>Streptoglossa bubakii</i>				0.1	0.4
<i>Streptoglossa decurrens</i>				0.1	0.5
<i>Ptilotus exaltatus</i>				0.1	0.6

Site details			
Site	E046	Position (WGS84)	-20.843983, 116.398463
Slope	negligible	Topography	plain
Soil colour	red-orange	Soil texture	clay, silt
Rock cover (%)	0	Rock type	

Observation details - visit 1 (19 Apr 2020)			
Sample description	Closed, mixed grassland of <i>Triodia epactia</i> , * <i>Cenchrus ciliaris</i> and <i>Sorghum plumosum</i> .		
Habitat	grassland		
Disturbance	Evidence of feral animals, Grazing-medium, Weed infestation		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	95	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	94
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	19-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	15-Oct-2021	50m x 50m	Martin Henson

Species (25)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		60	0.4		
* <i>Cenchrus ciliaris</i>	Weed	30	0.8		
<i>Sorghum plumosum</i>		2	1.5		
<i>Eragrostis eriopoda</i>		1	0.5		
<i>Sporobolus virginicus</i>		1	0.5		
<i>Goodenia microptera</i>		0.5	0.3		
<i>Alysicarpus muelleri</i>		0.1	0.5		
<i>Solanum dioicum</i>		0.1	0.4		
<i>Ipomoea coptica</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Heliotropium crispatum</i>		0.1	0.25		
<i>Ipomoea polymorpha</i>		0.1	0.25		
<i>Sida fibulifera</i>		0.1	0.25		
<i>Indigofera trita</i>		0.1	0.2		
<i>Stemodia grossa</i>		0.1	0.2		
<i>Gomphrena cunninghamii</i>		0.1	0.2		
<i>Trianthema turgidifolium</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.1		
<i>Salsola australis</i>				0.1	0.15
<i>Solanum diversiflorum</i>				0.1	0.25
<i>Euploca inexplicita</i>				0.1	
<i>Eriachne obtusa</i>				0.1	0.3
<i>Streptoglossa decurrens</i>				0.1	0.4
<i>Cassytha filiformis</i>				2	
<i>Rhynchosia minima</i>				0.1	

Site details			
Site	E047	Position (WGS84)	-20.856169, 116.340165
Slope	negligible	Topography	undulating plain
Soil colour	brown	Soil texture	sandy loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (17 Apr 2020)			
Sample description	Low open shrubland of <i>Aerva javanica</i> over tussock grassland of <i>Cenchrus setiger</i> with <i>Triodia ?epactia</i> and <i>Sorghum plumosum</i> .		
Habitat	grassland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	75	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	70
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	17-Apr-2020	50m x 50m	David Leach
Quadrat	2	01-Apr-2021	50m x 50m	Martin Henson

Species (28)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus setiger</i>	Weed	65	0.4		
<i>Sorghum plumosum</i>		20	1.2		
<i>*Aerva javanica</i>	Weed	10	0.4		
<i>Triodia ?epactia</i>		5	0.4		
<i>Whiteochloa airoides</i>		2.5	0.6		
<i>Eulalia aurea</i>		2.5	0.5		
<i>Solanum lasiophyllum</i>		1	0.3		
<i>Acacia trachycarpa</i>		0.5	1		
<i>Tribulus occidentalis</i>		0.5	0.2		
<i>Rhynchosia minima</i>		0.25	0.2		
<i>Pluchea rubelliflora</i>		0.25	0.1		
<i>Eriachne obtusa</i>		0.1	0.4		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Melhania oblongifolia</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.2		
<i>*Flaveria trinervia</i>	Weed	0.1	0.15		
<i>Indigofera linnaei</i>		0.1	0.15		
<i>Stemodia grossa</i>		0.1	0.1		
<i>Dysphania kalpari</i>		0.1	0.1		
<i>Indigofera colutea</i>				1	0.25
<i>Ptilotus exaltatus</i>				0.1	0.3
<i>Salsola australis</i>				0.1	0.3
<i>Solanum cleistogamum</i>				0.1	0.2
<i>Triodia epactia</i>				5	0.4
<i>Pterocaulon sphacelatum</i>				0.1	0.15

Site details			
Site	E048	Position (WGS84)	-20.844377, 116.350017
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	sandy loam
Rock cover (%)	0	Rock type	calcrete

Observation details - visit 1 (16 Apr 2020)			
Sample description	Mid open shrubland of <i>Acacia bivenosa</i> , <i>Hakea lorea</i> subsp. <i>lorea</i> over tussock grassland of * <i>Cenchrus steiger</i> .		
Habitat	shrubland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	60	Tree cover (%)	1
Shrub cover (%)	4	Grass cover (%)	50
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	16-Apr-2020	50m x 50m	David Leach
Quadrat	2	01-Apr-2021	50m x 50m	Martin Henson

Species (48)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus setiger</i>	Weed	50	0.4		
<i>Triodia ?epactia</i>		12	0.5		
<i>Aristida hygrometrica</i>		5	0.4		
<i>Acacia bivenosa</i>		3	1.75		
<i>Eriachne obtusa</i>		1	0.5		
<i>*Aerva javanica</i>	Weed	1	0.4		
<i>Arivela viscosa</i>		1	0.4		
<i>Solanum lasiophyllum</i>		1	0.3		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		0.5	2.75		
<i>Hakea loreus</i> subsp. <i>loreus</i>		0.5	1.5		
<i>Rhagodia eremaea</i>		0.5	1.25		
<i>Senna ferraria</i>		0.25	1.5		
<i>Chrysopogon fallax</i>		0.1	1		
<i>Euphorbia boophthona</i>		0.1	0.3		
<i>Abutilon fraseri</i> subsp. <i>fraseri</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Ptilotus polystachyus</i>		0.1	0.2		
<i>Tephrosia supina</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Tribulus occidentalis</i>		0.1	0.2		
<i>Bonamia pilbarensis</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Corchorus walcottii</i>		0.1	0.2		
<i>*Cenchrus ciliaris</i>	Weed	0.1	0.2		
<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>		0.1	0.2		
<i>Swainsona pterostylis</i>		0.1	0.15		
<i>Stemodia grossa</i>		0.1	0.15		
<i>Euploca cunninghamii</i>		0.1	0.1		
<i>Fimbristylis dichotoma</i>		0.1	0.1		
<i>Solanum diversiflorum</i>		0.1	0.1		
<i>Tephrosia</i> sp. NW Eremaean (<i>S. van Leeuwen et al. PBS 0356</i>)		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Cucumis variabilis</i>		0.1	0.1		
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.05		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.05		
<i>Goodenia microptera</i>		0.1	0.05		
<i>Indigofera colutea</i>		0.1	0.05		
<i>Gomphrena canescens</i>				0.1	0.3

<i>Eragrostis eriopoda</i>		0.1	0.4
<i>Polymeria ambigua</i>		0.1	0.02
<i>Portulaca filifolia</i>	Range extension	0.1	0.3
<i>Ptilotus polystachyus</i>		0.1	0.05
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>		0.2	1
<i>Aristida contorta</i>		0.1	0.3
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	0.5
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		1	2.5
<i>Triodia epactia</i>		10	0.3
<i>Melhania oblongifolia</i>		0.1	0.2

Site details			
Site	E049	Position (WGS84)	-20.874758, 116.328918
Slope	negligible	Topography	sand dune
Soil colour	brown	Soil texture	sand
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Low shrubland of <i>Aerva javanica</i> and <i>Scaevola cunninghamii</i> over mixed grassland of <i>Whiteochloa airoides</i> , <i>Eragrostis eriopoda</i> , and <i>Triodia wiseana</i> .		
Habitat	grassland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	60	Tree cover (%)	0
Shrub cover (%)	25	Grass cover (%)	40
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	17-Apr-2020	50m x 50m	David Leach
Quadrat	2	01-Apr-2021	50m x 50m	Martin Henson

Species (23)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Aerva javanica</i>	Weed	25	0.4		
<i>Whiteochloa airoides</i>		20	0.6		
<i>Scaevola cunninghamii</i>		15	0.3		
<i>Eragrostis eriopoda</i>		5	0.4		
<i>Triodia wiseana</i>		5	0.4		
<i>*Cenchrus setiger</i>	Weed	5	0.4		
<i>Ipomoea costata</i>		0.1	1.75		
<i>Corchorus walcottii</i>		0.1	0.3		
<i>Tribulus occidentalis</i>		0.1	0.25		
<i>*Cenchrus ciliaris</i>	Weed	0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.2		
<i>Melhania oblongifolia</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1	0.15		
<i>Sida fibulifera</i>		0.1	0.15		
<i>Indigofera linnaei</i>		0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.1		
<i>Swainsona pterostylis</i>		0.1	0.1		
<i>Yakirra australiensis</i>		0.1	0.1		
<i>Ptilotus polystachyus</i>		0.1	0.1		
<i>Indigofera trita</i> subsp. <i>trita</i>				0.5	0.25
<i>Euphorbia myrtoides</i>				0.1	0.15
<i>Triodia epactia</i>				5	0.3

Site details			
Site	E052	Position (WGS84)	-20.901457, 116.284797
Slope	negligible	Topography	plain
Soil colour	red-brown, red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (21 Apr 2020)			
Sample description	Closed mixed grassland of <i>*Cenchrus ciliaris</i> , <i>Triodia angusta</i> , <i>T. epactia</i> with diverse herbs.		
Habitat	grassland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Poor	Fire age	
Total veg. cover (%)	80	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	80
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	21-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	20-Sep-2020	50m x 50m	Shenade Findlay

Species (32)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	70	0.8		
<i>Triodia angusta</i>		5	0.4		
<i>Triodia epactia</i>		5	0.3		
<i>Dactyloctenium radulans</i>		1	0.15		
<i>Chrysopogon fallax</i>		0.5	1.5		
<i>*Vachellia farnesiana</i>	Weed	0.1	1		
<i>Solanum lasiophyllum</i>		0.1	0.4		
<i>Sida fibulifera</i>		0.1	0.4		
<i>Hibiscus brachysiphonius</i>		0.1	0.3		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Salsola australis</i>		0.1	0.3		
<i>Eragrostis xerophila</i>		0.1	0.3		
<i>Stemodia grossa</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.2		
<i>Portulaca oleracea</i>		0.1	0.2		
<i>Gomphrena cunninghamii</i>		0.1	0.15		
<i>Trianthema triquetrum</i>		0.1	0.15		
<i>Indigofera colutea</i>		0.1	0.1		
<i>Trianthema turgidifolium</i>		0.1	0.1		
<i>Indigofera linifolia</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1			
<i>Pluchea rubelliflora</i>				0.1	0.3
<i>Goodenia pascua</i>				0.1	0.3
<i>Sclerolaena hostilis</i>				0.1	0.15
<i>Solanum diversiflorum</i>				0.1	0.15
<i>Sporobolus virginicus</i>				0.1	0.3
<i>Dissocarpus paradoxus</i>				0.1	0.5
<i>Streptoglossa liatroides</i>				0.1	0.4
<i>*Flaveria trinervia</i>	Weed			0.1	0.3
<i>Atriplex bunburyana</i>				0.1	0.3
<i>Ptilotus exaltatus</i>				0.1	0.5

Site details			
Site	E052A	Position (WGS84)	-20.899736, 116.28152
Slope	negligible	Topography	plain
Soil colour	red-brown, red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (21 Apr 2020)			
Sample description	Open shrubland of <i>Acacia ampliceps</i> and <i>Scaevola spinescens</i> over a closed grassland of <i>Triodia angusta</i> , <i>Sporobolus virginicus</i> and <i>Dactyloctenium radulans</i> with mixed herbs.		
Habitat	shrubland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	80	Tree cover (%)	20
Shrub cover (%)	0.5	Grass cover (%)	75
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	21-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	16-Oct-2021	50m x 50m	Martin Henson

Species (40)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Acacia ampliceps</i>		10	1.5		
<i>Triodia angusta</i>		5	0.5		
<i>Sporobolus virginicus</i>		5	0.4		
<i>Dactyloctenium radulans</i>		2	0.15		
* <i>Cenchrus setiger</i>	Weed	1	0.4		
* <i>Cenchrus ciliaris</i>	Weed	1	0.3		
<i>Xerochloa barbata</i>		1	0.3		
* <i>Flaveria trinervia</i>	Weed	0.5	0.3		
<i>Sesbania cannabina</i>		0.2	0.3		
<i>Trianthema turgidifolium</i>		0.2	0.2		
<i>Chrysopogon fallax</i>		0.15	1.5		
<i>Scaevola spinescens</i>		0.1	0.8		
<i>Neptunia dimorphantha</i>		0.1	0.4		
<i>Panicum decompositum</i>		0.1	0.4		
<i>Gomphrena cunninghamii</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3		
* <i>Malvastrum americanum</i>	Weed	0.1	0.3		
<i>Solanum lasiophyllum</i>		0.1	0.3		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Streptoglossa liatroides</i>		0.1	0.3		
<i>Cassytha capillaris</i>		0.1	0.3		
<i>Goodenia muelleriana</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Atriplex bunburyana</i>		0.1	0.3		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.3		
<i>Pluchea rubelliflora</i>		0.1	0.2		
<i>Stemodia grossa</i>		0.1	0.2		
<i>Hibiscus brachysiphonius</i>		0.1	0.15		
<i>Ipomoea optica</i>		0.1	0.1		
<i>Senna glutinosa</i> subsp. <i>chatelainiana</i>		0.1	0.1		
<i>Tecticornia</i> sp. sterile 6	local sig.	0.1	0.1		
<i>Ptilotus carinatus</i>		0.1	0.1		
<i>Myoporum montanum</i>		0.1			
<i>Operculina aequisejala</i>		0.1			
<i>Rhynchosia minima</i>		0.1			
<i>Indigofera trita</i>				0.1	0.25
<i>Dissocarpus paradoxus</i>				0.1	0.2
<i>Salsola australis</i>				0.1	0.2
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.2	0.3

Tecticornia halocnemoides subsp. *tenuis*

0.1 0.15

Site details			
Site	E053R	Position (WGS84)	-20.909916, 116.279139
Slope		Topography	
Soil colour		Soil texture	
Rock cover (%)	0	Rock type	

Observation details - visit 1 (21 Apr 2020)			
Sample description	Broad drainage of <i>Eucalyptus victrix</i> over <i>Sesbania cannabina</i> over an open tussock grassland of <i>Sporobolus virginicus</i> .		
Habitat	open woodland		
Disturbance			
Vegetation condition	Good	Fire age	
Total veg. cover (%)	55	Tree cover (%)	15
Shrub cover (%)	10	Grass cover (%)	50
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	21-Apr-2020	50m x 50m	Martin Henson

Species (6)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Sporobolus virginicus</i>		50			
<i>Eucalyptus victrix</i>		15			
<i>Sesbania cannabina</i>		10			
<i>Diplachne fusca</i> subsp. <i>fusca</i>		0.1	1		
<i>Mimulus gracilis</i>		0.1	0.15		
<i>Marsilea drummondii</i>		0.1	0.1		

Site details			
Site	E054	Position (WGS84)	-20.90693, 116.27208
Slope	negligible	Topography	plain
Soil colour	red-brown, red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (23 Apr 2020)			
Sample description	Scattered shrubs of <i>Indigofera trita</i> and <i>Xerochloa barbata</i> over an open grassland of <i>Eragrostis xerophila</i> .		
Habitat	grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	55	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	50
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	23-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	20-Sep-2020	50m x 50m	Shenade Findlay

Species (14)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Indigofera trita</i>		30	0.3		
<i>Eragrostis xerophila</i>		30	0.3		
<i>Xerochloa barbata</i>		20	0.2		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.2		
<i>Rhynchosia minima</i>		0.1	0.15		
<i>Streptoglossa liatroides</i>		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Xerochloa laniflora</i>				0.1	0.2
<i>Sida fibulifera</i>				0.1	0.15
<i>Sclerolaena hostilis</i>				0.1	0.15
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.2
<i>Ptilotus exaltatus</i>				0.1	0.15
<i>Indigofera linnaei</i>				1	0.15
<i>Hibiscus brachysiphonius</i>				0.1	0.1

Site details			
Site	E064	Position (WGS84)	-21.010305, 116.323999
Slope	gentle	Topography	hill slope
Soil colour	red-brown	Soil texture	sandy loam
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (21 Apr 2020)			
Sample description	Scattered <i>Corymbia hamersleyana</i> , over mid open shrubland of <i>Acacia bivenosa</i> , over open hummock grassland of <i>Triodia wiseana</i> , with mixed herbs.		
Habitat	shrubland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	50	Tree cover (%)	0.5
Shrub cover (%)	20	Grass cover (%)	40
Herb cover (%)	2.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	21-Apr-2020	50m x 50m	David Leach
Quadrat	2	27-Mar-2021	50m x 50m	Brody Loneragan

Species (38)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		40	0.5		
<i>Acacia bivenosa</i>		15	1.75		
* <i>Cenchrus setiger</i>	Weed	1	0.4		
<i>Corymbia hamersleyana</i>		0.5	5		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		0.1	0.75		
<i>Melhania oblongifolia</i>		0.1	0.4		
<i>Abutilon amplum</i>		0.1	0.4		
<i>Enneapogon caeruleus</i>		0.1	0.4		
<i>Indigofera monophylla</i>		0.1	0.4		
<i>Abutilon lepidum</i>		0.1	0.4		
Lamiaceae sp.		0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Ptilotus clementii</i>		0.1	0.25		
<i>Ptilotus polystachyus</i>		0.1	0.2		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.2		
* <i>Flaveria trinervia</i>	Weed	0.1	0.2		
<i>Cullen cinereum</i>		0.1	0.2		
<i>Aristida contorta</i>		0.1	0.2		
<i>Tephrosia supina</i>		0.1	0.2		
<i>Tribulus hirsutus</i>		0.1	0.2		
<i>Rhynchosia minima</i>		0.1	0.15		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		0.1	0.15		
<i>Stemodia grossa</i>		0.1	0.1		
<i>Notoleptopus decaisnei</i> var. <i>decaisnei</i>	Range extension	0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.1		
<i>Sporobolus australasicus</i>		0.1	0.1		
<i>Polygala glaucifolia</i>		0.1	0.05		
<i>Paspalidium clementii</i>		0.1			
<i>Gossypium australe</i>				0.1	0.4
<i>Dolichandrone occidentalis</i>				0.1	1.8
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>				0.1	1.5
<i>Solanum diversiflorum</i>				0.1	0.3
<i>Streptoglossa odora</i>				0.1	0.5
<i>Swainsona formosa</i>				1	0.4
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.5
* <i>Cenchrus ciliaris</i>	Weed			1	0.4
<i>Ptilotus axillaris</i>				0.1	0.05

Site details			
Site	E067	Position (WGS84)	-20.983564, 116.328322
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	loam
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (21 Apr 2020)			
Sample description	Low open shrubland of <i>Acacia xiphophila</i> , over mixed herb land of <i>Ptilotus gomphrenoides</i> , <i>Pterocaulon sphacelatum</i> , over grassland of <i>Sorghum plumosum</i> and <i>Triodia wiseana</i> .		
Habitat	shrubland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	55	Tree cover (%)	0
Shrub cover (%)	15	Grass cover (%)	40
Herb cover (%)	2.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	21-Apr-2020	50m x 50m	David Leach
Quadrat	2	30-Mar-2021	50m x 50m	Martin Henson

Species (33)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Sorghum plumosum</i>		42.5	1		
<i>Acacia xiphophylla</i>		15	1		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		2	0.5		
<i>Triodia wiseana</i>		1.5	0.5		
<i>Pterocaulon sphacelatum</i>		1	0.15		
<i>Ptilotus gomphrenoides</i>		1	0.15		
<i>Euploca conocarpa</i>		0.5	0.15		
<i>Eragrostis xerophila</i>		0.1	0.2		
<i>Neptunia dimorphantha</i>		0.1	0.2		
<i>Sporobolus australasicus</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.15		
<i>Iseilema membranaceum</i>		0.1	0.15		
<i>Ptilotus helipteroides</i>		0.1	0.15		
<i>Sida fibulifera</i>		0.1	0.15		
<i>Solanum diversiflorum</i>		0.1	0.15		
<i>Corchorus trilocularis</i>		0.1	0.15		
<i>Arivela viscosa</i>		0.1	0.15		
<i>Tribulus hirsutus</i>		0.1	0.15		
<i>Grona muelleri</i>		0.1	0.1		
<i>Enneapogon caeruleus</i>		0.1	0.1		
<i>Nelica maderaspatensis</i>		0.1	0.1		
<i>Ptilotus aevoides</i>		0.1	0.1		
<i>Ptilotus carinatus</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Goodenia microptera</i>		0.1	0.05		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.3
<i>Ptilotus exaltatus</i>				0.1	0.2
<i>Salsola australis</i>				0.1	0.5
<i>Stemodia grossa</i>				0.1	0.3
<i>Streptoglossa bubakii</i>				0.1	0.3

Site details			
Site	E068	Position (WGS84)	-20.980532, 116.331198
Slope	negligible	Topography	undulating plain
Soil colour	red-brown	Soil texture	loam
Rock cover (%)	0	Rock type	ferrous - ironstone, quartz

Observation details - visit 1 (19 Apr 2020)			
Sample description	Mid open shrubland of <i>Acacia bivenosa</i> , <i>Senna glutinosa</i> subsp. <i>glutinosa</i> , <i>Acacia ancistrocarpa</i> , over low open for land of <i>Ptilotus ?polystachyus</i> , over hummock grassland of <i>Triodia wiseana</i> .		
Habitat	shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	50	Tree cover (%)	1
Shrub cover (%)	30	Grass cover (%)	35
Herb cover (%)	10		

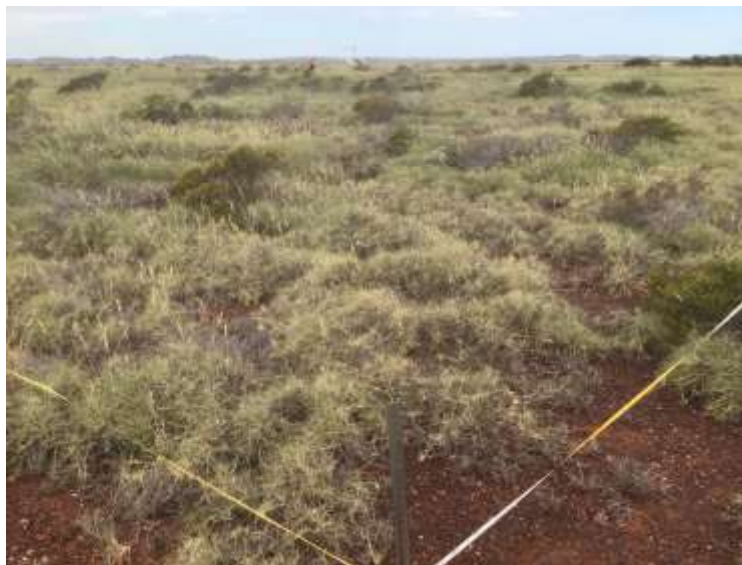


Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	19-Apr-2020	50m x 50m	David Leach
Quadrat	2	12-Oct-2021	50m x 50m	Martin Henson

Species (38)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		30	0.5		
<i>Acacia bivenosa</i>		22.5	2		
<i>Tribulus hirsutus</i>		3	0.2		
<i>Ptilotus polystachyus</i>		1	0.2		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>		0.25	1.75		
<i>Acacia ancistrocarpa</i>		0.25	1.75		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>		0.25	1.75		
<i>Triumfetta clementii</i>		0.25	0.4		
<i>Euphorbia biconvexa</i>		0.2			
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.4		
<i>Scaevola spinescens</i>		0.1	0.4		
<i>Corchorus walcottii</i>		0.1	0.4		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Cassytha capillaris</i>		0.1	0.3		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.25		
<i>Indigostrum parviflorum</i>		0.1	0.2		
<i>Pterocaulon sphacelatum</i>		0.1	0.2		
<i>Euploca conocarpa</i>		0.1	0.2		
<i>Tephrosia</i> sp. clay soils (<i>S. van Leeuwen et al. PBS 0273</i>)		0.1	0.2		
<i>Tephrosia supina</i>		0.1	0.2		
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.2		
<i>Ptilotus helipteroides</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Sporobolus australasicus</i>		0.1	0.1		
<i>Bonamia pilbarensis</i>		0.1	0.1		
<i>Ptilotus aervoides</i>		0.1	0.05		
<i>Portulaca oleracea</i>		0.1	0.03		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.25
<i>Enneapogon caeruleus</i>				0.1	0.15
<i>Ptilotus exaltatus</i>				1	0.8
<i>Rhodanthe floribunda</i>				0.1	0.05
<i>Sida fibulifera</i>				0.1	0.25
<i>Solanum diversiflorum</i>				0.1	0.3
<i>Acacia inaequilatera</i>				0.4	2
<i>Streptoglossa decurrens</i>				0.1	1
<i>Ptilotus clementii</i>				0.1	0.4

Site details			
Site	E070	Position (WGS84)	-20.847479, 116.351386
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (16 Apr 2020)			
Sample description	Hummock grassland of <i>Triodia angusta</i> and <i>Sorghum plumosum</i> .		
Habitat	spinifex grassland		
Disturbance	Grazing-low		
Vegetation condition	Good	Fire age	
Total veg. cover (%)	90	Tree cover (%)	0
Shrub cover (%)	0.1	Grass cover (%)	90
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	16-Apr-2020	50m x 50m	David Leach
Quadrat	2	01-Apr-2021	50m x 50m	Martin Henson

Species (34)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia angusta</i>		70	0.4		
<i>Sorghum plumosum</i>		15	1.25		
* <i>Cenchrus ciliaris</i>	Weed	5	0.4		
<i>Eragrostis eriopoda</i>		1	0.4		
<i>Sorghum plumosum</i>		0.5	1.25		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		0.5	0.4		
<i>Leptochloa digitata</i>		0.1	1		
<i>Scaevola spinescens</i>		0.1	0.4		
* <i>Aerva javanica</i>	Weed	0.1	0.4		
* <i>Cenchrus setiger</i>	Weed	0.1	0.4		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.3		
<i>Salsola australis</i>		0.1	0.3		
<i>Acacia bivenosa</i>		0.1	0.25		
<i>Trianthema turgidifolium</i>		0.1	0.25		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		0.1	0.2		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.2		
<i>Solanum lasiophyllum</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Melhania oblongifolia</i>		0.1	0.2		
<i>Stemodia grossa</i>		0.1	0.2		
<i>Goodenia microptera</i>		0.1	0.2		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Dactyloctenium radulans</i>		0.1	0.15		
<i>Ptilotus carinatus</i>		0.1	0.1		
<i>Indigofera linnaei</i>		0.1	0.1		
<i>Ipomoea muelleri</i>		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.5	0.3
<i>Eriachne obtusa</i>				0.1	0.3
<i>Rhagodia eremaea</i>				0.1	0.4
<i>Solanum cleistogamum</i>				0.1	0.2
<i>Triodia epactia</i>				0.1	0.15
<i>Ptilotus exaltatus</i>				0.1	0.3

Site details			
Site	E071	Position (WGS84)	-20.850734, 116.349079
Slope	negligible	Topography	floodplain
Soil colour	brown, whitish	Soil texture	clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (16 Apr 2020)			
Sample description	Samphire shrubland with mixed low shrubs over <i>Eragrostis falcata</i> salt flat.		
Habitat	samphire shrubland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	60	Tree cover (%)	0
Shrub cover (%)	2	Grass cover (%)	50
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	16-Apr-2020	50m x 50m	David Leach
Quadrat	2	01-Apr-2021	50m x 50m	Martin Henson

Species (28)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis falcata</i>		50	0.2		
<i>Threlkeldia diffusa</i>		15	0.3		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		3	0.2		
<i>Xerochloa laniflora</i>		2	0.2		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		1	0.4		
<i>Swainsona pterostylis</i>		1	0.2		
<i>Ptilotus murrayi</i>		1	0.15		
Indeterminate sp.		0.5	0.4		
<i>Cyperus bulbosus</i>		0.5	0.25		
* <i>Cenchrus ciliaris</i>	Weed	0.5	0.2		
* <i>Flaveria trinervia</i>	Weed	0.1	0.3		
<i>Alternanthera denticulata</i>		0.1	0.3		
<i>Nicotiana heterantha</i>		0.1	0.25		
<i>Amaranthus undulatus</i>		0.1	0.25		
<i>Frankenia pauciflora</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Dysphania kalpari</i>		0.1	0.15		
<i>Lawrenca viridigrisea</i>		0.1	0.1		
<i>Neobassia astrocarpa</i>		0.1	0.1		
<i>Stemodia grossa</i>		0.1	0.1		
<i>Dissocarpus paradoxus</i>				0.1	0.25
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>				0.1	0.1
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>				0.1	0.3
<i>Portulaca filifolia</i>	Range extension			0.1	0.25
<i>Scaevola spinescens</i>				0.1	0.3
<i>Streptoglossa bubakii</i>				0.1	0.2
<i>Surreya diandra</i>				1	0.25
<i>Panicum decompositum</i>				0.1	0.5

Site details			
Site	E072R	Position (WGS84)	-20.84194, 116.345683
Slope	moderate	Topography	sand dune
Soil colour	brown	Soil texture	sand
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (17 Apr 2020)			
Sample description	Mid open shrubland of <i>Acacia coriacea</i> subsp. <i>pendens</i> over low shrubland of <i>Aerva javanica</i> a over tussock grassland of <i>Cenchrus setiger</i> .		
Habitat	shrubland		
Disturbance	Grazing-low, Vehicle tracks, Weed infestation		
Vegetation condition	Degraded	Fire age	
Total veg. cover (%)	70	Tree cover (%)	5
Shrub cover (%)	30	Grass cover (%)	60
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	17-Apr-2020	unbounded	David Leach

Species (20)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus setiger</i>	Weed	60	0.3		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		17.5	2		
<i>*Aerva javanica</i>	Weed	15	0.5		
<i>Tribulus occidentalis</i>		0.5	0.3		
<i>Commicarpus australis</i>		0.1	1		
<i>Scaevola spinescens</i>		0.1	0.5		
<i>Boerhavia</i> sp.		0.1	0.4		
<i>Goodenia microptera</i>		0.1	0.4		
<i>Threlkeldia diffusa</i>		0.1	0.3		
<i>Eragrostis eriopoda</i>		0.1	0.3		
<i>*Cenchrus ciliaris</i>	Weed	0.1	0.3		
<i>Solanum lasiophyllum</i>		0.1	0.2		
<i>Euploca cunninghamii</i>		0.1	0.2		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.2		
<i>Arivela viscosa</i>		0.1	0.2		
<i>Amaranthus undulatus</i>		0.1	0.2		
<i>*Aerva javanica</i>	Weed	0.1	0.15		
<i>Indigofera linnaei</i>		0.1	0.15		
<i>Swainsona pterostylis</i>		0.1	0.1		
<i>Synaptantha tillaeacea</i> var. <i>hispidula</i>		0.1	0.1		

Site details			
Site	E073	Position (WGS84)	-20.8938, 116.373321
Slope	gentle	Topography	drainage line
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	calcrete

Observation details - visit 1 (18 Apr 2020)			
Sample description	Drainage line of mid open shrubland of <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i> and <i>Acacia xiphophylla</i> over tussock grassland of <i>Eriachne obtusa</i> and <i>Eragrostis xerophila</i> and <i>Dicanthium serissium</i> su		
Habitat	shrubland		
Disturbance	Grazing-low, Livestock tracks		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	75	Tree cover (%)	0
Shrub cover (%)	30	Grass cover (%)	50
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	18-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	15-Oct-2021	50m x 50m	Grant Wells

Species (40)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		35	0.2		
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		20	1.25		
<i>Sorghum plumosum</i>		20	1		
<i>Eriachne obtusa</i>		20	0.6		
<i>Dactyloctenium radulans</i>		5	0.15		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		3	0.15		
<i>Euploca conocarpa</i>		2.5	0.25		
<i>Ipomoea lonchophylla</i>		2.5	0.1		
<i>Operculina aequisejala</i>		1	0.2		
<i>Arivela viscosa</i>		0.5	0.4		
* <i>Cenchrus setiger</i>	Weed	0.5	0.3		
* <i>Vachellia farnesiana</i>	Weed	0.1	1.3		
<i>Acacia xiphophylla</i>		0.1	0.5		
<i>Boerhavia paludosa</i>		0.1	0.4		
<i>Ptilotus clementii</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.3		
<i>Polymeria calycina</i>		0.1	0.3		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.3		
<i>Cullen cinereum</i>		0.1	0.2		
<i>Solanum lasiophyllum</i>		0.1	0.2		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Ptilotus gomphrenoides</i>		0.1	0.2		
<i>Bonamia pilbarensis</i>		0.1	0.2		
* <i>Malvastrum americanum</i>	Weed	0.1	0.2		
<i>Portulaca oleracea</i>		0.1	0.15		
<i>Tribulus occidentalis</i>		0.1	0.1		
<i>Ptilotus polystachyus</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1	0.1		
<i>Pterocaulon sphacelatum</i>		0.1	0.1		
<i>Ptilotus exaltatus</i>		0.1	0.05		
<i>Sida rohlenae</i> subsp. <i>rohlenae</i>		0.1			
<i>Themeda triandra</i>				0.1	0.4
<i>Tephrosia rosea</i> var. <i>clementii</i>				0.2	0.4
<i>Streptoglossa bubakii</i>				0.1	0.2
<i>Corchorus walcottii</i>				0.1	0.4
<i>Desmodiopsis campylocaulon</i>				0.1	0.1
<i>Salsola australis</i>				0.1	0.5
<i>Eremophila longifolia</i>				0.1	1.5
<i>Ptilotus polystachyus</i>				0.1	0.4

Sclerolaena bicornis var. *bicornis*

0.1 0.4

Site details			
Site	E074	Position (WGS84)	-20.879899, 116.389607
Slope	gentle	Topography	drainage line
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	calcrete

Observation details - visit 1 (18 Apr 2020)			
Sample description	Draining line of tall open shrubland of <i>Acacia inequilatera</i> over mid open shrubland of <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i> and <i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i> , over mixed grassland of <i>Tri</i>		
Habitat	shrubland		
Disturbance	Livestock tracks		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	80	Tree cover (%)	25
Shrub cover (%)	25	Grass cover (%)	60
Herb cover (%)	5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	18-Apr-2020	50m x 50m	David Leach
Quadrat	2	12-Oct-2021	50m x 50m	Adam Crosby-Clarke

Species (53)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Themeda triandra</i>		25	0.6		
<i>Dactyloctenium radulans</i>		25	0.1		
<i>Acacia inaequilatera</i>		15	3		
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		15	1.2		
<i>Sorghum plumosum</i>		2.5	1		
* <i>Cenchrus ciliaris</i>	Weed	2.5	0.2		
* <i>Cenchrus setiger</i>	Weed	2	0.4		
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>		1	1.5		
<i>Eriachne obtusa</i>		1	0.4		
<i>Triodia wiseana</i>		1	0.3		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		1	0.15		
<i>Eulalia aurea</i>		0.5	1		
* <i>Vachellia farnesiana</i>	Weed	0.5	1		
<i>Scaevola spinescens</i>		0.1	1.3		
<i>Sesbania cannabina</i>		0.1	1.2		
<i>Acacia xiphophylla</i>		0.1	1		
<i>Eremophila longifolia</i>		0.1	1		
<i>Alysicarpus muelleri</i>		0.1	0.4		
<i>Boerhavia paludosa</i>		0.1	0.4		
<i>Indigofera monophylla</i>		0.1	0.3		
<i>Solanum lasiophyllum</i>		0.1	0.3		
<i>Goodenia muelleriana</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Ptilotus clementii</i>		0.1	0.2		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.2		
<i>Operculina aequisejala</i>		0.1	0.2		
<i>Arivela viscosa</i>		0.1	0.2		
<i>Cullen cinereum</i>		0.1	0.2		
<i>Grona muelleri</i>		0.1	0.1		
<i>Bonamia pilbarensis</i>		0.1	0.1		
<i>Portulaca oleracea</i>		0.1	0.1		
<i>Ptilotus exaltatus</i>		0.1	0.1		
<i>Ptilotus polystachyus</i>		0.1	0.1		
<i>Tribulus occidentalis</i>		0.1	0.1		
<i>Indigofera linifolia</i>		0.1	0.1		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>				0.1	0.2
<i>Acacia coriacea</i> subsp. <i>pendens</i>				5	3.6
* <i>Malvastrum americanum</i>	Weed			0.1	0.8
<i>Waltheria indica</i>				0.1	0.3

<i>Triumfetta clementii</i>	0.1	0.2
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	1.7
<i>Streptoglossa decurrens</i>	0.1	0.7
<i>Streptoglossa bubakii</i>	0.1	0.4
<i>Solanum diversiflorum</i>	0.1	0.4
<i>Ipomoea muelleri</i>	0.1	0.3
<i>Sida fibulifera</i>	0.1	0.2
<i>Sclerolaena glabra</i>	0.1	
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>	0.1	0.2
<i>Pterocaulon sphacelatum</i>	0.1	0.6
<i>Euphorbia boophthona</i>	0.1	0.4
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.2
<i>Abutilon cryptopetalum</i>	0.1	0.2
<i>Cucumis variabilis</i>	0.1	1.5

Site details			
Site	E075	Position (WGS84)	-20.865164, 116.423549
Slope		Topography	
Soil colour		Soil texture	
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open shrubland of <i>Acacia inaequilatera</i> , <i>Eremophila longifolia</i> , <i>Ptilotus clementii</i> and <i>E. forrestii</i> subsp. <i>forrestii</i> over a grassland of <i>Eragrostis xerophila</i> , <i>Sorghum plumosum</i> and <i>Eriachn</i>		
Habitat			
Disturbance			
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)		Tree cover (%)	
Shrub cover (%)		Grass cover (%)	
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	18-Apr-2020	50m x 50m	David Leach
Quadrat	2	13-Oct-2021	50m x 50m	Adam Crosby-Clarke

Species (37)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Aristida contorta</i>		85	0.2		
<i>Acacia inaequilatera</i>		15	3		
<i>Ptilotus clementii</i>		5	0.3		
<i>Chrysopogon fallax</i>		1	0.8		
<i>Eriachne obtusa</i>		1	0.4		
<i>Eragrostis xerophila</i>		1	0.3		
<i>Dactyloctenium radulans</i>		0.5	0.1		
<i>Eremophila longifolia</i>		0.25	1.5		
<i>Arivela viscosa</i>		0.25	0.4		
<i>Portulaca oleracea</i>		0.25	0.1		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		0.1	1.25		
* <i>Vachellia farnesiana</i>	Weed	0.1	0.5		
<i>Boerhavia paludosa</i>		0.1	0.4		
<i>Abutilon lepidum</i>		0.1	0.4		
<i>Scaevola spinescens</i>		0.1	0.4		
<i>Triodia wiseana</i>		0.1	0.3		
<i>Chloris pectinata</i>		0.1	0.2		
<i>Boerhavia repleta</i>		0.1	0.2		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Solanum lasiophyllum</i>		0.1	0.2		
<i>Sida</i> sp. sp.		0.1	0.2		
<i>Euploca inexplicita</i>		0.1	0.2		
<i>Xerochloa laniflora</i>		0.1	0.1		
<i>Salsola australis</i>				0.1	0.4
<i>Acacia coriacea</i> subsp. <i>coriacea</i>				0.1	1.6
* <i>Cenchrus ciliaris</i>	Weed			0.1	0.4
<i>Sclerolaena hostilis</i>				0.1	0.3
<i>Indigofera colutea</i>				0.1	0.2
<i>Sclerolaena costata</i>				0.1	0.2
<i>Cucumis variabilis</i>				0.1	2
<i>Rhagodia eremaea</i>				0.1	0.4
<i>Desmodiopsis campylocaulon</i>				0.1	0.3
<i>Ptilotus polystachyus</i>				0.1	0.4
<i>Portulaca filifolia</i>	Range extension			0.1	0.2
<i>Ipomoea costata</i>				0.1	2.2
<i>Bonamia pilbarensis</i>				0.1	0.2

Site details			
Site	E076	Position (WGS84)	-20.956535, 116.33093
Slope	gentle	Topography	beach
Soil colour	BLK	Soil texture	ALUV
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Tall open shrubland of <i>Acacia sericophylla</i> , <i>Acacia coriacea</i> subsp. <i>pendens</i> and <i>A. sclerosperma</i> subsp. <i>sclerosperma</i> over an open shrubland of <i>Abutilon amplum</i> and * <i>Malvastrum americanum</i> ove		
Habitat			
Disturbance			
Vegetation condition	Excellent	Fire age	not evident
Total veg. cover (%)	0	Tree cover (%)	
Shrub cover (%)		Grass cover (%)	
Herb cover (%)			





Sample and effort summary					
Sample method	Visit	Sample date	Dimensions	Observer	
Quadrat	1	18-Apr-2020	50 m x 50 m	David Leach	
Quadrat	2	12-Oct-2021	50m x 50m	Martin Henson	
Species (49)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	20	0.4		
<i>Triodia angusta</i>		10	0.6		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		5	2		
<i>Dactyloctenium radulans</i>		5	0.1		
<i>*Cenchrus setiger</i>	Weed	3.5	0.6		
<i>*Vachellia farnesiana</i>	Weed	2.5	2		
<i>*Malvastrum americanum</i>	Weed	2	0.3		
<i>Acacia bivenosa</i>		1	1.5		
<i>Chrysopogon fallax</i>		1	1		
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		0.5	2		
<i>Abutilon amplum</i>		0.5	1.5		
<i>Ehretia saligna</i> var. <i>saligna</i>		0.1	2.5		
<i>Acacia sericophylla</i>		0.1	2.5		
<i>Operculina aequisejala</i>		0.1	0.6		
<i>Setaria dielsii</i>		0.1	0.5		
<i>Scaevola spinescens</i>		0.1	0.5		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Synaptantha tillaeacea</i> var. <i>hispidula</i>		0.1	0.3		
<i>Boerhavia paludosa</i>		0.1	0.3		
<i>Cucumis variabilis</i>		0.1	0.3		

<i>Ptilotus exaltatus</i>	0.1	0.3	
<i>Abutilon fraseri</i> subsp. <i>fraseri</i>	0.1	0.3	
<i>Heliotropium crispatum</i>	0.1	0.3	
<i>Amaranthus undulatus</i>	0.1	0.3	
<i>Solanum lasiophyllum</i>	0.1	0.3	
<i>Sporobolus australasicus</i>	0.1	0.3	
<i>Alysicarpus muelleri</i>	0.1	0.3	
<i>Vigna lanceolata</i> var. <i>lanceolata</i>	0.1	0.25	
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	0.1	0.25	
<i>Nellica maderaspatensis</i>	0.1	0.2	
<i>Grona muelleri</i>	0.1	0.2	
<i>Solanum diversiflorum</i>	0.1	0.2	
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>	0.1	0.2	
<i>Portulaca oleracea</i>	0.1	0.2	
<i>Ptilotus gomphrenoides</i>	0.1	0.2	
<i>Cucumis picrocarpus</i>	0.1	0.2	
<i>Corchorus trilocularis</i>	0.1	0.2	
* <i>Flaveria trinervia</i>	Weed	0.1	0.2
<i>Capparis spinosa</i> subsp. <i>nummularia</i>	0.1	0.2	
<i>Ptilotus polystachyus</i>	0.1	0.2	
<i>Rhynchosia minima</i>	0.1	0.2	
<i>Goodenia muelleriana</i>	0.1	0.2	
<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>	0.1	0.15	
<i>Melhania oblongifolia</i>	0.1	0.15	
<i>Xerochloa laniflora</i>	0.1	0.15	
<i>Ipomoea lonchophylla</i>	0.1	0.15	
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusata</i>		20	15
<i>Pluchea rubelliflora</i>		0.1	0.25
<i>Sesbania cannabina</i>		0.2	1.8

Site details			
Site	E077	Position (WGS84)	-21.047073, 116.253044
Slope	gentle	Topography	drainage line
Soil colour	red-brown	Soil texture	sandy loam
Rock cover (%)	0	Rock type	siltstone / mudstone

Observation details - visit 1 (22 Apr 2020)			
Sample description	Drainage line of <i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i> , <i>Eucalyptus victrix</i> , and <i>Corymbia hamersleyana</i> , over <i>Melaleuca glomerata</i> , <i>Acacia trachycarpa</i> , and <i>Acacia bivenosa</i> , over mixed grass		
Habitat	riparian zone		
Disturbance	Grazing-medium		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	75	Tree cover (%)	50
Shrub cover (%)	25	Grass cover (%)	15
Herb cover (%)	2.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	22-Apr-2020	50m x 50m	David Leach
Quadrat	2	27-Mar-2021	50m x 50m	Brody Loneragan

Species (58)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusata</i>		25	15		
<i>Melaleuca glomerata</i>		25	3		
<i>Acacia trachycarpa</i>		2.5	2.25		
<i>Acacia bivenosa</i>		2.5	2.25		
<i>Eucalyptus victrix</i>		1	15		
<i>Sesbania cannabina</i>		0.5	0.5		
<i>Nicotiana heterantha</i>		0.25	0.6		
<i>Arivela viscosa</i>		0.25	0.4		
<i>Corymbia hamersleyana</i>		0.1	7.5		
<i>Acacia ampliceps</i>		0.1	2		
<i>Acacia sericophylla</i>		0.1	1.25		
<i>Cyperus vaginatus</i>		0.1	1		
<i>Leptochloa digitata</i>		0.1	0.7		
<i>Triodia wiseana</i>		0.1	0.5		
<i>Abutilon amplum</i>		0.1	0.5		
<i>Triodia angusta</i>		0.1	0.5		
<i>Corchorus walcottii</i>		0.1	0.4		
<i>Setaria dielsii</i>		0.1	0.4		
* <i>Aerva javanica</i>	Weed	0.1	0.4		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.3		
<i>Eragrostis tenellula</i>		0.1	0.3		
<i>Amaranthus undulatus</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Senna glutinosa</i> subsp. <i>x luerssenii</i>		0.1	0.3		
<i>Alternanthera nodiflora</i>		0.1	0.25		
<i>Fimbristylis microcarya</i>		0.1	0.2		
<i>Ptilotus gomphrenoides</i>		0.1	0.2		
* <i>Malvastrum americanum</i>	Weed	0.1	0.2		
<i>Melhania oblongifolia</i>		0.1	0.2		
<i>Corchorus trilocularis</i>		0.1	0.2		
<i>Solanum diversiflorum</i>		0.1	0.2		
<i>Tribulus hirsutus</i>		0.1	0.2		
<i>Cyperus squarrosus</i>		0.1	0.15		
<i>Dactyloctenium radulans</i>		0.1	0.15		
<i>Dysphania kalpari</i>		0.1	0.15		
<i>Ammannia multiflora</i>		0.1	0.15		
<i>Boerhavia coccinea</i>		0.1	0.15		
<i>Ptilotus helipteroides</i>		0.1	0.15		

<i>Trianthema triquetrum</i>		0.1	0.15
<i>Ipomoea muelleri</i>		0.1	0.15
<i>Abutilon fraseri</i> subsp. <i>fraseri</i>		0.1	0.1
<i>Stemodia grossa</i>		0.1	0.1
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.1
<i>Ptilotus exaltatus</i>		0.1	0.1
<i>Portulaca oleracea</i>		0.1	0.1
<i>Marsilea drummondii</i>		0.1	0.1
<i>Notoleptopus decaisnei</i> var. <i>decaisnei</i>	Range extension	0.1	0.3
<i>Nellica maderaspatensis</i>		0.1	
<i>Gossypium australe</i>		0.1	1
<i>Swainsona formosa</i>		0.1	0.25
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.4
<i>Gomphrena cunninghamii</i>		0.1	0.2
<i>Triodia epactia</i>		5	1
* <i>Cenchrus ciliaris</i>	Weed	10	0.5
* <i>Cenchrus setiger</i>	Weed	40	0.5
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		0.1	0.5

Site details			
Site	E078	Position (WGS84)	-20.948528, 116.259269
Slope	negligible	Topography	drainage line
Soil colour	red-brown	Soil texture	clay loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (23 Apr 2020)			
Sample description	Shallow drainage of mid open woodland of <i>Eucalyptus camaldulensis</i> var. <i>obtusa</i> , <i>Eucalyptus victrix</i> , over isolated shrubs, over tussock grassland of <i>Eragrostis tenellula</i> .		
Habitat	riparian zone		
Disturbance	Grazing-medium, Litter, Livestock tracks		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	80	Tree cover (%)	30
Shrub cover (%)	0.1	Grass cover (%)	80
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	23-Apr-2020	50m x 50m	David Leach
Quadrat	2	29-Mar-2021	50m x 50m	Martin Henson

Species (31)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Alternanthera nodiflora</i>		35	0.4		
<i>Eucalyptus victrix</i>		20	10		
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i>		10	12		
<i>Ptilotus gomphrenoides</i>		5	0.2		
<i>Eragrostis tenellula</i>		1	0.5		
<i>Acacia sericophylla</i>		0.1	3		
* <i>Vachellia farnesiana</i>	Weed	0.1	1		
<i>Chrysopogon fallax</i>		0.1	0.6		
<i>Sesbania cannabina</i>		0.1	0.4		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Panicum decompositum</i>		0.1	0.4		
* <i>Malvastrum americanum</i>	Weed	0.1	0.4		
<i>Nicotiana occidentalis</i> subsp. <i>obliqua</i>		0.1	0.3		
<i>Cyperus vaginatus</i>		0.1	0.3		
<i>Sida rohlenae</i> subsp. <i>rohlenae</i>		0.1	0.3		
<i>Chloris pectinata</i>		0.1	0.3		
<i>Stemodia kingii</i>		0.1	0.25		
<i>Cullen graveolens</i>		0.1	0.25		
<i>Solanum diversiflorum</i>		0.1	0.2		
<i>Portulaca oleracea</i>		0.1	0.2		
<i>Ammannia baccifera</i>		0.1	0.15		
<i>Cuscuta victoriana</i>		0.1	0.1		
<i>Dactyloctenium radulans</i>		0.1	0.1		
<i>Fimbristylis microcarya</i>		0.1	0.1		
<i>Trianthema triquetrum</i>		0.1	0.1		
<i>Ptilotus murrayi</i>		0.1	0.1		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.1		
<i>Eriachne flaccida</i>				60	1
<i>Cucumis melo</i>				0.1	0.1
<i>Marsilea exarata</i>				0.1	0.1
<i>Mimulus gracilis</i>				0.1	0.3

Site details			
Site	E079	Position (WGS84)	-20.980292, 116.254978
Slope	gentle	Topography	drainage line
Soil colour	red-brown	Soil texture	sandy loam
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (23 Apr 2020)			
Sample description	Woodland of <i>Eucalyptus vitrix</i> , <i>E. camaldulensis</i> subsp. <i>obtusa</i> and <i>Acacia coriacea</i> subsp. <i>coriacea</i> over a shrubland of <i>A. bivenosa</i> and <i>A. pyrifolia</i> var. <i>pyrifolia</i> over a low shrub		
Habitat	riparian zone		
Disturbance	Not recorded		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	70	Tree cover (%)	30
Shrub cover (%)	10	Grass cover (%)	40
Herb cover (%)	1		



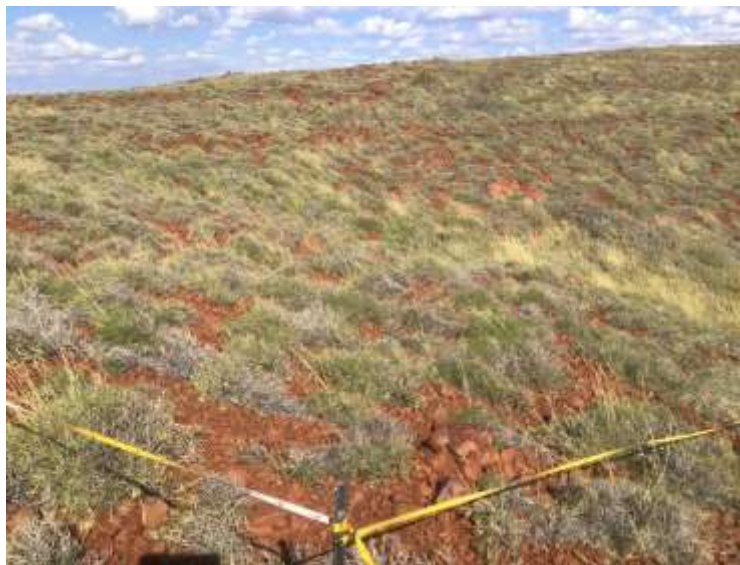
Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	23-Apr-2020	50m x 50m	David Leach
Quadrat	2	29-Mar-2021	50m x 50m	Martin Henson

Species (43)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eucalyptus victrix</i>		15	20		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		10	5.5		
* <i>Cenchrus setiger</i>	Weed	10	0.4		
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusata</i>		5	20		
<i>Eulalia aurea</i>		1	0.6		
<i>Setaria dielsii</i>		1	0.5		
<i>Erythrina vespertilio</i>		0.5	5		
<i>Arivela viscosa</i>		0.5	0.3		
<i>Dactyloctenium radulans</i>		0.5	0.1		
<i>Ehretia saligna</i> var. <i>saligna</i>		0.1	3.5		
<i>Acacia bivenosa</i>		0.1	1.5		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		0.1	1.25		
<i>Portulaca oleracea</i>		0.1	1		
<i>Chrysopogon fallax</i>		0.1	0.6		
<i>Boerhavia paludosa</i>		0.1	0.4		
<i>Operculina aequisejala</i>		0.1	0.4		
<i>Sesbania cannabina</i>		0.1	0.4		
<i>Abutilon amplum</i>		0.1	0.4		
<i>Sporobolus australasicus</i>		0.1	0.3		
* <i>Malvastrum americanum</i>	Weed	0.1	0.3		
<i>Ptilotus clementii</i>		0.1	0.3		
<i>Heliotropium crispatum</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Alysicarpus muelleri</i>		0.1	0.3		
<i>Ptilotus polystachyus</i>		0.1	0.2		
<i>Boerhavia coccinea</i>		0.1	0.2		
<i>Nellica maderaspatensis</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Ipomoea costata</i>		0.1	0.15		
<i>Cullen cinereum</i>		0.1	0.15		
<i>Ipomoea muelleri</i>		0.1	0.15		
<i>Synaptantha tillaeacea</i> var. <i>hispidula</i>		0.1	0.15		
<i>Ptilotus exaltatus</i>		0.1	0.1		
<i>Neptunia dimorphantha</i>		0.1	0.1		
<i>Capparis spinosa</i> subsp. <i>nummularia</i>				0.1	0.3
<i>Chrysopogon fallax</i>				1	1
<i>Cucumis variabilis</i>				0.1	
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.5
<i>Achyranthes aspera</i>				0.1	0.4

<i>Acacia coriacea</i> subsp. <i>pendens</i>	10	
<i>Vigna lanceolata</i> var. <i>lanceolata</i>	0.1	
<i>Pterocaulon sphaeranthoides</i>	0.1	0.5
<i>Amaranthus undulatus</i>	0.1	0.4

Site details			
Site	E100	Position (WGS84)	-20.931034, 116.228994
Slope	moderate	Topography	hill slope
Soil colour	red-brown	Soil texture	sandy clay
Rock cover (%)	0	Rock type	granite - outcropping, granite - rocks

Observation details - visit 1 (22 Apr 2020)			
Sample description	Scattered mid shrubs of <i>Acacia bivenosa</i> , <i>Senna glutinosa</i> subsp. <i>pruinosa</i> and <i>Ficus aculeata</i> var. <i>indecora</i> over low scattered shrubs of <i>Indigofera monophylla</i> , <i>Ptilotus auriculifolius</i> and		
Habitat	spinifex grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	70	Tree cover (%)	
Shrub cover (%)	0.75	Grass cover (%)	69
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	22-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	28-Mar-2021	50m x 50m	Brody Loneragan

Species (27)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		55	0.3		
<i>Acacia bivenosa</i>		0.1	1.2		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>		0.1	1		
<i>Ficus aculeata</i> var. <i>indecora</i>		0.1	0.8		
<i>Indigofera monophylla</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.2		
<i>Euphorbia careyi</i>		0.1	0.2		
<i>Ptilotus auriculifolius</i>		0.1	0.2		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.15		
<i>Dolichocarpa crouchiana</i>		0.1	0.15		
<i>Gomphrena cunninghamii</i>		0.1	0.15		
<i>Paspalidium rarum</i>		0.1	0.15		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		0.1	0.15		
<i>Polymeria ambigua</i>		0.1	0.1		
<i>Tribulus hirsutus</i>		0.1	0.1		
<i>Cucumis variabilis</i>		0.1			
<i>Polygala isingii</i>				0.1	0.05
<i>Abutilon lepidum</i>				0.1	0.4
<i>Indigofera linifolia</i>				0.1	0.25
<i>Rhynchosia minima</i>				0.1	
<i>Scaevola spinescens</i>				0.1	0.5
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.3
<i>Solanum diversiflorum</i>				0.1	0.3
<i>Tephrosia rosea</i> var. <i>clementii</i>				0.1	0.2
<i>Crotalaria novae-hollandiae</i> subsp. <i>novae-hollandiae</i>				0.1	0.15
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.5
<i>Pentalepis trichodesmoides</i> subsp. <i>trichodesmoides</i>				0.1	0.4

Site details			
Site	E100R01	Position (WGS84)	-20.931195, 116.228613
Slope	moderate	Topography	gully
Soil colour	red-orange	Soil texture	
Rock cover (%)	0	Rock type	granite - outcropping, granite - rocks

Observation details - visit 1 (22 Apr 2020)			
Sample description	Isolated shrubs of <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i> , <i>A. bivenosa</i> and <i>Scaevola spinescens</i> over a grassland of <i>Paspalidium rarum</i> and <i>Triodia wiseana</i> .		
Habitat	grassland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	80	Tree cover (%)	0
Shrub cover (%)	3	Grass cover (%)	70
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	22-Apr-2020	unbounded	Martin Henson
Relevé	2	28-Mar-2021	unbounded	Brody Loneragan

Species (29)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		70	0.3		
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		1	3		
<i>Acacia bivenosa</i>		1	1.8		
<i>Scaevola spinescens</i>		0.5	1		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		0.2	0.2		
* <i>Citrullus colocynthis</i>	Weed	0.2	0.2		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		0.1	1.8		
<i>Cymbopogon ambiguus</i>		0.1	0.4		
<i>Myoporum montanum</i>		0.1	0.3		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	0.3		
<i>Themeda triandra</i>		0.1	0.3		
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.3		
<i>Ptilotus auriculifolius</i>		0.1	0.3		
<i>Goodenia lamprosperma</i>		0.1	0.3		
<i>Paspalidium rarum</i>		0.1	0.15		
<i>Tinospora smilacina</i>		0.1	0.1		
<i>Abutilon lepidum</i>				0.1	0.4
<i>Indigofera monophylla</i>				0.1	0.3
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>				0.1	0.15
<i>Polymeria ambigua</i>				0.1	0.1
<i>Gomphrena cunninghamii</i>				0.1	0.1
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.25
<i>Dolichocarpa crouchiana</i>				0.1	0.15
<i>Ptilotus fusiformis</i>				0.1	0.3
<i>Cheilanthes contigua</i>				0.1	0.1
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>				0.1	1.2
<i>Solanum cleistogamum</i>				0.1	0.15
<i>Triumfetta clementii</i>				0.1	0.3
<i>Polygala isingii</i>				0.1	0.05

Site details			
Site	E101	Position (WGS84)	-20.95289, 116.238897
Slope	moderate	Topography	hill top
Soil colour	red-brown, red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	granite - outcropping, granite - rocks

Observation details - visit 1 (22 Apr 2020)			
Sample description	Scattered shrubs of <i>Ficus aculeata</i> var. <i>indecora</i> , <i>Corchorus tectus</i> and <i>Indigofera monophylla</i> over a grassland of <i>Paspalidium rarum</i> , <i>Themeda triandra</i> and <i>Triodia wiseana</i> .		
Habitat	spinifex grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	85	Tree cover (%)	0.1
Shrub cover (%)	0.75	Grass cover (%)	83
Herb cover (%)	2		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	22-Apr-2020	50m x 50m	Martin Henson
Quadrat	2	28-Mar-2021	50m x 50m	Brody Loneragan

Species (31)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		60	0.3		
<i>Cynanchum floribundum</i>		0.3			
<i>Themeda triandra</i>		0.1	1		
<i>Cymbopogon ambiguus</i>		0.1	1		
<i>Ficus aculeata</i> var. <i>indecora</i>		0.1	0.5		
<i>Indigofera monophylla</i>		0.1	0.4		
<i>Corchorus tectus</i>		0.1	0.4		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Crotalaria novae-hollandiae</i> subsp. <i>novae-hollandiae</i>		0.1	0.3		
<i>Ptilotus fusiformis</i>		0.1	0.3		
<i>Paspalidium tabulatum</i>		0.1	0.3		
<i>Abutilon lepidum</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.25		
<i>Gomphrena cunninghamii</i>		0.1	0.2		
<i>Paspalidium rarum</i>		0.1	0.15		
<i>Cucumis variabilis</i>		0.1			
<i>Acacia coriacea</i> subsp. <i>coriacea</i>				0.1	1.5
<i>Acacia elachantha</i>				0.1	1.5
<i>Afrohybanthus aurantiacus</i>	Weed			0.1	0.3
<i>Tephrosia</i> sp. NW Eremaean (<i>S. van Leeuwen et al. PBS 0356</i>)				0.1	0.15
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>				0.1	1
<i>Marsilea exarata</i>				0.1	0.3
<i>Rhynchosia minima</i>				0.1	
<i>Triumfetta clementii</i>				0.1	0.15
<i>Polymeria ambigua</i>				0.1	
<i>Polygala isingii</i>				0.1	0.05
<i>Euphorbia boophthona</i>				0.1	0.25
<i>Pentalepis trichodesmoides</i> subsp. <i>trichodesmoides</i>				0.1	0.3
<i>Nellica maderaspatensis</i>				0.1	0.25
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>				0.1	0.25

Site details			
Site	E102	Position (WGS84)	-21.042597, 116.262016
Slope	steep	Topography	hill top
Soil colour	red-brown	Soil texture	rocks
Rock cover (%)	0	Rock type	siltstone / mudstone

Observation details - visit 1 (22 Apr 2020)			
Sample description	Restricted rock outcrop on horseflat plain, scattered <i>Ehretia saligna</i> var. <i>saligna</i> , <i>Sesbania cannabina</i> , and <i>Senna venusta</i> , over grassland of <i>Triodia wiseana</i> and * <i>Cenchrus setiger</i> .		
Habitat	shrubland		
Disturbance	Weed infestation		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	1	Grass cover (%)	30
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	22-Apr-2020	50m x 50m	David Leach
Quadrat	2	27-Mar-2021	50m x 50m	Brody Loneragan

Species (24)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus setiger</i>	Weed	20	0.4		
<i>Triodia wiseana</i>		10	0.3		
<i>Sesbania cannabina</i>		1	1.75		
<i>Operculina aequisejala</i>		1	1		
<i>Cucumis variabilis</i>		0.5	0.3		
<i>Ehretia saligna</i> var. <i>saligna</i>		0.1	1.5		
<i>Senna venusta</i>		0.1	0.5		
<i>Acacia bivenosa</i>		0.1	0.4		
<i>Boerhavia paludosa</i>		0.1	0.4		
<i>Abutilon amplum</i>		0.1	0.4		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Ptilotus clementii</i>		0.1	0.3		
<i>Solanum lasiophyllum</i>		0.1	0.25		
<i>Boerhavia coccinea</i>		0.1	0.2		
<i>Alysicarpus muelleri</i>		0.1	0.2		
<i>Ficus aculeata</i> var. <i>indecora</i>		0.1	0.2		
<i>Tinospora smilacina</i>		0.1	0.2		
<i>Portulaca oleracea</i>		0.1	0.2		
<i>Tribulus hirsutus</i>		0.1	0.15		
<i>Gomphrena cunninghamii</i>		0.1	0.1		
<i>Poaceae</i> sp.		0.1	0.05		
<i>Rhynchosia minima</i>				0.1	
<i>Trichosanthes cucumerina</i>				1	
<i>Portulaca filifolia</i>	Range extension			0.1	0.5

Site details			
Site	E103	Position (WGS84)	-20.86602, 116.33653
Slope	negligible	Topography	coast
Soil colour	red-brown, red-orange	Soil texture	sandy loam
Rock cover (%)	0	Rock type	None

Observation details - visit 1 (30 Mar 2021)			
Sample description	<i>Triodia epactia</i> , * <i>Cenchrus ciliaris</i> closed grassland with scattered * <i>Aerva javanica</i> low shrubs		
Habitat	grassland		
Disturbance	Grazing-medium, Weed infestation		
Vegetation condition	Poor	Fire age	not evident
Total veg. cover (%)	80	Tree cover (%)	0
Shrub cover (%)	0.1	Grass cover (%)	80
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	30-Mar-2021	50m x 50m	Martin Henson
Quadrat	2	11-Oct-2021	50m x 50m	Martin Henson

Species (23)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	40	0.4		
<i>Triodia epactia</i>		40	0.3		
<i>Melhania oblongifolia</i>		0.5	0.3		
<i>Eriachne obtusa</i>		0.3	0.3		
<i>Chrysopogon fallax</i>		0.1	1		
<i>Scaevola spinescens</i>		0.1	0.5		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Euphorbia boophthona</i>		0.1	0.3		
<i>Frankenia pauciflora</i>		0.1	0.3		
<i>Aristida contorta</i>		0.1	0.3		
<i>Indigofera trita</i> subsp. <i>trita</i>		0.1	0.3		
<i>*Aerva javanica</i>	Weed	0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.25		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.25		
<i>Euploca cunninghamii</i>		0.1	0.15		
<i>Salsola australis</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1			
<i>Neobassia astrocarpa</i>				0.1	0.15
<i>Sclerolaena diacantha</i>				0.1	0.25
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				2	1.5
<i>Triodia wiseana</i>				5	0.3
<i>Indigofera trita</i>				0.2	0.25

Site details			
Site	E104	Position (WGS84)	-20.89218, 116.26032
Slope	negligible	Topography	sandy rise
Soil colour	red-brown, red-orange	Soil texture	sandy loam
Rock cover (%)	0	Rock type	

Observation details - visit 1 (29 Mar 2021)			
Sample description	Closed hummock grassland of <i>Triodia epactia</i> over mixed shrubs and herbs.		
Habitat	spinifex grassland		
Disturbance	Weed infestation		
Vegetation condition	Very Good	Fire age	not evident
Total veg. cover (%)	95	Tree cover (%)	0
Shrub cover (%)	0.1	Grass cover (%)	95
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	29-Mar-2021	50m x 50m	Martin Henson
Quadrat	2	16-Oct-2021	50m x 50m	Adam Crosby-Clarke

Species (28)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		90	0.3		
<i>Arivela viscosa</i>		0.5	0.2		
<i>Scaevola spinescens</i>		0.1	1		
<i>Salsola australis</i>		0.1	0.6		
<i>Sclerolaena glabra</i>		0.1	0.5		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.5		
<i>Ptilotus exaltatus</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3		
<i>Frankenia pauciflora</i>		0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.3		
<i>Neobassia astrocarpa</i>		0.1	0.3		
* <i>Aerva javanica</i>	Weed	0.1	0.3		
<i>Lepidium pedicellosum</i>		0.1	0.25		
<i>Euphorbia biconvexa</i>		0.1	0.25		
<i>Amaranthus undulatus</i>		0.1	0.25		
<i>Gomphrena leptoclada</i>		0.1	0.25		
<i>Enneapogon caeruleus</i>		0.1	0.25		
<i>Indigofera trita</i> subsp. <i>trita</i>		0.1	0.2		
<i>Heliotropium crispatum</i>		0.1	0.2		
<i>Streptoglossa bubakii</i>		0.1	0.2		
<i>Rhynchosia minima</i>		0.1			
<i>Eragrostis falcata</i>				0.1	0.4
<i>Lepidium pholidogynum</i>				0.1	0.3
<i>Sclerolaena diacantha</i>				0.1	0.2
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>				0.1	0.3
<i>Trianthema turgidifolium</i>				0.1	0.3
<i>Lawrenca viridigrisea</i>				0.1	0.25

Site details			
Site	E105	Position (WGS84)	-20.89236, 116.31637
Slope	negligible	Topography	plain
Soil colour	red-orange	Soil texture	sandy loam
Rock cover (%)	0	Rock type	ferrous - ironstone

Observation details - visit 1 (30 Mar 2021)			
Sample description	<i>Acacia xiphophylla</i> open shrubland over <i>Eragrostis xerophila</i> open grassland.		
Habitat	spinifex grassland		
Disturbance	Grazing-low		
Vegetation condition	Excellent	Fire age	not evident
Total veg. cover (%)	45	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	40
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	30-Mar-2021	50m x 50m	Martin Henson
Quadrat	2	15-Oct-2021	50m x 50m	Martin Henson

Species (23)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Acacia xiphophylla</i>		10	1.5		
<i>Eragrostis xerophila</i>		10	0.3		
<i>Triodia epactia</i>		10	0.3		
<i>Sida fibulifera</i>		0.5	0.2		
<i>Chrysopogon fallax</i>		0.1	1		
<i>Rhagodia eremaea</i>		0.1	1		
<i>Salsola australis</i>		0.1	0.5		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.25		
<i>Abutilon lepidum</i>		0.1	0.2		
<i>Ptilotus exaltatus</i>		0.1	0.2		
<i>Solanum cleistogamum</i>		0.1	0.2		
<i>Dissocarpus paradoxus</i>		0.1	0.15		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		0.1			
<i>Aristida contorta</i>				1	0.15
<i>Corchorus walcottii</i>				0.1	0.1
<i>Euphorbia myrtoides</i>				0.1	0.2
<i>Maireana tomentosa</i> subsp. <i>tomentosa</i>				0.5	0.3
<i>Portulaca oleracea</i>				0.1	0.2
<i>Ptilotus obovatus</i>				0.1	0.3
<i>Senna artemisioides</i> subsp. <i>helmsii</i>				0.1	0.1
<i>Threlkeldia diffusa</i>				0.1	0.5
<i>Lepidium platypetalum</i>				0.1	0.5

Site details			
Site	E106	Position (WGS84)	-20.93662, 116.28082
Slope	negligible	Topography	plain
Soil colour	red-orange	Soil texture	sand, loamy sand
Rock cover (%)	0	Rock type	ferrous - ironstone

Observation details - visit 1 (30 Mar 2021)			
Sample description	<i>Acacia xiphophyla</i> open shrubland over <i>Eragrostis xerophila</i> open grassland.		
Habitat	grassland		
Disturbance	Current operations, Weed infestation		
Vegetation condition	Very Good	Fire age	not evident
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	30
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	30-Mar-2021	50m x 50m	Martin Henson
Quadrat	2	14-Oct-2021	50m x 50m	Martin Henson

Species (28)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		30	0.3		
<i>Acacia xiphophylla</i>		5	1.5		
<i>Sida fibulifera</i>		2	0.15		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		1	0.3		
<i>Indigofera trita</i> subsp. <i>trita</i>		1	0.3		
<i>Ptilotus exaltatus</i>		1	0.3		
<i>Aristida contorta</i>		1	0.25		
<i>Boerhavia coccinea</i>		0.5	0.25		
<i>Triodia wiseana</i>		0.5	0.2		
<i>Xerochloa barbata</i>		0.5	0.15		
<i>Enneapogon caeruleus</i>		0.2	0.3		
<i>Acacia bivenosa</i>		0.1	0.5		
<i>Euphorbia boophthona</i>		0.1	0.3		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.3		
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>		0.1	0.3		
<i>Salsola australis</i>		0.1	0.3		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.25		
<i>Abutilon malvifolium</i>		0.1	0.15		
<i>Euploca inexplicita</i>		0.1	0.1		
<i>Ptilotus helipteroides</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1			
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>				0.1	0.3
<i>Euphorbia australis</i> var. <i>australis</i>				0.1	0.1
<i>Sclerolaena</i> sp.				0.1	0.15
<i>Threlkeldia diffusa</i>				0.1	0.3
<i>Trianthema pilosum</i>				0.1	1
<i>Trigastrotheca molluginea</i>				0.1	0.15
<i>Indigofera trita</i>				0.1	0.3

Site details			
Site	E107	Position (WGS84)	-20.93565, 116.31765
Slope	negligible	Topography	plain
Soil colour	red-orange	Soil texture	sandy loam
Rock cover (%)	0	Rock type	ferrous - ironstone

Observation details - visit 1 (30 Mar 2021)			
Sample description	<i>Acacia xiphophylla</i> open shrubland over <i>Eragrostis xerophila</i> grassland with <i>Triodia epactia</i> , <i>T. wiseana</i> scattered hummock grasses.		
Habitat	shrubland		
Disturbance			
Vegetation condition	Excellent	Fire age	not evident
Total veg. cover (%)	15	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	7
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	30-Mar-2021	50m x 50m	Martin Henson
Quadrat	2	14-Oct-2021	50m x 50m	Martin Henson

Species (35)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Acacia xiphophylla</i>		30	1.8		
<i>Chrysopogon fallax</i>		3	1		
<i>Acacia bivenosa</i>		1	1.2		
<i>Sida fibulifera</i>		0.5	0.2		
<i>Portulaca oleracea</i>		0.5	0.01		
<i>Sclerolaena diacantha</i>		0.1	15		
<i>Eragrostis xerophila</i>		0.1	3		
<i>Panicum decompositum</i>		0.1	0.5		
<i>Enchylaena tomentosa</i>		0.1	0.4		
<i>Eriachne flaccida</i>		0.1	0.4		
<i>Nellica maderaspatensis</i>		0.1	0.3		
<i>Ptilotus exaltatus</i>		0.1	0.3		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.3		
<i>Stemodia grossa</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.2		
<i>Triodia wiseana</i>		0.1	0.2		
<i>Neptunia dimorphantha</i>		0.1	0.2		
<i>Abutilon lepidum</i>		0.1	0.2		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.15		
<i>Enneapogon caeruleus</i>		0.1	0.15		
<i>Dicladantha forrestii</i>		0.1	0.15		
<i>Triodia epactia</i>		0.1	0.15		
<i>Sporobolus australasicus</i>		0.1	0.15		
<i>Ptilotus helipteroides</i>		0.1	0.1		
<i>Dactyloctenium radulans</i>		0.1	0.1		
<i>Rhynchosia minima</i>		0.1			
<i>Lepidium pedicellosum</i>		0.1			
<i>Aristida contorta</i>				0.1	0.15
<i>Threlkeldia diffusa</i>				0.1	0.3
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>				0.1	0.3
<i>Euphorbia boophthona</i>				0.1	0.5
* <i>Malvastrum americanum</i>	Weed			0.1	0.3
<i>Poaceae</i> sp.				0.1	
<i>Sclerolaena densiflora</i>				0.1	0.15
<i>Streptoglossa liatroides</i>				0.1	0.3

Site details			
Site	E108	Position (WGS84)	-20.83226, 116.39339
Slope	steep	Topography	dune
Soil colour	light-brown, orange	Soil texture	sand
Rock cover (%)	0	Rock type	None

Observation details - visit 1 (26 Mar 2021)			
Sample description	<i>Acacia coriacea</i> subsp. <i>coriacea</i> open shrubland over <i>Corchorus walcottii</i> open shrubland, over * <i>Cenchrus ciliaris</i> grassland.		
Habitat	beach		
Disturbance	Vehicle tracks, Weed infestation		
Vegetation condition	Poor	Fire age	not evident
Total veg. cover (%)	55	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	50
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	26-Mar-2021	50m x 50m	Brody Loneragan

Species (14)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	50	0.4		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		3	1.9		
<i>Indigofera linnaei</i>		1.5	0.25		
<i>Corchorus walcottii</i>		1	0.3		
<i>Scaevola</i> aff. <i>pulchella</i>	sp. nov.	1	0.2		
<i>Scaevola spinescens</i>		0.5	1.2		
<i>Rhagodia eremaea</i>		0.1	1.5		
<i>Euploca cunninghamii</i>		0.1	1		
<i>Whiteochloa airoides</i>		0.1	0.5		
<i>Threlkeldia diffusa</i>		0.1	0.5		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.3		
<i>Euphorbia myrtoides</i>		0.1	0.3		
<i>Trianthema turgidifolium</i>		0.1	0.25		
<i>Rhynchosia minima</i>		0.1			

Site details			
Site	E109	Position (WGS84)	-20.8398, 116.3802
Slope	gentle	Topography	coast
Soil colour	red-brown, red-orange	Soil texture	sand
Rock cover (%)	0	Rock type	None

Observation details - visit 1 (26 Mar 2021)			
Sample description	<i>Triodia epactia</i> , <i>Whiteochloa airoides</i> and <i>*Cenchrus ciliaris</i> grassland.		
Habitat	grassland		
Disturbance	Grazing-low, Weed infestation		
Vegetation condition	Good	Fire age	not evident
Total veg. cover (%)	60	Tree cover (%)	1
Shrub cover (%)	5	Grass cover (%)	30
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	26-Mar-2021	50m x 50m	Brody Loneragan
Quadrat	2	11-Oct-2021	50m x 50m	Martin Henson

Species (23)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Whiteochloa airoides</i>		10	1		
<i>Triodia epactia</i>		10	1		
* <i>Cenchrus ciliaris</i>	Weed	10	1		
* <i>Aerva javanica</i>	Weed	2	0.8		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		1	3		
<i>Eragrostis eriopoda</i>		1	0.4		
<i>Corchorus walcottii</i>		1	0.3		
<i>Scaevola</i> aff. <i>pulchella</i>	sp. nov.	0.5	0.3		
<i>Eremophila longifolia</i>		0.1	1.2		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>		0.1	1		
<i>Cynanchum viminale</i> subsp. <i>australe</i>		0.1	1		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	0.5		
<i>Solanum lasiophyllum</i>		0.1	0.4		
<i>Goodenia microptera</i>		0.1	0.4		
<i>Melhania oblongifolia</i>		0.1	0.3		
<i>Euphorbia boophthona</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3		
<i>Indigofera trita</i> subsp. <i>trita</i>		0.1	0.25		
<i>Indigofera georgei</i>		0.1	0.25		
<i>Indigofera colutea</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1			
<i>Euphorbia myrtoides</i>				0.5	0.3
<i>Rhagodia eremaea</i>				0.1	0.4

Site details			
Site	E110R	Position (WGS84)	-20.88081, 116.36581
Slope	negligible	Topography	plain
Soil colour	BLK	Soil texture	ALUV
Rock cover (%)	90	Rock type	

Observation details - visit 1 (31 Mar 2021)			
Sample description	Isolated plants of <i>Indigofera linifolia</i> , <i>Eriachne mucronata</i> and * <i>Cenchrus ciliaris</i> with diverse mixed herbs.		
Habitat	rockshelf		
Disturbance	Grazing-medium, Vehicle tracks, Weed infestation		
Vegetation condition	Good	Fire age	not evident
Total veg. cover (%)	10	Tree cover (%)	6
Shrub cover (%)	0.5	Grass cover (%)	5
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	31-Mar-2021	unbounded	Martin Henson

Species (38)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Indigofera linifolia</i>		1	0.25		
<i>Eriachne mucronata</i>		0.5	0.3		
* <i>Cenchrus ciliaris</i>	Weed	0.5	0.3		
<i>Tribulus cistoides</i>		0.5	0.01		
<i>Trianthema triquetrum</i>		0.3	0.1		
<i>Jasminum didymum</i> subsp. <i>lineare</i>		0.2	0.25		
<i>Eremophila longifolia</i>		0.1	1.2		
<i>Alysicarpus muelleri</i>		0.1	1		
<i>Cymbopogon ambiguus</i>		0.1	1		
<i>Scaevola spinescens</i>		0.1	0.5		
<i>Abutilon lepidum</i>		0.1	0.5		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		0.1	0.3		
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Goodenia muelleriana</i>		0.1	0.3		
<i>Solanum lasiophyllum</i>		0.1	0.3		
<i>Melhania oblongifolia</i>		0.1	0.3		
<i>Panicum decompositum</i>		0.1	0.3		
<i>Nellica maderaspatensis</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Sclerolaena glabra</i>		0.1	0.3		
<i>Solanum diversiflorum</i>		0.1	0.25		
<i>Portulaca filifolia</i>	Range extension	0.1	0.25		
<i>Arivela viscosa</i>		0.1	0.25		
<i>Ptilotus gomphrenoides</i>		0.1	0.2		
<i>Solanum cleistogamum</i>		0.1	0.2		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Indigofera monophylla</i>		0.1	0.2		
<i>Boerhavia coccinea</i>		0.1	0.2		
<i>Boerhavia paludosa</i>		0.1	0.2		
<i>Enneapogon caerulescens</i>		0.1	0.15		
<i>Sporobolus australasicus</i>		0.1	0.15		
<i>Notoleptopus decaisnei</i>		0.1	0.15		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.15		
<i>Bonamia</i> aff. <i>media</i>	sp. nov.	0.1	0.05		
<i>Euphorbia australis</i> var. <i>subtomentosa</i>		0.1	0.05		
<i>Abutilon oxycarpum</i> subsp. Prostrate (A.A. Mitchell PRP 1266)		0.1	0.05		
<i>Ptilotus exaltatus</i>		0.1			

Site details			
Site	E111R	Position (WGS84)	-21.05392, 116.2531
Slope	gentle	Topography	undulating plain
Soil colour	light-brown	Soil texture	sand, sandy clay, sandy loam, rocks
Rock cover (%)	80	Rock type	granite - outcropping

Observation details - visit 1 (27 Mar 2021)			
Sample description	<i>Melaleuca glomerata</i> scattered tall shrubland on drainage over <i>Triodia wiseana</i> , <i>T. epactia</i> open hummock grassland and * <i>Cenchrus ciliaris</i> stands.		
Habitat	rockpile		
Disturbance	Erosion Channels, Grazing-medium, Vehicle tracks, Weed infestation		
Vegetation condition	Good	Fire age	not evident
Total veg. cover (%)	20	Tree cover (%)	5
Shrub cover (%)	5	Grass cover (%)	12
Herb cover (%)	3		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	27-Mar-2021	unbounded	Brody Loneragan

Species (33)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	15	0.3		
<i>Melaleuca glomerata</i>		10	3		
<i>Triodia wiseana</i>		10	3		
<i>Triodia epactia</i>		10	0.4		
<i>Sesbania cannabina</i>		2	1		
<i>Eucalyptus leucophloia</i>		1	6		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		0.1	1		
<i>Ipomoea costata</i>		0.1	0.8		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	0.5		
<i>Abutilon lepidum</i>		0.1	0.5		
<i>Enneapogon caeruleus</i>		0.1	0.4		
<i>Alysicarpus muelleri</i>		0.1	0.4		
<i>Salsola australis</i>		0.1	0.3		
<i>Acacia bivenosa</i>		0.1	0.3		
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.3		
<i>Pluchea rubelliflora</i>		0.1	0.3		
<i>Notoleptopus decaisnei</i> var. <i>decaisnei</i>	Range extension	0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3		
<i>Stemodia grossa</i>		0.1	0.3		
<i>Solanum diversiflorum</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Nellica maderaspatensis</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.3		
<i>Tephrosia supina</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.25		
<i>Eragrostis falcata</i>		0.1	0.2		
<i>Polycarpaea longiflora</i>		0.1	0.2		
<i>Indigofera linnaei</i>		0.1	0.2		
<i>Ipomoea optica</i>		0.1	0.15		
<i>Cucumis variabilis</i>		0.1			
<i>Vigna lanceolata</i> var. <i>lanceolata</i>		0.1			
<i>Rhynchosia minima</i>		0.1			

Site details			
Site	E112R	Position (WGS84)	-20.97945, 116.29706
Slope	moderate	Topography	plain
Soil colour	red-brown, red-orange	Soil texture	sandy loam, loam, rocks
Rock cover (%)	40	Rock type	granite - bolders, granite - outcropping

Observation details - visit 1 (30 Mar 2021)			
Sample description	Scattered <i>Acacia coriacea</i> subsp. <i>coriacea</i> and <i>Eremophila longifolia</i> tall shrubs over <i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i> , <i>Abutilon fraseri</i> subsp. <i>fraseri</i> , and <i>Gomphrena cunninghami</i>		
Habitat	rockpile		
Disturbance	Weed infestation		
Vegetation condition	Good	Fire age	not evident
Total veg. cover (%)	60	Tree cover (%)	0.1
Shrub cover (%)	5	Grass cover (%)	55
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	30-Mar-2021	unbounded	Martin Henson

Species (23)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	30	0.5		
<i>Triodia epactia</i>		25	0.3		
<i>Capparis spinosa</i> subsp. <i>nummularia</i>		1	1		
<i>Gomphrena cunninghamii</i>		1	0.25		
<i>*Passiflora foetida</i> var. <i>hispida</i>	Weed	1			
<i>Zaleya galericulata</i> subsp. <i>galericulata</i>		0.5	0.4		
<i>Solanum lasiophyllum</i>		0.5	0.3		
<i>Operculina aequisejala</i>		0.5			
<i>Eremophila longifolia</i>		0.1	4		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		0.1	3		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	2.5		
<i>Acacia synchronica</i>		0.1	2.5		
<i>*Vachellia farnesiana</i>	Weed	0.1	1.5		
<i>Abutilon fraseri</i> subsp. <i>fraseri</i>		0.1	0.3		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.3		
<i>Euphorbia boophthona</i>		0.1	0.3		
<i>Portulaca filifolia</i>	Range extension	0.1	0.3		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Polymeria ambigua</i>		0.1	0.1		
<i>Ipomoea costata</i>		0.1	0.1		
<i>Cucumis variabilis</i>		0.1			
<i>Rhynchosia minima</i>		0.1			

Site details			
Site	E113R	Position (WGS84)	-20.93385, 116.25792
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	loamy sand
Rock cover (%)	40	Rock type	quartz

Observation details - visit 1 (29 Mar 2021)			
Sample description	<i>Triodia wiseana</i> and * <i>Cenchrus ciliaris</i> mixed open grassland.		
Habitat	rockpile		
Disturbance	Grazing-medium, Livestock tracks		
Vegetation condition	Very Good	Fire age	not evident
Total veg. cover (%)	50	Tree cover (%)	0.1
Shrub cover (%)	10	Grass cover (%)	40
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	29-Mar-2021	unbounded	Martin Henson

Species (31)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		40	0.25		
* <i>Cenchrus ciliaris</i>	Weed	5	0.3		
<i>Corymbia hamersleyana</i>		1	1.8		
<i>Acacia coriacea</i> subsp. <i>coriacea</i>		0.1	2		
<i>Hakea loreus</i> subsp. <i>loreus</i>		0.1	1.8		
<i>Acacia ampliceps</i>		0.1	1.8		
<i>Ehretia saligna</i> var. <i>saligna</i>		0.1	1.8		
<i>Acacia inaequilatera</i>		0.1	1.2		
<i>Eremophila longifolia</i>		0.1	1		
<i>Cymbopogon ambiguus</i>		0.1	1		
<i>Eriachne mucronata</i>		0.1	0.5		
<i>Ptilotus clementii</i>		0.1	0.5		
<i>Abutilon lepidum</i>		0.1	0.5		
<i>Themeda triandra</i>		0.1	0.4		
<i>Waltheria indica</i>		0.1	0.4		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		0.1	0.4		
<i>Enneapogon caeruleus</i>		0.1	0.3		
<i>Dissocarpus paradoxus</i>		0.1	0.3		
<i>Eremophila forrestii</i> subsp. <i>viridis</i>	Range extension	0.1	0.3		
<i>Euphorbia boophthona</i>		0.1	0.3		
<i>Portulaca filifolia</i>	Range extension	0.1	0.3		
<i>Sclerolaena glabra</i>		0.1	0.3		
<i>Sida fibulifera</i>		0.1	0.3		
<i>Tephrosia densa</i>		0.1	0.3		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.25		
<i>Ptilotus exaltatus</i>		0.1	0.2		
<i>Cynanchum viminalis</i> subsp. <i>australe</i>		0.1	0.2		
<i>Solanum lasiophyllum</i>		0.1	0.2		
<i>Boerhavia coccinea</i>		0.1	0.2		
<i>Tinospora smilacina</i>		0.1			

Site details			
Site	ES001	Position (WGS84)	-20.831587, 116.428367
Slope	negligible	Topography	salt lake (playa)
Soil colour	grey, light-brown	Soil texture	sand, clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (13 Oct 2021)			
Sample description	<i>Tecticornia</i> shrubland.		
Habitat	chenopod shrubland		
Disturbance	none evident		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	30	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	09-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (5)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		30	0.2		
<i>Tecticornia auriculata</i>		20	0.2		
<i>Tecticornia indica</i> subsp. <i>bidens</i>		10	0.3		
<i>Tecticornia</i> sp. sterile 5	local sig.	5	0.3		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>				1	0.2

Site details			
Site	ES002R	Position (WGS84)	-20.831267, 116.42839
Slope	negligible	Topography	riparian zone
Soil colour	grey	Soil texture	sand
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (13 Oct 2021)			
Sample description	<i>Acacia ampliceps</i> , <i>Myoporum montanum</i> low shrubland grading into <i>Sporobolus virginicus</i> closed grassland downslope towards lake bed.		
Habitat	shrubland		
Disturbance	none evident		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	95	Tree cover (%)	0
Shrub cover (%)	45	Grass cover (%)	60
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	13-Oct-2021	unbounded	Martin Henson

Species (11)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Sporobolus virginicus</i>		60	0.3		
<i>Myoporum montanum</i>		40	1.8		
<i>Pluchea rubelliflora</i>		2	0.4		
<i>Acacia ampliceps</i>		1			
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		0.2	0.25		
<i>Rhagodia eremaea</i>		0.1	0.4		
<i>Threlkeldia diffusa</i>		0.1	0.3		
<i>Tecticornia indica</i> subsp. <i>bidens</i>		0.1	0.3		
<i>Lawrenia viridigrisea</i>		0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Frankenia pauciflora</i>		0.1	0.25		

Site details			
Site	ES003	Position (WGS84)	-20.830258, 116.428955
Slope	negligible	Topography	coast
Soil colour	light-brown	Soil texture	sand
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (13 Oct 2021)			
Sample description	Coastal <i>Acacia coriacea</i> subsp. <i>pendens</i> over mostly * <i>Cenchrus ciliaris</i> and <i>Triodia epactia</i> with some <i>Whiteochloa aeroides</i> .		
Habitat	shrubland		
Disturbance	weed infestation		
Vegetation condition	Good	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	70	Tree cover (%)	10
Shrub cover (%)	2	Grass cover (%)	70
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	09-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (19)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	45	0.4		
<i>Acacia ligulata</i>		10	2.5		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		2	1.8		
<i>Whiteochloa airoides</i>		1	1		
<i>*Aerva javanica</i>	Weed	1	0.4		
<i>Santalum lanceolatum</i>		0.5	1.8		
<i>Corchorus walcottii</i>		0.5	0.3		
<i>Triodia epactia</i>		0.25	0.35		
<i>Swainsona formosa</i>		0.1	0.5		
<i>Rhagodia eremaea</i>		0.1	0.5		
<i>Threlkeldia diffusa</i>		0.1	0.4		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Rhynchosia minima</i>		0.1			
<i>Polymeria ambigua</i>				0.1	0.1
<i>Euploca cunninghamii</i>				0.1	0.2
<i>*Prosopis glandulosa</i> x <i>velutina</i>	Weed (WoNS)			0.1	1.8
<i>Cassytha filiformis</i>				1	0.1
<i>Senna artemisioides</i> subsp. <i>helmsii</i>				0.1	1.1
<i>Rhagodia preissii</i> subsp. <i>obovata</i>				0.1	0.5

Site details			
Site	ES004	Position (WGS84)	-20.829482, 116.432662
Slope	gentle	Topography	dune
Soil colour	grey	Soil texture	sand
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (13 Oct 2021)			
Sample description	<i>Triodia epactia</i> and <i>Whiteochloa airoides</i> mixed grassland.		
Habitat	grassland		
Disturbance	weed infestation		
Vegetation condition	Very Good	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	90	Tree cover (%)	0.1
Shrub cover (%)	0.1	Grass cover (%)	90
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	09-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (19)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Whiteochloa airoides</i>		45	0.9		
<i>Triodia epactia</i>		40	0.25		
<i>Cassytha filiformis</i>		3			
<i>Corchorus walcottii</i>		1	0.3		
<i>Indigofera linnaei</i>		1	0.15		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		0.5	2		
* <i>Aerva javanica</i>	Weed	0.5	0.5		
* <i>Prosopis glandulosa</i> x <i>velutina</i>	Weed (WoNS)	0.1	1		
<i>Pterocaulon sphacelatum</i>		0.1	0.5		
* <i>Vachellia farnesiana</i>	Weed	0.1	0.3		
<i>Rhagodia eremaea</i>		0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Swainsona formosa</i>		0.1	0.3		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.3		
<i>Eragrostis eriopoda</i>		0.1	0.25		
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.02		
<i>Boerhavia coccinea</i>				0.1	0.2
<i>Indigofera trita</i>				0.1	0.1

Site details			
Site	ES005	Position (WGS84)	-20.82994, 116.431042
Slope	negligible	Topography	dune
Soil colour	light-brown	Soil texture	sand
Rock cover (%)	0	Rock type	

Observation details - visit 1 (13 Oct 2021)			
Sample description	<i>Acacia coriacea</i> subsp. <i>pendens</i> and <i>A. ligulata</i> over <i>Whiteochloa airoides</i> , <i>Triodia epactia</i> grassland.		
Habitat	shrubland		
Disturbance	weed infestation		
Vegetation condition	Good	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	80	Tree cover (%)	5
Shrub cover (%)	2	Grass cover (%)	80
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	09-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (27)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	50	0.4		
<i>Triodia epactia</i>		20	0.25		
<i>Sporobolus virginicus</i>		10	0.15		
<i>Cassytha filiformis</i>		10			
<i>Acacia ampliceps</i>		5	1.6		
<i>Whiteochloa airoides</i>		5	1		
<i>Acacia ligulata</i>		2	1		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		1	1.8		
<i>Threlkeldia diffusa</i>		1	0.4		
<i>*Aerva javanica</i>	Weed	0.5	0.4		
<i>Neobassia astrocarpa</i>		0.2	0.3		
<i>Swainsona formosa</i>		0.1	0.8		
<i>Rhagodia eremaea</i>		0.1	0.5		
<i>*Vachellia farnesiana</i>	Weed	0.1	0.5		
<i>Lawrenzia viridigrisea</i>		0.1	0.3		
<i>Pterocaulon sphacelatum</i>		0.1	0.3		
<i>Salsola australis</i>		0.1	0.3		
<i>Portulaca oleracea</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1			
<i>Portulaca filifolia</i>	Range extension			0.1	0.2
<i>Myoporum montanum</i>				0.1	1.1
<i>Melhaniania oblongifolia</i>				0.1	0.3
<i>Indigofera linnaei</i>				0.1	0.2
<i>Euphorbia biconvexa</i>				0.1	0.3
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>				0.1	0.4
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.8
<i>*Prosopis glandulosa</i> x <i>velutina</i>	Weed (WoNS)			0.1	0.5

Site details			
Site	ES006	Position (WGS84)	-20.832867, 116.427384
Slope	gentle	Topography	sand dune
Soil colour	light-brown, orange	Soil texture	sand
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (13 Oct 2021)			
Sample description	<i>Triodia epactia</i> grassland with <i>Cassutha filiformes</i> and * <i>Aerva javanica</i> scattered shrubs		
Habitat	spinifex grassland		
Disturbance	weed infestation		
Vegetation condition	Very Good	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	70	Tree cover (%)	0
Shrub cover (%)	2	Grass cover (%)	45
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	09-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (16)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		60	0.3		
<i>Cassytha filiformis</i>		20			
* <i>Aerva javanica</i>	Weed	1	0.5		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.5	1.8		
* <i>Cenchrus ciliaris</i>	Weed	0.5	0.4		
<i>Corchorus walcottii</i>		0.5	0.3		
<i>Whiteochloa airoides</i>		0.2	1		
<i>Goodenia microptera</i>		0.1	0.4		
<i>Euphorbia biconvexa</i>		0.1	0.4		
<i>Eragrostis eriopoda</i>		0.1	0.3		
<i>Euploca cunninghamii</i>		0.1	0.25		
<i>Indigofera linnaei</i>		0.1	0.25		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.2
<i>Ipomoea coptica</i>				0.1	0.05
<i>Swainsona formosa</i>				0.1	0.2
<i>Indigofera trita</i>				0.1	0.05

Site details			
Site	ES007	Position (WGS84)	-20.830287, 116.423961
Slope	gentle	Topography	dune
Soil colour	light-brown	Soil texture	sand
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (13 Oct 2021)			
Sample description	<i>Acacia coriacea</i> subsp. <i>pendens</i> shrubland over <i>Triodia epactia</i> and * <i>Cenchrus ciliaris</i>		
Habitat	shrubland		
Disturbance	weed infestation		
Vegetation condition	Very Good	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	70	Tree cover (%)	10
Shrub cover (%)	10	Grass cover (%)	60
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	09-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (23)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		50	0.4		
<i>Cassytha filiformis</i>		20			
<i>Acacia coriacea</i> subsp. <i>pendens</i>		10	3		
* <i>Cenchrus ciliaris</i>	Weed	5	0.3		
<i>Whiteochloa airoides</i>		2	1		
<i>Swainsona formosa</i>		2	0.5		
<i>Rhagodia eremaea</i>		1	0.5		
<i>Scaevola spinescens</i>		0.5	1		
<i>Corchorus walcottii</i>		0.5	0.3		
<i>Santalum lanceolatum</i>		0.1	1		
<i>Threlkeldia diffusa</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Euploca cunninghamii</i>		0.1	0.25		
<i>Portulaca oleracea</i>		0.1	0.15		
* <i>Prosopis glandulosa</i> x <i>velutina</i>	Weed (WoNS)			0.1	2.4
<i>Tribulus hirsutus</i>				0.1	0.1
<i>Polymeria ambigua</i>				0.1	0.1
<i>Lepidium pedicellosum</i>				0.1	0.5
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>				0.1	0.4
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	
* <i>Aerva javanica</i>	Weed			0.1	0.4
<i>Amaranthus undulatus</i>				0.1	0.1
<i>Adriana tomentosa</i> var. <i>tomentosa</i>				0.1	0.6

Site details			
Site	ES011	Position (WGS84)	-20.830514, 116.420389
Slope	negligible	Topography	dune
Soil colour	BLK	Soil texture	ALUV
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (15 Oct 2021)			
Sample description	<i>Acacia coriacea</i> subsp. <i>pendens</i> over <i>Triodia epactia</i> sparse grassland		
Habitat	beach		
Disturbance	weed infestation		
Vegetation condition	Very Good	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	50	Tree cover (%)	40
Shrub cover (%)	1	Grass cover (%)	10
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	15-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	09-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (25)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Acacia coriacea</i> subsp. <i>pendens</i>		40	3		
<i>Triodia epactia</i>		10	0.2		
<i>Santalum lanceolatum</i>		1	1.2		
<i>Swainsona formosa</i>		1	0.2		
<i>Rhagodia eremaea</i>		0.3	1		
<i>Commicarpus australis</i>		0.1	1		
<i>Salsola australis</i>		0.1	1		
<i>Scaevola spinescens</i>		0.1	1		
<i>Amaranthus undulatus</i>		0.1	1		
<i>Spinifex longifolius</i>		0.1	0.8		
<i>Arivela viscosa</i>		0.1	0.8		
<i>Euphorbia boophthona</i>		0.1	0.8		
* <i>Aerva javanica</i>	Weed	0.1	0.4		
<i>Euploca cunninghamii</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.25		
<i>Canavalia rosea</i>		0.1	0.2		
<i>Euphorbia myrtoides</i>		0.1	0.2		
<i>Synaptantha tillaeacea</i> var. <i>tillaeacea</i>		0.1	0.15		
<i>Corchorus walcottii</i>				0.1	0.4
<i>Rhagodia preissii</i> subsp. <i>obovata</i>				0.1	0.6
<i>Threlkeldia diffusa</i>				0.1	0.6
<i>Tribulus hirsutus</i>				0.1	0.1
<i>Indigofera trita</i>				0.1	0.1

Site details			
Site	ES012	Position (WGS84)	-20.832334, 116.420427
Slope	negligible	Topography	dune
Soil colour	light-brown, orange	Soil texture	sand
Rock cover (%)	0	Rock type	calcrete

Observation details - visit 1 (15 Oct 2021)			
Sample description	<i>Acacia ligulata</i> , <i>Santalum acuminatum</i> low sparse shrubs over <i>Triodia epactia</i> grassland.		
Habitat	grassland		
Disturbance	weed infestation		
Vegetation condition	Very Good	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	60	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	60
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	15-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	09-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (28)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		60	0.3		
<i>Cassytha filiformis</i>		5			
<i>Acacia ligulata</i>		3	1		
<i>Santalum acuminatum</i>		2	1.5		
* <i>Aerva javanica</i>	Weed	2	0.5		
<i>Adriana tomentosa</i> var. <i>tomentosa</i>		1	1.5		
<i>Eremophila longifolia</i>		1	1.1		
<i>Swainsona formosa</i>		1	0.25		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1.5		
<i>Commicarpus australis</i>		0.1	1.4		
<i>Scaevola spinescens</i>		0.1	1		
<i>Corchorus walcottii</i>		0.1	0.6		
<i>Rhagodia eremaea</i>		0.1	0.5		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Threlkeldia diffusa</i>		0.1	0.3		
<i>Euphorbia boophthona</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.25		
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.15		
<i>Euphorbia myrtoides</i>		0.1	0.15		
<i>Indigofera linnaei</i>		0.1	0.15		
<i>Portulaca oleracea</i>		0.1	0.15		
<i>Euploca cunninghamii</i>		0.1	0.15		
<i>Indigofera trita</i>				0.1	0.1
<i>Portulaca filifolia</i>	Range extension			0.1	0.3
<i>Boerhavia coccinea</i>				0.1	0.2
<i>Rhagodia latifolia</i>				0.1	0.4

Site details			
Site	ES013R	Position (WGS84)	-20.831829, 116.418444
Slope	negligible	Topography	depression
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	none

Observation details - visit 1 (15 Oct 2021)			
Sample description	<i>Tecticornia</i> and <i>Surreya diandra</i> shrubland on mudflat margin		
Habitat	intertidal mudflat		
Disturbance	litter		
Vegetation condition	Excellent	Fire age	not evident
Total veg. cover (%)	90	Tree cover (%)	0
Shrub cover (%)	90	Grass cover (%)	0.1
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	15-Oct-2021	unbounded	Martin Henson

Species (8)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		40	0.25		
<i>Tecticornia</i> sp. sterile 7	local sig.	30	0.4		
<i>Frankenia pauciflora</i>		20	0.15		
<i>Surreya diandra</i>		20	0.1		
<i>Tecticornia</i> sp. sterile 8	local sig.	10	0.2		
<i>Avicennia marina</i>		0.1	1		
<i>Lawrenca viridigrisea</i>		0.1	0.25		
<i>Eragrostis falcata</i>		0.1	0.2		

Site details			
Site	ES014	Position (WGS84)	-20.832664, 116.416754
Slope	gentle	Topography	dune
Soil colour	yellow, orange,	Soil texture	sand,
Rock cover (%)	0	Rock type	None,

Observation details - visit 1 (15 Oct 2021)			
Sample description	Tall open <i>Acacia coriacea</i> subsp. <i>pendens</i> and <i>A. sclerosperma</i> subsp. <i>sclerosperma</i> shrubland over low open * <i>Aerva javanica</i> and <i>Corchorus walcottii</i> shrubland over <i>Triodia epactia</i> an		
Habitat	shrubland		
Disturbance	evidence of feral animals, weed infestation,		
Vegetation condition	Poor	Fire age	moderate (>5 years)
Total veg. cover (%)	45	Tree cover (%)	10
Shrub cover (%)	10	Grass cover (%)	35
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	15-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	08-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (25)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		20	0.3		
* <i>Cenchrus ciliaris</i>	Weed	15	0.6		
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		7	2.5		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		5	3		
* <i>Aerva javanica</i>	Weed	5	0.8		
<i>Corchorus walcottii</i>		2	0.5		
<i>Solanum lasiophyllum</i>		0.5	0.5		
<i>Swainsona formosa</i>		0.5	0.3		
<i>Cassytha capillaris</i>		0.2	0.1		
<i>Commicarpus australis</i>		0.1	2.3		
<i>Adriana tomentosa</i> var. <i>tomentosa</i>		0.1	1.8		
<i>Rhynchosia minima</i>		0.1	1.5		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1.5		
<i>Whiteochloa airoides</i>		0.1	1		
<i>Rhagodia preissii</i> subsp. <i>obovata</i>		0.1	0.9		
<i>Goodenia microptera</i>		0.1	0.4		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.4		
<i>Euphorbia biconvexa</i>		0.1	0.4		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.4		
<i>Euploca cunninghamii</i>		0.1	0.3		
<i>Rhagodia eremaea</i>		0.1			
<i>Indigofera trita</i>				0.1	0.1
<i>Solanum cleistogamum</i>				0.1	0.2
<i>Indigofera linnaei</i>				0.1	0.2

Site details			
Site	ES016	Position (WGS84)	-20.832237, 116.414693
Slope	gentle	Topography	depression
Soil colour	brown, whitish,	Soil texture	sand,
Rock cover (%)	0	Rock type	None,

Observation details - visit 1 (15 Oct 2021)			
Sample description	Mid open <i>Acacia ampliceps</i> , and <i>Myoporum montana</i> shrubland over low closed <i>Sporobolus virginicus</i> and * <i>Cenchrus ciliaris</i> grassland.		
Habitat	shrubland		
Disturbance	weed infestation,		
Vegetation condition	Poor	Fire age	moderate (>5 years)
Total veg. cover (%)	75	Tree cover (%)	0.1
Shrub cover (%)	15	Grass cover (%)	75
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	15-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	08-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (27)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Sporobolus virginicus</i>		40	0.25		
* <i>Cenchrus ciliaris</i>	Weed	32	0.5		
<i>Myoporum montanum</i>		9	1.5		
<i>Acacia ampliceps</i>		6	2.2		
<i>Triodia epactia</i>		3	0.3		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.5	1		
<i>Rhagodia eremaea</i>		0.2	1		
* <i>Vachellia farnesiana</i>	Weed	0.1	1		
<i>Pluchea rubelliflora</i>		0.1	0.5		
<i>Pterocaulon sphacelatum</i>		0.1	0.5		
<i>Salsola australis</i>		0.1	0.5		
<i>Swainsona formosa</i>		0.1	0.5		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		0.1	0.5		
<i>Threlkeldia diffusa</i>		0.1	0.5		
* <i>Aerva javanica</i>	Weed	0.1	0.5		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		0.1	0.4		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.4		
<i>Solanum diversiflorum</i>		0.1	0.3		
<i>Arivela viscosa</i>		0.1	0.3		
<i>Boerhavia burbridgeana</i>		0.1	0.2		
<i>Portulaca filifolia</i>	Range extension	0.1	0.2		
<i>Indigofera linnaei</i>				0.1	0.2
<i>Boerhavia coccinea</i>				0.1	0.4
<i>Goodenia microptera</i>				0.1	0.3
<i>Scaevola spinescens</i>				0.1	0.5
<i>Indigofera trita</i>				0.1	0.1
<i>Euploca cunninghamii</i>				0.1	0.3

Site details			
Site	ES016A	Position (WGS84)	-20.831265, 116.413358
Slope	gentle	Topography	dune
Soil colour	yellow, whitish, orange,	Soil texture	sand,
Rock cover (%)	0	Rock type	None,

Observation details - visit 1 (15 Oct 2021)			
Sample description	Isolated tall <i>Acacia coriacea</i> subsp. <i>pendens</i> shrubs over isolated low * <i>Aerva javanica</i> and <i>Corchorus walcottii</i> shrubs over <i>Whitechloa airoides</i> , <i>Triodia epactia</i> and * <i>Cenchrus ciliaris</i> grass		
Habitat	grassland		
Disturbance	weed infestation,		
Vegetation condition	Good	Fire age	moderate (>5 years)
Total veg. cover (%)	50	Tree cover (%)	2
Shrub cover (%)	2	Grass cover (%)	50
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	15-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	08-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (24)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Whiteochloa airoides</i>		30	0.9		
<i>Triodia epactia</i>		15	0.3		
* <i>Cenchrus ciliaris</i>	Weed	3	0.6		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		2	2.5		
<i>Corchorus walcottii</i>		1	0.5		
* <i>Aerva javanica</i>	Weed	1	0.4		
<i>Indigofera linnaei</i>		0.2	0.15		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		0.1	1.5		
<i>Acacia sericophylla</i>		0.1	1.2		
<i>Adriana tomentosa</i> var. <i>tomentosa</i>		0.1	1		
<i>Swainsona formosa</i>		0.1	0.5		
<i>Rhynchosia minima</i>		0.1	0.5		
<i>Goodenia microptera</i>		0.1	0.5		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.4		
<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Eragrostis eriopoda</i>		0.1	0.2		
<i>Indigofera colutea</i>		0.1	0.2		
<i>Euploca cunninghamii</i>				0.1	0.2
<i>Indigofera trita</i>				0.1	0.1
<i>Portulaca filifolia</i>	Range extension			0.1	0.2
<i>Scaevola spinescens</i>				0.1	0.4
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	1.4

Site details			
Site	ES017	Position (WGS84)	-20.832584, 116.410047
Slope	moderate	Topography	dune
Soil colour	whitish, orange,	Soil texture	sand,
Rock cover (%)	0	Rock type	None,

Observation details - visit 1 (15 Oct 2021)			
Sample description	Isolated tall <i>Acacia coriacea</i> subsp. <i>pendens</i> and * <i>Vachelia farnesiana</i> shrubs over <i>Whitechloa airoides</i> and <i>Triodia epactia</i> grassland.		
Habitat	grassland		
Disturbance	evidence of feral animals, weed infestation,		
Vegetation condition	Very Good	Fire age	moderate (>5 years)
Total veg. cover (%)	50	Tree cover (%)	1
Shrub cover (%)	1	Grass cover (%)	50
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	15-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	12-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (28)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Whiteochloa airoides</i>		40	1		
<i>Triodia epactia</i>		10	0.25		
* <i>Vachellia farnesiana</i>	Weed	1	2.5		
<i>Eragrostis eriopoda</i>		1	0.25		
<i>Corchorus walcottii</i>		0.5	0.5		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		0.1	2.5		
<i>Adriana tomentosa</i> var. <i>tomentosa</i>		0.1	1.5		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.5		
* <i>Aerva javanica</i>	Weed	0.1	0.5		
<i>Acacia ampliceps</i>		0.1	0.5		
<i>Rhynchosia minima</i>		0.1	0.5		
<i>Goodeniaceae</i> sp.		0.1	0.4		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		0.1	0.4		
<i>Goodenia microptera</i>		0.1	0.4		
<i>Solanum diversiflorum</i>		0.1	0.4		
<i>Euphorbia biconvexa</i>		0.1	0.4		
<i>Euploca cunninghamii</i>		0.1	0.25		
<i>Indigofera linnaei</i>		0.1	0.2		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Indigofera colutea</i>		0.1	0.1		
<i>Indigofera trita</i>				0.1	0.1
<i>Scaevola spinescens</i>				0.5	0.4
<i>Scaevola</i> aff. <i>pulchella</i>	sp. nov.			0.1	0.3
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>				0.1	0.7
<i>Swainsona formosa</i>				0.1	0.2
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.6
* <i>Prosopis glandulosa</i> x <i>velutina</i>	Weed (WoNS)			1	2.3

Site details			
Site	ES018	Position (WGS84)	-20.835867, 116.409081
Slope	gentle	Topography	dune
Soil colour	yellow, whitish, orange,	Soil texture	sand,
Rock cover (%)	0	Rock type	None,

Observation details - visit 1 (15 Oct 2021)			
Sample description	Low sparse * <i>Aerva javanica</i> and <i>Corchorus walcottii</i> shrubland over low <i>Triodia epactia</i> and <i>Whitechloa airoides</i> grassland.		
Habitat	grassland		
Disturbance	weed infestation,		
Vegetation condition	Good	Fire age	moderate (>5 years)
Total veg. cover (%)	45	Tree cover (%)	0
Shrub cover (%)	7	Grass cover (%)	40
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	15-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	08-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (17)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		30	0.3		
<i>Whiteochloa airoides</i>		10	0.6		
* <i>Aerva javanica</i>	Weed	5	0.7		
<i>Corchorus walcottii</i>		1	0.5		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1.5		
<i>Goodenia microptera</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.3		
<i>Indigofera linnaei</i>		0.1	0.25		
<i>Solanum horridum</i>		0.1	0.2		
<i>Polycarpaea longiflora</i>		0.1	0.2		
<i>Melhaniania oblongifolia</i>		0.1	0.2		
<i>Euploca cunninghamii</i>		0.1	0.2		
<i>Eragrostis eriopoda</i>		0.1	0.2		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.15		
<i>Cassytha capillaris</i>		0.1	0.1		
<i>Ipomoea coptica</i>				0.1	0.1
<i>Indigofera trita</i>				0.1	0.1

Site details			
Site	ES019	Position (WGS84)	-20.86535, 116.432604
Slope	moderate	Topography	creek
Soil colour	red-brown, brown,	Soil texture	sand, sandy loam,
Rock cover (%)	2	Rock type	sandstone, siltstone / mudstone,

Observation details - visit 1 (13 Oct 2021)			
Sample description	Low <i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i> woodland over tall open <i>Acacia coriacea</i> subsp. <i>pendens</i> , <i>A. pyrifolia</i> var. <i>pyrifolia</i> and <i>Melaleuca linophylla</i> shrubland over mid * <i>Cenchrus ci</i>		
Habitat	riparian zone		
Disturbance	evidence of feral animals, grazing-low, livestock tracks, weed infestation,		
Vegetation condition	Good	Fire age	not evident
Total veg. cover (%)	55	Tree cover (%)	30
Shrub cover (%)	4	Grass cover (%)	30
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	11-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (65)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		20	0.8		
<i>Melaleuca linophylla</i>		15	3		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		13	5		
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusata</i>		12	9		
* <i>Cenchrus setiger</i>	Weed	5	1		
* <i>Cenchrus ciliaris</i>	Weed	5	1		
* <i>Passiflora foetida</i> var. <i>hispida</i>	Weed	1	3		
<i>Melaleuca glomerata</i>		1	2.5		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		1	2.2		
<i>Eriachne tenuiculmis</i>		1	1		
<i>Ptilotus obovatus</i>		1	0.6		
<i>Triodia wiseana</i>		1	0.5		
<i>Eulalia aurea</i>		1	0.5		
<i>Cyperus vaginatus</i>		0.5	0.8		
<i>Ipomoea costata</i>		0.2	1.8		
<i>Acacia trachycarpa</i>		0.1	2		
<i>Vigna lanceolata</i> var. <i>lanceolata</i>		0.1	2		
<i>Cucumis variabilis</i>		0.1	1.8		
<i>Gossypium australe</i>		0.1	1.5		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1.5		
<i>Sesbania cannabina</i>		0.1	1.5		
<i>Triumfetta chaetocarpa</i>		0.1	1		
<i>Waltheria indica</i>		0.1	1		
<i>Cullen graveolens</i>		0.1	1		
<i>Tephrosia</i> sp. B Kimberley Flora (C.A. Gardner 7300)		0.1	0.8		
<i>Indigofera monophylla</i>		0.1	0.6		
<i>Eremophila longifolia</i>		0.1	0.6		
<i>Pterocaulon sphacelatum</i>		0.1	0.5		
<i>Alternanthera nodiflora</i>		0.1	0.5		
<i>Ptilotus exaltatus</i>		0.1	0.5		
* <i>Vachellia farnesiana</i>	Weed	0.1	0.5		
<i>Achyranthes aspera</i>		0.1	0.5		
<i>Goodenia lamprosperma</i>		0.1	0.4		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Setaria dielsii</i>		0.1	0.4		
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.4		
* <i>Malvastrum americanum</i>	Weed	0.1	0.4		
<i>Nellica maderaspatensis</i>		0.1	0.4		

<i>Corchorus tectus</i>		0.1	0.3
<i>Vigna lanceolata</i> var. <i>lanceolata</i>		0.1	0.3
<i>Solanum diversiflorum</i>		0.1	0.3
<i>Portulaca filifolia</i>	Range extension	0.1	0.3
<i>Polymeria ambigua</i>		0.1	0.3
<i>Euphorbia careyi</i>		0.1	0.3
<i>Eragrostis tenellula</i>		0.1	0.25
<i>Abutilon lepidum</i>		0.1	0.2
<i>Polycarpaea longiflora</i>		0.1	0.2
<i>Alternanthera nana</i>		0.1	0.2
<i>Melhanian oblongifolia</i>		0.1	0.2
* <i>Melochia pyramidata</i>	Weed	0.1	0.2
<i>Indigofera linifolia</i>		0.1	0.2
<i>Rostellularia adscendens</i> var. <i>clementii</i>		0.1	0.2
<i>Eragrostis cumingii</i>		0.1	0.15
<i>Centipeda minima</i> subsp. <i>macrocephala</i>		0.1	0.15
<i>Marsilea hirsuta</i>		0.1	0.1
<i>Trianthema triquetrum</i>		0.1	0.1
<i>Synaptantha tillaeacea</i> var. <i>tillaeacea</i>		0.1	0.06
<i>Bergia henshallii</i>	Range extension	0.1	0.02
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>			0.1 0.6
<i>Amaranthus undulatus</i>			0.1 0.1
<i>Euphorbia biconvexa</i>			0.1 0.2
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>			0.1 0.2
<i>Neptunia dimorphantha</i>			0.1 0.2
<i>Rhynchosia minima</i>			0.1 0.2
<i>Jasminum didymum</i> subsp. <i>lineare</i>			0.1 2.4

Site details			
Site	ES020	Position (WGS84)	-20.866035, 116.43065
Slope	gentle	Topography	floodplain
Soil colour	red-brown,	Soil texture	sandy clay, sandy loam,
Rock cover (%)	0	Rock type	None,

Observation details - visit 1 (13 Oct 2021)			
Sample description	Tall open <i>Acacia trachycarpa</i> , <i>A. pyrifolia</i> var. <i>pyrifolia</i> shrubland over isolated low <i>Indigofera monophylla</i> and <i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i> shrubs over mid closed * <i>Cenchrus cilia</i>		
Habitat	shrubland		
Disturbance	grazing-medium, livestock tracks, weed infestation,		
Vegetation condition	Poor	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	90	Tree cover (%)	20
Shrub cover (%)	2	Grass cover (%)	90
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	12-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (48)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>*Cenchrus ciliaris</i>	Weed	50	0.7		
<i>Triodia wiseana</i>		25	0.5		
<i>Acacia trachycarpa</i>		15	3		
<i>Triodia epactia</i>		15	0.6		
<i>Ipomoea costata</i>		4	2.2		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		1	2		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		1	1.3		
<i>*Cenchrus setiger</i>	Weed	1	0.8		
<i>Indigofera monophylla</i>		1	0.6		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		0.2	4		
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		0.2	2.5		
<i>Acacia inaequilatera</i>		0.1	2.5		
<i>Petalostylis labicheoides</i>		0.1	2		
<i>*Vachellia farnesiana</i>	Weed	0.1	1.8		
<i>Eremophila longifolia</i>		0.1	1.5		
<i>Rhynchosia minima</i>		0.1	1.2		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		0.1	1.2		
<i>Chrysopogon fallax</i>		0.1	1		
<i>Triumfetta chaetocarpa</i>		0.1	1		
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		0.1	1		
<i>Cucumis variabilis</i>		0.1	1		
<i>*Malvastrum americanum</i>	Weed	0.1	1		
<i>Waltheria indica</i>		0.1	0.8		
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>		0.1	0.8		
<i>Corchorus tectus</i>		0.1	0.5		
<i>Alysicarpus muelleri</i>		0.1	0.5		
<i>Tephrosia</i> sp. <i>B Kimberley Flora (C.A. Gardner 7300)</i>		0.1	0.5		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Ptilotus polystachyus</i>		0.1	0.4		
<i>Solanum diversiflorum</i>		0.1	0.4		
<i>Bonamia erecta</i>		0.1	0.4		
<i>Polymeria ambigua</i>		0.1	0.3		
<i>Portulaca filifolia</i>	Range extension	0.1	0.3		
<i>Melhaniania oblongifolia</i>		0.1	0.3		
<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.3		
<i>Nellica maderaspatensis</i>		0.1	0.3		
<i>Boerhavia gardneri</i>		0.1	0.25		

<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	0.1	0.2	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.15	
<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>	0.1	0.1	
<i>Swainsona formosa</i>	0.1	0.1	
<i>Tribulus macrocarpus</i>	0.1	0.1	
<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>		0.1	0.6
<i>Tephrosia rosea</i> var. <i>clementii</i>		0.1	0.4
* <i>Melochia pyramidata</i>	Weed	0.1	0.4
<i>Vigna lanceolata</i> var. <i>lanceolata</i>		0.1	0.5
<i>Bonamia pilbarensis</i>		0.1	0.2

Site details			
Site	ES021	Position (WGS84)	-20.866428, 116.428277
Slope	negligible	Topography	plain
Soil colour	red-orange,	Soil texture	sandy clay, sandy loam,
Rock cover (%)	0	Rock type	sandstone, siltstone / mudstone,

Observation details - visit 1 (13 Oct 2021)			
Sample description	Isolated tall <i>Acacia inaequilatera</i> , <i>Hakea chordophylla</i> and <i>Eremophila longifolia</i> shrubs over isolated clumps of mid <i>Rhagodia eremaea</i> shrubs over low <i>Aristida contorta</i> , * <i>Cenchrus ciliaris</i> and <i>Triodia wiseana</i> grasslan		
Habitat	spinifex grassland		
Disturbance	livestock tracks, weed infestation,		
Vegetation condition	Good	Fire age	not evident
Total veg. cover (%)	65	Tree cover (%)	2
Shrub cover (%)	0.1	Grass cover (%)	65
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	12-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (27)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		60	0.4		
* <i>Cenchrus ciliaris</i>	Weed	4	0.5		
<i>Hakea loreus</i> subsp. <i>loreus</i>		1	3		
<i>Eremophila longifolia</i>		1	3		
<i>Aristida contorta</i>		1	0.15		
<i>Acacia inaequilatera</i>		0.2	2.5		
<i>Rhagodia eremaea</i>		0.1	1.1		
* <i>Cenchrus setiger</i>	Weed	0.1	0.5		
<i>Ptilotus exaltatus</i>		0.1	0.5		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.4		
<i>Abutilon lepidum</i>		0.1	0.4		
<i>Alysicarpus muelleri</i>		0.1	0.4		
<i>Ptilotus clementii</i>		0.1	0.4		
<i>Ptilotus fusiformis</i>		0.1	0.3		
<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>		0.1	0.3		
<i>Sclerolaena costata</i>		0.1	0.3		
<i>Sida echinocarpa</i>		0.1	0.3		
<i>Aristida holathera</i>		0.1	0.3		
<i>Indigofera linnaei</i>		0.1	0.25		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		0.1	0.25		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		0.1	0.2		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.2		
<i>Tribulus macrocarpus</i>		0.1	0.1		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>				0.1	0.6
<i>Ipomoea costata</i>				0.1	2.3
<i>Scaevola spinescens</i>				0.1	0.6
<i>Indigofera linifolia</i>				0.1	0.3

Site details			
Site	ES022	Position (WGS84)	-20.874243, 116.42777
Slope	moderate	Topography	creek
Soil colour	red-brown, brown,	Soil texture	sand, sandy clay, sandy loam,
Rock cover (%)	10	Rock type	siltstone / mudstone,

Observation details - visit 1 (14 Oct 2021)			
Sample description	Low <i>Eucalyptus camaldulensis</i> subsp. <i>obtus</i> a woodland over tall open <i>Acacia coriacea</i> subsp. <i>pendens</i> , <i>Melaleuca glomerata</i> and <i>M. linophylla</i> shrubland over mid * <i>Cenchrus ciliaris</i> , <i>Triodia epactia</i>		
Habitat	riparian zone		
Disturbance	evidence of feral animals, grazing-low, livestock tracks, weed infestation,		
Vegetation condition	Good	Fire age	not evident
Total veg. cover (%)	50	Tree cover (%)	25
Shrub cover (%)	5	Grass cover (%)	50
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	14-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	10-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (50)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		25	0.6		
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i>		15	10		
<i>Eriachne tenuiculmis</i>		8	1		
<i>Eriachne obtusa</i>		8	0.4		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		7	5		
<i>Eulalia aurea</i>		6	0.8		
* <i>Cenchrus ciliaris</i>	Weed	5	0.6		
<i>Melaleuca linophylla</i>		3	3		
<i>Melaleuca glomerata</i>		2	3		
<i>Sesbania cannabina</i>		2	1.8		
<i>Triodia wiseana</i>		2	0.3		
<i>Alternanthera nodiflora</i>		0.2	0.4		
<i>Indigofera linifolia</i>		0.2	0.3		
<i>Marsilea hirsuta</i>		0.2	0.1		
<i>Cucumis variabilis</i>		0.1	2		
<i>Ipomoea costata</i>		0.1	2		
<i>Vigna lanceolata</i> var. <i>lanceolata</i>		0.1	2		
<i>Aeschynomene indica</i>		0.1	1.8		
<i>Chrysopogon fallax</i>		0.1	1.2		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		0.1	1		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1		
<i>Rhynchosia minima</i>		0.1	1		
<i>Setaria dielsii</i>		0.1	0.7		
<i>Stemodia grossa</i>		0.1	0.6		
<i>Arivela viscosa</i>		0.1	0.5		
<i>Ptilotus exaltatus</i>		0.1	0.5		
<i>Swainsona formosa</i>		0.1	0.5		
<i>Waltheria indica</i>		0.1	0.5		
<i>Triumfetta chaetocarpa</i>		0.1	0.5		
<i>Eragrostis tenellula</i>		0.1	0.4		
<i>Sida rohlenae</i> subsp. <i>rohlenae</i>		0.1	0.4		
<i>Goodenia lamprosperma</i>		0.1	0.4		
<i>Corchorus tectus</i>		0.1	0.4		
<i>Alternanthera nana</i>		0.1	0.3		
<i>Portulaca filifolia</i>	Range extension	0.1	0.3		
<i>Rostellularia adscendens</i> var. <i>clementii</i>		0.1	0.2		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Centipeda minima</i> subsp. <i>macrocephala</i>		0.1	0.15		
<i>Schoenoplectiella dissachantha</i>		0.1	0.1		

<i>Bergia ammannioides</i>		0.1	0.1
<i>Bergia pedicellaris</i>		0.1	0.08
<i>Glinus lotoides</i>		0.1	0.02
<i>Bergia henshallii</i>	Range extension	0.1	0.01
<i>Poaceae</i> sp.			0.1 0.1
<i>Euphorbia careyi</i>			0.1 0.2
<i>Amaranthus undulatus</i>			0.1 0.3
* <i>Malvastrum americanum</i>	Weed		0.1 0.5
* <i>Prosopis glandulosa x velutina</i>	Weed (WoNS)		0.1 0.7
<i>Sida fibulifera</i>			0.1 0.3
<i>Ipomoea coptica</i>			0.1 0.3

Site details			
Site	ES023	Position (WGS84)	-20.945704, 116.359872
Slope	negligible	Topography	plain
Soil colour	red	Soil texture	loamy sand
Rock cover (%)	100	Rock type	ferrous - ironstone, quartz

Observation details - visit 1 (12 Oct 2021)			
Sample description	<i>Acacia xiphophylla</i> open shrubland over <i>Triodia wiseana</i> sparse hummocks, and <i>Eragrostis xerophilla</i> sparse tussocks.		
Habitat	shrubland		
Disturbance	none evident		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	25	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	5
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	12-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	11-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (16)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Acacia xiphophylla</i>		20	1.5		
<i>Triodia wiseana</i>		4	0.25		
<i>Eragrostis xerophila</i>		2	0.25		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	1.5		
<i>Ptilotus exaltatus</i>		0.1	0.3		
<i>Sida fibulifera</i>		0.1	0.25		
<i>Tribulus hirsutus</i>		0.1	0.15		
<i>Aristida contorta</i>		0.1	0.15		
<i>Sclerolaena densiflora</i>		0.1	0.15		
<i>Ptilotus aervoides</i>		0.1	0.1		
<i>Eriachne pulchella</i> subsp. <i>dominii</i>		0.1	0.1		
<i>Hibiscus brachysiphonius</i>				0.1	0.2
<i>Neptunia dimorphantha</i>				0.1	0.2
<i>Salsola australis</i>				0.1	0.4
<i>Senna hamersleyensis</i>				0.1	0.2
<i>Ipomoea coptica</i>				0.1	0.1

Site details			
Site	ES024	Position (WGS84)	-20.944083, 116.367846
Slope	gentle	Topography	undulating plain
Soil colour	brown, red	Soil texture	sandy loam
Rock cover (%)	100	Rock type	ferrous - ironstone, quartz

Observation details - visit 1 (12 Oct 2021)			
Sample description	<i>Acacia bivenosa</i> scattered shrubs over <i>Triodia wiseana</i> grassland.		
Habitat	spinifex grassland		
Disturbance	vehicle tracks		
Vegetation condition	Very Good	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	60	Tree cover (%)	0
Shrub cover (%)	4	Grass cover (%)	60
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	12-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	11-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (23)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		60	0.4		
<i>Acacia bivenosa</i>		4	1.8		
<i>Tribulus hirsutus</i>		1	0.25		
<i>Cassytha capillaris</i>		1	0.25		
<i>Abutilon lepidum</i>		0.5	0.3		
<i>Aristida contorta</i>		0.5	0.15		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1		
<i>Ptilotus polystachyus</i>		0.1	0.5		
<i>Acacia synchronicia</i>		0.1	0.5		
<i>Ptilotus exaltatus</i>		0.1	0.3		
<i>Salsola australis</i>		0.1	0.3		
<i>Streptoglossa decurrens</i>		0.1	0.3		
* <i>Cenchrus ciliaris</i>	Weed	0.1	0.3		
<i>Bonamia pilbarensis</i>		0.1	0.15		
<i>Boerhavia gardneri</i>		0.1	0.15		
<i>Tephrosia</i> sp. Northern (K.F. Kenneally 11950)		0.1	0.15		
<i>Ptilotus helipteroides</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1			
<i>Ptilotus clementii</i>		0.1			
<i>Hakea loreus</i> subsp. <i>loreus</i>				0.1	0.4
<i>Indigofera trita</i>				0.1	0.1
<i>Solanum diversiflorum</i>				0.1	0.3
<i>Acacia inaequilatera</i>				0.1	1.8

Site details			
Site	ES025	Position (WGS84)	-20.871551, 116.429649
Slope	gentle	Topography	hill slope
Soil colour	red-brown,	Soil texture	sandy clay, sandy loam,
Rock cover (%)	70	Rock type	siltstone / mudstone,

Observation details - visit 1 (14 Oct 2021)			
Sample description	Isolated mid <i>Ipomoea costata</i> shrubs over low <i>Triodia wiseana</i> hummock grassland over isolated clumps of low forbs.		
Habitat	spinifex grassland		
Disturbance	none evident,		
Vegetation condition	Excellent	Fire age	not evident
Total veg. cover (%)	50	Tree cover (%)	0
Shrub cover (%)	1	Grass cover (%)	50
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	14-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	10-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (26)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		50	0.25		
<i>Ipomoea costata</i>		1	1.9		
<i>Acacia adsurgens</i>		0.1	1.5		
<i>Acacia arida</i>		0.1	1.4		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1		
<i>Abutilon lepidum</i>		0.1	0.4		
<i>Cynanchum viminalis</i> subsp. <i>australe</i>		0.1	0.4		
<i>Ptilotus fusiformis</i>		0.1	0.4		
<i>Triumfetta clementii</i>		0.1	0.3		
<i>Ptilotus exaltatus</i>		0.1	0.3		
<i>Indigofera monophylla</i>		0.1	0.3		
<i>Rhynchosia minima</i>		0.1	0.3		
<i>Ptilotus clementii</i>		0.1	0.3		
<i>Solanum horridum</i>		0.1	0.2		
<i>Trianthema pilosum</i>		0.1	0.2		
<i>Euphorbia australis</i> var. <i>australis</i>		0.1	0.2		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.15		
<i>Tephrosia</i> sp. Northern (K.F. Kenneally 11950)		0.1	0.1		
<i>Bonamia pilbarensis</i>		0.1	0.02		
<i>Boerhavia gardneri</i>				0.1	0.2
<i>Cucumis variabilis</i>				0.1	0.3
<i>Dolichocarpa crouchiana</i>				0.1	0.2
<i>Euploca inexplicita</i>				0.1	0.1
<i>Indigofera linnaei</i>				0.1	0.2
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>				0.1	2.3
<i>Fimbristylis littoralis</i>				0.1	0.1

Site details			
Site	ES027	Position (WGS84)	-20.883667, 116.423938
Slope	moderate	Topography	creek
Soil colour	red-orange, brown,	Soil texture	sand, sandy clay, sandy loam,
Rock cover (%)	40	Rock type	siltstone / mudstone,

Observation details - visit 1 (14 Oct 2021)			
Sample description	Low <i>Eucalyptus camaldulensis</i> subsp. <i>obtus</i> a woodland over tall open <i>Acacia coriacea</i> subsp. <i>pendens</i> , <i>A. trachycarpa</i> and <i>Melaleuca linophylla</i> shrubland over <i>Triodia epactia</i> , <i>Themeda tria</i>		
Habitat	riparian zone		
Disturbance	grazing-low, livestock tracks, weed infestation,		
Vegetation condition	Good	Fire age	not evident
Total veg. cover (%)	65	Tree cover (%)	25
Shrub cover (%)	1	Grass cover (%)	50
Herb cover (%)	1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	14-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	09-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (48)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia epactia</i>		30	0.4		
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i>		12	8		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		5	5		
* <i>Cenchrus ciliaris</i>	Weed	4	0.6		
<i>Melaleuca linophylla</i>		3	4		
<i>Themeda triandra</i>		3	0.7		
<i>Acacia trachycarpa</i>		2	2.5		
<i>Eulalia aurea</i>		2	0.7		
<i>Triodia wiseana</i>		2	0.3		
<i>Eriachne obtusa</i>		2	0.25		
<i>Melaleuca glomerata</i>		1	3		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		1	2.2		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		1	1.2		
* <i>Cenchrus setiger</i>	Weed	1	0.5		
<i>Ipomoea costata</i>		0.1	1.8		
<i>Eremophila longifolia</i>		0.1	1.6		
<i>Scaevola crassifolia</i>		0.1	1.3		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>		0.1	1.2		
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>		0.1	1		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		0.1	1		
<i>Cucumis variabilis</i>		0.1	1		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>		0.1	1		
<i>Vigna lanceolata</i> var. <i>lanceolata</i>		0.1	1		
<i>Scaevola spinescens</i>		0.1	1		
<i>Triumfetta chaetocarpa</i>		0.1	0.8		
<i>Waltheria indica</i>		0.1	0.6		
<i>Isotropis atropurpurea</i>		0.1	0.5		
<i>Nellica maderaspatensis</i>		0.1	0.5		
<i>Pterocaulon sphacelatum</i>		0.1	0.4		
<i>Solanum diversiflorum</i>		0.1	0.4		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Corchorus tectus</i>		0.1	0.4		
<i>Ptilotus exaltatus</i>		0.1	0.4		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.4		
<i>Indigofera monophylla</i>		0.1	0.4		
* <i>Melochia pyramidata</i>	Weed	0.1	0.4		
<i>Goodenia lamprosperma</i>		0.1	0.4		
<i>Desmodiopsis campylocaulon</i>		0.1	0.4		
<i>Portulaca filifolia</i>	Range extension	0.1	0.3		

<i>Indigofera linifolia</i>		0.1	0.3
<i>Polycarpaea longiflora</i>		0.1	0.2
<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>		0.1	0.2
<i>Bonamia pilbarensis</i>		0.1	0.2
<i>Alternanthera nana</i>		0.1	0.2
<i>Ipomoea muelleri</i>		0.1	0.05
<i>Goodenia microptera</i>			0.1 0.3
<i>Afrohybanthus aurantiacus</i>	Weed		0.1 0.4
<i>Senna glutinosa</i> subsp. <i>x luerssenii</i>			0.1 0.5

Site details			
Site	ES028	Position (WGS84)	-20.878139, 116.426636
Slope	gentle	Topography	floodplain
Soil colour	red-orange,	Soil texture	sandy clay, sandy loam,
Rock cover (%)	1	Rock type	siltstone / mudstone,

Observation details - visit 1 (14 Oct 2021)			
Sample description	Low open <i>Eucalyptus camaldulensis</i> subsp. <i>obtus</i> a woodland over isolated tall <i>Acacia inaequilatera</i> and <i>Ipomoea costata</i> shrubs over low <i>Triodia wiseana</i> and * <i>Cenchrus ciliaris</i> grassland.		
Habitat	spinifex grassland		
Disturbance	grazing-medium, livestock tracks, weed infestation,		
Vegetation condition	Good	Fire age	not evident
Total veg. cover (%)	60	Tree cover (%)	10
Shrub cover (%)	0.5	Grass cover (%)	60
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	14-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	10-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (36)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		55	0.3		
<i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i>		8	7		
* <i>Cenchrus ciliaris</i>	Weed	5	0.5		
<i>Acacia inaequilatera</i>		2	2.2		
<i>Ipomoea costata</i>		0.1	2.1		
<i>Acacia coriacea</i> subsp. <i>pendens</i>		0.1	1.8		
<i>Eremophila longifolia</i>		0.1	1.8		
<i>Abutilon lepidum</i>		0.1	1.5		
<i>Streptoglossa decurrens</i>		0.1	1.5		
* <i>Cenchrus setiger</i>	Weed	0.1	0.5		
<i>Rhagodia eremaea</i>		0.1	0.5		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.4		
* <i>Malvastrum americanum</i>	Weed	0.1	0.4		
<i>Ptilotus exaltatus</i>		0.1	0.4		
<i>Salsola australis</i>		0.1	0.4		
<i>Waltheria indica</i>		0.1	0.4		
<i>Solanum diversiflorum</i>		0.1	0.3		
<i>Streptoglossa bubakii</i>		0.1	0.3		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		0.1	0.3		
<i>Sclerolaena costata</i>		0.1	0.3		
<i>Euphorbia biconvexa</i>		0.1	0.2		
<i>Portulaca filifolia</i>	Range extension	0.1	0.2		
<i>Solanum horridum</i>		0.1	0.2		
<i>Cassytha filiformis</i>		0.1	0.2		
<i>Euphorbia boophthona</i>		0.1	0.2		
<i>Trianthema triquetrum</i>		0.1	0.1		
<i>Acacia bivenosa</i>				0.1	0.4
<i>Euploca cunninghamii</i>				0.1	0.2
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				0.1	0.2
<i>Hibiscus brachysiphonius</i>				0.1	0.1
<i>Abutilon fraseri</i> subsp. <i>fraseri</i>				0.1	0.2
<i>Nellica maderaspatensis</i>				0.1	0.2
<i>Senna glutinosa</i> subsp. <i>x luerssenii</i>				0.1	0.4
<i>Tephrosia</i> sp. clay soils (<i>S. van Leeuwen et al. PBS 0273</i>)				0.1	0.2
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				0.1	0.8
<i>Melhaniania oblongifolia</i>				0.1	0.2

Site details			
Site	ES031	Position (WGS84)	-20.889117, 116.405129
Slope	negligible	Topography	plain
Soil colour	red-brown,	Soil texture	sandy clay, sandy loam,
Rock cover (%)	0	Rock type	ferrous - ironstone, quartz,

Observation details - visit 1 (12 Oct 2021)			
Sample description	Isolated low <i>Scleroleana bicornis</i> , <i>Sida fibulifera</i> and <i>Streptoglossa bubakii</i> shrubs over low <i>Eragrostis xerophylla</i> and <i>Sorghum plumosum</i> over isolated low <i>Ptilotus exaltatus</i> , <i>P. carinatus</i>		
Habitat	grassland		
Disturbance	grazing-medium, livestock tracks, vehicle tracks,		
Vegetation condition	Very Good	Fire age	not evident
Total veg. cover (%)	35	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	30
Herb cover (%)	3		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	12-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	12-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (21)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Sorghum plumosum</i>		20	0.5		
<i>Eragrostis xerophila</i>		10	0.2		
<i>Ptilotus exaltatus</i>		3	0.5		
<i>Sida fibulifera</i>		3	0.2		
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>		1	0.4		
<i>Streptoglossa bubakii</i>		0.2	0.4		
<i>Trianthema triquetrum</i>		0.2	0.2		
<i>Aristida latifolia</i>		0.1	0.4		
<i>Panicum decompositum</i>		0.1	0.4		
<i>Stemodia kingii</i>		0.1	0.3		
<i>Rhynchosia minima</i>		0.1	0.2		
<i>Nellica maderaspatensis</i>		0.1	0.2		
<i>Indigofera trita</i>		0.1	0.2		
<i>Goodenia microptera</i>		0.1	0.2		
<i>Euploca cunninghamii</i>		0.1	0.2		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.2		
<i>Ptilotus carinatus</i>		0.1	0.2		
<i>Aristida contorta</i>		0.1	0.1		
<i>Salsola australis</i>				0.2	0.4
<i>Afrohybanthus aurantiacus</i>	Weed			0.1	0.2
<i>Senna hamersleyensis</i>				0.1	0.3

Site details			
Site	ES032	Position (WGS84)	-20.892031, 116.408978
Slope	negligible	Topography	plain
Soil colour	red-orange,	Soil texture	sandy clay, sandy loam,
Rock cover (%)	2	Rock type	calcrete, ferrous - ironstone,

Observation details - visit 1 (12 Oct 2021)			
Sample description	Low sparse <i>Acacia xiphophylla</i> shrubland over isolated low <i>Aristida contorta</i> grasses over isolated low <i>Ptilotus exaltatus</i> forbs.		
Habitat	shrubland		
Disturbance	livestock tracks,		
Vegetation condition	Very Good	Fire age	not evident
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	3
Herb cover (%)	2		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	12-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	12-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (31)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Acacia xiphophylla</i>		5	0.8		
<i>Aristida contorta</i>		3	0.15		
<i>Ptilotus exaltatus</i>		2	0.6		
* <i>Cenchrus ciliaris</i>	Weed	0.2	0.5		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>		0.1	0.6		
<i>Rhynchosia minima</i>		0.1	0.4		
<i>Salsola australis</i>		0.1	0.3		
<i>Streptoglossa bubakii</i>		0.1	0.3		
* <i>Cenchrus setiger</i>	Weed	0.1	0.3		
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>		0.1	0.3		
<i>Sorghum plumosum</i>		0.1	0.3		
<i>Eragrostis xerophila</i>		0.1	0.25		
<i>Alysicarpus muelleri</i>		0.1	0.2		
<i>Indigofera linifolia</i>		0.1	0.2		
<i>Stemodia kingii</i>		0.1	0.2		
<i>Enneapogon caeruleus</i>		0.1	0.15		
<i>Sclerolaena</i> sp.		0.1	0.1		
<i>Sclerolaena densiflora</i>		0.1	0.1		
<i>Murdannia graminea</i>		0.1	0.1		
<i>Sporobolus australasicus</i>		0.1	0.08		
<i>Rhodanthe floribunda</i>		0.1	0.06		
<i>Trianthema triquetrum</i>		0.1	0.05		
<i>Dactyloctenium radulans</i>		0.1	0.03		
<i>Ptilotus aevoides</i>		0.1	0.02		
<i>Euploca cunninghamii</i>				0.1	0.1
<i>Goodenia muelleriana</i>				0.1	0.2
<i>Tephrosia</i> sp. clay soils (<i>S. van Leeuwen et al.</i> PBS 0273)				0.1	0.1
<i>Corchorus crozophorifolius</i>				0.1	0.1
<i>Senna hamersleyensis</i>				0.1	0.3
<i>Sida fibulifera</i>				0.1	0.2
<i>Indigofera trita</i> subsp. <i>trita</i>				0.1	0.2

Site details			
Site	ES033	Position (WGS84)	-20.904287, 116.402741
Slope	negligible	Topography	floodplain
Soil colour	red-orange,	Soil texture	sandy clay, clay loam,
Rock cover (%)	60	Rock type	siltstone / mudstone,

Observation details - visit 1 (14 Oct 2021)			
Sample description	Isolated low <i>Streptoglossa bubakii</i> and <i>Scleroleana bicornis</i> var. <i>bicornis</i> shrubs over low <i>Triodia wiseana</i> hummock grassland.		
Habitat	spinifex grassland		
Disturbance	livestock tracks,		
Vegetation condition	Excellent	Fire age	not evident
Total veg. cover (%)	45	Tree cover (%)	0
Shrub cover (%)	4	Grass cover (%)	45
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	14-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	10-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (22)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		45	0.25		
<i>Streptoglossa bubakii</i>		3	0.4		
<i>Aristida latifolia</i>		1	0.5		
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>		1	0.4		
<i>Ptilotus exaltatus</i>		0.2	0.7		
<i>Eragrostis xerophila</i>		0.2	0.2		
<i>Sida fibulifera</i>		0.2	0.1		
<i>Streptoglossa decurrens</i>		0.1	0.5		
<i>Salsola australis</i>		0.1	0.4		
<i>Sorghum plumosum</i>		0.1	0.4		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Abutilon lepidum</i>		0.1	0.4		
<i>Indigofera linnaei</i>		0.1	0.3		
<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>		0.1	0.3		
<i>Panicum decompositum</i>		0.1	0.3		
<i>Nellica maderaspatensis</i>		0.1	0.25		
<i>Acacia synchronicia</i>		0.1	0.2		
<i>Solanum horridum</i>		0.1	0.15		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.15		
<i>Lepidium pholidogynum</i>		0.1	0.1		
<i>Indigofera trita</i> subsp. <i>trita</i>				0.1	
<i>Neptunia dimorphantha</i>				0.1	0.2

Site details			
Site	ES034	Position (WGS84)	-20.904206, 116.401906
Slope	gentle	Topography	drainage line
Soil colour	red-orange,	Soil texture	sandy clay, sandy loam,
Rock cover (%)	1	Rock type	siltstone / mudstone,

Observation details - visit 1 (14 Oct 2021)			
Sample description	Mid sparse <i>Acacia inaequilatera</i> , <i>A. pyrifolia</i> var. <i>pyrifolia</i> and <i>Ehretia saligna</i> var. <i>saligna</i> shrubland over low open <i>Scaevola spinescens</i> shrubland over <i>Eulalia aurea</i> , <i>Chrysopogon fal</i>		
Habitat	shrubland		
Disturbance	grazing-low, livestock tracks, weed infestation,		
Vegetation condition	Good	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	80	Tree cover (%)	2
Shrub cover (%)	15	Grass cover (%)	80
Herb cover (%)	0.5		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	14-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	10-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (47)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Aristida latifolia</i>		30	0.3		
<i>Triodia wiseana</i>		20	0.4		
<i>Chrysopogon fallax</i>		12	0.5		
<i>Scaevola spinescens</i>		5	0.5		
<i>Ehretia saligna</i> var. <i>saligna</i>		3	2		
<i>Eulalia aurea</i>		3	0.7		
<i>Triodia epactia</i>		3	0.5		
* <i>Cenchrus ciliaris</i>	Weed	3	0.5		
<i>Acacia inaequilatera</i>		2	2		
<i>Panicum decompositum</i>		2	0.5		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		1	1.8		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		1	1.5		
<i>Triumfetta chaetocarpa</i>		1	0.6		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.5	0.3		
<i>Eremophila longifolia</i>		0.2	1.8		
<i>Cullen lachnostachys</i>		0.2	1		
<i>Ipomoea muelleri</i>		0.2	0.5		
<i>Indigofera monophylla</i>		0.2	0.4		
<i>Cucumis variabilis</i>		0.1	2		
<i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i>		0.1	1.5		
<i>Streptoglossa decurrens</i>		0.1	1.5		
<i>Acacia bivenosa</i>		0.1	1.3		
<i>Jasminum didymum</i> subsp. <i>lineare</i>		0.1	1		
* <i>Malvastrum americanum</i>	Weed	0.1	0.8		
<i>Ptilotus exaltatus</i>		0.1	0.8		
<i>Capparis spinosa</i> subsp. <i>nummularia</i>		0.1	0.6		
<i>Chrysocephalum gilesii</i>		0.1	0.5		
<i>Bonamia erecta</i>		0.1	0.5		
<i>Pterocaulon sphacelatum</i>		0.1	0.5		
<i>Solanum lasiophyllum</i>		0.1	0.5		
<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>		0.1	0.4		
<i>Salsola australis</i>		0.1	0.4		
<i>Solanum diversiflorum</i>		0.1	0.4		
<i>Waltheria indica</i>		0.1	0.4		
<i>Arivela viscosa</i>		0.1	0.4		
<i>Afrohybanthus aurantiacus</i>	Weed	0.1	0.3		
<i>Euphorbia boophthona</i>		0.1	0.3		
<i>Indigofera linifolia</i>		0.1	0.3		
<i>Streptoglossa bubakii</i>		0.1	0.3		

<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	0.1	0.3		
<i>Bergia ammannioides</i>	0.1	0.25		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.15		
<i>Swainsona formosa</i>	0.1	0.15		
<i>Bonamia pilbarensis</i>	0.1	0.1		
<i>Leiocarpa semicalva</i> subsp. <i>semicalva</i>			0.1	0.4
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>			0.1	0.4
<i>Tephrosia supina</i>			0.1	0.3

Site details			
Site	ES035	Position (WGS84)	-20.907526, 116.40199
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	loam, clay
Rock cover (%)	10	Rock type	granite - rocks

Observation details - visit 1 (14 Oct 2021)			
Sample description	Sparse <i>Aristida contorta</i> grassland.		
Habitat	grassland		
Disturbance	none evident		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	10
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	14-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	10-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (18)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Aristida contorta</i>		5	0.2		
<i>Ptilotus exaltatus</i>		0.1	0.3		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.2		
<i>Sclerolaena densiflora</i>		0.1	0.2		
<i>Sida fibulifera</i>		0.1	0.15		
<i>Enneapogon caeruleus</i>		0.1	0.15		
<i>Goodenia muelleriana</i>		0.1	0.15		
<i>Neptunia dimorphantha</i>		0.1	0.1		
<i>Rhodanthe floribunda</i>		0.1	0.1		
<i>Sclerolaena glabra</i>		0.1	0.1		
<i>Euphorbia biconvexa</i>		0.1			
<i>Xerochloa barbata</i>				0.1	0.2
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>				0.1	0.2
<i>Euploca inexplicita</i>				0.1	0.1
<i>Eragrostis xerophila</i>				0.1	0.2
<i>Senna hamersleyensis</i>				0.1	0.3
<i>Tephrosia</i> sp. clay soils (<i>S. van Leeuwen et al.</i> <i>PBS 0273</i>)				0.1	0.1
<i>Portulaca oleracea</i>				0.1	0.1

Site details			
Site	ES036	Position (WGS84)	-20.910436, 116.397478
Slope	negligible	Topography	plain
Soil colour	red-brown	Soil texture	loam, clay
Rock cover (%)	0	Rock type	ferrous - ironstone, quartz

Observation details - visit 1 (14 Oct 2021)			
Sample description	Scattered herbs over <i>Eragrostis xerophila</i> grassland with sparse <i>Sorghum plumsum</i> .		
Habitat	grassland		
Disturbance	none evident		
Vegetation condition	Excellent	Fire age	long-unburnt (>10 years)
Total veg. cover (%)	65	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	65
Herb cover (%)	2		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	14-Oct-2021	50m x 50m	Martin Henson
Quadrat	2	10-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (16)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		65	0.25		
<i>Sorghum plumosum</i>		1	1		
<i>Streptoglossa liatroides</i>		1	0.3		
<i>Ptilotus exaltatus</i>		0.1	0.5		
<i>Indigofera trita</i>		0.1	0.3		
<i>Salsola australis</i>		0.1	0.3		
<i>Goodenia pascua</i>		0.1	0.3		
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>		0.1	0.25		
<i>Euploca cunninghamii</i>		0.1	0.2		
<i>Ptilotus carinatus</i>		0.1	0.2		
<i>Sida fibulifera</i>		0.1	0.2		
<i>Euploca conocarpa</i>		0.1	0.15		
<i>Rhynchosia minima</i>		0.1			
<i>Operculina aequisejala</i>		0.1			
<i>Indigofera trita</i> subsp. <i>trita</i>				0.1	0.2
<i>Euploca inexplicita</i>				0.1	0.2

Site details			
Site	ES037R	Position (WGS84)	-20.922311, 116.392165
Slope	gentle	Topography	undulating plain
Soil colour	red-brown,	Soil texture	sandy clay, sandy loam,
Rock cover (%)	0	Rock type	ferrous - ironstone, quartz, siltstone / mudstone,

Observation details - visit 1 (13 Oct 2021)			
Sample description	Isolated mid <i>Acacia bivenosa</i> shrubs over low <i>Triodia wiseana</i> and <i>Aristida contorta</i> grassland.		
Habitat	spinifex grassland		
Disturbance	evidence of feral animals, vehicle tracks,		
Vegetation condition	Very Good	Fire age	
Total veg. cover (%)	55	Tree cover (%)	0
Shrub cover (%)	2	Grass cover (%)	55
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Relevé	1	13-Oct-2021	unbounded	Grant Wells

Species (14)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		50	0.3		
<i>Aristida contorta</i>		5	0.15		
<i>Acacia bivenosa</i>		1	1.9		
<i>Streptoglossa odora</i>		1	0.4		
<i>Acacia inaequilatera</i>		0.1	2.2		
<i>Abutilon lepidum</i>		0.1	1.8		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1.5		
<i>Streptoglossa decurrens</i>		0.1	1.5		
<i>Ptilotus exaltatus</i>		0.1	1		
<i>Ptilotus clementii</i>		0.1	0.8		
<i>Triumfetta clementii</i>		0.1	0.4		
<i>Pterocaulon sphacelatum</i>		0.1	0.4		
<i>Solanum diversiflorum</i>		0.1	0.3		
<i>Goodenia microptera</i>		0.1	0.3		

Site details			
Site	ES038	Position (WGS84)	-20.923933, 116.389599
Slope	negligible	Topography	drainage line
Soil colour	red-brown,	Soil texture	sandy clay, sandy loam,
Rock cover (%)	1	Rock type	ferrous - ironstone, quartz, siltstone / mudstone,

Observation details - visit 1 (13 Oct 2021)			
Sample description	Isolated low <i>Corymbia hamersleyana</i> trees over isolated mid <i>Acacia ancistrocarpa</i> , <i>A. bivenosa</i> and <i>A. inaequilatera</i> shrubs over <i>Triodia wiseana</i> , <i>Themeda triandra</i> and * <i>Cenchrus ciliaris</i> grassland.		
Habitat	riparian zone		
Disturbance	evidence of feral animals, grazing-low, weed infestation,		
Vegetation condition	Good	Fire age	moderate (>5 years)
Total veg. cover (%)	55	Tree cover (%)	3
Shrub cover (%)	5	Grass cover (%)	55
Herb cover (%)	0.1		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	13-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	11-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (43)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Triodia wiseana</i>		35	0.5		
* <i>Cenchrus ciliaris</i>	Weed	12	0.6		
<i>Themeda triandra</i>		8	0.6		
<i>Eulalia aurea</i>		5	0.6		
<i>Acacia ancistrocarpa</i>		2	2		
<i>Acacia bivenosa</i>		2	1.8		
<i>Corymbia hamersleyana</i>		1	4.5		
<i>Acacia inaequilatera</i>		1	1.8		
<i>Aristida contorta</i>		1	0.15		
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		0.2	1.2		
<i>Ptilotus exaltatus</i>		0.1	1		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>		0.1	1		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>		0.1	1		
<i>Streptoglossa odora</i>		0.1	1		
<i>Indigofera monophylla</i>		0.1	0.5		
<i>Rhynchosia minima</i>		0.1	0.5		
<i>Sida echinocarpa</i>		0.1	0.5		
<i>Waltheria indica</i>		0.1	0.5		
<i>Senna notabilis</i>		0.1	0.4		
<i>Bonamia erecta</i>		0.1	0.4		
<i>Solanum diversiflorum</i>		0.1	0.4		
<i>Corchorus walcottii</i>		0.1	0.4		
<i>Tephrosia</i> sp. Northern (K.F. Kenneally 11950)		0.1	0.4		
<i>Goodenia microptera</i>		0.1	0.4		
<i>Eriachne obtusa</i>		0.1	0.3		
<i>Melhantha oblongifolia</i>		0.1	0.3		
<i>Ptilotus helipteroides</i>		0.1	0.3		
<i>Sida cardiophylla</i>		0.1	0.3		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		0.1	0.2		
<i>Eriachne mucronata</i>		0.1	0.15		
<i>Trigastrotheca molluginea</i>		0.1	0.1		
<i>Streptoglossa bubakii</i>				0.1	0.4
<i>Eremophila longifolia</i>				0.1	1.4
<i>Cucumis variabilis</i>				0.1	1.2
<i>Indigofera trita</i> subsp. <i>trita</i>				0.1	0.4
<i>Solanum lasiophyllum</i>				0.1	0.3
<i>Bonamia pilbarensis</i>				0.1	0.2
* <i>Malvastrum americanum</i>	Weed			0.1	0.4
<i>Tephrosia supina</i>				0.1	0.4

<i>Acacia synchronicia</i>	0.1	0.5
<i>Triumfetta clementii</i>	0.1	0.3
<i>Scaevola spinescens</i>	0.1	0.6
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	

Site details			
Site	ES039	Position (WGS84)	-20.875464, 116.420473
Slope	negligible	Topography	plain
Soil colour	red-orange,	Soil texture	sandy clay, clay loam,
Rock cover (%)	1	Rock type	quartz, siltstone / mudstone,

Observation details - visit 1 (14 Oct 2021)			
Sample description	Low sparse <i>Eragrostis xerophilla</i> tussock grassland over low isolated <i>Ptilotus aervooides</i> , <i>Scleroleana glabra</i> and <i>Sida fibulifera</i> forbs.		
Habitat	grassland		
Disturbance	grazing-medium, livestock tracks,		
Vegetation condition	Very Good	Fire age	not evident
Total veg. cover (%)	8	Tree cover (%)	0
Shrub cover (%)	0	Grass cover (%)	5
Herb cover (%)	3		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Quadrat	1	14-Oct-2021	50m x 50m	Grant Wells
Quadrat	2	10-Apr-2022	50m x 50m	Adam Crosby-Clarke

Species (24)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eragrostis xerophila</i>		5	0.2		
<i>Sida fibulifera</i>		0.5	0.2		
<i>Sclerolaena glabra</i>		0.5	0.2		
<i>Ptilotus aevoides</i>		0.5	0.1		
<i>Ptilotus exaltatus</i>		0.1	0.8		
<i>Sclerolaena hostilis</i>		0.1	0.3		
<i>Sclerolaena bicornis</i> var. <i>bicornis</i>		0.1	0.2		
<i>Goodenia microptera</i>		0.1	0.2		
<i>Aristida contorta</i>		0.1	0.15		
<i>Sclerolaena densiflora</i>		0.1	0.15		
<i>Atriplex codonocarpa</i>		0.1	0.15		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		0.1	0.15		
<i>Polygala isingii</i>		0.1	0.1		
<i>Xerochloa barbata</i>		0.1	0.1		
<i>Trianthema triquetrum</i>		0.1	0.05		
<i>Lepidium pholidogynum</i>		0.1	0.04		
<i>Rhodanthe floribunda</i>		0.1	0.02		
<i>Ptilotus murrayi</i>		0.1	0.01		
<i>Portulaca conspicua</i>		0.1	0.01		
<i>Neptunia dimorphantha</i>				0.1	0.2
<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 0273)				0.1	0.1
<i>Salsola australis</i>				0.1	0.3
<i>Senna hamersleyensis</i>				0.1	0.2
<i>Alternanthera nana</i>				0.1	0.1

Site details			
Site	ET001-01	Position (WGS84)	-20.837194, 116.421362
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	<i>Tecticornia indica</i> subsp. <i>leiostrachya</i> and <i>T. halocnmeoides</i> subsp. <i>tenuis</i> open samphire shrubland.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	not recorded
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		15	0.2		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>				5	0.2
<i>Eragrostis xerophila</i>				1	0.15

Site details			
Site	ET001-02	Position (WGS84)	-20.837107, 116.421552
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		7	0.3		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		3	0.3		
<i>Muellerolimon salicorniaceum</i>				5	0.25
<i>Frankenia pauciflora</i>				1	0.2

Site details			
Site	ET001-03	Position (WGS84)	-20.836947, 116.421877
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		20	0.4		

Site details			
Site	ET001-04	Position (WGS84)	-20.836782, 116.422023
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i> , <i>T. halocnemoides</i> subsp. <i>longispicata</i> , and <i>T. indica</i> subsp. <i>leiostachya</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	30	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		23	0.2		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		5	0.15		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		1	0.3		

Site details			
Site	ET002-01	Position (WGS84)	-20.846388, 116.427555
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	9	Tree cover (%)	0
Shrub cover (%)	8	Grass cover (%)	1
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		8	0.15		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		0.2	0.3		
<i>Eragrostis xerophila</i>				1	0.1

Site details			
Site	ET002-02	Position (WGS84)	-20.846191, 116.427548
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> , <i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i> and <i>Tecticornia indica</i> subsp. <i>leiostachya</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (6)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		9	0.2		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		8	0.2		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		0.5	0.2		
<i>Sporobolus virginicus</i>				0.5	0.15
<i>Muellerolimon salicorniaceum</i>				0.5	0.15
<i>Frankenia pauciflora</i>				0.5	0.15

Site details			
Site	ET002-03	Position (WGS84)	-20.846041, 116.427635
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> , <i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i> and <i>Tecticornia indica</i> subsp. <i>leiostachya</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	2	Tree cover (%)	0
Shrub cover (%)	2	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		1	0.2		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		0.5			
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		0.1	0.15		
<i>Muellerolimon salicorniaceum</i>				0.1	0.1

Site details			
Site	ET002-04	Position (WGS84)	-20.845704, 116.427774
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> , <i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i> and <i>Tecticornia indica</i> subsp. <i>leiostachya</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		12	0.25		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		8	0.3		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>				3	0.15
<i>Frankenia pauciflora</i>				1	0.1

Site details			
Site	ET004-01	Position (WGS84)	-20.837612, 116.38489
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (19 Apr 2020)			
Sample description	Samphire shrubland of <i>Tecticornia auriculata</i> , <i>T. halocnemoides</i> subsp. <i>tenuis</i> and <i>Tecticornia sp.</i> sterile 1.		
Habitat	samphire shrubland		
Disturbance	Vehicle tracks		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	40	Tree cover (%)	0
Shrub cover (%)	40	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	19-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (5)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		20	0.4		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		10	0.2		
<i>Tecticornia</i> sp. sterile 1	local sig.	5	0.5		
<i>Tecticornia</i> sp. sterile 2	local sig.	0.5	0.1		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		0.5			

Site details			
Site	ET004-02	Position (WGS84)	-20.837701, 116.385075
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (19 Apr 2020)			
Sample description	Closed samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i> , <i>T. halocnemoides</i> 'large ovate seed aggregate' and <i>T. sp. sterile</i> 1.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	70	Tree cover (%)	0
Shrub cover (%)	70	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	19-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		25	0.2		
<i>Tecticornia</i> sp. sterile 1	local sig.	10	1		
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.			20	0.5
<i>Muellerolimon salicorniaceum</i>				15	0.15

Site details			
Site	ET004-03	Position (WGS84)	-20.837837, 116.385307
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (19 Apr 2020)			
Sample description	Closed samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i> , <i>T. halocnemoides</i> 'large ovate seed aggregate' and <i>T. sp. sterile</i> 1.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	55	Tree cover (%)	0
Shrub cover (%)	55	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	19-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia</i> sp. sterile 1	local sig.	30	0.5		
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	20	0.45		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		5			
<i>Muellerolimon salicorniaceum</i>				10	0.15

Site details			
Site	ET004-04	Position (WGS84)	-20.837955, 116.385435
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (19 Apr 2020)			
Sample description	Closed samphire shrubland of <i>Tecticornia</i> sp. sterile 1.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	15	Tree cover (%)	0
Shrub cover (%)	15	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	19-Apr-2020	3m x 3m	Martin Henson

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia</i> sp. sterile 1	local sig.	15	0.4		

Site details			
Site	ET005-01	Position (WGS84)	-20.85258, 116.3787
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Isolated samphire shrubs if <i>Tecticornia indica</i> subsp. <i>leiostachya</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	2	Tree cover (%)	0
Shrub cover (%)	2	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		2	0.2		

Site details			
Site	ET005-02	Position (WGS84)	-20.85247, 116.378823
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Isolated samphire shrubs of <i>Tecticornia auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	5	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		5	0.5		

Site details			
Site	ET005-03	Position (WGS84)	-20.852368, 116.378958
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Spare samphire shrubland of <i>Tecticornia auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		10	0.5		

Site details			
Site	ET005-04	Position (WGS84)	-20.852242, 116.379016
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Isolated shrubs of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat			
Disturbance			
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)		Tree cover (%)	
Shrub cover (%)		Grass cover (%)	
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		5	0.3		

Site details			
Site	ET006-01	Position (WGS84)	-20.860388, 116.37275
Slope	negligible	Topography	salt lake (playa)
Soil colour		Soil texture	clay loam
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Isolated samphire shrubs if <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	2	Tree cover (%)	0
Shrub cover (%)	2	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		2	0.3		

Site details			
Site	ET006-02	Position (WGS84)	-20.860639, 116.372716
Slope	negligible	Topography	salt lake (playa)
Soil colour		Soil texture	clay loam
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Sparse samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		8	0.2		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		2	0.15		

Site details			
Site	ET006-03	Position (WGS84)	-20.860823, 116.372605
Slope	negligible	Topography	salt lake (playa)
Soil colour		Soil texture	clay loam
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Sparse samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	3	Tree cover (%)	0
Shrub cover (%)	3	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		2	0.25		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>					

Site details			
Site	ET006-04	Position (WGS84)	-20.861124, 116.372413
Slope	negligible	Topography	salt lake (playa)
Soil colour		Soil texture	clay loam
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Isolated samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	1	Tree cover (%)	0
Shrub cover (%)	1	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		1	0.3		

Site details			
Site	ET007-01	Position (WGS84)	-20.861686, 116.385593
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	clay loam, rocks
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (18 Apr 2020)			
Sample description	Isolated samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		5	0.2		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		5	0.2		

Site details			
Site	ET007-02	Position (WGS84)	-20.861526, 116.38582
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	clay loam, rocks
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	12	Tree cover (%)	0
Shrub cover (%)	12	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (6)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		5	0.15		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		5	0.15		
<i>Xerochloa laniflora</i>				1	0.15
<i>Neobassia astrocarpa</i>				0.5	0.1
<i>Gomphrena cunninghamii</i>				0.5	0.05
<i>Eragrostis xerophila</i>				0.5	0.4

Site details			
Site	ET007-03	Position (WGS84)	-20.861325, 116.386137
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	clay loam, rocks
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (18 Apr 2020)			
Sample description	Sparse samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		5	0.15		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		5	0.15		
<i>Lawrenia viridigrisea</i>				0.1	0.1

Site details			
Site	ET007-04	Position (WGS84)	-20.861182, 116.386342
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	clay loam, rocks
Rock cover (%)	0	Rock type	granite - rocks

Observation details - visit 1 (18 Apr 2020)			
Sample description	Samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	40	Tree cover (%)	0
Shrub cover (%)	40	Grass cover (%)	0
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	17-Sep-2020	3m x 3m	Shenade Findlay

Species (5)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		2	0.1		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>				30	0.35
<i>Neobassia astrocarpa</i>				0.5	0.15
<i>Lawrencia viridigrisea</i>				1	0.2
<i>Frankenia pauciflora</i>				0.5	0.15

Site details			
Site	ET008-01	Position (WGS84)	-20.862509, 116.355123
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	20
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3mx 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Eriachne tenuiculmis</i>		25	0.25		
<i>Tecticornia auriculata</i>		5	0.4		

Site details			
Site	ET008-02	Position (WGS84)	-20.862808, 116.354899
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Sparse samphire shrubland of <i>Tecticornia auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	Vehicle tracks		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	6	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	1
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Martin Henson

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		5	0.4		
<i>Eriachne tenuiculmis</i>		1			
<i>Tecticornia</i> sp. sterile 3	local sig.			0.5	0.1

Site details			
Site	ET008-03	Position (WGS84)	-20.863262, 116.354527
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Isolated samphire shrubs of <i>Tecticornia auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	5	Tree cover (%)	0
Shrub cover (%)	2	Grass cover (%)	3
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		2	1		
<i>Eriachne tenuiculmis</i>		1	0.25		

Site details			
Site	ET008-04	Position (WGS84)	-20.864046, 116.354197
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Sparse samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>Tecticornia</i> sp. sterile 3.		
Habitat	samphire shrubland		
Disturbance			
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)		Tree cover (%)	
Shrub cover (%)		Grass cover (%)	
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Frankenia</i> sp.		1	0.3		
<i>Eriachne tenuiculmis</i>		1	0.25		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		1	0.15		
<i>Tecticornia</i> sp. sterile 3	local sig.	0.5	0.3		

Site details			
Site	ET009-01	Position (WGS84)	-20.881349, 116.350102
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Sparse samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	5	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		4	0.15		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		2	0.15		
<i>Neobassia astrocarpa</i>				0.1	0.15
<i>Eragrostis xerophila</i>				0.5	0.1

Site details			
Site	ET009-02	Position (WGS84)	-20.88115, 116.349696
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)		Tree cover (%)	
Shrub cover (%)		Grass cover (%)	
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		15	0.2		
<i>Ptilotus murrayi</i>				0.5	0.15

Site details			
Site	ET009-03	Position (WGS84)	-20.880945, 116.349302
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland if <i>Tecticornia indica</i> subsp. <i>leiostachya</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	25	Tree cover (%)	0
Shrub cover (%)	25	Grass cover (%)	0
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		20	0.3		
<i>Gomphrena cunninghamii</i>				5	0.2
<i>Eragrostis xerophila</i>				0.5	0.1

Site details			
Site	ET010-01	Position (WGS84)	-20.874251, 116.366046
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Isolated samphire shrubs of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	5	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		8	0.2		
<i>Frankenia pauciflora</i>		1	0.2		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		1	0.15		
<i>Frankenia pauciflora</i>				1	0.15

Site details			
Site	ET010-02	Position (WGS84)	-20.874095, 116.365668
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Isolated samphire shrubs of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	5	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		4	0.3		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		1.5			
<i>Eragrostis xerophila</i>				0.5	0.1

Site details			
Site	ET010-03	Position (WGS84)	-20.87389, 116.365291
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		8	0.15		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		2	0.2		

Site details			
Site	ET010-04	Position (WGS84)	-20.873899, 116.364908
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (18 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	18-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		3	0.2		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		2	0.15		

Site details			
Site	ET011-01	Position (WGS84)	-20.86988, 116.338866
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Isolated samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	5	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		5	0.4		

Site details			
Site	ET011-02	Position (WGS84)	-20.869922, 116.338505
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Isolated samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	8	Tree cover (%)	0
Shrub cover (%)	8	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		8	0.35		

Site details			
Site	ET011-03	Position (WGS84)	-20.869933, 116.338126
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> and <i>T. halocnemoides</i> 'large ovate seed aggregate'.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	50	Tree cover (%)	0
Shrub cover (%)	50	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	10	0.5		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>				0.5	

Site details			
Site	ET011-04	Position (WGS84)	-20.869938, 116.338111
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i> , <i>T. indica</i> subsp. <i>leiostachya</i> and <i>T. sp. sterile</i> 4.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	50	Tree cover (%)	0
Shrub cover (%)	50	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		35	0.4		
<i>Tecticornia</i> sp. sterile 4	local sig.	15	0.4		
<i>Tecticornia</i> sp. sterile 5	local sig.	1	0.3		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		0.5	0.15		

Site details			
Site	ET011-05	Position (WGS84)	-20.869904, 116.337783
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Isolated samphire shrubs of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	1	Tree cover (%)	0
Shrub cover (%)	1	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		1	0.3		

Site details			
Site	ET011-06	Position (WGS84)	-20.869898, 116.337272
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Isolated samphire shrubs of <i>Tecticornia. halocnemoides</i> subsp. <i>longispicata</i> and <i>T. sp. sterile</i> 4.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	2	Tree cover (%)	0
Shrub cover (%)	2	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	18-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		2	0.3		
<i>Tecticornia</i> sp. sterile 4	local sig.	1	0.3		

Site details			
Site	ET012-01	Position (WGS84)	-20.878551, 116.325706
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Samphire shrubland of <i>Tecticornia auriculata</i> and <i>T. halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	50	Tree cover (%)	0
Shrub cover (%)	50	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		35	0.3		
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	10	0.3		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		5	0.3		

Site details			
Site	ET012-02	Position (WGS84)	-20.878534, 116.325396
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia auriculata</i> and <i>T. halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	17	Tree cover (%)	0
Shrub cover (%)	17	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		12	0.3		
<i>Tecticornia auriculata</i>		5	0.4		

Site details			
Site	ET012-03	Position (WGS84)	-20.878414, 116.324951
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia auriculata</i> and <i>T. halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		15	0.4		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		5	0.2		

Site details			
Site	ET012-04	Position (WGS84)	-20.878344, 116.324468
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Sparse samphire shrubland of <i>Tecticornia auriculata</i> and <i>T. halocnemoides</i> subsp. <i>longispicata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	5	Tree cover (%)	0
Shrub cover (%)	5	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		4	0.3		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		1	0.25		

Site details			
Site	ET012-05	Position (WGS84)	-20.878264, 116.323968
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> and <i>T. auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	Not recorded		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	45	Tree cover (%)	0
Shrub cover (%)	45	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	15-Oct-2021	3m x 3m	Martin Henson

Species (5)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		15	0.25		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		10	0.3		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		10	0.25		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		5	0.2		
<i>Tecticornia pruinosa</i>				5	0.2

Site details			
Site	ET013-01	Position (WGS84)	-20.882246, 116.324644
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> , <i>T. auricalta</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	Vehicle tracks		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	15	Tree cover (%)	0
Shrub cover (%)	15	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		9	0.25		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		5			
<i>Tecticornia auriculata</i>		1	0.25		

Site details			
Site	ET013-02	Position (WGS84)	-20.882435, 116.324682
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> , <i>T. auriculata</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	25	Tree cover (%)	0
Shrub cover (%)	25	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (5)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	10			
<i>Tecticornia auriculata</i>		0.5	0.2		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>				5	0.2
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>				20	0.35
<i>Eragrostis xerophila</i>				0.1	0.1

Site details			
Site	ET013-03	Position (WGS84)	-20.8826, 116.32474
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (5)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		5	0.15		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		1	0.15		
<i>Trianthema triquetrum</i>				2	0.2
<i>Muellerolimon salicorniaceum</i>				1	0.2
<i>Eragrostis xerophila</i>				0.5	0.2

Site details			
Site	ET013-04	Position (WGS84)	-20.883023, 116.324845
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-brown, whitish	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Sparse samphire shrubland of <i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i> and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	Vehicle tracks		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	30	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>		10	0.25		
<i>Trianthema triquetrum</i>				5	0.25
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>				7.5	0.15
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.			7.5	0.2

Site details			
Site	ET014-01	Position (WGS84)	-20.876818, 116.312066
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>T. halocnemoides</i> 'large ovate seed aggregate'.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	25	Tree cover (%)	0
Shrub cover (%)	25	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	15-Oct-2021	3m x 3m	Grant Wells

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	25	0.5		
<i>Tecticornia pruinosa</i>				20	0.5

Site details			
Site	ET014-02	Position (WGS84)	-20.877031, 116.312082
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>T. halocnemoides</i> 'large ovate seed aggregate'.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	3	15-Oct-2021	3m x 3m	Grant Wells

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	20	0.3		
<i>Muellerolimon salicorniaceum</i>					

Site details			
Site	ET014-03	Position (WGS84)	-20.877417, 116.312134
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>T. halocnemoides</i> 'large ovate seed aggregate'.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	15	Tree cover (%)	0
Shrub cover (%)	15	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	15-Oct-2021	3m x 3m	Grant Wells
Transect-Quadrat	3	15-Oct-2021	3m x 3m	Grant Wells

Species (6)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	8	0.3		
<i>Tecticornia pterygosperma</i> subsp. <i>denticulata</i>				5	0.15
<i>Tecticornia pruinosa</i>				1	0.5
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>				2	0.4
<i>Muellerolimon salicorniaceum</i>				6	0.2
<i>Muellerolimon salicorniaceum</i>					

Site details			
Site	ET015-01	Position (WGS84)	-20.897786, 116.312591
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	15	Tree cover (%)	0
Shrub cover (%)	15	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		15	0.4		
<i>Tecticornia</i> sp. sterile 3	local sig.			5	0.4

Site details			
Site	ET015-02	Position (WGS84)	-20.897793, 116.313041
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia pruinosa</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia pruinosa</i>		10	0.3		

Site details			
Site	ET015-03	Position (WGS84)	-20.897885, 116.3135
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia indica</i> subsp. <i>leiostachya</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	10	Tree cover (%)	0
Shrub cover (%)	10	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (5)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		4	0.25		
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		4	0.2		
<i>Streptoglossa bubakii</i>				0.5	0.2
<i>Lawrencia viridigrisea</i>				0.5	0.15
<i>Eragrostis xerophila</i>				0.5	0.1

Site details			
Site	ET016-01	Position (WGS84)	-20.886151, 116.301101
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> 'large ovate seed aggregate' and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	25	Tree cover (%)	0
Shrub cover (%)	25	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	16-Oct-2021	3m x 3m	Adam Crosby-Clarke

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	20	0.3		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		5	0.2		
<i>Muellerolimon salicorniaceum</i>				0.1	0.2

Site details			
Site	ET016-02	Position (WGS84)	-20.886322, 116.301256
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	20	0.3		

Site details			
Site	ET016-03	Position (WGS84)	-20.886512, 116.301343
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'.		
Habitat	samphire shrubland		
Disturbance			
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	15	Tree cover (%)	0
Shrub cover (%)	15	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	16-Oct-2021	3m x 3m	Adam Crosby-Clarke

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	8	0.3		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		7	0.2		
<i>Muellerolimon salicorniaceum</i>				0.1	0.2

Site details			
Site	ET016-04	Position (WGS84)	-20.886846, 116.301508
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (17 Apr 2020)			
Sample description	Open samphire shrubland of <i>tecticornia halocnemoides</i> 'large ovate seed aggregate'.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	30	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	17-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	16-Oct-2021	3m x 3m	Adam Crosby-Clarke

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	30	0.4		
<i>Avicennia marina</i>		0.1	0.8		

Site details			
Site	ET017-01	Position (WGS84)	-20.889656, 116.296693
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		

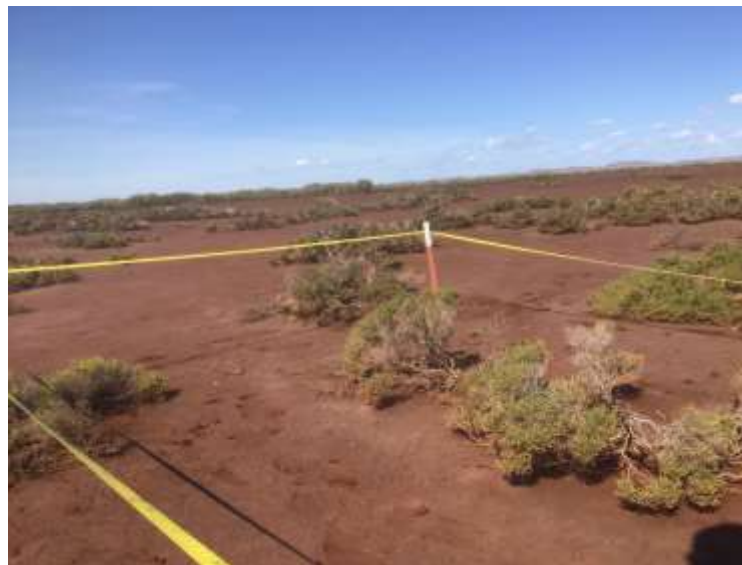


Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	16-Oct-2021	3m x 3m	Adam Crosby-Clarke

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	20	0.3		

Site details			
Site	ET017-02	Position (WGS84)	-20.889938, 116.296946
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia halocnemoides</i> 'large ovate seed aggregate' and <i>T. halocnemoides</i> subsp. <i>tenuis</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	16-Oct-2021	3m x 3m	Adam Crosby-Clarke

Species (3)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	16	0.4		
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		4	0.25		
<i>Tecticornia halocnemoides</i> subsp. <i>longispicata</i>				0.1	0.2

Site details			
Site	ET020-01	Position (WGS84)	-20.87518, 116.26296
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	35	Tree cover (%)	0
Shrub cover (%)	35	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	15-Oct-2021	3m x 3m	Grant Wells

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	35	0.4		

Site details			
Site	ET020-02	Position (WGS84)	-20.874899, 116.26291
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland.		
Habitat	samphire shrubland		
Disturbance	Not recorded		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	15	Tree cover (%)	
Shrub cover (%)	15	Grass cover (%)	
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	15	0.3		

Site details			
Site	ET021-01	Position (WGS84)	-20.901293, 116.252808
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Isolated samphire shrubs		
Habitat	playa		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	1	Tree cover (%)	0
Shrub cover (%)	1	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		1	0.4		

Site details			
Site	ET021-02	Position (WGS84)	-20.901648, 116.252926
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (03 Apr 2020)			
Sample description	Isolated samphire shrubs.		
Habitat	playa		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	2	Tree cover (%)	0
Shrub cover (%)	2	Grass cover (%)	0
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	03-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (5)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		1	0.25		
* <i>Cenchrus ciliaris</i>	Weed			0.5	0.2
<i>Xerochloa laniflora</i>				0.5	0.2
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>				0.5	0.15
<i>Lawrenzia viridigrisea</i>				0.5	0.2

Site details			
Site	ET021-03	Position (WGS84)	-20.90212, 116.253238
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sand
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Samphire shrubland.		
Habitat	playa		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	30	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (4)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>bidens</i>		10			
<i>Xerochloa laniflora</i>				0.5	0.3
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>				20	0.5
<i>Sesbania cannabina</i>				0.5	0.6

Site details			
Site	ET022-01	Position (WGS84)	-20.888881, 116.231328
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sand
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Samphire shrubland.		
Habitat	chenopod shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	55	Tree cover (%)	0
Shrub cover (%)	55	Grass cover (%)	
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (2)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>		55	0.4		
<i>Swainsona pterostylis</i>				1	0.45

Site details			
Site	ET022-02	Position (WGS84)	-20.88874, 116.231019
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Mixed <i>Tecticornia</i> spp. shrubland.		
Habitat			
Disturbance			
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (6)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia auriculata</i>		8			
<i>Tecticornia indica</i> subsp. <i>bidens</i>		1			
<i>Tecticornia indica</i> subsp. <i>leiostachya</i>				8	0.5
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>				1	0.1
<i>Frankenia pauciflora</i>				0.5	0.15
<i>Eragrostis xerophila</i>				0.5	0.1

Site details			
Site	ET023-01	Position (WGS84)	-20.882108, 116.269718
Slope	negligible	Topography	salt lake (playa)
Soil colour	brown	Soil texture	clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	15	Tree cover (%)	
Shrub cover (%)	15	Grass cover (%)	
Herb cover (%)			



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	15	0.25		

Site details			
Site	ET023-02	Position (WGS84)	-20.882039, 116.269828
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Samphire shrubland.		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	50	Tree cover (%)	0
Shrub cover (%)	50	Grass cover (%)	0
Herb cover (%)	0		

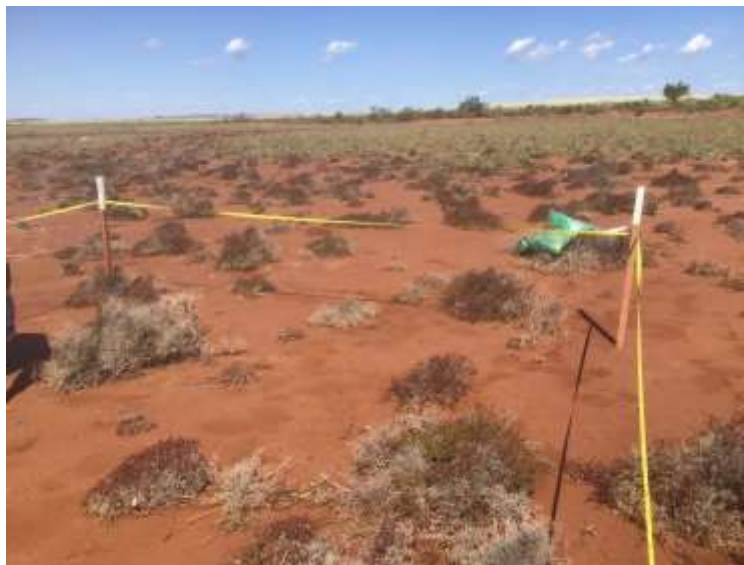


Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> 'large ovate seed aggregate'	sp. nov.	50	0.3		

Site details			
Site	ET024-01	Position (WGS84)	-20.896305, 116.281613
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	15	Tree cover (%)	0
Shrub cover (%)	15	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay
Transect-Quadrat	3	16-Oct-2021	3m x 3m	Martin Henson

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		20	0.2		

Site details			
Site	ET024-02	Position (WGS84)	-20.896316, 116.281587
Slope	negligible	Topography	salt lake (playa)
Soil colour	red-orange	Soil texture	sandy clay
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	30	Tree cover (%)	0
Shrub cover (%)	30	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		20	0.15		

Site details			
Site	ET024-03	Position (WGS84)	-20.895992, 116.281444
Slope		Topography	
Soil colour		Soil texture	
Rock cover (%)	0	Rock type	

Observation details - visit 1 (16 Apr 2020)			
Sample description	Open samphire shrubland of <i>Tecticornia auriculata</i> .		
Habitat	samphire shrubland		
Disturbance	None Evident		
Vegetation condition	Excellent	Fire age	
Total veg. cover (%)	20	Tree cover (%)	0
Shrub cover (%)	20	Grass cover (%)	0
Herb cover (%)	0		



Sample and effort summary				
Sample method	Visit	Sample date	Dimensions	Observer
Transect-Quadrat	1	16-Apr-2020	3m x 3m	Martin Henson
Transect-Quadrat	2	19-Sep-2020	3m x 3m	Shenade Findlay

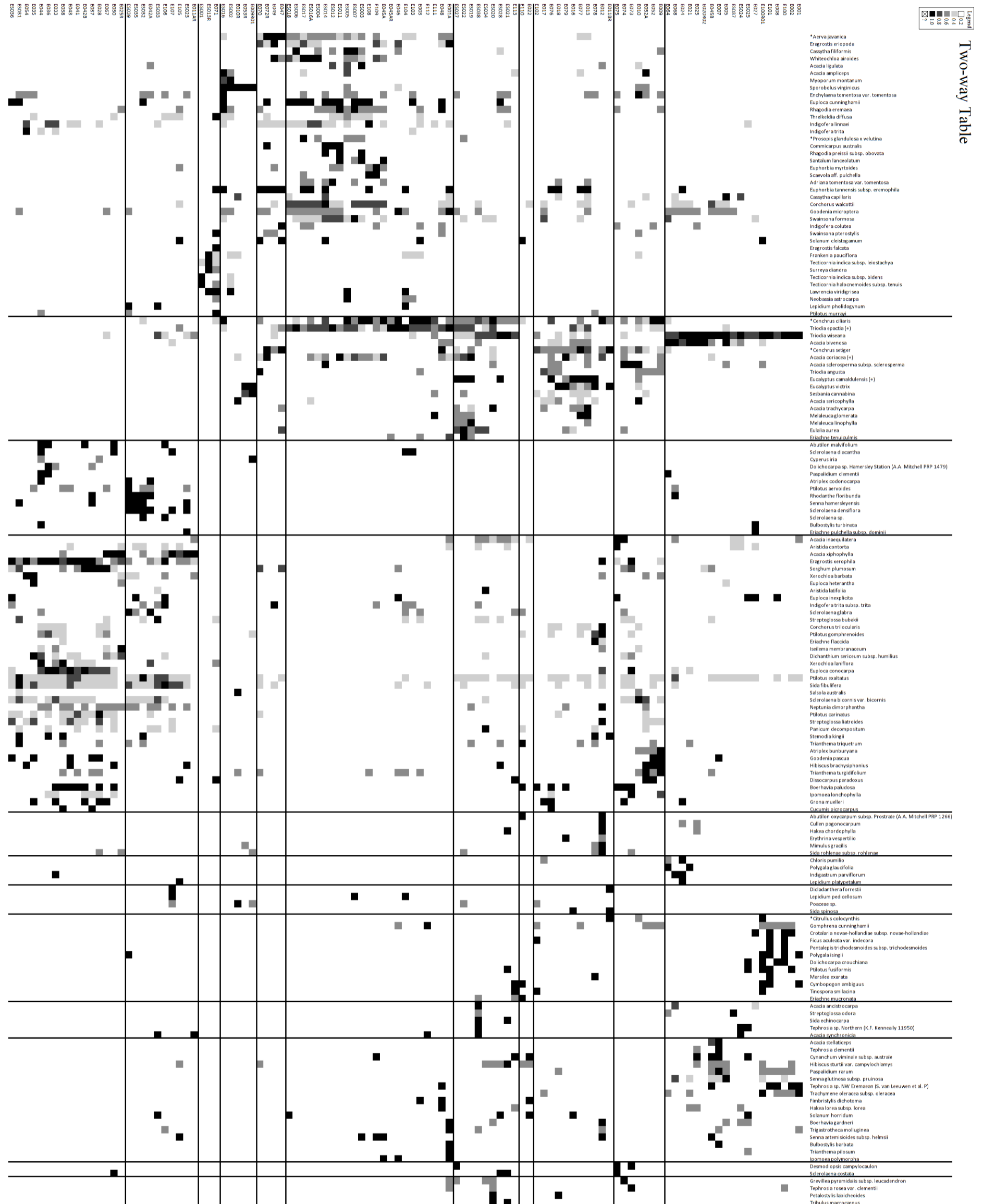
Species (1)	Status	Visit 1		Visit 2	
		Cover (%)	Height (m)	Cover (%)	Height (m)
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>		10	0.2		

Appendix 6 Lodgement of significant flora records and specimens

Includes Threatened and Priority Flora Report forms and Western Australian Herbarium Flora Specimen Lodgement forms.

* Provided separately to Leichhardt Pty Ltd

Appendix 7 Analysis two-way table of sites versus species



Detailed flora and vegetation survey for the Eramurra Solar Salt Project
Prepared for Leichhardt Salt Pty Ltd

Sample ID	Species	Presence
E001	*Flaveria trinervia	
	Pluchea rubelliflora	
	Heliotropium crispatum	
	*Malvastrum americanum	
	*Vachellia farnesiana	
	Arivela viscosa	
	Indigofera linifolia	
	Euphorbia biconvexa	
	Rhynchosia minima	
	Portulaca oleracea	
E002	Pterocaulon sphacelatum	
	Chrysopogon fallax	
	Dactyloctenium radulans	
	Eriachne obtusa	
	Opeculina aequisepta	
	Tribulus occidentalis	
	Ipomoea coccinea	
	Sclerolaena hodgkissii	
	Alysicarpus muelleri	
	Sporobolus australasicus	
E003	Ptilotus helipteroides	
	Goodenia muelleriana	
	Enneapogon caeruleus	
	Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	
	Abutilon lepidum	
	Ptilotus auricidens	
	Triumfetta clementii	
	Tribulus hirtatus	
	Senna glutinosa subsp. glutinosa	
	Euphorbia boophthona	
E004	Evolvulus alainoides var. villosicalyx	
	Trichodesma zeylanicum var. zeylanicum	
	Scaveola spinicaeris	
	Solanum lasiophyllum	
	Bonania pilbarensis	
	Streptoglossa decurrens	
	Acacia pyrifolia var. pyrifolia	
	Indigofera monophylla	
	Polymeria ambigua	
	Eremophila longifolia	
E005	Portulaca filifolia	
	Gomphrena affinis subsp. pilbarensis	
	Afrathybanthus aurantiacus	
	Orotalia mediolaginea var. neglecta	
	Cucumis variabilis	
	Solanum diversiflorum	
	Melthania oblongifolia	
	Phyllanthus maderaspatisensis	
	Stemodia grassa	
	Ptilotus polytachyus (+)	
Tephrosia supina		
E006	Ipomoea muelleri	
	Senna artemisioides subsp. oligophylla	
	Boerhaavia coccinea	
	Euphorbia australis var. australis	
	Notolappaceum decalvum (+)	
	Corymbia hamersleyana	
	Themeda triandra	
	Abutilon amplum	
	Setaria dielsii	
	Abutilon fraseri subsp. fraseri	
Capparis spinosa subsp. nummularia		
E007	Ehretia saligna var. saligna	
	Synaptantha tillaeacea var. hispida	
	Bonania erecta	
	Senna notabilis	
	Cullen cinereum	
	Jasminum didymum subsp. lineare	
	Alternanthera nodiflora	
	Eragrostis tenellula	
	Cyperus vaginatus	
	Amaranthus undulatus	
Ipomoea costata		
E008	Walteria indica	
	Vigna lanceolata var. lanceolata	
	Gossypium australe	
	Senna glutinosa subsp. x luerssenii	
	Eremophila forrestii subsp. forrestii	
	Ptilotus obovatus	
	Euphorbia careyi	
	Goodenia lamprosepium	
	*Portulaca pilosa	
	Chloris pectinata	
Dysphania kalpari		
E009	Nicotiana heterantha	
	Fimbristylis microcarpa	
	Marsilea drummondii	
	Lepidotheca digitata	
	*Melicope pyramidalis	
	Tephrosia sp. B Kimberley Flora (C.A. Gardner 7300)	
	Corchorus tectus	
	Triumfetta chaetocarpa	
	Alternanthera nana	
	Polycarpha longiflora	
*Passiflora foetida var. hispida		
Achyranthes aspera		
E010	Bergia henschalii	
	Cenropeda minima subsp. macrocephala	
	Marsilea hirsuta	
	Rostellularia adscendens var. clementii	
	Cullen graeolens	
	Synaptantha tillaeacea var. tillaeacea	
	Bergia ammannioides	