CPS 7914/3 AMENDMENT APPLICATION SUPPORTING DOCUMENT

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1. INTRODUCTION

The Cosmos Nickel Operation (Cosmos) is owned and operated by Australian Nickel Investments Pty Ltd (ANI), a fully owned subsidiary of Independence Group (IGO). Cosmos is located approximately 40km north of the Leinster township (Figure 1) and consists of the Cosmos open pit, underground operations (undergoing development), and supporting processing facilities which are undergoing construction.

Jubilee Mines NL operated Cosmos from October 1999 to 2007 developing the Cosmos open pit and UG operations. Xstrata (a subsidiary of Glencore) purchased the operations in 2007, continuing operations and then placed it on Care and Maintenance in February 2012 due to the exhaustion of the Prospero ore body. ANI purchased Cosmos in September 2015 with the aim to recommence mining operations. ANI has recommenced operations at Cosmos for nickel ore production from the Odysseus deposit following the Decision to Mine in April 2018 and the Definitive Feasibility Study confirming the 10-year operation in October 2018.

ANI were granted the current Clearing Purpose Permit CPS 7914/3 (the permit) in March 2018, for mineral production and associated activities. ANI is applying to redescribe the permit boundary area to clear a duplicated gas spur/pipeline corridor. No increase to clearing allocation (ha) is proposed. This document has been prepared for the Department of Mines, Industry Regulation and Safety (DMIRS) to support the CPS amendment application form (Form C4).

Figure 1: Location of Cosmos Nickel Operations

2. PROPOSAL

ANI is planning clearing activities to allow construction of a second gas supply pipeline (adjacent to existing) from the 'Cosmos Lateral section' of the 'Goldfields Gas Pipeline' to the 'Cosmos power plant'. The purpose of this project is to ensure sufficient gas supply to sustain increased energy requirements of continued ramp up to full production/processing and construction.

A detailed description of the proposed clearing and construction activities the subject of this amendment listed below and shown on Figure 2:

- The required disturbance footprint (including clearing) corridor to be ~40m wide;
- The pipe diameter will be DN150 (6 inch);
- The approx. length will be 12.7km (same as current gas pipeline);
- The gas delivery station will be located adjacent to the existing Cosmos power station;
- The existing power station footprint will require expansion to install additional gas fired generators; and
- The proposed pipeline will have a Max Allowable Operating Pressure of 10.2Mpa and as such will need to be designed in accordance with AS2885 and will be licensed under a Pipeline License that will be issued by DMIRS (Petroleum).

Both the proposed duplicated and existing gas pipeline will be located within a single services corridor located on tenements L36/189, M36/127, M36/180, M36/212, M36/371 and M36/659 with a total length of approximately 12.7 km. The gas supply transfer station and expanded power station will be located on M36/371.

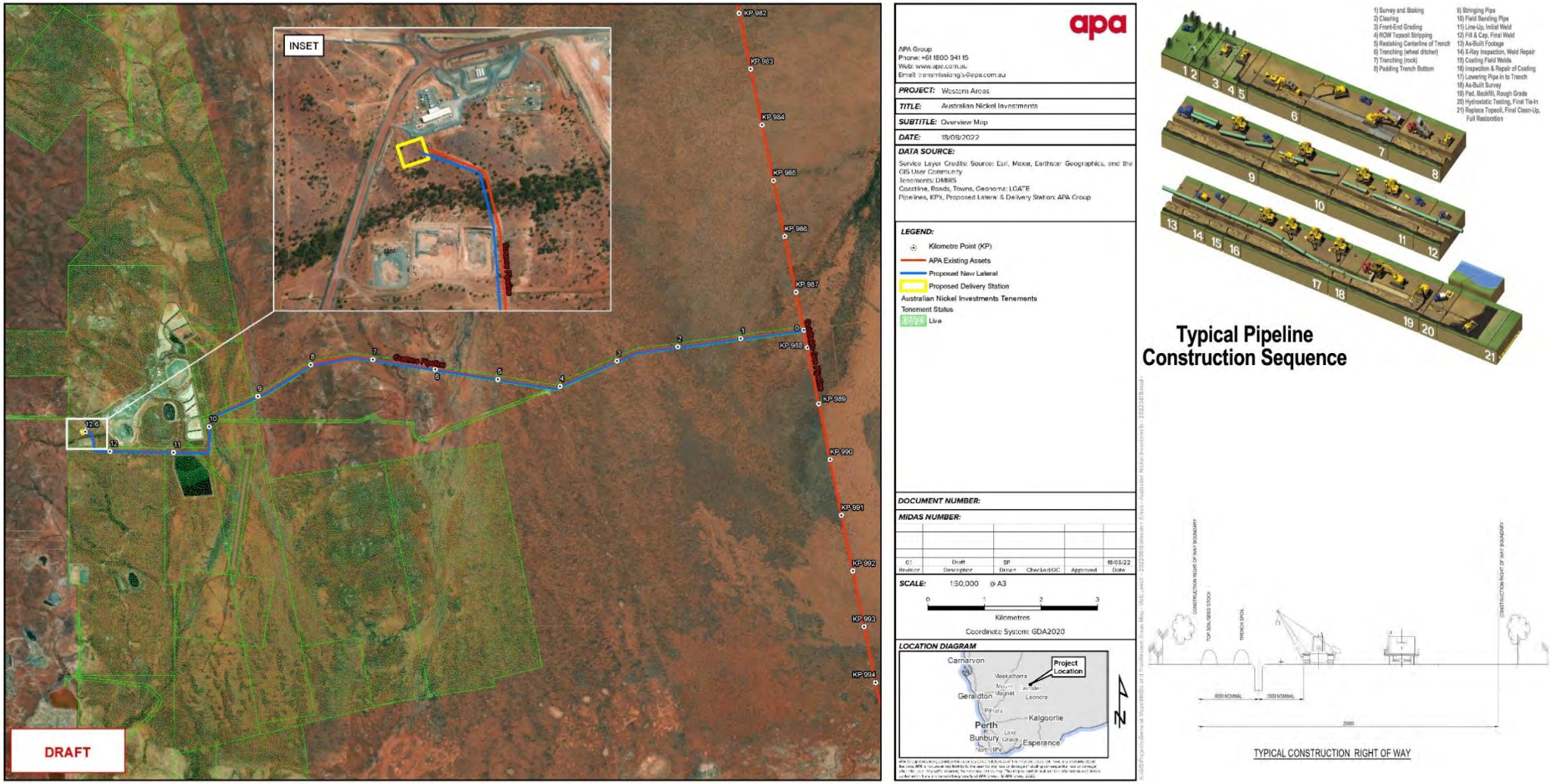
Tenements M36/212 and L36/189 are outside the existing permit boundary. ANI is proposing an amendment to the permit to redescribe the boundary to include sections of M36/212 and L36/189 to allow for clearing to widen the existing gas pipeline corridor (Figure 2 and Figure 3). Approximately 35 ha of clearing will be required to widen the services corridor and install the second gas pipeline within the amended permit boundary.

No changes to the overall approved clearing area allocation (180 ha) proposed in this amendment.

The total area of the amended permit is 1,402 Ha and covers leases L36/159, L36/189, M36/127, M36/180, M36/212, M36/349, M36/371, and M3/659. The permit allows for 180 Ha of native vegetation to be cleared within the permit boundary. The duration of the permit is from 3 March 2018 to 28 February 2027.

In November 2022, an amended Part 1 Mining Proposal amendment to REGID 92690 was submitted to include the gas pipeline duplication, addition of M36/212 in the development envelope and other key/miscellaneous activity additions. The revised mining proposal and closure plan (REGID 111609) is currently under assessment with DMIRS. The proposed clearing permit boundary is entirely within the development envelope provided in the latest submitted mining proposal (REGID 111609).

Figure 2 - Proposed gas pipeline duplication (APA and ANI)



ANI is the owner and holder of tenements L36/159, L36/189, M36/127, M36/180, M36/212, M36/349, M36/371, and M3/659. All tenements are owner-operated giving ANI a 100% holding, title deeds are presented in **Appendix A**.

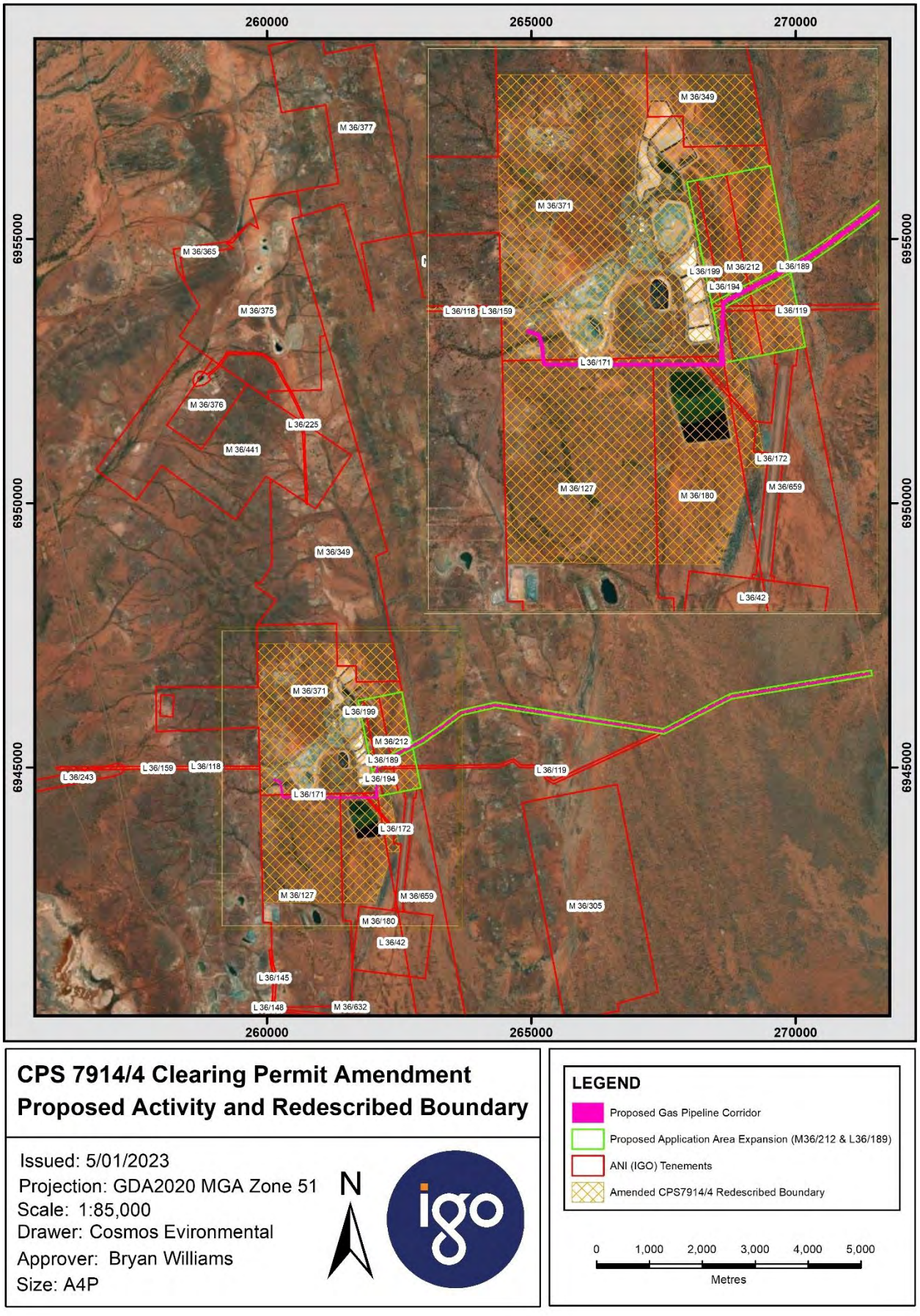
The proposed amendment application is unlikely to have an impact on a matter of national environmental significance; hence this proposed clearing action is unlikely to require assessment in accordance with, or under, an EPBC Act Accredited Process such as the assessment bilateral agreement.

The location of the proposed application area is shown on Figure 3, the tenements on which clearing is to occur is provided in Table 1.

Table 1 – Tenement Overview

Tenement	Tenement Holder	Expiry Date
L36/159	AUSTRALIAN NICKEL INVESTMENTS PTY LTD	19/07/2043
L36/189	AUSTRALIAN NICKEL INVESTMENTS PTY LTD	15/08/2027
M36/127	AUSTRALIAN NICKEL INVESTMENTS PTY LTD	19/04/2031
M36/180	AUSTRALIAN NICKEL INVESTMENTS PTY LTD	03/07/2032
M36/212	AUSTRALIAN NICKEL INVESTMENTS PTY LTD	01/07/2033
M36/349	AUSTRALIAN NICKEL INVESTMENTS PTY LTD	03/03/2041
M36/371	AUSTRALIAN NICKEL INVESTMENTS PTY LTD	03/03/2041
M36/659	AUSTRALIAN NICKEL INVESTMENTS PTY LTD	22/02/2028

Figure 3 – Project Location



3. SITING AND EXISTING ENVIRONMENT

The siting and location of the permit area in relation to other sensitive land uses is provided as Figure 3. The closest human receptor is Yakabindie Pastoral Station (homestead), located approximately 2-5km northwest of Cosmos. The nearest regional town site is Leinster at 32 km south of the permit boundary.

3.1 Climate

Cosmos is located within the Murchison bioregion and experiences a semi-arid to arid climate, with hot, dry summers and cool, mild winters. The region is influenced by the winter rainfall patterns that affect the southwest of Western Australia as well as the variable summer rainfall typical of the northern regions. Summer rainfall activity is dependent upon thunderstorm activity and rain bearing depressions, often formed in the wake of tropical cyclones.

The long-term average annual rainfall for the Leinster Region is 240 mm. The nearest Bureau of Meteorology (BoM) weather station is located at Leinster (Leinster Aero Station Number 012314). The mean annual temperature is 28.2°C and the mean annual minimum temperature is 14.7°C. Daily maxima greater than 30°C are common between October and March. Dominant wind direction is easterly in the mornings increasing to northerlies in winter. The average wind speeds vary from 16.0 to 21.4 km/hr in the morning and 15.6 to 19.4 km/hr in the afternoon. Annual evaporation rates are between 3000 to 3200 mm, exceeding the annual rainfall (Bureau of Meteorology, 2019).

3.2 Field Surveys - Flora, Vegetation and Fauna

Ten vegetation surveys have been undertaken at the Project including historically Dames and Moore (1998) and Mattiske Consulting Pty Ltd (Mattiske) (2000 – 2009, 2011), and more recently PEK Enviro (2017) and Botanica Consulting (2018).

Five terrestrial fauna surveys have been completed at CNO since 1999:

- Hart, Simpson and Associates (1999). A Vertebrate Fauna Assessment of the Cosmos Nickel Project Area.
- Biota Environmental Sciences (2003). Bellevue Mine Airstrip Extension - Rare Fauna Survey. Letter report to URS Australia, 5 July 2003.
- Biota Environmental Sciences (2004) Cosmos Nickel Mine Extension Fauna Survey.
- Ninox Wildlife Consulting (2005) Vertebrate Fauna Habitat Assessment of the Proposed Expansions to the Cosmos Nickel Mine, Near Leinster, Western Australia.
- PEK Enviro (2017). Cosmos Nickel Project. Level 1 Vegetation, Flora and Fauna Survey.

No declared rare (DRF) or conservation significant/priority flora/fauna species have been recorded within the existing or proposed clearing permit application area.

3.3 Desktop Studies and Literature Review

A number of vegetation and fauna assessments have been completed at CNO since the Project commenced and these were reviewed as part of the desktop assessment. In addition, several vegetation and fauna assessments have been completed regionally, in particular and more recently ~40km north for the BHP Billiton Mt Keith satellite Project. The records of flora or fauna of conservation significance and the habitat were reviewed to ascertain if similar habitat is present within the proposed amendment to the clearing permit area.

A flora and fauna desktop study (consolidating previous ecological field surveys) was undertaken by Clark Lindbeck & Associates in November 2022 (**Appendix B**). To date, 89 species, from 40 genera and 19 families have been recorded across the entire Cosmos tenement package. Of these, 59 species, 39 genera and 23 families have been recorded within the proposed application boundary expansion (gas pipeline corridor).

3.3.1 Conservation Significant Flora

A search of the EPBC PMST and DBCA Threatened flora database (50 km and 100 km buffer respectively) revealed 50 flora species of conservation significance. The results are attached in **Appendix B.**

Table 2 and Figure 4 present the 24 flora species of conservation significance recorded within 50 km of the Project and their preferred habitat and likelihood of occurrence within the proposed clearing permit application area.

Seringia exastia was listed in the DBCA results, but has recently had its Threatened status delisted (as of 30 September 2022), as such it is not included in Table 2.

Table 2 - DBCA threatened flora search results within 50km

Taxon	Cons. Rating	Preferred Habitat	Closest Records	Likelihood of Occurrence
*Atriplex yeelirie*1*	T	Highly restricted population on Yeelirie Station within palaeovalley of Yilgarn valley (associated with near surface Uranium mineralisation).	Yeelirie Station; Albion Downs	Unlikely – no preferred habitat
Anacampseros sp. Eremaean (F. Hort, J. Hort & J. Shanks 3248)	1	Sand patches inside rocks, brown sandy clay, granite. Depressions in rock outcrops, breakaways, flats	Yakabindie Station	Unlikely – no preferred habitat or local records
Eremophila congesta	1	Lateritic outcrops in greenstone hills, stony quartzite slopes.	Mount Keith	Unlikely – no preferred habitat
Swainsona katjarra	1	Eucalyptus camaldulensis open woodland over mulga, Melaleuca sp. and Grevillea spinosa shrubland;	Yakabindie Station	Unlikely – no preferred habitat
Eremophila sp. long pedicels (G. Cockerton 1975)	2	Drainage line. Dark red loam. Dark red hardpan over palaeochannel; Mulga woodland	Mt Keith	Unlikely – no local records.
Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Weathered granite, coarse siliceous silty sand; Breakaways	Yakabindie Station (Mt Keith Satellite operation)	Unlikely – no preferred habitat
Austroparmelina macrospora	**3**	**Red brown clayey sand, plain.**	**Wanjarri Nature Reserve**	**Possible – low (no local records)**
Baeckea sp. Sandstone (C.A. Gardner s.n. 26 Oct. 1963)	3	Orange sand. Flats.	31 km W of Agnew	Unlikely – no preferred habitat
Bossiaea eremaea	3	Red sandplain; Deep red sand.	Wanjarri Nature Reserve	Unlikely – no preferred habitat
Goodenia modesta	3	Rangeland, Salt Lake, grey clay. Red loam, sand.	West side Lake Miranda; Yakabindie Station	Unlikely – no preferred habitat
Hybanthus floribundus subsp. chloroxanthus	**3**	**Dark red-brown soil, never sandy, rich in iron oxide, laterite. Rocky areas, creek banks, along drainage lines.**	**Yakabindie Station.**	**Possible – low (no local records)**

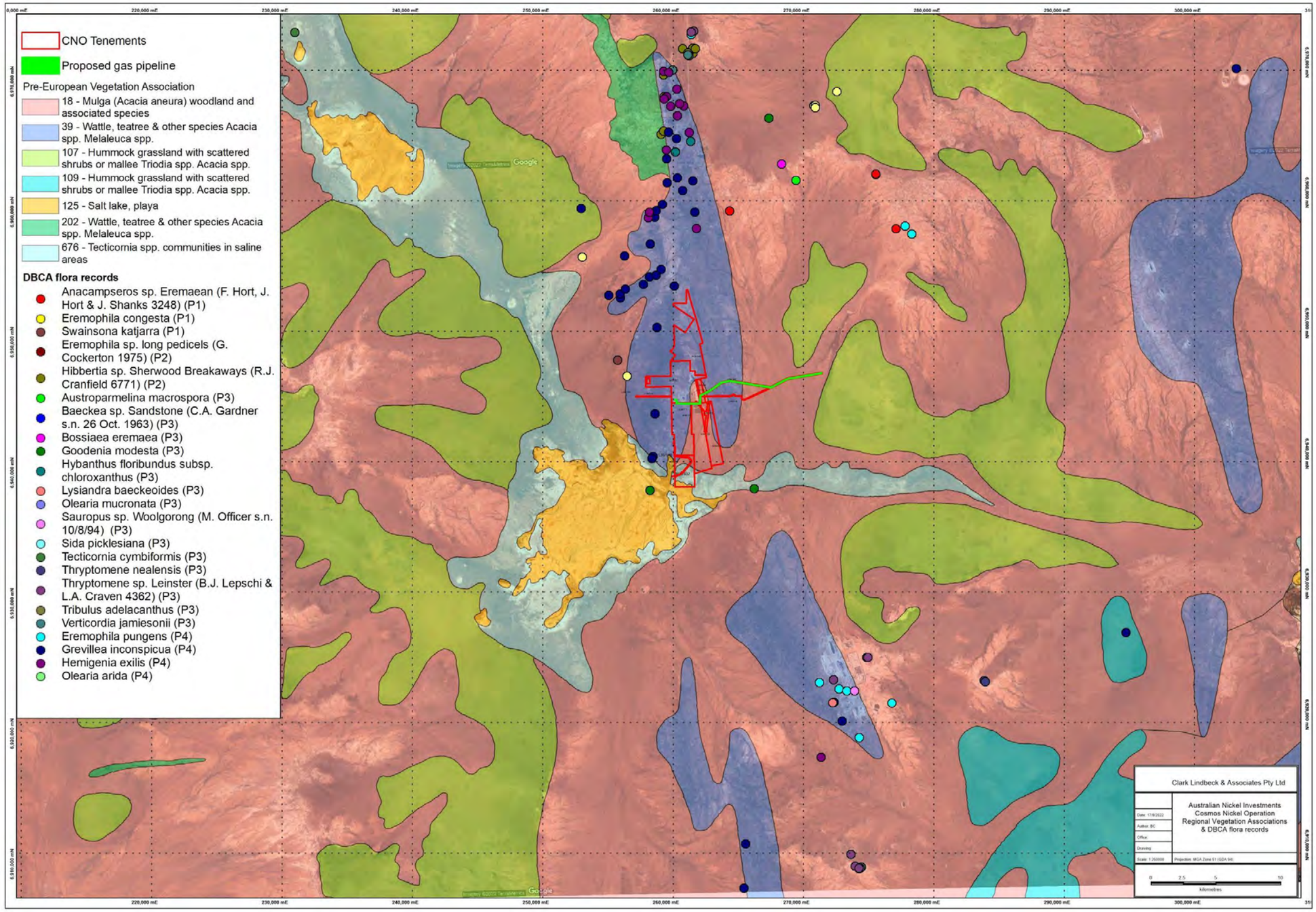
Taxon	Cons. Rating	Preferred Habitat	Closest Records	Likelihood of Occurrence
Lysiandra baeckeoides	3	Ironstone slope.	Leinster Downs Station - >25 km south of CNO	Unlikely – no preferred habitat or local records
Olearia mucronata	3	Schistose hills, along drainage channels.	Waterfall gully	Unlikely – no preferred habitat
Sauropus sp. Woolgorong (M. Officer s.n. 10/8/94)	3	Red sand. Plains.	Leinster	Unlikely – no preferred habitat
Sida picklesiana	3	Granite breakaway plateaux and upper slopes of breakaways.	70 km SW Wiluna	Unlikely – no preferred habitat
Tecticornia cymbiformis	3	Salt lake complex in red sandy clay.	Albion Downs Station	Unlikely – no preferred habitat
Thryptomene nealensis	3	Breakaways, skeletal soil	20 km NE Leinster	Unlikely – no preferred habitat
Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3	Sandstone outcrop; Stony hills; Breakaways	15 km NE Leinster; 30 km and 60 km N Leinster; Yakabindie Mine	Unlikely – no preferred habitat
Tribulus adelacanthus	**3**	**Hardpan plain; Low stony hill**	**Mount Keith; 80 km NE Leinster**	**Possible**
Verticordia jamiesonii	3	Sandy clay soils. Lateritic breakaways	Yakabindie Station; Wanjarri Nature Reserve; Leinster	Unlikely – no preferred habitat
Eremophila pungens	4	Sandy loam, clayey sand over laterite. Plains, ridges, breakaways.	Wanjarri Nature Reserve; Yakabindie Station; Lake Way Station; Leinster	Unlikely – no preferred habitat
Grevillea inconspicua	**4**	**Loam, gravel. Along drainage lines on rocky outcrops, creeklines.**	**Yakabindie Station to Leinster; Violet Range; Boolylgoo Homestead**	**Possible – numerous local records**
Hemigenia exilis	**4**	**Laterite. Breakaways, slopes**	**Yakabindie Station; Wanjarri Nature Reserve; Mt Keith Station**	**Possible - numerous local records**
Olearia arida	4	Sand plain; Red or yellow sand. Undulating low rises.	Albion Downs Station; Yeelirrie Project	Unlikely – no preferred habitat

**from DBCA records and Florabase (DBCA 2022)*

**1 – from EPBC PMST results*

Although none have been identified within the application area, ANI will avoid clearing Priority Flora and maintain a buffer area of 10m around and plants/populations identified in the future. Where impacts to individual plants or buffer areas cannot be avoided, ANI will seek advice from DBCA prior to undertaking any works.

Figure 4 – Priority flora records within 50km (CNO Tenements)



3.3.2 Conservation Significant Ecological Communities, Areas and Reserves

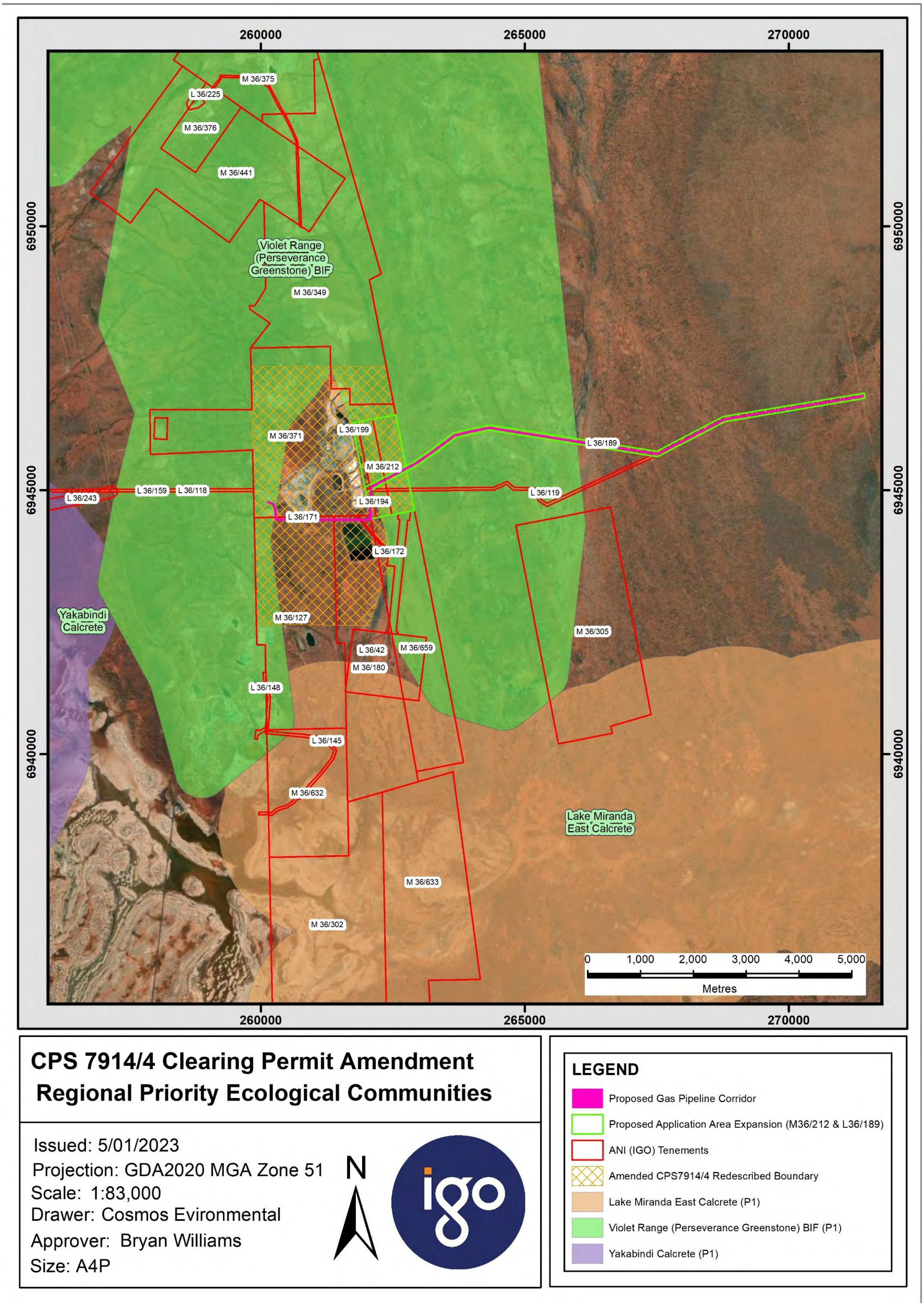
No Threatened Ecological Community (TEC) pursuant to Commonwealth or State legislation are located within the proposed redescribed clearing permit boundary. Vegetation is consistent with that previously mapped by Mattiske (2005), PEK (2017) and Botanica (2018) which are not limited to the Project area, and in which no DRF/Priority flora were included. Consistent with the original CPS 7914/1 application (and amendments 2 and 3), the proposed extension area (gas pipeline) is situated within the buffer zone of a Priority 1 PEC; the 'Violet Range (Perseverance Greenstone) vegetation complexes (banded ironstone formation).' This buffer has a mapped extent of over 19,000 hectares and the PEC a known extent over 14,000 hectares. PEK (2017) identified the four vegetation communities comprising this PEC, are unlikely to be found at the Project given that the survey area is located almost 100% on colluvial sheet wash plains, sheet wash deposits and alluvial floodplains and is situated to the east of the Violet Range. In addition, no areas of BIF have been mapped at the Project. The vegetation located within the proposed clearing area is not representative of the vegetation within this PEC. Three Priority 1 Priority Ecological Communities (PEC's), associated with unique stygofauna communities in calcrete are located around Lake Miranda: Lake Miranda West, Lake Miranda East and Yakabindie. These will not be impacted by the proposed clearing.

Specific to the extension to the clearing permit boundary, the central section of the proposed gas pipeline lies within the Priority 1 PEC (and buffer zone) 'Violet Range (Perseverance Greenstone) vegetation complexes (banded ironstone formation). The pipeline comprises <0.2% of the total area of the PEC. The vegetation located within this section of the proposed gas pipeline is not BIF but does contain reference to ironstone and quartz rocks for the A1 and S2 vegetation groups.

In addition to 'Violet Range – P1 PEC, three Priority 1 PEC's are associated with unique stygofauna communities in calcretes of Lake Miranda: Lake Miranda West, Lake Miranda East and Yakabindie (Figure 5).

The existing and proposed clearing area does not lie within or contain any ESA's or Conservation Reserves (DWER, 2022). The Wanjarri Nature Reserve (southern boundary) is located approximately 10 km north of the application area.

Figure 5 - Location of PEC at CNO and in region



3.3.3 Introduced Flora and Fauna

Several weeds have been recorded at the Cosmos area:

- Paddy melon (Citrillus lanatus)
- Prickly paddy melon (Cucumis myriocarpus).
- Ruby dock (Acetosa vesicaria)
- Various thistles (Sonchus sp)
- Rosetted Tobacco (Nicotiana rosulate)
- Buffel Grass (Cenchrus ciliaris)

These species have mostly been recorded in disturbed or rehabilitated sites. Citrullus lanatus has been recorded within an undisturbed area along a drainage line.

These species are not declared weeds under the Biosecurity and Agriculture Management Act 2007. Weed management is undertaken onsite, with a report proved in Appendix F.

Several feral animals that have been declared a pest under the Biosecurity and Agriculture Management Act 2007 (BAM Act) have been recorded within the Cosmos area and include:

- Red Fox (Vulpes vulpes)
- Rabbit (Oryctolagus cuniculus)
- Feral Cat (Felis catus)
- Feral Donkey (Equus asinus)
- Feral Dog/ Dingo (Canis familiaris)

3.3.4 Terrestrial Fauna

Five terrestrial fauna surveys have been completed at CNO since 1999 (**Appendix B**).

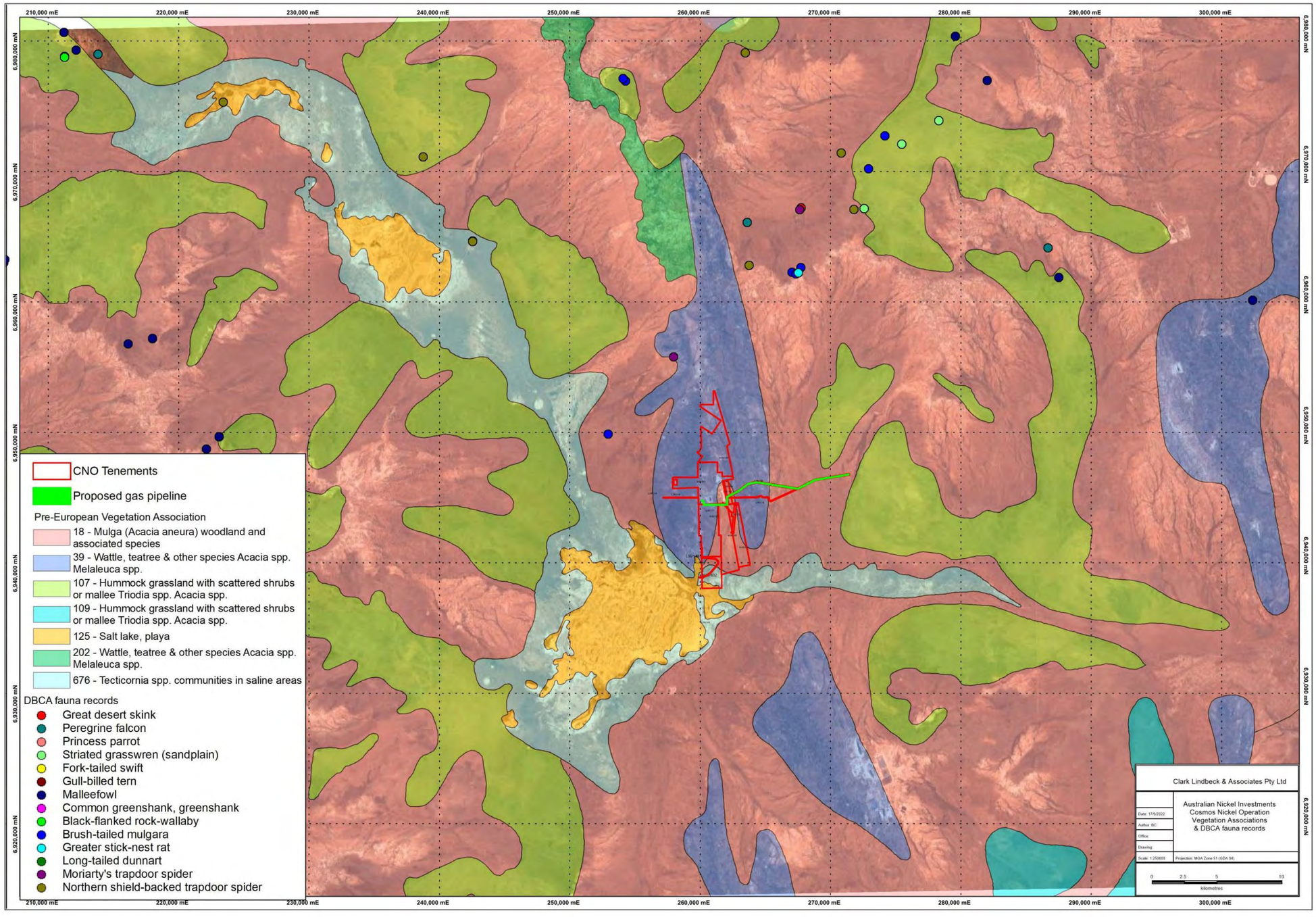
No currently listed fauna species of conservation significance were recorded during any of the previous surveys and field searches have recorded no preferred or critical habitat types for any conservation significant vertebrate fauna species.

From the most recent assessment, only two fauna species of conservation significance were considered to possibly occur: Malleefowl and Rainbow Bee-Eater, although no evidence Malleefowl mounds or Rainbow Bee-eater burrows were observed.

A likelihood of occurrence/potential impact summary of significant fauna within 100km of the application area is included in **Appendix B**.

Conservation significant fauna records within 50km are shown below on Figure 6.

Figure 6 - DBCA fauna records in CNO and surrounding region



3.4 Landform and Soils

The application area is located within the Eastern Murchison subregion, described as extensive areas of elevated red desert sandplains with minimal dune development. Internal drainage includes salt-lake systems associated with occluded paleodrainage systems. Broad plains with red brown soils are typically encountered and occasional breakaway complexes or red sandplains. Mulga woodlands are dominant and often rich in ephemerals (short life cycles), hummock grasslands (such as spinifex), and saltbush or samphire (succulent) shrublands (Cowan, 2001).

Land systems across the arid and semi-arid tropical regions were progressively classified and mapped, according to the geomorphology, soil and vegetation. The application area intersects eight Land Systems (Figure 7 and Table 3), predominantly the Jundee and Violet land systems. Typical characteristics of the Jundee Land System include gently inclined to level plains with mantles of fine ironstone gravel, subject to sheet flow, also sparse tracts receiving more concentrated run-on, and occasional irregular low sandy tracts and banks. The characteristics of the Violet Land System include extensive gently undulating to level plains and low rises with mantles of ironstone pebbles and level to very gently inclined plains subject to sheet flow with mantles of fine ironstone gravel.

Landforms belonging to the Violet Land System in this area generally form a part of the Perseverance Greenstone Belt. The landform type is generally described as an Undulating Plains landform which has formed over greenstone bedrock. Compared to the generally acidic granitic rocks, these greenstones are basic owing to high calcium and magnesium content. The undulating landscape consists of minor ridges, with slopes less than 10°, and colluvial flats, 50-500 m wide and 5 m below the ridges. The ridges (generally of hard metabasalts) and colluvial flats (ultrabasics) bore alkaline soils separated by a lime layer from the under-lying rock. Shallow calcareous earths and deep calcareous earths (to 1m deep) mantle the ridges and dips (respectively) of Undulating Plains. This landform occurs as a few large belts or islands surrounded by Broad Valleys. Colluvial flats are often drained by faint creek lines, too small to be mapped as Drainage Lines.

Details of land systems and associated regional scale soil types impacted by proposed clearing activities are provided in Table 3 and shown on Figure 7.

Figure 7 – Regional Land Systems

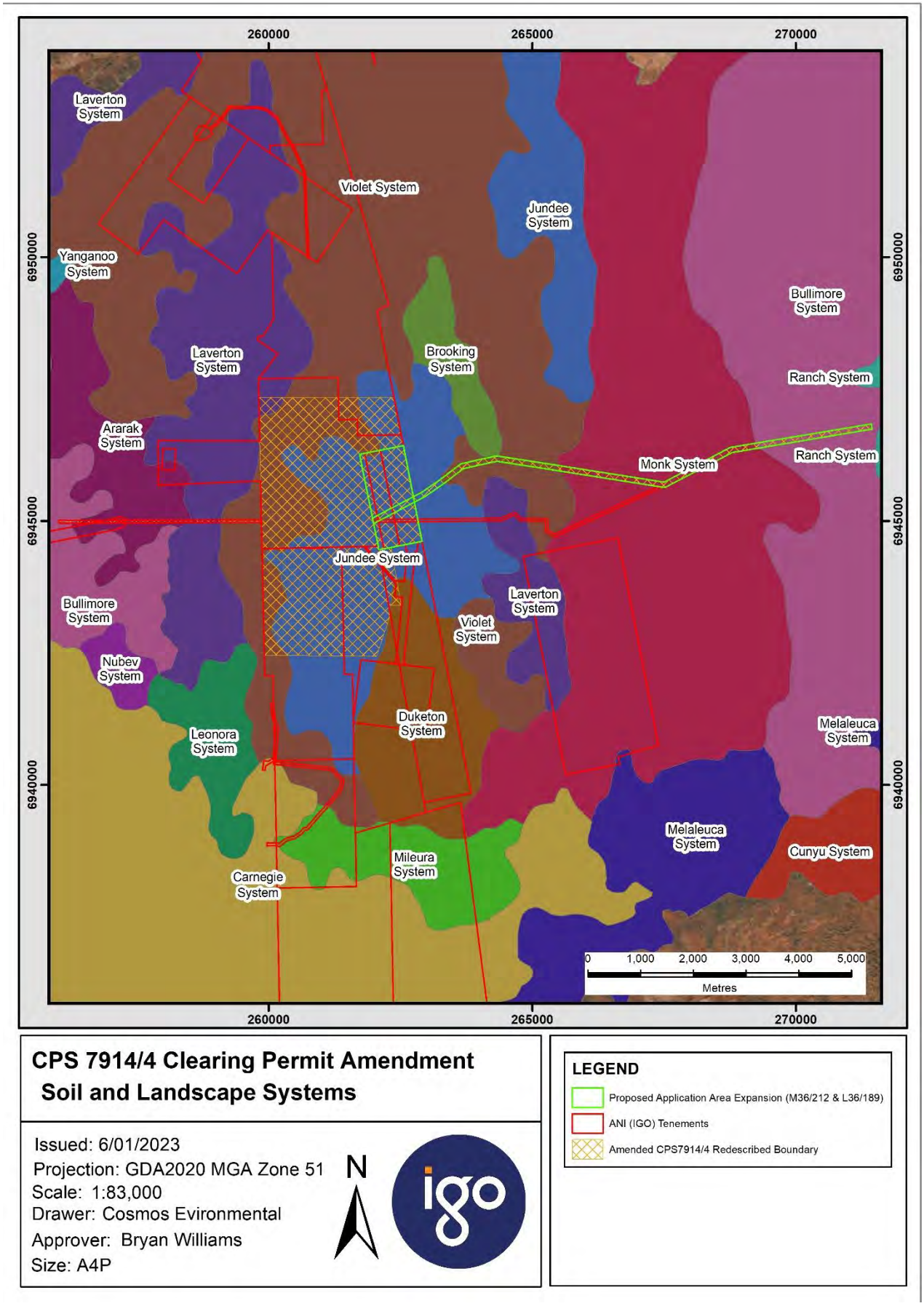


Table 3 – Land Systems

Land System	WA Soils	Description	Extent in Application Area (ha)
Ararak System	279A	Broad plains with mantles of ironstone gravel supporting mulga shrublands with wanderrie grasses.	10.68
Brooking System	279Br	Prominent ridges of banded iron formation supporting mulga shrublands and occasional minor halophytic communities.	0.21
Bullimore System	279Bu	Gently undulating sandplain with occasional linear dunes and stripped surfaces supporting spinifex grasslands with mallees and acacia shrubs.	23.65
Duketon System	279Dk	Stony wash plains and sandy banks supporting mulga shrublands and wanderrie grasses.	6.38
Jundee System	279Ju	Hardpan plains with variable gravelly mantles and minor sandy banks supporting weakly groved mulga shrublands.	873.31
Laverton System	279Lv	Greenstone hills and ridges with acacia shrublands.	15.96
Monk System	279Mk	Hardpan plains with occasional sandy banks supporting mulga tall shrublands and wanderrie grasses.	39.30
Violet System	79Vi	Gently undulating gravelly plains on greenstone, laterite and hardpan, with low stony rises and minor saline plains; supporting groved mulga and bowgada shrublands and occasionally chenopod shrublands.	432.12
			1401.61

3.5 Geology

The prescribed premises boundary lies within the Agnew-Wiluna portion of the Norseman-Wiluna Greenstone belt. The belt is attenuated and characterized by major wrench faults traceable over tens of kilometres with at least two phases of complex folding and generally steep dips. The greenstones are dominated by a sequence of NNW striking tholeiitic pillow basalts intercalated with a package of felsic to intermediate volcanoclastic-metasedimentary rocks and ultramafic spinifex textured and cumulate komatiite units.

The local area comprises a package of felsic to intermediate volcanoclastic rocks, with minor interflow sedimentary rocks and the polymictic Jones Creek Conglomerates. These units inter-connect with a sequence of tholeiitic basalts (Mt Goode Basalt) and two ultramafic komatiite flows, the Western and Central Ultramafic (Mt Goode Dunite) (EGI, 2018).

3.6 Hydrology and Hydrogeology

3.6.1 Surface Water

Cosmos is located within the Lake Carey sub-catchment of the Western Plateau Salt Lake hydrographic basin. There are several local catchments across which Cosmos fall, with numerous minor watercourses flowing towards Lake Miranda. These drainage features are ephemeral and only flow during large rainfall events associated with thunderstorms or cyclonic activity.

A main drainage feature situated to the east of Cosmos, Freshwater Creek, flows southward and feeds Lake Miranda during runoff events. Smaller tributaries to the north-west of Cosmos are directed around key landforms via large drains and out southwards joining the main drainage feature to Lake Miranda. The catchments at Kathleen Valley drain to the south west towards Goldfields Highway and Lake Miranda. Cosmos is not located within a Surface Water Proclamation Area.

3.6.2 Groundwater

The hydraulic gradient of the regional area is shallow and trends south towards Lake Miranda, the main groundwater sink. The region is characterised by areas of surficial sediments, rocks of low permeability and fractured and weathered rocks. Flow systems are described as local and intermediate within Precambrian rocks. Local systems have recharge and discharge areas within a few kilometres of one another and respond relatively rapidly (10 years) to increased groundwater recharge from large scale clearing and land activity changes. Groundwater levels are primarily sustained by rainfall recharge and groundwater salinity ranges from brackish to hypersaline (GRM, 2016). The pre-mining groundwater levels in the area of the Cosmos ranged between 15 to 20 metres below ground level (mbgl), equivalent to about 460 metres Reduced Level (mRL) Australian Height Datum (AHD).

4. ABORIGINAL HERITAGE

Cosmos is located within the Tjiwarl Native Title Determination Area. ANI works with the Tjiwarl to conduct archaeological and ethnographic heritage surveys to identify places of heritage significance under various Deeds of Agreement. ANI then works to avoid these areas in the design of the project with the aim to mitigate and minimise impacts to any places deemed significant and important to the Tjiwarl people.

ANI has commissioned and facilitated heritage surveys completed by the Tjiwarl people in order to identify any culturally significant sites. Effort to avoid these sites is made by placing and designing infrastructure around or away from these areas. This includes design amendments to avoid any areas of cultural and mythological significance. ANI will also engage a heritage monitoring team to relocate any known potential artefacts identified during the surveys prior to activity where required.

ANI is well progressed towards agreement of a broad Mining Agreement/ Land Access Agreement with the Tjiwarl. ANI will continue to consult with the Tjiwarl on aspects of the project and its planning. Where heritage sites cannot be avoided, ANI will apply for a Section 18 consent under the Aboriginal Heritage Act 1972 in consultation with the Tjiwarl to destroy the site or relocate the artefacts. The Section 18 application is a transparent process with the Tjiwarl AC whom are provided a draft of the application and opportunity to comment on it prior to its submission.

5. CLEARING PRINCIPLES

Schedule 5 of the Western Australian Environmental Protection Act (1986) provides a list of 10 clearing principles against which a proposal can be assessed to determine if clearing should proceed. A brief statement against these principles based on the outcomes of the proposed permit boundary amendment (CPS 7914/4) is provided below. The clearing principles for the existing approved CPS 7914/3 clearing boundary have been assessed in previous clearing permit applications and annual clearing compliance reports submitted to the department.

a) Native vegetation should not be cleared if it comprises a high level of biological diversity

The Project lies within the central area of the Eastern Murchison (MUR1) Interim Biogeographic Regionalisation for Australia (IBRA) Sub Region of the Murchison Biogeographic Region which totals over 7.8 million hectares (Cowan, 2001).

Based on Beard (Shepherd et al. 2002), two vegetation associations occur in the proposed clearing areas:

- 18: Low woodland; mulga (Acacia aneura)
- 39: Shrublands; mulga scrub.

These vegetation associations are well represented, with more than 98% of pre-European levels of native vegetation remaining within the State and Bioregion (Government of Western Australia, 2019; GIS Database).

Eight vegetation groups were mapped by Mattiske (2006) along the gas pipeline corridor and no DRF or Priority flora species were recorded, or, have ever been recorded at CNO.

The Project will not significantly reduce the extent of the local vegetation communities recorded at the Project. It is expected that all fauna habitats within the proposed gas pipeline corridor are common within the locality and occur contiguously with the same habitat types outside of the clearing area.
The overall fauna assemblage within the study area would not be unique and would also occur outside of the study area.

Based on the above, the proposed clearing envelope is not considered to comprise a high level of biological diversity. All vegetation groups are represented extensively outside the proposed clearing area and the proposed clearing is not expected to reduce the biodiversity of the area. Based on the above, the proposed clearing is not at variance to this Principle.

b) Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia

A search of current available flora and fauna databases identified a number of conservation significant species within the local area (20 km radius) (DBCA, 2022b):

- Trapdoor spider (Kwonkan moriartii – P2). The Trapdoor spider (Kwonkan moriartii) is a relic collection from 1962. There have only been two individuals of this species

recorded from the entire Eastern Murchison subregion, and collection data suggests that herbaceous graminoids and/or sparse hummock grassland is the preferred habitat which is not located in the proposed clearing area (DPaW, 2018).

- Brush-tailed Mulgara (Dasycercus blythii – P4). Recorded in spinifex sandplain and this habitat is not located in the proposed clearing area.

No evidence of conservation significant fauna has been recorded in fauna survey work completed at CNO to date.

As the vegetation groups, part of the extension to the overall clearing area, are consistent with those previously identified, no critical habitat types are expected to be impacted.

Given the mobility of fauna species and the lineal nature of the proposed clearing, it is considered the proposed clearing would have no impact on the conservation significance of fauna species.

All fauna habitats within the proposed clearing envelope are common in the local area and occur contiguously with the same habitat types outside of the proposed clearing area.

In relation to SRE species, the habitats identified within the study area are typical of those occurring in the wider subregion and they are also contiguous with very similar habitat extending beyond the study area.

Using habitat as a surrogate to infer wider distributions, if an SRE taxa were to occur, they would not be restricted solely to the survey area, as there are no geomorphological or habitat attributes that would suggest a high risk of species level distributions being restricted to the scale of the survey area.

ANI considers that the proposed clearing area is not necessary for the on-going maintenance of any significant fauna habitat and that equal or higher quality vegetation and fauna habitats exist throughout the surrounding area (i.e. with less disturbance).

In addition, the proposed clearing will not significantly reduce the extent of flora or fauna habitats at the Project or in the region. Given the above, the proposed clearing will not be at variance to this Principle.

c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora

No plant taxa located in the proposed clearing area are gazetted as Threatened under the EPBC Act or BC Act. No Priority flora has been recorded at the Project.

Given the above, the proposed clearing will not be at variance to this Principle.

d) Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of a Threatened Ecological Community (TEC)

No TEC's are listed under the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 or endorsed by the Western Australian Minister for the Environment for the Project area.

Therefore, the proposed clearing is not at variance to this Principle.

e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared

The proposed clearing comprises two Beard Vegetation Associations all of which have approximately 98% of their pre-European extent remaining.

Given the above, the vegetation proposed to be cleared cannot be considered significant as a remnant in an area that has been extensively cleared.

Therefore, the proposed clearing will not be at variance to this Principle.

f) Native vegetation should not be cleared if it is growing, in, or in association with, an environment associated with a watercourse or wetlands

A series of small drainage lines trend east and south-east from rocky hills to the west, joining a main north-south drainage line known as Freshwater Creek. Freshwater Creek becomes less distinct toward the south where surface water flows are less confined within channels and flood across a wider plain. Surface drainage is largely via sheet flow with surface water flow only following periods of heavy rainfall.

Ephemeral drainage lines are present in the overall clearing area and surface runoff within these drainage lines only flows following heavy rainfall associated with thunderstorms or cyclonic activity. The vegetation in these drainage lines is not considered to be riparian vegetation.

There is, therefore, no vegetation growing in association with a water course or wetland. The proposed clearing is not at variance to this Principle.

g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation

The clearing permit area is broadly predominantly mapped as the Violet and Jundee land systems according to Pringle et al., 1994.

The proposed clearing of vegetation is not likely to lead to land degradation issues such as salinity, water logging or acidic soils and therefore is not at variance to this Principle.

h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area

There are no conservation or nature reserves within the Project area.

The Wanjarri Nature Reserve is approximately 12 km north east of the proposed clearing area.

Given the distance to the nature reserve, the proposed clearing will not have any impact on the environmental values of the area. The proposed clearing, therefore, is not at variance to this Principle.

i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water

Surface water in the Project area is sourced from direct precipitation and surface runoff following rainfall events. The Murchison area often receives considerable rainfall from degenerating cyclonic depressions from the northern parts of the State. However, overall, the mean annual rainfall is only 266.2 mm.

Evaporation rates in the region vary from 3000-3200 mm annually.

With such high annual evaporation rates, there is little surface flow during normal seasonal rains. Given the low annual rainfall and high evaporation rate there is expected to be minimal rainfall recharge that would impact the groundwater levels or the quality of the groundwater in the local region.

There is no surface water of significance, large drainage lines, lakes or swamps in or in close proximity to the proposed clearing area. Drainage lines at CNO are ephemeral and only flow following significant rainfall.

The area proposed to be cleared does not fall within a Public Drinking Water Source Area (PDWSA) or PDWSA Protection Zone (www.dow.wa.gov.au).

The clearing of native vegetation is not likely to cause deterioration in the quality of surface or groundwater and, therefore, the proposed clearing is not at variance to this Principle.

j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding

The area proposed to be cleared is surrounded by native vegetation. The climate of the Eastern Murchison subregion is arid, with a variable bimodal rainfall that usually falls in winter (Cowan, 2001). Annual average rainfall is only 266.2 mm with little surface flow during normal seasonal rains.

As there is little surface flow during normal rains, the proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding. Therefore, the proposed clearing is not at variance to this Principle.

6. ENVIRONMENTAL MANAGEMENT

6.1 Disturbance Data

Disturbance data is managed through the internal Land Use Permitting system. All clearing under CPS 7914/3 is recorded using GPS in accordance with condition 7 of CPS 7914/3. Information including date, total area cleared and purpose for the clearing is recorded and reported annually to DMIRS.

Disturbance data has been verified through orthophotography captured in 2017 (aerial flyover) and 2019 (drone flyovers), sentinel satellite imagery, as well as using survey pickups and visual checks on the ground. Disturbance is assessed continuously and amendments made where additions or corrections are required. The most recent annual report, required under condition 8 (a) of the permit is provided in **Appendix C**.

6.2 Weed Management

In accordance with condition 5 of CPS 7914/3, a weed management program is implemented at Cosmos to prevent and control invasive weed species. Targeted weed spraying is undertaken by environmental contractors annually and add hock spraying is undertaken inhouse by site-based environmental personnel. Report on June 2021 weed management program is provided in (**Appendix D**).

6.3 Water Course Management

In accordance with condition 6 of the permit, where a water course may be impacted by clearing, ANI installs surface water infrastructure where required to control and direct surface water flows to minimise flooding and maintain the existing surface flow. This may include bunding, culverts, drainage lines or collection sumps. ANI also grade areas as required to ensure any potentially contaminated stormwater or runoff from clearing is directed to a designated collection area and treated accordingly if reused or disposed.

Surface water management is incorporated into the design of the site infrastructure for a 1 in 100-year event. Various flood inundation scenarios have been modelled. Drainage infrastructure has been

constructed around key mining activities and landforms, with drainage channels diverting regional rainfall through and around the mine site to prevent flooding and preserve water quality.

6.4 Environmental Commitments

ANI is committed to Environmental Sustainability through its Environmental Policy, which includes minimising impacts on the environment and local communities. As part of this application ANI is proposing the following:

ANI environmental personnel will undertake an internal ground and desktop search as per the Cosmos Land Use Procedure CNO-ENV-PRO-3316 targeting the proposed area to be cleared plus 50 m buffer.

- Avoid clearing large trees and fauna breeding habitat identified for conservation significant species.
- Avoid disturbing any significant drainage line so as not to alter its flow.
- Where possible, utilise previously disturbed areas to minimise impacts on natural bushland.
- Rehabilitate all sites and tracks as per the Cosmos Mine Closure Plan.
- Undertake weed control as per the Cosmos Weeds Spraying and Chemical Handling Procedure
- Avoid clearing Priority Flora (PF) and maintain a buffer area of 10 around and plants/populations identified. Where impacts to individual plants or buffer areas cannot be avoided, seek advice from DBCA prior to undertaking any works.

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APPENDIX B – 2022 DESKTOP FLORA AND FAUNA ASSESSMENT

AUSTRALIAN NICKEL INVESTMENTS PTY LTD

COSMOS NICKEL OPERATION PROPOSED GAS PIPELINE

DESKTOP FLORA AND FAUNA ASSESSMENT

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1.0 INTRODUCTION

1.1 BACKGROUND

Australian Nickel Investments Pty Ltd (ANI) purchased Cosmos Nickel Operation (CNO) in 2015 with the aim of recommencing development at the Project. Mining at the Project historically was undertaken by Jubilee Mines NL from 1999-2007 and then by Xstrata until the Project was placed on care and maintenance in 2012.

ANI discovered the Odysseus nickel ore body below the Cosmos open pit and development of the Odysseus mine at Cosmos is ongoing, with underground mine development progressing alongside the construction of surface infrastructure.

A new dual-fuel (gas and diesel) power station was completed in 2021 and the Goldfields Gas Pipeline (GGP) Cosmos Spur connecting the GGP to the power station was reinstated and will support the next phase of development and operations at CNO.

To provide additional supply of gas to the power station, ANI propose to construct an additional 12.6 km lateral gas pipeline from the GGP to the CNO alongside the existing spur. It is anticipated that clearing for the pipeline will be approximately 40 m wide during construction, following all will be rehabilitated with the exception of a single lane access/inspection road along the pipeline.

1.2 OBJECTIVES

This desktop assessment has been completed to:

- provide a summary of the flora/fauna work completed at CNO
- complete a preliminary assessment of the potential occurrence of flora and fauna species of conservation significance in the Project area and surrounds, and, potential impacts of the proposed 12.6 km lateral gas pipeline on conservation significant flora and fauna.

1.3 LOCATION

The Project is located approximately 40 km north of Leinster. Access via road is from the Goldfields Highway north of Lake Miranda (Figure 1). The Project is located in the Shire of Leonora.

The tenure of the proposed additional lateral gas pipeline is shown in Figure 2.

1.4 LEGISLATIVE CONTEXT

Flora and fauna in Western Australia is protected formally and informally by various legislative and non-legislative measures, which are:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) – Australian Government
- *Biodiversity Conservation Act 2016* (BC Act) – WA State Government.
- WA Department of Biodiversity, Conservation and Attractions (DBCA) Priority lists for flora, ecological communities and fauna (non-legislative)
- Recognition of locally significant populations by DBCA (non-legislative).

An outline of the conservation rating categories is provided in Appendix 1.

Figure 1: Location of the Project

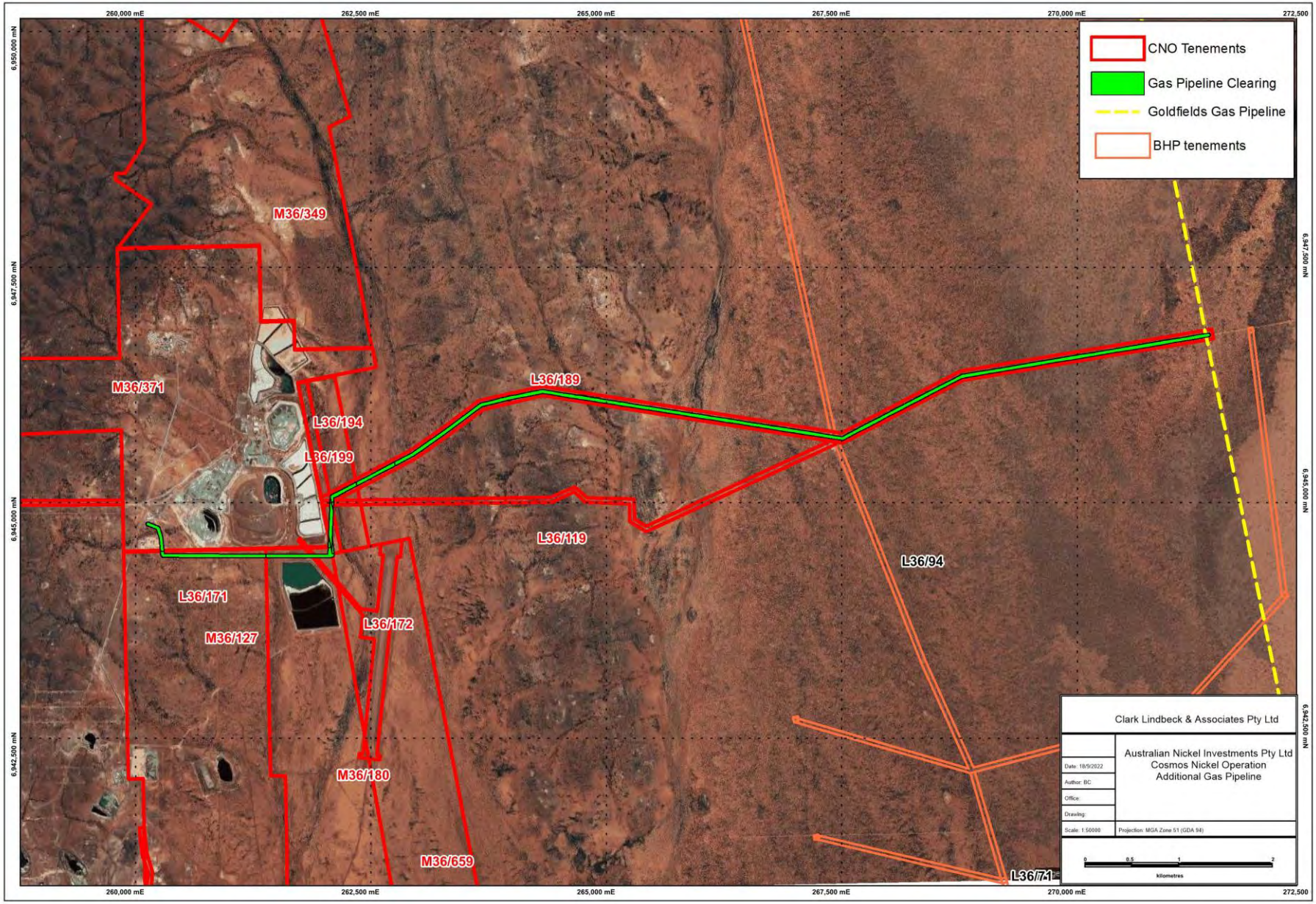

Figure 2: CNO tenure and proposed clearing

2 METHODOLOGY

2.1 LITERATURE REVIEW

A number of vegetation and fauna assessments have been completed at CNO since the Project commenced and these were reviewed as part of the desktop assessment. In addition, several vegetation and fauna assessments have been completed regionally, in particular and more recently ~40km north for the BHP Billiton Mt Keith satellite Project. The records of flora or fauna of conservation significance and the habitat were reviewed to ascertain if similar habitat is present within the proposed gas pipeline route.

2.2 DATABASE SEARCHES

2.2.1 Environmental Protection and Biodiversity Conservation Act Protected Matters

The *EPBC Act* Protected Matters Search tool (PMST) was utilised to provide results for matters of National Environmental Significance within the proposed clearing area with a 50 km buffer (DCCEEW, 2022). The results are attached as Appendix 2.

2.2.2 Flora

A search of the DBCA Threatened/ Priority flora spatial database (DBCA, 2022a) was undertaken to aid in the compilation of a list of conservation significant flora at the Project, in particular, any new records since the previous biological survey work.

2.2.3 Fauna

A search of the DBCA Threatened/ Priority fauna spatial database (DBCA, 2022b) was undertaken to aid in the compilation of a list of conservation significant fauna at the Project, in particular, any new records since the previous biological survey work.

2.2.4 Communities

The presence of Threatened and Priority Ecological Communities (TEC's & PEC's) was determined by examining Geographic Information System (GIS) data supplied by the DBCA upon request within a 100 km buffer of the survey area shapefile (DBCA, 2019).

2.2.5 Environmentally Sensitive Areas (ESA's) and Conservation Reserves

The Department of Water and Environmental Regulation (DWER) Clearing Permit System Map Viewer was used to determine the location of any ESA's and Conservation Reserves (DWER, 2022c).

2.2.6 Vegetation Type and Extent

Vegetation extent and status data was sourced from the Department of Agriculture and Food (DAFWA) report and its associated GIS file (Shepherd *et al*, 2002). This data comprises Beard's Pre-European vegetation groups.

3 LITERATURE REVIEW

3.1 COSMOS VEGETATION SURVEY WORK UNDERTAKEN TO DATE

3.1.1 Overview

The Cosmos Project is located in the Austin Botanical District of the Eremaean Province, as defined by Beard (1990). The Austin Botanical District covers over 300 000 km^2 and is essentially Mulga (*Acacia aneura*) woodlands associated with red loams over siliceous hardpans on the plains reducing to scrub on the rises and hills (Beard, 1990). Mulga and *Eremophila* shrublands dominate on stony plains whilst chenopod communities are more often associated with duplex soils (Pringle *et al*, 1994).

Numerous vegetation surveys have been undertaken at the Project including historically Dames and Moore (1998) and Mattiske Consulting Pty Ltd (Mattiske) (2000 – 2009, 2011), and more recently PEK Enviro (2017) and Botanica Consulting (2018) (Table 1).

The PEK (2017) assessment identified vegetation groups based on landforms and are consistent with that identified by Mattiske (2004, 2005) and that the vegetation types recorded are considered to be common and widespread regionally.

To date, 89 species, from 40 genera and 19 families have been recorded on the site (PEK Enviro 2017).

No Threatened or Priority flora species have been recorded at the Project to date.

Table 1: List of vegetation surveys completed at the Project

YEAR	SURVEY TITLE
1998	Dames & Moore (1998). Vegetation of the Cosmos Nickel Project.
2000	Mattiske (2000). Flora and Vegetation Assessment of the Proposed Pipeline Route Options – Cosmos Nickel Project.
2003	Mattiske (2003). Flora and Vegetation Survey of the Proposed Airstrip Extension – Cosmos Nickel Project.
2004	Mattiske (2004) Flora and Vegetation Survey of the Proposed Cosmos Nickel Expansion, Prepared for URS Australia, May 2004.
2005	Mattiske (2005) Flora and Vegetation Survey of the Cosmos Nickel Project, including the Prospero Expansion Area.
2006	Mattiske (2006). Flora and Vegetation Survey of the Proposed Gas Pipeline and Area M36/212, Cosmos Mine Site. Report prepared for Jubilee Mines NL, October 2006
2011	Mattiske (2011) Flora and Vegetation Survey of Proposed Evaporation Pond Extensions, Cosmos Nickel Project.
2017	PEK Enviro (2017) Cosmos Nickel Project. Level 1 Vegetation, Flora and Fauna Survey.
2017	Botanica Consulting Pty Ltd (2017) Vegetation Monitoring Cosmos Nickel Operations. Prepared for Western Areas Limited. November 2017.
2018	Botanica Consulting (2018b) Memorandum: Cosmos Water Management Pond Expansion, Flora and Vegetation Desktop Assessment. Prepared for Western Areas Ltd. May 2018.

3.1.2 Survey of gas pipeline route

Mattiske (2006) completed a flora and vegetation assessment of the original gas pipeline route corridor (L36/189, L36/194, M36/212 – now L36/199), within which the new proposed gas pipeline will be constructed.

The vegetation map and descriptions recorded by Mattiske (2006) are presented in Figure 3 and those mapped by Mattiske (2005) along the western side of the gas pipeline corridor in Figure 4.

The survey area, which is consistent with that for the proposed gas pipeline (second spur), recorded eight vegetation groups and all were considered to be widespread and well represented outside of the surveyed area with the exception of A2. The A2 vegetation group (occurring in red gravelly clays in minor flow lines, Mattiske 2006) comprises a very small section of the proposed clearing area and is expected to be contiguous either side of the surveyed area (Figure 3).

The survey recorded a total of 23 families, 39 genera, 59 species and 68 taxa. Two weed species were recorded: *Lysimachia arvensis* (formerly *Anagallis arvensis* var. *caerulea*) and *Citrullus colocynthis*. These species are not listed as 'Declared Pests' under the *Biosecurity and Agriculture Management Act 2007* (DPIRD 2022).

No DRF or Priority flora were recorded along the gas pipeline route by Mattiske (2005; 2006).

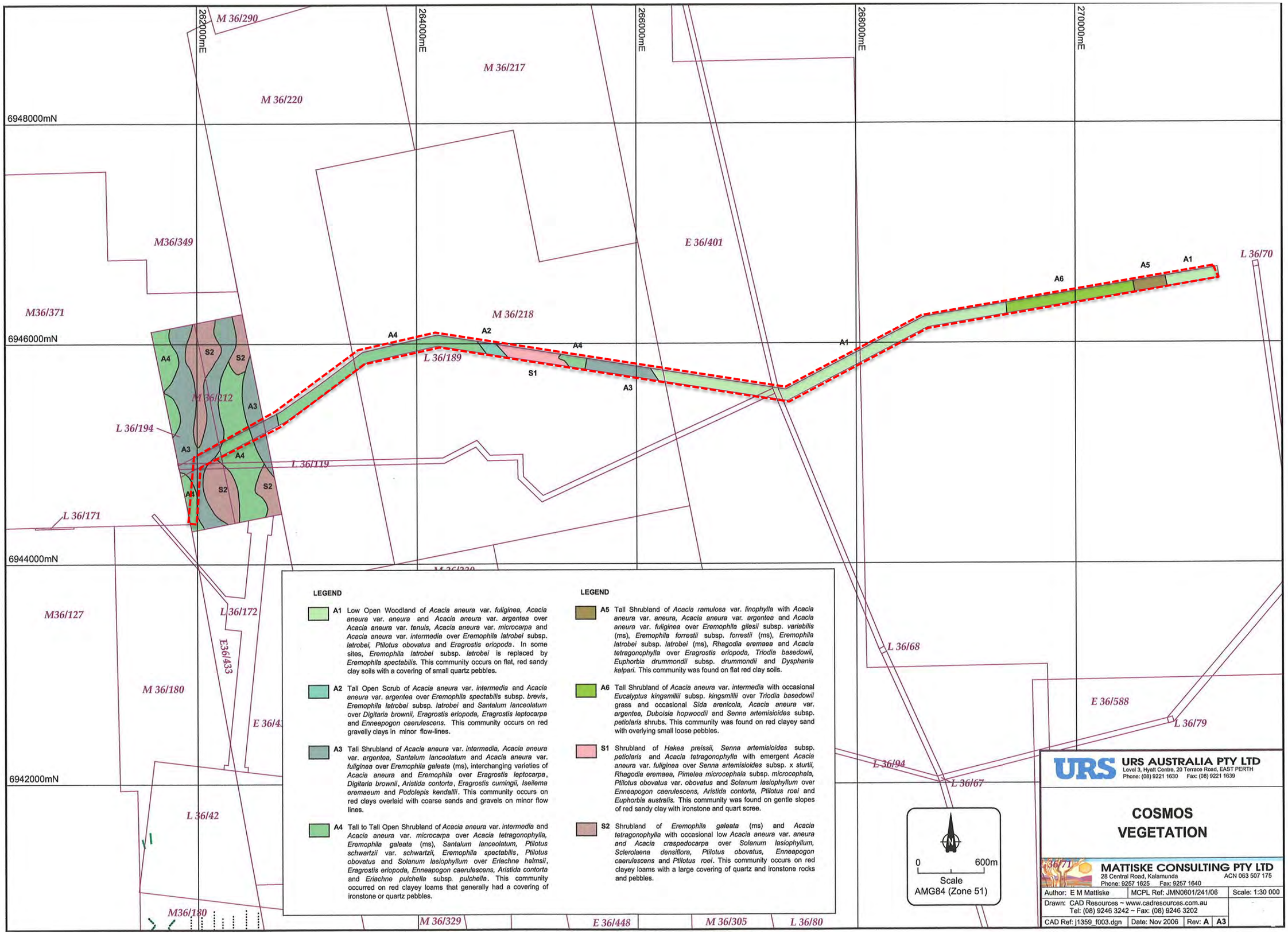

Figure 3: Vegetation communities mapped by Mattiske (2006) along the gas pipeline route (from Mattiske 2006) – red dashed line is the pipeline route *currency of species names has not been validated

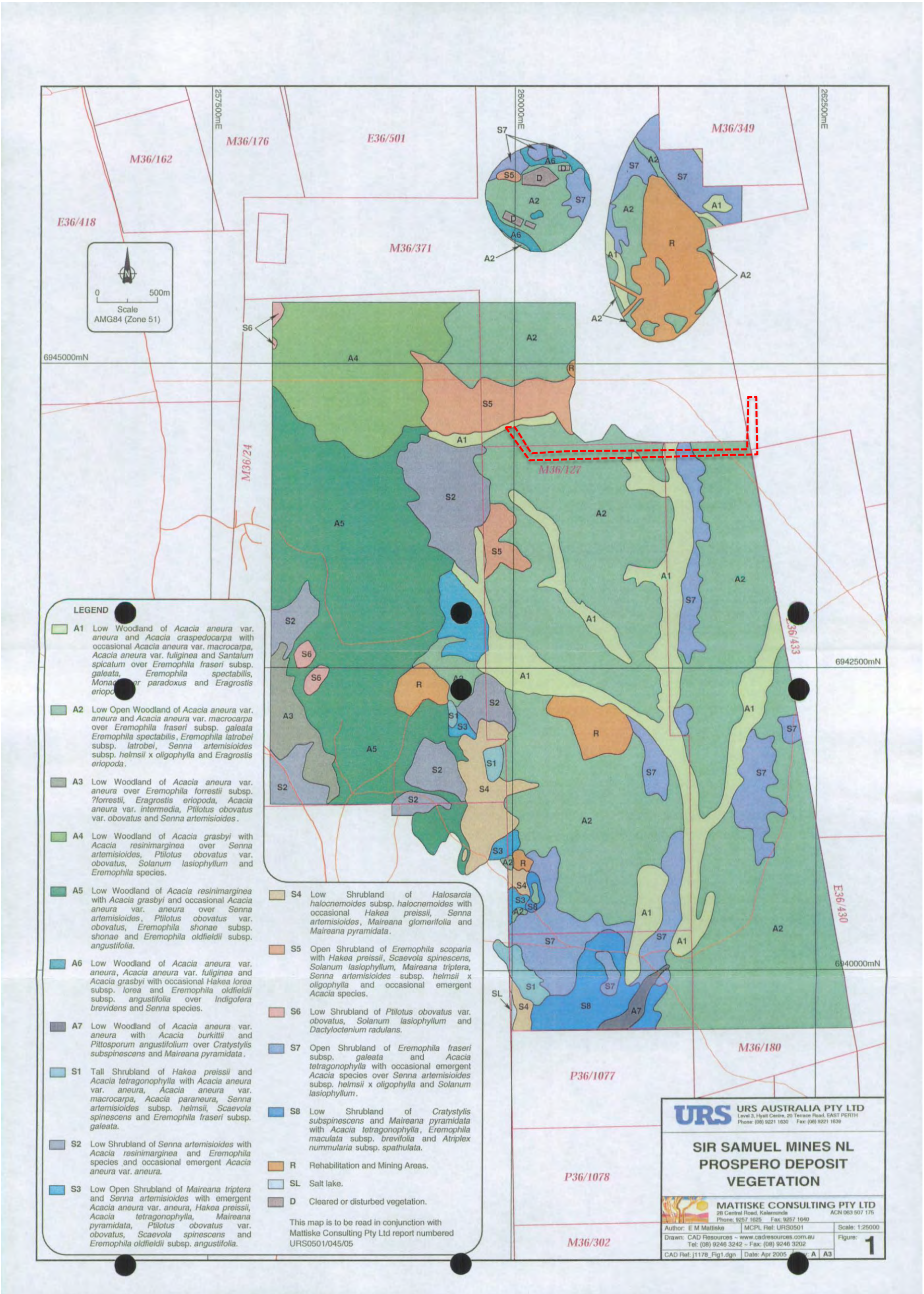

Figure 4: Vegetation groups identified at the Project on the western side of the gas pipeline route (from Mattiske 2005) – hatched red line is western extent of pipeline route

3.2 COSMOS FAUNA SURVEY WORK UNDERTAKEN TO DATE

3.2.1 Terrestrial Fauna

Five terrestrial fauna surveys have been completed at CNO since 1999:

- Hart, Simpson and Associates (1999). A Vertebrate Fauna Assessment of the Cosmos Nickel Project Area.
- Biota Environmental Sciences (2003). Bellevue Mine Airstrip Extension - Rare Fauna Survey. Letter report to URS Australia, 5 July 2003.
- Biota Environmental Sciences (2004) Cosmos Nickel Mine Extension Fauna Survey.
- Ninox Wildlife Consulting (2005) Vertebrate Fauna Habitat Assessment of the Proposed Expansions to the Cosmos Nickel Mine, Near Leinster, Western Australia.
- PEK Enviro (2017). Cosmos Nickel Project. Level 1 Vegetation, Flora and Fauna Survey.

No currently listed fauna species of conservation significance were recorded during any of the previous surveys and field searches have recorded no preferred or critical habitat types for any conservation significant vertebrate fauna species (PEK, 2017; Ninox 2005).

From the most recent assessment, PEK (2017) only two fauna species of conservation significance were considered to possibly occur: Malleefowl and Rainbow Bee-Eater, although no evidence Malleefowl mounds or Rainbow Bee-eater burrows was observed.

4 DATABASE SEARCH RESULTS

4.1 EPBC PROTECTED MATTERS SEASRCH TOOL RESULTS

The results of the EPBC PMST in relation to threatened flora and fauna have been incorporated in the flora and fauna database results sections.

The EPBC search results confirmed there are no TEC's or Commonwealth listed Reserves at or surrounding the proposed gas pipeline.

4.2 FLORA DATABASE RESULTS

A search of the EPBC PMST and DBCA Threatened flora database (50 km and 100 km buffer respectively) revealed 50 flora species of conservation significance. The results are attached as Appendix 2 (EPBC) and Appendix 3 (DBCA) respectively.

Seringia exastia was listed in the DBCA results, but has recently had its Threatened status delisted (as of 30 September 2022), as such it is not included in Table 2.

Table 2 and Figure 5 present the 24 flora species of conservation significance recorded within 50 km of the Project and their preferred habitat and likelihood of occurrence.

Table 2: DBCA threatened flora search results within TR and surrounds

Taxon	Cons Rating	Preferred habitat*	Closest records	Likelihood of occurrence
Atriplex yeelirie[1]	T	Highly restricted population on Yeelirie Station within palaeovalley of Yilgarn valley (associated with near surface Uranium mineralisation).	Yeelirie Station; Albion Downs	Unlikely – no preferred habitat
Anacampseros sp. Eremaean (F. Hort, J. Hort & J. Shanks 3248)	1	Sand patches inside rocks, brown sandy clay, granite. Depressions in rock outcrops, breakaways, flats	Yakabindie Station	Unlikely – no preferred habitat or local records
Eremophila congesta	1	Lateritic outcrops in greenstone hills, stony quartzite slopes.	Mount Keith	Unlikely – no preferred habitat
Swainsona katjarra	1	*Eucalyptus camaldulensis* open woodland over mulga, *Melaleuca* sp. and *Grevillea spinosa* shrubland;	Yakabindie Station	Unlikely – no preferred habitat
Eremophila sp. long pedicels (G. Cockerton 1975)	2	Drainage line. Dark red loam. Dark red hardpan over palaeochannel; Mulga woodland	Mt Keith	Unlikely – no local records.
Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Weathered granite, coarse siliceous silty sand; Breakaways	Yakabindie Station (Mt Keith Satellite operation)	Unlikely – no preferred habitat
Austroparmelina macrospora	3	Red brown clayey sand, plain.	Wanjarri Nature Reserve	Possible – low (no local records)
Baeckea sp. Sandstone (C.A. Gardner s.n. 26 Oct. 1963)	3	Orange sand. Flats.	31 km W of Agnew	Unlikely – no preferred habitat
Bossiaea eremaea	3	Red sandplain; Deep red sand.	Wanjarri Nature Reserve	Unlikely – no preferred habitat
Goodenia modesta	3	Rangeland, salt lake, grey clay. Red loam, sand.	West side Lake Miranda; Yakabindie Station	Unlikely – no preferred habitat
Hybanthus floribundus subsp. chloroxanthus	3	Dark red-brown soil, never sandy, rich in iron oxide, laterite. Rocky areas, creek banks, along drainage lines.	Yakabindie Station.	Possible – low (no local records)

Taxon	Cons Rating	Preferred habitat*	Closest records	Likelihood of occurrence
Lysiandra baeckeoides	3	Ironstone slope.	Leinster Downs Station - >25 km south of CNO	Unlikely – no preferred habitat or local records
Olearia mucronata	3	Schistose hills, along drainage channels.	Waterfall gully	Unlikely – no preferred habitat
Sauropus sp. Woolgorong (M. Officer s.n. 10/8/94)	3	Red sand. Plains.	Leinster	Unlikely – no preferred habitat
Sida picklesiana	3	Granite breakaway plateaux and upper slopes of breakaways.	70 km SW Wiluna	Unlikely – no preferred habitat
Tecticornia cymbiformis	3	Salt Lake complex in red sandy clay.	Albion Downs Station	Unlikely – no preferred habitat
Thryptomene nealensis	3	Breakaways, skeletal soil	20 km NE Leinster	Unlikely – no preferred habitat
Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3	Sandstone outcrop; Stony hills; Breakaways	15 km NE Leinster; 30 km and 60 km N Leinster; Yakabindie Mine	Unlikely – no preferred habitat
Tribulus adelacanthus	3	Hardpan plain; Low stony hill	Mount Keith; 80 km NE Leinster	Possible
Verticordia jamiesonii	3	Sandy clay soils. Lateritic breakaways	Yakabindie Station; Wanjarri Nature Reserve; Leinster	Unlikely – no preferred habitat
Eremophila pungens	4	Sandy loam, clayey sand over laterite. Plains, ridges, breakaways.	Wanjarri Nature Reserve; Yakabindie Station; Lake Way Station; Leinster	Unlikely – no preferred habitat
Grevillea inconspicua	4	Loam, gravel. Along drainage lines on rocky outcrops, creeklines.	Yakabindie Station to Leinster; Violet Range; Boolylgoo Homestead	Possible – numerous local records
Hemigenia exilis	4	Laterite. Breakaways, slopes	Yakabindie Station; Wanjarri Nature Reserve; Mt Keith Station	Possible - numerous local records
Olearia arida	4	Sand plain; Red or yellow sand. Undulating low rises.	Albion Downs Station; Yeelirrie Project	Unlikely – no preferred habitat

*from DBCA records and Florabase (DBCA 2022)

*[1] – from EPBC PMST results

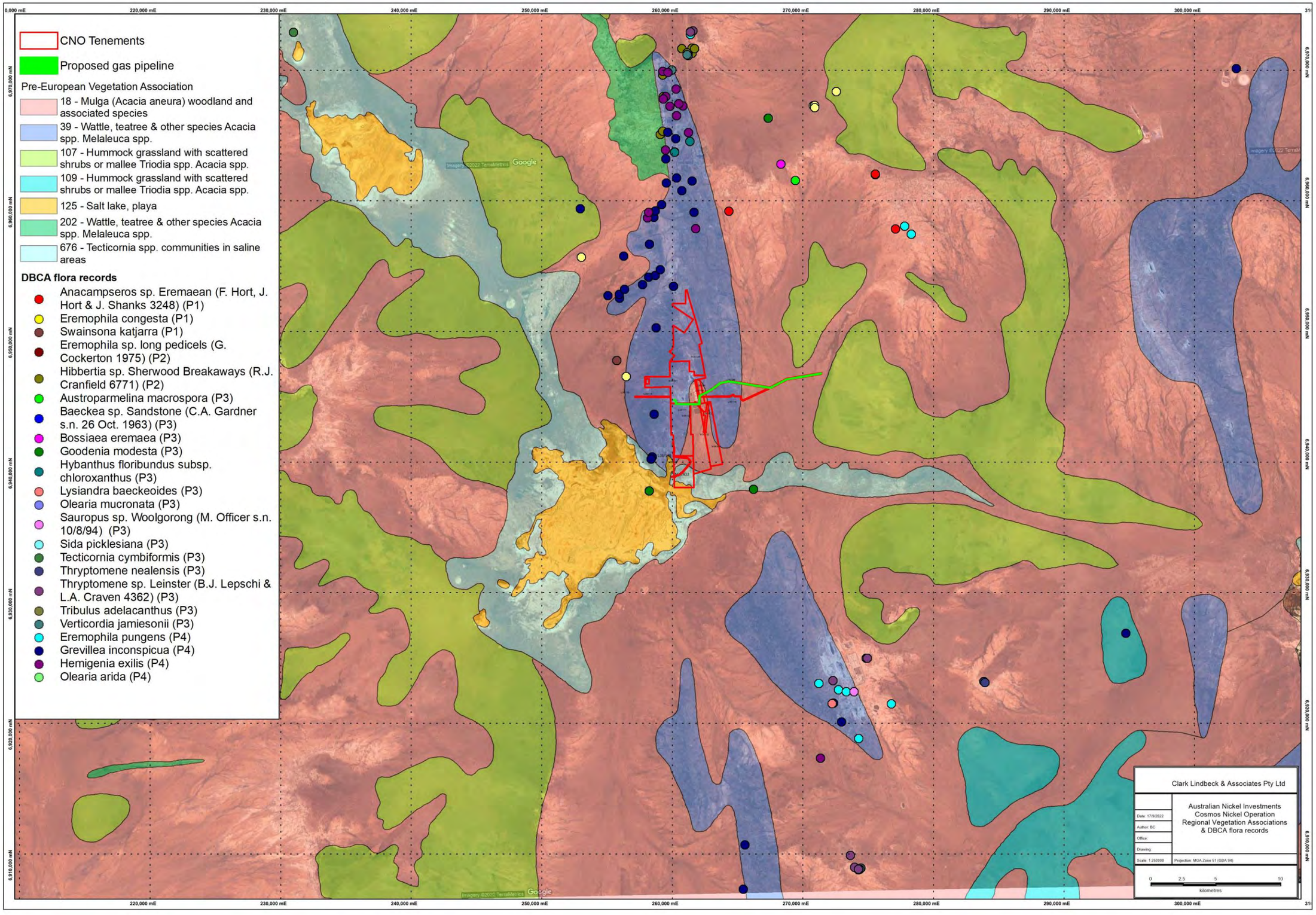

Figure 5: DBCA flora records in region

4.3 FAUNA DATABASE RESULTS

A search of the EPBC Protected Matters Tool (PMST) and DBCA Threatened fauna database (50 km and 100 km buffer respectively) identified a number of species, including wetland avifauna (some of which are listed as migratory and or marine) that inhabit estuaries, mudflats, saltmarshes, sandflats and beaches, wetlands with shallow water edges, where they feed on invertebrates such as worms, molluscs, insects and crustaceans (Garnett *et al*. 2011). There is no habitat for these species in the proposed gas pipeline area. The results are attached as Appendix 2 (EPBC) and Appendix 4 (DBCA) respectively.

It is important to note that the EPBC PMST is not entirely based on point records but also on broader information (e.g., bioclimatic distribution models), whereas the DBCA threatened fauna database is solely based on point records. Consequently, the results of the EPBC PMST are in some cases less accurate, particularly at a local scale. As a result, the EPBC PMST can include species that do not occur in the study area because, for example, there is no habitat available or they are now known to be locally extinct.

With the above species removed from the database searches, 14 fauna species of conservation significance present in the database searches are considered, including their likelihood of occurrence in the Project area and the potential impact of the Project (Table 3, Figure 6).

As the Project area is located within the medium priority survey area for the Night Parrot (*Pezoporus occidentalis*) (DPAW 2017), and potential range of the Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina),* these are included in Table 3.

The Malleefowl (*Leiopoa ocellata*), Peregrine Falcon (*Falco peregrinus*) and Northern shield-backed Trapdoor Spider (*Idiosoma clypeatum*) could potentially occur in native vegetation surrounding the Project, given the proximity of DBCA records and potential suitable habitat.

No evidence of these three species has been recorded in previous survey work completed at CNO.

Table 3: EPBC PMST and DBCA records of fauna of conservation significance recorded within 100km of CNO

SPECIES	CONSERVATION STATUS		LIKELIHOOD OF OCCURRENCE/POTENTIAL IMPACT
	DCCEEW*	DBCA**	
REPTILES			
Liopholis kintorei Great desert skink	VU	VU	The Western Spiny-tailed Skink population has declined significantly as a result of land-clearing and currently occurs in small isolated subpopulations and is found on rocky outcrops, hills and woodlands (Chapple *et al*. 2019). Record from 1964 at Wanjarri Nature Reserve >20 km to the north of CNO. As there are no rocky habitats in the proposed clearing area, this species is not expected to occur.
AVIFAUNA			
Amytornis striatus striatus (Striated Grasswren-sandplain)		P4	Closest records in Wanjarri Nature Reserve ~16 km to the north of the proposed clearing. This species prefers spinifex habitat with or without lows shrubs, on sandy or loamy plains (Johnstone and Storr 2004). This habitat is not located in the Project area; thus, it is considered highly unlikely to occur.
Falco hypoleucos (Grey Falcon) *[1]	VU		The species frequents timbered lowland plains, particularly *Acacia* shrublands that are crossed by tree-lined water courses (Garnett *et al*. 2011). No local records – record from EPBC PMST. The species is considered unlikely to occur, however, given the mobility of this species and the linear nature of the proposed clearing, it is considered the proposed clearing would have no impact on this species.
Falco peregrinus (Peregrine Falcon)		OS	The Peregrine Falcon is an uncommon but wide-ranging bird across Australia (Barrett *et al.* 2003). It occurs mainly along rivers and ranges as well as wooded watercourses and lakes and nests primarily on cliffs, granite outcrops and quarries. The species could occur, but given the mobility of the species and the linear nature of the proposed clearing, it is not expected to be impacted.
Leipoa ocellata (Malleefowl)	VU	VU	Malleefowl prefer habitat with a dense canopy and an open ground layer in which they can construct their mounds (Benshemesh 2007). The species may occur in areas surrounding the Project, however, there has been no evidence of Malleefowl (mounds or tracks) recorded during fauna survey work completed at CNO. Several records of this species within 20-40 km of CNO.
Polytelis alexandrae (Princess Parrot)	VU	P4	There is one record of this species in the DBCA threatened fauna database from 1964 at Wanjarri Nature Reserve. The Princess Parrot inhabits sand dunes and sand flats in the arid zone of western and central Australia. It occurs in open savanna woodlands and shrublands that usually consist of scattered stands of *Eucalyptus* (including *E. gongylocarpa*, *E. chippendalei* and mallee species), *Casuarina* or *Allocasuarina* trees; and understorey of shrubs such as *Acacia* (especially *A. aneura*), *Eremophila, Grevillea, Hakea and Senna*; and a ground cover dominated by *Triodia* species (Garnett & Baker 2021). This habitat is not located in the Project area, thus, this species is considered unlikely to occur.
Pezoporus occidentalis (Night Parrot) *[1], ***	EN	CR	This species was present only in the EPBC PMST database (there were no records in the DBCA threatened fauna database), and there are limitations with this PMST as outlined above. Sightings of the Night Parrot in WA comes from the Pilbara (12 April 2005) at a well near the Fortescue Marshes (Davis & Metcalf 2008), and near Matuwa (Lorna Glen), which is about 160 km north-east of Wiluna, in 2009 (Hamilton *et al*. 2017). There has been a more recent sighting just few years ago south east of Balgo in the Great Sandy Desert, but no exact location has been made public or published.

SPECIES	CONSERVATION STATUS		LIKELIHOOD OF OCCURRENCE/POTENTIAL IMPACT
	DCCEEW*	DBCA**	
			The Night Parrot is a highly elusive nocturnal ground dwelling parrot found in the arid and semi-arid zones of Australia (DoE 2020c). The broad habitat requirements of night parrots include areas of old-growth spinifex (*Triodia*) for roosting and nesting, together with foraging habitats that are likely to include various native grasses and herbs, and may or may not contain shrubs or low trees (DPaW 2017). These may be in expanses or isolated patches, but sometimes associated with other vegetation types, such as dense chenopod shrubs. As the Project area contains no spinifex, this species is considered unlikely to occur.
MAMMALS			
Dasycercus blythi (Brush-tailed Mulgara)		P4	There closest record is located ~8 km northwest of CNO in spinifex grasslands. The Brush-tailed Mulgara is associated mostly with hummock (spinifex) grasslands but also uses other vegetation types (often sandplains, grasslands and woodlands) when mixed with or adjacent to hummock grasslands. It is mainly nocturnal and shelters during the day in excavated burrow systems (Woinarski *et al*. 2014). There is no preferred habitat for this species in the Project area, therefore it is unlikely to occur.
Dasyurus geoffroii (Chuditch) *[1]	VU		No local records - Listed only in EPBC search results. The Chuditch previously occurred throughout arid and semi-arid Australia, but is now primarily restricted to the south west of WA, predominantly the Jarrah Forest and nearby areas. Though, there are small, isolated subpopulations that persist in the Avon Wheatbelt, eastern Goldfields Woodlands and Mallee and in Fitzgerald National Park and Ravensthorpe Range (Woinarski *et al*. 2014). Considered unlikely to occur.
Leporillus conditor Greater Stick-Nest Rat	CD	VU	Known to be regionally and locally extinct, thus, not discussed further. DBCA record in Wanjarri Nature Reserve (2019), ~16 km to the north of the proposed clearing.
Petrogale lateralis lateralis Black-flanked rock-wallaby)	EN	EN	The Black-flanked Rock-wallaby was formerly widespread, but patchily distributed throughout most of WA south of the Kimberley, but has greatly declined and is restricted to the best habitat in a number of locations (Pearson & Kinnear 1997, Woinarski *et al*. 2014). This species requires daytime shelter in heavily shaded locations in rocky areas, caves, cliffs, screes and rockpiles. They feed on grasses, forbs, shrubs and sometimes seeds and fruits (Woinarski *et al*. 2014). Closest records are >60 km northwest of CNO. There are no rocky habitats in the proposed clearing area, thus, this species is not expected to occur.
Sminthopsis longicaudata (Long-tailed Dunnart)		P4	This species prefers rocky habitats that support low open woodlands or *Acacia* shrublands with an understorey of Spinifex (Burbidge *et al*. 2008). Closest record is >70 km southwest of CNO. As there are no rocky habitats in the proposed clearing area, this species is considered unlikely to occur.
Sminthopsis psammophila (Sandhill Dunnart) *[1]	EN	EN	No local records - Listed only in EPBC search results. Inhabits spinifex sandplains on deep yellow sands, with a diverse shrubby understorey. Currently only known from the southern Great Victoria Desert. There is no preferred habitat (spinifex) for this species in the Project area, therefore it is considered unlikely to occur.
INVERTEBRATES			
Idiosoma clypeatum (Northern shield-backed trapdoor spider)		P3	This species could potentially occur and has a scattered distribution through the Yalgoo and Murchison Bioregions. As it has a known extent of occurrence of over 120,000 km^2, it is not considered to be a short-range endemic species by the definition of Harvey (2002) and the small size of the Project is not expected to impact the conservation significance of this species (if it did occur).

SPECIES	CONSERVATION STATUS		LIKELIHOOD OF OCCURRENCE/POTENTIAL IMPACT
	DCCEEW*	DBCA**	
Kwonkan moriartii (Northern shield-backed trapdoor spider)		P2	Records from 1962 at Kathleen Valley Station ~12 km to the north of CNO. Known from only this location. Species is considered highly unlikely to occur in the proposed clearing area.
Ogyris subterrestris petrina (Arid Bronze Azure Butterfly) ***	CR	CR	The Arid Bronze Azure Butterfly (ABAB) is known from only two existing subpopulations in WA. One occurs at Barbalin Nature Reserve (BNR), and at a second site ~100 km from Barbalin (DBCA 2020). There was a population at Lake Douglas, 12 km south west of Kalgoorlie, however, this population is reported to have become extinct in about 1993 as no ABAB have been recorded there since then (CA 2015, DBCA 2020). The species (and host ant) preferred habitat is woodland with smooth barked eucalypts – the Project area is dominated by Mulga shrubland. This habitat is not located in the Project area, thus it is highly unlikely to occur.

* – listed under the *Environmental Protection and Biodiversity Conservation Act 1999* – rankings provided in Appendix 1
** - under *Biodiversity Conservation Act 2016* - – rankings provided in Appendix 1
***DBCA search results indicate "the search area is within the potential range of the arid bronze azure butterflies host ant and within the high and medium priority survey areas for night parrots"
*[1] – from the EPBC PMST results

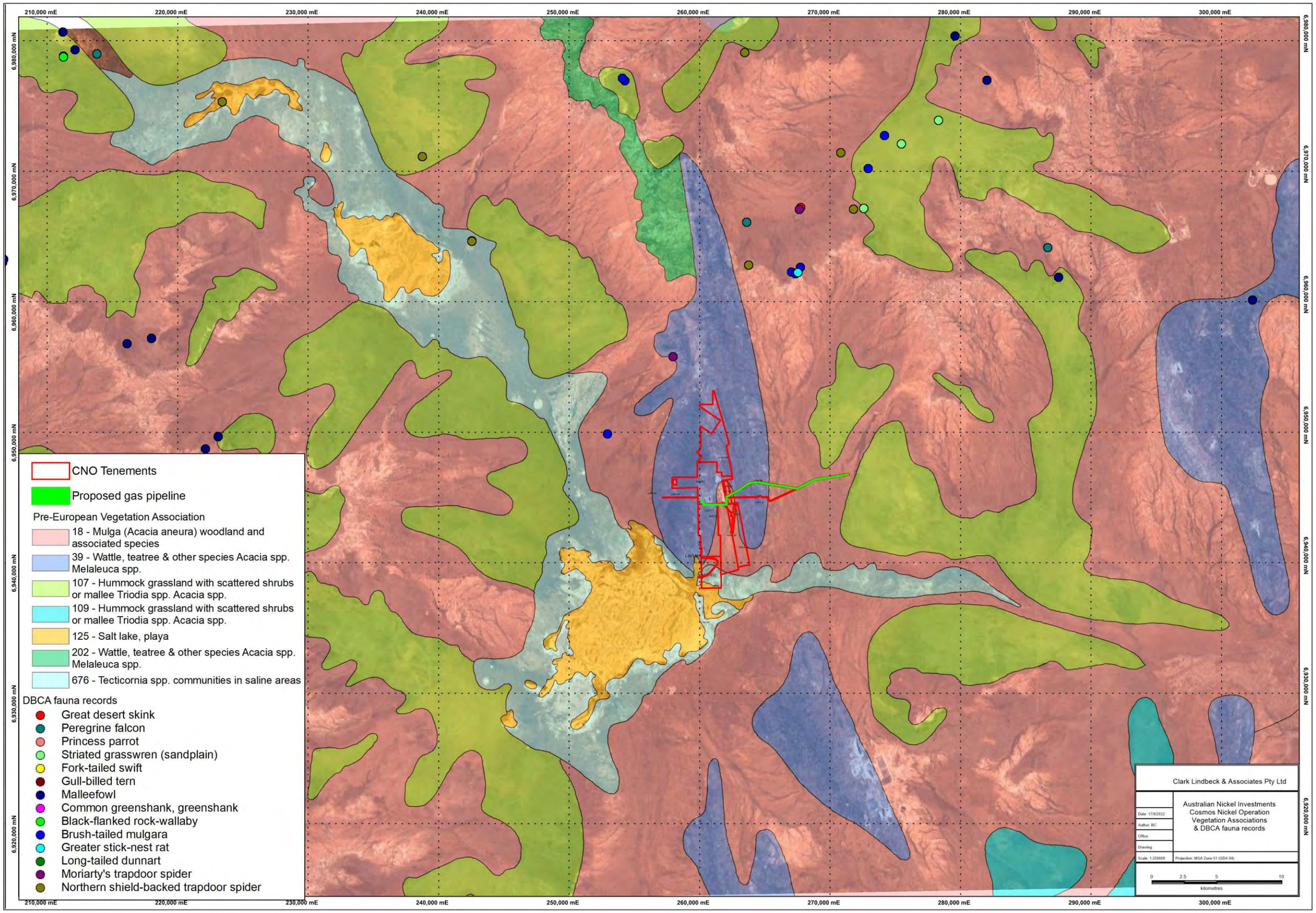

Figure 6: DBCA fauna records in CNO and surrounding region

4.4 THREATENED COMMUNITIES

No TEC's pursuant to Commonwealth or State legislation are located within the proposed clearing area.

The PEC/TEC search (DBCA, 2019) revealed the central section of the proposed gas pipeline lies within the Priority 1 PEC (and buffer zone) 'Violet Range (Perseverance Greenstone) vegetation complexes (banded ironstone formation) (Figure 7). This buffer has a mapped extent of over 19,000 hectares and the PEC a known extent over 14,000 hectares. The pipeline comprises <0.2% of the total area of the PEC.

The vegetation located within this section of the proposed gas pipeline is not BIF but does contain reference to ironstone and quartz rocks for the A1 and S2 vegetation groups (Figure 3).

Three Priority 1 PEC's associated with unique stygofauna communities in calcrete are located around the CNO, Lake Miranda: Lake Miranda West, Lake Miranda East and Yakabindie (Figure 7).

4.5 ENVIRONMENTALLY SENSITIVE AREAS AND CONSERVATION RESERVES

The proposed clearing area does not lie within or contain any ESA's or Conservation Reserves (DWER, 2022).

The Wanajarri Nature Reserve (southern boundary) is located approximately 10 km north of the eastern edge of the pipeline (Figure 7).

4.6 VEGETATION TYPE AND EXTENT

Based on Beard (Shepherd *et al.* 2002), two vegetation associations occur in the proposed clearing areas:

- 18: Mulga (*Acacia aneura*) woodland and associated species;
- 39: Shrublands; mulga scrub (Wattle, teatree and other species *Acacia* sp, *Melaleuca* sp).

These associations have >97% of their original extent remaining (Table 4).

Freshwater Creek, an ephemeral drainage line is located east of M36/371 and crosses L36/194 and L36/199. The vegetation in this area is not considered to be riparian vegetation based on the vegetation groups mapped which have described the vegetation as:

- Mattiske (S7) – Open shrubland of *Eremophila fraseri* subsp. *galeata* and *Acacia tetragonophylla* with occasional emergent *Acacia* species over *Senna artemisioides* subsp. *helmsii x oligophylla* and *Solanum lasiophyllum.*
- PEK /Botanica - Mid sparse shrubland of *Acacia pteraneura*, *A tetragonophylla* and *Eremophila galeata* over low sparse shrubland of *Ptilotus obovatus subsp. obovatus* and *Solanum lasiophyllum* on low isolated clumps of *Aristida contorta* and *Sclerolaena densiflora* on washplains.

Table 4: Current extent of regional vegetation associations

Beard Vegetation Association	Pre-European Extent (Ha)	Current Extent (Ha)	Pre-European extent remaining (%)
18	10,269,896	10,234,838	99.66
39	711,328	701,934	98.68

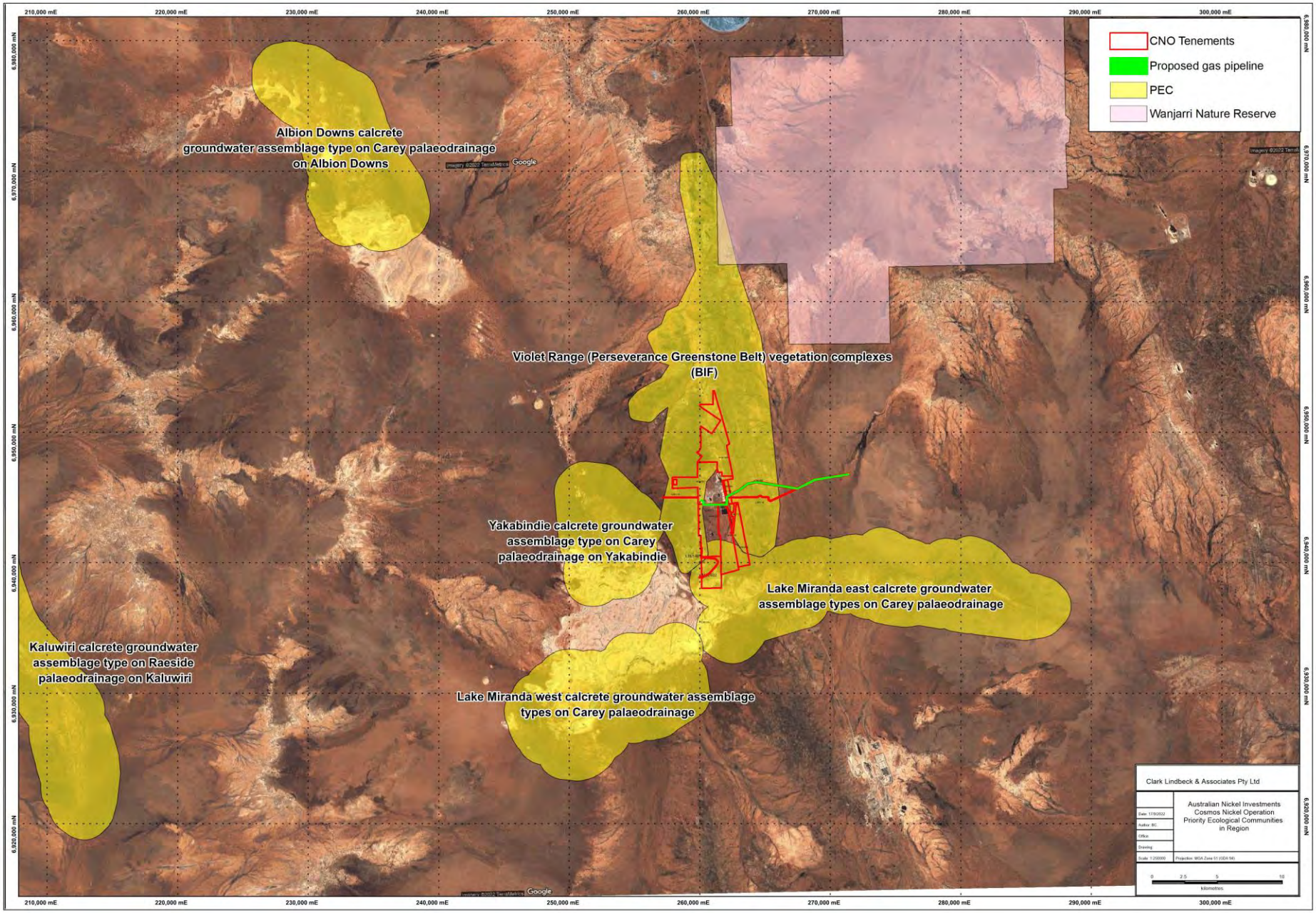

Figure 7: Location of PEC at CNO and in region

5 CLEARING PERMIT PRINCIPLES

a) Native vegetation should not be cleared if it comprises a high level of biological diversity

The Project lies within the central area of the Eastern Murchison (MUR1) Interim Biogeographic Regionalisation for Australia (IBRA) Sub Region of the Murchison Biogeographic Region which totals over 7.8 million hectares (Cowan, 2001).

Based on Beard (Shepherd *et al.* 2002), two vegetation associations occur in the proposed clearing areas:

- 18: Low woodland; mulga (*Acacia aneura*)
- 39: Shrublands; mulga scrub.

These vegetation associations are well represented, with more than 98% of pre-European levels of native vegetation remaining within the State and Bioregion (Government of Western Australia, 2019; GIS Database).

Eight vegetation groups were mapped by Mattiske (2006) along the gas pipeline corridor and no DRF or Priority flora species were recorded, or, have ever been recorded at CNO.

The Project will not significantly reduce the extent of the local vegetation communities recorded at the Project. It is expected that all fauna habitats within the proposed gas pipeline corridor are common within the locality and occur contiguously with the same habitat types outside of the clearing area.

The overall fauna assemblage within the study area would not be unique and would also occur outside of the study area.

Based on the above, the proposed clearing envelope is not considered to comprise a high level of biological diversity. All vegetation groups are represented extensively outside the proposed clearing area and the proposed clearing is not expected to reduce the biodiversity of the area.

Based on the above, the proposed clearing is not at variance to this Principle.

(b) Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

A search of current available flora and fauna databases identified a number of conservation significant species within the local area (20 km radius) (DBCA, 2022b):

- Trapdoor spider (*Kwonkan moriartii* – P2). The Trapdoor spider (*Kwonkan moriartii*) is a relic collection from 1962. There have only been two individuals of this species recorded from the entire Eastern Murchison subregion, and collection data suggests that herbaceous graminoids and/or sparse hummock grassland is the preferred habitat which is not located in the proposed clearing area (DPaW, 2018).

- Brush-tailed Mulgara (*Dasycercus blythii* – P4). Recorded in spinifex sandplain and this habitat is not located in the proposed clearing area.

No evidence of conservation significant fauna has been recorded in fauna survey work completed at CNO to date.

As the vegetation groups, part of the extension to the overall clearing area, are consistent with those previously identified, no critical habitat types are expected to be impacted.

Given the mobility of fauna species and the lineal nature of the proposed clearing, it is considered the proposed clearing would have no impact on the conservation significance of fauna species.

All fauna habitats within the proposed clearing envelope are common in the local area and occur contiguously with the same habitat types outside of the proposed clearing area.

In relation to SRE species, the habitats identified within the study area are typical of those occurring in the wider subregion and they are also contiguous with very similar habitat extending beyond the study area.

Using habitat as a surrogate to infer wider distributions, if an SRE taxa were to occur, they would not be restricted solely to the survey area, as there are no geomorphological or habitat attributes that would suggest a high risk of species level distributions being restricted to the scale of the survey area.

ANI considers that the proposed clearing area is not necessary for the on-going maintenance of any significant fauna habitat and that equal or higher quality vegetation and fauna habitats exist throughout the surrounding area (i.e. with less disturbance).

In addition, the proposed clearing will not significantly reduce the extent of flora or fauna habitats at the Project or in the region. Given the above, the proposed clearing will not be at variance to this Principle.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

No plant taxa located in the proposed clearing area are gazetted as Threatened under the EPBC Act or BC Act.

No Priority flora has been recorded at the Project.

Given the above, the proposed clearing will not be at variance to this Principle.

(d) Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of a Threatened Ecological Community (TEC).

No TEC's are listed under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* or endorsed by the Western Australian Minister for the Environment for the Project area.

Therefore, the proposed clearing is not at variance to this Principle.

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

The proposed clearing comprises two Beard Vegetation Associations all of which have approximately 98% of their pre-European extent remaining.

Given the above, the vegetation proposed to be cleared cannot be considered significant as a remnant in an area that has been extensively cleared.

Therefore, the proposed clearing will not be at variance to this Principle.

(f) Native vegetation should not be cleared if it is growing, in, or in association with, an environment associated with a watercourse or wetlands.

A series of small drainage lines trend east and south-east from rocky hills to the west, joining a main north-south drainage line known as Freshwater Creek. Freshwater Creek becomes less distinct toward the south where surface water flows are less confined within channels and flood across a wider plain.

Surface drainage is largely via sheet flow with surface water flow only following periods of heavy rainfall.

Ephemeral drainage lines are present in the overall clearing area and surface runoff within these drainage lines only flows following heavy rainfall associated with thunderstorms or cyclonic activity. The vegetation in these drainage lines is not considered to be riparian vegetation.

There is, therefore, no vegetation growing in association with a water course or wetland. The proposed clearing is not at variance to this Principle.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

The clearing permit area is broadly mapped as the Violet and Jundee land systems according to Pringle *et al*., 1994.

The proposed clearing of 59.1 ha of vegetation is not likely to lead to land degradation issues such as salinity, water logging or acidic soils and therefore is not at variance to this Principle.

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

There are no conservation or nature reserves within the Project area.

The Wanjarri Nature Reserve is approximately 12 km north east of the proposed clearing area.

Given the distance to the nature reserve, the proposed clearing will not have any impact on the environmental values of the area. The proposed clearing, therefore, is not at variance to this Principle.

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Surface water in the Project area is sourced from direct precipitation and surface runoff following rainfall events. The Murchison area often receives considerable rainfall from degenerating cyclonic depressions from the northern parts of the State. However, overall, the mean annual rainfall is only 266.2 mm.

Evaporation rates in the region vary from 3000-3200 mm annually.

With such high annual evaporation rates, there is little surface flow during normal seasonal rains. Given the low annual rainfall and high evaporation rate there is expected to be minimal rainfall re-charge that would impact the groundwater levels or the quality of the groundwater in the local region.

There is no surface water of significance, large drainage lines, lakes or swamps in or in close proximity to the proposed clearing area. Drainage lines at CNO are ephemeral and only flow following significant rainfall.

The area proposed to be cleared does not fall within a Public Drinking Water Source Area (PDWSA) or PDWSA Protection Zone (www.dow.wa.gov.au).

The clearing of 59.1 ha of native vegetation is not likely to cause deterioration in the quality of surface or groundwater and, therefore, the proposed clearing is not at variance to this Principle.

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

The area proposed to be cleared is surrounded by native vegetation. The climate of the Eastern Murchison subregion is arid, with a variable bimodal rainfall that usually falls in winter (Cowan, 2001). Annual average rainfall is only 266.2 mm with little surface flow during normal seasonal rains.

As there is little surface flow during normal rains, the proposed clearing of 59.1 ha is not likely to cause or exacerbate the incidence or intensity of flooding. Therefore, the proposed clearing is not at variance to this Principle.

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APPENDICES

Appendix 1: Conservation Rating Definitions

CONSERVATION CODES

For Western Australian Fauna and Flora

Threatened, Extinct and Specially Protected fauna or flora[1] are species[2] which have been adequately searched for and are deemed to be, in the wild, threatened, extinct or in need of special protection, and have been gazetted as such.

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[3] under Part 2 of the *Biodiversity Conservation Act 2016.*

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

T Threatened species

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

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

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

The assessment of the conservation status of threatened species is in accordance with the BC Act listing criteria and the requirements of Ministerial Guideline (Number 1) and Ministerial Guideline (Number 2) that adopts the use of the International Union for Conservation of Nature (IUCN) Red List of Threatened Species Categories and Criteria[4], and is based on the national distribution of the species.

CR Critically endangered species

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

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

Examples of use:

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

EN Endangered species

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

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

Examples of use:

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

VU Vulnerable species

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

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

Examples of use:

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

Extinct species

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

EX Extinct species

Species where "*there is no reasonable doubt that the last member of the species has died*", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Examples of use:

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

EW Extinct in the wild species

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

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

SP Specially protected species

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

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

MI Migratory species

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

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA)[5], China (CAMBA)[6] or The Republic of Korea (ROKAMBA)[7], and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention)[8], an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Examples of use:

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

CD **Species of special conservation interest (conservation dependent)**

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

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

Examples of use:

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

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

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

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

Examples of use:

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

P **Priority species**

Priority is not a listing category under the BC Act.

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

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

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

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

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

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

Examples of use:

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

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

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, for example, national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

Examples of use:

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

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

Species that are known from several locations and the species does not appear to be under imminent threat or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat.

Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. These species need further survey.

Examples of use:

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

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

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

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

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

(d) Other species in need of monitoring.

Examples of use:

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

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

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

[3] Schedules are not referred to when stating the listing status of threatened, extinct or specially protected species under the BC Act. See the examples provided under each listing category.

[4] Western Australia has assigned species to threat categories using the *IUCN Red List of Threatened Species Categories and Criteria* since 1996 (referencing all criteria). At the national level, threatened species listings under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) reference only some of the IUCN criteria (http://www.environment.gov.au/biodiversity/threatened/nominations/forms-and-guidelines).

[5] JAMBA - first included in the WA migratory species list in 1980.

[6] CAMBA - first included in the WA migratory species list in 2010.

[7] ROKAMBA - first included in the WA migratory species list in 2010.

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

Appendix 2: EPBC PMST Results

Australian Government
Department of Agriculture, Water and the Environment

EPBC Act Protected Matters Report

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

Report created: 02-Sep-2022

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

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	8
Listed Migratory Species:	7

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	9
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	4
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Species			[Resource Information]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.			
Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat likely to occur within area	In feature area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area	In feature area
MAMMAL			
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Sminthopsis psammophila Sandhill Dunnart [291]	Endangered	Species or species habitat may occur within area	In buffer area only
PLANT			
Atriplex yeelirrie [88538]	Endangered	Species or species habitat known to occur within area	In buffer area only
REPTILE			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Liopholis kintorei			
Great Desert Skink, Tjakura, Warrarna, Mulyamiji [83160]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In buffer area only
Migratory Terrestrial Species			
Motacilla cinerea			
Grey Wagtail [642]		Species or species habitat may occur within area	In feature area
Motacilla flava			
Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Charadrius veredus			
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In buffer area only
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area	In feature area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Wanjarri	Nature Reserve	WA	In buffer area only

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Lake Maitland Uranium Project	2009/5220	Controlled Action	Completed	In buffer area only
Yeelirrie Uranium Mine	2009/4906	Controlled Action	Post-Approval	In buffer area only
Not controlled action				
Clearing for Mt Keith Satellite Project, WA	2017/8001	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area

Caveat

1 PURPOSE

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

The report contains the mapped locations of:

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

2 DISCLAIMER

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

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

3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

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

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

4 LIMITATIONS

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

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

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

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

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

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

Acknowledgements

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

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

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

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

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Appendix 3: DBCA flora search results

#	long	lat	SPECIES	RATIING	HABITAT	LOCATION	VEGETATION		LAT	LONG			DATE
1	120.985	-28.326	Acacia sp. Marshall Pool (G. Cockerton 3024)	3	On hill slo	Site 15, Marshall Pool, 70 km N of Leonora			-28.326	120.985	MAN	0	20/07/1997
2	120.989	-28.327	Acacia sp. Marshall Pool (G. Cockerton 3024)	3		Site 12, Marshall Pool, 70 km N of Leonora			-28.327	120.989	MAN	0	20/07/1997
3	120.993	-28.3319	Acacia sp. Marshall Pool (G. Cockerton 3024)	3	On creek l	Marshall Pool, 70 km N of Leonora	Near Hemigenia exilis population.		-28.3319	120.993	MAN	0	20/07/1997
4	121.066	-28	Acacia sp. Marshall Pool (G. Cockerton 3024)	3	Greenston	5 km NE of No. 5 Well, Weebo Station	Open scrub.	frequent.	-28	121.066	AUTO	3	9/06/1988
5	121.011	-28.3174	Acacia sp. Marshall Pool (G. Cockerton 3024)	3	Rocky bas	Site 33, Marshall Pool, ca 70 km N of Leonora on Leinster Road	Low shrubland dominated by Acacia aneura with Eremophila forrestii, Hybanthus fl		-28.3174	121.011	MAN	0	18/07/1997
6	120.729	-27.447	Anacampseros sp. Eremaean (F. Hort, J. Hort & J. Shanks 3248)	1	In depress	Yakabindie Station, Sir Samuel block			-27.447	120.729	GPS	1	19/02/2006
7	119.741	-27.9033	Angianthus prostratus	3	saline clay	41 ml N of Bulga Downs			-27.9033	119.741	AUTO	3	24/09/1975
8	119.902	-27.1775	Atriplex yeelirrie	T	Self mulch	Yeelirrie, 85 km S of Wiluna			-27.1775	119.902	GPS	1	22/05/2009
9	119.902	-27.1775	Atriplex yeelirrie	T	Self mulch	Yeelirrie, 85 km S of Wiluna			-27.1775	119.902	GPS	1	22/05/2009
10	119.9	-27.179	Atriplex yeelirrie	T	Self mulch	Yeelirrie, 85 km S of Wiluna			-27.179	119.9	UNK	2	22/04/2009
11	119.9	-27.179	Atriplex yeelirrie	T	Self mulch	Yeelirrie, 85 km S of Wiluna	Atriplex sp. Yeelirrie shrubland.		-27.179	119.9	UNK	2	28/04/2009
12	119.9	-27.179	Atriplex yeelirrie	T	Self mulch	Yeelirrie, 85 km S of Wiluna			-27.179	119.9	UNK	2	22/04/2009
13	119.935	-27.1877	Atriplex yeelirrie	T	Medium c	Yeelirrie Station, c. 70 km SW of Wiluna	Low Atriplex shrubland.		-27.1877	119.935	GPS	1	24/09/2009
14	119.898	-27.179	Atriplex yeelirrie	T	Medium c	Yeelirrie Station, 20 km NW of Yeelirrie Homestead	Low Atriplex shrubland.		-27.179	119.898	GPS	1	16/09/2009
15	119.9	-27.1792	Atriplex yeelirrie	T	Medium c	Yeelirrie Station, c. 70 km SW of Wiluna	Low Atriplex shrubland.		-27.1792	119.9	GPS	1	16/09/2009
16	120.185	-27.3349	Atriplex yeelirrie	T	Light to m	Eastern population, at the eastern end of Yeelirrie Station, near Albion Downs S	Associated species: Lycium australe.	100 + plants.	-27.3349	120.185	GPS	1	3/12/2009
17	119.935	-27.1877	Atriplex yeelirrie	T	Medium c	Yeelirrie, c. 70 km SW of Wiluna	Low Atriplex shrubland.		-27.1877	119.935	GPS	1	24/09/2009
18	120.199	-27.324	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station near Albion Downs Station, south-east Snakebore population. Pr	Atriplex shrubland.	dominant shrub.	-27.324	120.199	GPS	1	16/04/2010
19	120.09	-27.2833	Atriplex yeelirrie	T	On clay lak	Yeelirrie		dominant.	-27.2833	120.09	AUTO	3	/04/1976
20	120.212	-27.324	Atriplex yeelirrie	T	Shallow (1	Yeelirrie Station, Eastern Population, Satellite Tenement 4, on the northern sid	CApS Low Atriplex Shrubland on Smectite Clay within the Calcrete Soil Landscape.		-27.324	120.212	GPS	1	22/08/2014
21	120.212	-27.324	Atriplex yeelirrie	T	Shallow (1	Yeelirrie Station, Eastern Population, Satellite Tenement 4, 12 km SE of Yeelirr	CApS Low Atriplex Shrubland on Smectite Clay within the Calcrete Soil Landscape.		-27.324	120.212	GPS	1	22/08/2014
22	120.212	-27.3147	Atriplex yeelirrie	T	Lake bed (	Lake Miranda, Albion Downs Station, 80 km S of Wiluna		369 plants.	-27.3147	120.212	GPS	1	18/05/2010
23	119.926	-27.1859	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station, eastern baseline population. Project Area Site 1	Atriplex shrubland.	dominant shrub.	-27.1859	119.926	GPS	1	15/04/2010
24	119.897	-27.1767	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station, W end BHP Biliton Project Area Site 1	Atriplex shrubland.	dominant shrub.	-27.1767	119.897	GPS	1	15/04/2010
25	119.897	-27.1768	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station, W end BHP Biliton Project Area Site 1	Atriplex shrubland.	dominant shrub.	-27.1768	119.897	GPS	1	15/04/2010
26	119.926	-27.1855	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station, eastern baseline population. Project Area Site 1	Atriplex shrubland.	dominant shrub.	-27.1855	119.926	GPS	1	15/04/2010
27	120.199	-27.3245	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station near Albion Downs Station, south-east Snakebore population. Pr	Atriplex shrubland.	dominant shrub.	-27.3245	120.199	GPS	1	16/04/2010
28	120.199	-27.324	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station near Albion Downs Station, south-east Snakebore population. Pr	Atriplex shrubland.	dominant shrub.	-27.324	120.199	GPS	1	16/04/2010
29	120.211	-27.3242	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station near Albion Downs Station, south-east Snakebore population. Pr	Atriplex shrubland.	dominant shrub.	-27.3242	120.211	GPS	1	16/04/2010
30	120.211	-27.3242	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station near Albion Downs Station, south-east Snakebore population. Pr	Atriplex shrubland.	dominant shrub.	-27.3242	120.211	GPS	1	16/04/2010
31	119.9	-27.1846	Atriplex yeelirrie	T	Medium s	Yeelirrie Station, Western Population, 20 km NW of Yeelirrie Homestead, ca 70 km	CApS Low Atriplex Shrubland on Smectite Clay within the Calcrete Soil Landscape.		-27.1846	119.9	GPS	1	21/08/2014
32	120.199	-27.3245	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station near Albion Downs Station, south-east Snakebore population. Pr	Atriplex shrubland.	dominant shrub.	-27.3245	120.199	GPS	1	16/04/2010
33	119.899	-27.1789	Atriplex yeelirrie	T	Medium c	Yeelirrie Station, c. 70 km SW of Wiluna	Low Atriplex shrubland.		-27.1789	119.899	GPS	1	18/09/2009
34	120.218	-27.3258	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station, near Albion Downs Station. Project A	Atriplex shrubland.	dominant shrub.	-27.3258	120.218	GPS	1	16/04/2010
35	120.185	-27.3349	Atriplex yeelirrie	T	Light to m	Eastern population, at the eastern end of Yeelirrie Station, near Albion Downs S	Associated species: Lycium australe.	100 + plants.	-27.3349	120.185	GPS	1	3/12/2009
36	119.902	-27.1775	Atriplex yeelirrie	T	Medium s	Yeelirrie Station, Western Population, 20 km NW of Yeelirrie Homestead, ca 70 km	CApS Low Atriplex Shrubland on Smectite Clay within the Calcrete Soil Landscape.		-27.1775	119.902	GPS	1	22/08/2014
37	119.898	-27.1788	Atriplex yeelirrie	T	Medium c	Yeelirrie Station, 20 km NW of Yeelirrie Homestead	Low Atriplex shrubland.		-27.1788	119.898	GPS	1	18/09/2009
38	120.205	-27.3174	Atriplex yeelirrie	T	Light to m	Eastern population, at the eastern end of Yeelirrie Station, near Albion Downs S	Atriplex shrubland.		-27.3174	120.205	GPS	1	18/11/2009
39	120.211	-27.3242	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station near Albion Downs Station, south-east Snakebore population. Pr	Atriplex shrubland.	dominant shrub.	-27.3242	120.211	GPS	1	16/04/2010
40	119.9	-27.1838	Atriplex yeelirrie	T	Silty sand.	Yeelirrie Station, former Stockpile area S of Orebody Population, 20 km NW of Ye	Rehabilitation within Acacia ayersiana woodland.		-27.1838	119.9	GPS	1	21/08/2014
41	119.902	-27.1857	Atriplex yeelirrie	T	Silty sand.	Yeelirrie Station, former Stockpile area S of Orebody Population, 20 km NW of Ye	Rehabilitation within Acacia ayersiana woodland.		-27.1857	119.902	GPS	1	21/08/2014
42	119.902	-27.1852	Atriplex yeelirrie	T	Silty sand.	Yeelirrie Station, former Stockpile area S of Orebody Population, 20 km NW of Ye	Rehabilitation within Acacia ayersiana woodland.		-27.1852	119.902	GPS	1	20/08/2014
43	119.902	-27.1775	Atriplex yeelirrie	T	Medium s	Yeelirrie Station, Western Population, 20 km NW of Yeelirrie Homestead, ca 70 km	CApS Low Atriplex Shrubland on Smectite Clay within the Calcrete Soil Landscape.		-27.1775	119.902	GPS	1	22/08/2014
44	119.9	-27.1846	Atriplex yeelirrie	T	Silty sand.	Yeelirrie Station, former Stockpile area S of Orebody Population, 20 km NW of Ye	Rehabilitation within Acacia ayersiana woodland.		-27.1846	119.9	GPS	1	21/08/2014
45	119.926	-27.1859	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station, eastern baseline population. Project Area Site 1	Atriplex shrubland.	dominant shrub.	-27.1859	119.926	GPS	1	15/04/2010
46	119.897	-27.1768	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station, W end BHP Biliton Project Area Site 1	Atriplex shrubland.	dominant shrub.	-27.1768	119.897	GPS	1	15/04/2010
47	120.192	-27.3293	Atriplex yeelirrie	T	Light to m	N margin of Lake Miranda, 12 km SE of Yeelirrie Homestead	Atriplex shrubland.		-27.3293	120.192	GPS	1	3/12/2009
48	119.897	-27.177	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station, W end BHP Biliton Project Area Site 1	Atriplex shrubland.	dominant shrub.	-27.177	119.897	GPS	1	15/04/2010
49	120.199	-27.3245	Atriplex yeelirrie	T	Flat, seaso	Yeelirrie Station near Albion Downs Station, south-east Snakebore population. Pr	Atriplex shrubland.	dominant shrub.	-27.3245	120.199	GPS	1	16/04/2010
50	119.902	-27.1775	Atriplex yeelirrie	T	Self mulch	Yeelirrie, 85 km S of Wiluna	Shrubland.		-27.1775	119.902	GPS	1	22/05/2009
51	119.921	-27.1816	Atriplex yeelirrie	T	Rehabilita	Yilgarn Calcrete Survey, Yeelirrie Station, ca. 72.39 km SSW (203 degrees) of Wi			-27.1816	119.921	GPS	1	26/08/2010
52	120.667	-27.45	Austroparmelina macrospora	3	Red brown	Site 7, Wanjarri Nature Reserve	Thicket, Low Scrub A, Open Low Scrub B, Open Dwarf Scrub C, Open Dwarf Scrub D,	frequent.	-27.45	120.667	MAN	0	31/08/1994
53	120.667	-27.45	Austroparmelina macrospora	3	Red brown	Site 7, Wanjarri Nature Reserve	Thicket, Low Scrub A, Open Low Scrub B, Open Dwarf Scrub C, Open Dwarf Scrub D,		-27.45	120.667	MAN	0	31/08/1994
54	120.427	-27.9622	Baeckea sp. Sandstone (C.A. Gardner s.n. 26 Oct. 1963)	3		31.7 km W of Agnew towards Sandstone,			-27.9622	120.427	MAN	0	26/10/1996
55	120.852	-28.137	Baeckea sp. Sandstone (C.A. Gardner s.n. 26 Oct. 1963)	3	Red sand.	Ca 6.5 km SW of White Well, which is 26 km SE of Leinster on Goldfields Highway,	Low Woodland A dominated by Eucalyptus kingsmillii and E. gongylocarpa, over mix	locally common.	-28.137	120.852	GPS	1	24/06/2004
56	120.071	-27.234	Bossiaea eremaea	3		Yeelirrie Station, Murchison		>500 plants.	-27.234	120.071	GPS	1	12/05/2009
57	119.921	-27.1619	Bossiaea eremaea	3	Compact s	Yeelirrie Station			-27.1619	119.921	UNK	2	19/03/2009
58	119.567	-27.8	Bossiaea eremaea	3	Flat, red sa	Lake Mason Station, 7.5 km S along fenceline from O'Connor Bore	Open shrubs over Triodia, Eremophila sp. to 1 m., Grevillea open scrub to 3 m.	uncommon.	-27.8	119.567	UNK	3	23/05/1995
59	120.656	-27.4386	Bossiaea eremaea	3	Co-located	C. 4 km SSE of Wanjarri Nature Reserve shed or outstation, along the gas pipelin	Triodia basedowii low hummock grassland with emergent Eucalyptus gongylocarpa, E		-27.4386	120.656	GPS	1	28/03/2014
60	119.931	-27.173	Bossiaea eremaea	3		Yeelirrie Station, Murchison	Acacia effusifolia, Eucalyptus trivalva.	400 plants.	-27.173	119.931	GPS	1	8/12/2008
61	121.283	-28.1333	Calytrix praecipua	3	On breaka	24 km E of Lehman Well, vacant Crown Land E of Erlistoun Station, 500 metres W o			-28.1333	121.283	MAN	3	24/10/1989
62	121.011	-27.1335	Cratystylis centralis	3	Low plain.	20 m N of track to Lake Maitland via Little Well, 1.9 km E of main N-S road, 14	Low Woodland of Casuarina pauper to 6 m tall over Thicket of Eremophila over Ope	6 plants in 500 m area i	-27.1335	121.011	GPS	1	31/10/2007
63	121.033	-27.1387	Cratystylis centralis	3	Sandy clay	Near Lake Maitland, c. 105 km SE of Wiluna	Casuarina pauper woodland bordering Lake Maitland. Growing with Casuarina pauper		-27.1387	121.033	GPS	1	12/01/2015
64	120.996	-27.1441	Cratystylis centralis	3	Sandy clay	Near Lake Maitland, c. 105 km SE of Wiluna	Casuarina pauper woodland bordering Lake Maitland. Growing with Casuarina pauper		-27.1441	120.996	GPS	1	12/01/2015
65	121.011	-27.1335	Cratystylis centralis	3	Low plain.	20 m N of track to Lake Maitland via Little Well, 1.9 km E of main N-S road, 14	Low woodland of Casuarina pauper to 6 m tall over Thicket of Eremophila over Ope	6 plants in 500 m area i	-27.1335	121.011	GPS	1	31/10/2007
66	119.605	-27.7135	Drosera eremaea	3	By granite	LMS 5, 19 km SSE of Lake Mason Homestead		common under shrubs.	-27.7135	119.605	GPS	1	16/09/2004
67	119.887	-27.1631	Eremophila arachnoides subsp. arachnoides	3		Yeelirrie Station, Murchison	Eucalyptus gypsophila, Casuarina pauper, Senna artemisioides ssp. filifolia.		-27.1631	119.887	GPS	1	8/12/2008
68	120.302	-28.2795	Eremophila arachnoides subsp. arachnoides	3	Calcrete.	Pinnacles Station, calcrete rubble plain Lake Noondie, 150 km SW from Leinster	Eucalyptus gypsophila Woodland with Acacia burkittii, Casuarina pauper.	locally common.	-28.2795	120.302	GPS	1	14/02/2010
69	120.3	-28.2672	Eremophila arachnoides subsp. arachnoides	3	Calcrete.	Lake Noondie, 150 km SW of Leinster	Eucalyptus gypsophila Woodland.	1 plant.	-28.2672	120.3	GPS	1	13/02/2010
70	119.863	-27.1496	Eremophila arachnoides subsp. arachnoides	3	Level hillo	Yeelirrie Station, Survey Site YEEL09, ca. 71.92 km SSW (209 degrees) of Wiluna	Open woodland of Eucalyptus gypsophila over open shrubland of Acacia oswaldii, E	isolated plants.	-27.1496	119.863	GPS	1	6/10/2010
71	119.876	-27.158	Eremophila arachnoides subsp. arachnoides	3	Level flat c	Yeelirrie Station, Survey Site YEEL17, ca. 72.09 km SSW (207 degrees) of Wiluna	Open woodland of Casuarina pauper over open shrubland of Eremophila arachnoides	very sparse.	-27.158	119.876	GPS	1	7/10/2010
72	120.275	-26.8618	Eremophila arachnoides subsp. arachnoides	3	Very gentl	Lake Way Station, Survey Site LWAY01, ca. 31.39 km S (169 degrees) of Wiluna and	Open tall shrubland of Acacia burkittii over sparse shrubland of Eremophila arac	sparse.	-26.8618	120.275	GPS	1	8/10/2010
73	120.338	-26.8488	Eremophila arachnoides subsp. arachnoides	3	Level hillo	Lake Way Station, Survey Site LWAY07, ca. 31.80 km SSE (158 degrees) of Wiluna a	Open tall shrubland of Acacia burkittii over sparse shrubland of Senna charlesia	isolated plants.	-26.8488	120.338	GPS	1	9/10/2010
74	119.618	-27.5409	Eremophila arachnoides subsp. arachnoides	3	Cunyu Lan	LMS 11, 12 km NE of Lake Mason Homestead	Casuarina woodland.	common.	-27.5409	119.618	GPS	1	18/09/2004
75	120.533	-27.1667	Eremophila congesta	1	Laterite. S	Mount Keith,			-27.1667	120.533	MAN	0	23/08/1996
76	120.588	-27.3479	Eremophila pungens	4		Wanjarri Nature Reserve. 10 km S of Mount Keith	In small grove under Mulga within SIMS Community.		-27.3479	120.588	GPS	1	7/03/2008
77	120.708	-27.8362	Eremophila pungens	4		Leinster. E of LNO airport, outside PDP project area. 5 km E of Mt Keith	In small grove under Mulga within SIMS Community.		-27.8362	120.708	GPS	1	7/03/2008
78	120.467	-26.9497	Eremophila pungens	4		Lakeway Station			-26.9497	120.467	AUTO	4	/08/1991
79	121.233	-27.1333	Eremophila pungens	4	Rocky hills	W of Wonganoo Homestead,	Dense vegetation. Mulga, poverty bush, senna.	2 plants in vicinity.	-27.1333	121.233	MAN	0	5/06/2000
80	120.751	-27.483	Eremophila pungens	4	Granite ro	Yakabindie Station, Sir Samuel Block		10 plants.	-27.483	120.751	GPS	1	14/04/2006
81	120.756	-27.4886	Eremophila pungens	4		Yakabindie Station, Sir Samuel Block		1 plant.	-27.4886	120.756	GPS	1	14/04/2006

82	120.678	-27.7976	Eremophila pungens	4	Flat, ironst	Ca 15 km NE of Leinster, occurs on land W of the Leinster Nickel Operations mine	Dominated by Acacias to 3 m.	100+ plants.	-27.7976	120.678	GPS	1	1/06/2006
83	120.537	-27.1972	Eremophila pungens	4	Drainage f	Ca 3 km N of Mount Keith Operation minesite	Mulga Grove on Hardpan Plain (GRMU).	1 plant.	-27.1972	120.537	GPS	1	4/06/2007
84	120.663	-27.0595	Eremophila pungens	4		Wanjarri Nature Reserve, W end of Nature Reserve in Jones Creek, SE of Mount Kei		infrequent, 1 plant.	-27.0595	120.663	GPS	1	16/08/2005
85	120.579	-27.1915	Eremophila pungens	4	Ironstone	Mount Keith, 70 km SE of Wiluna			-27.1915	120.579	GPS	1	14/09/2005
86	120.531	-27.1839	Eremophila pungens	4	On side of	Lake Way Station, 40-50 km SE of Wiluna	Wanderrie Bank Grassy Shrublands (WABS).	2 plants.	-27.1839	120.531	GPS	1	13/08/2005
87	120.577	-27.192	Eremophila pungens	4	Banded iro	Mount Keith, 70 km SE of Wiluna		400-500 plants over 4 h	-27.192	120.577	GPS	1	14/09/2005
88	120.693	-27.8023	Eremophila pungens	4	Red soils w	Approximately 15 km NNE of Leinster, on LNO Minesite	Stony Ironstone Mulga Shrublands with associated species Acacia aneura, A. tetra	abundant.	-27.8023	120.693	GPS	1	19/07/2007
89	120.917	-27.0333	Eremophila pungens	4	Ironstone	5 km E of Shady Grove, Barwidgee Station	High open shrubland.		-27.0333	120.917	AUTO	4	5/06/1988
90	120.734	-27.8126	Eremophila pungens	4	Granite ou	Ca. 13 km NNE of Leinster	Mid sparse Acacia quadrimarginea shrubland over low sparse shrubs of Calytrix de	3 individuals.	-27.8126	120.734	GPS	1	5/04/2020
91	120.699	-27.8036	Eremophila pungens	4	Flat. Rocky	Leinster	Low open woodland of Acacia aneura complex over shrubland of Sida ectogama, Scae	1 plant.	-27.8036	120.699	GPS	1	28/07/2021
92	121.639	-27.6417	Eremophila shonae subsp. diffusa	3	Plain. Brov	N of Banjawarn and 1 km SW of Jacks Well		ove 50 plants.	-27.6417	121.639	GPS	1	30/08/2013
93	120.644	-27.2627	Eremophila sp. long pedicels (G. Cockerton 1975)	2	Drainage l	DRMS, Mount Keith	Mulga.		-27.2627	120.644	GPS	1	27/08/1996
94	120.74	-27.2571	Eremophila sp. long pedicels (G. Cockerton 1975)	2		Mount Keith, South Lake Way Borefield	Hardpan Mulga Shrublands (HPMS).		-27.2571	120.74	GPS	1	12/08/2005
95	120.568	-26.9035	Eremophila sp. long pedicels (G. Cockerton 1975)	2		Lake Way Station, 45 km SE of Wiluna	Drainage tract mulga shrublands (DRMS).		-26.9035	120.568	GPS	1	14/08/2005
96	120.626	-27.2602	Eremophila sp. long pedicels (G. Cockerton 1975)	2	Dark red h	Mount Keith, restricted to drainage line downstream of MKO TSF	Mulga Woodland with Acacia aneura (5 m), Eremophila gilesii subsp. variabilis (0		-27.2602	120.626	MAN	0	/08/1996
97	119.836	-27.5125	Euryomyrtus inflata	3	On burnt s	Just before corner going E of Morphies Bore, Kaluwiri, on boundary between E Lak		locally common.	-27.5125	119.836	GPS	1	20/03/2005
98	120.225	-27.0531	Euryomyrtus inflata	3	In red sand	32 miles S of Wiluna on road to Sandstone			-27.0531	120.225	AUTO	3	29/07/1963
99	120.101	-27.219	Euryomyrtus inflata	3		Yeelirrie Station, Murchison			-27.219	120.101	GPS	1	17/11/2010
100	119.831	-27.4078	Euryomyrtus inflata	3	Red sand.	Travelling E to breakaway, 50.3 km NE of homestead, Lake Mason Station N of Sand	Balgas, Jacksonia, Davesia, Newcastelia hexarrhena, Acacia, Homalocalyx.	common.	-27.4078	119.831	UNK	2	18/09/2005
101	120.15	-27.2833	Euryomyrtus inflata	3	Plain, bare	11 km E of Yeelirrie turnoff on road to Mount Keith,	Mid dense Hummock Grass (Muir, 1977) with occasional Triodia sp., Acacia sp., Ac		-27.2833	120.15	MAN	0	30/07/1996
102	120.327	-26.8185	Frankenia confusa	4	Growing o	Lake Way, ca. 30 km SSE of Wiluna	With Tecticornia aff. undulata, T. halocnemoides, Sclerolaena clelandii, Salsola		-26.8185	120.327	GPS	1	16/10/2014
103	120.357	-26.8308	Frankenia confusa	4	Growing o	Lake Way, ca. 30 km SSE of Wiluna	With Tecticornia undulata, T. peltata, T. halocnemoides, Disphyma crassifolium a		-26.8308	120.357	GPS	1	16/10/2014
104	120.345	-26.8511	Frankenia confusa	4	Growing o	Lake Way, ca. 30 km SSE of Wiluna	With Tecticornia aff. moniliformis, T. aff. undulata, Sclerolaena cuneata and Er		-26.8511	120.345	GPS	1	28/11/2014
105	121.279	-27.8058	Frankenia georgei	1	Soft red sa	8 km N of Darlot Airport and 60 km E of Leinster	Low open shrubland of Hakea preissii and Cratystylis subspinescens, over Franken	2-5 plants.	-27.8058	121.279	GPS	1	15/06/2020
106	120.549	-27.6625	Goodenia modesta	3	Rangeland	West side of Lake Miranda	Low shrubland with Lawrencella helmsii, Swainsona sp., Samphire, Eragrostis diel	>50 plants.	-27.6625	120.549	GPS	1	19/07/2018
107	120.647	-27.4067	Goodenia modesta	3	Grey clay i	Track, south of shearing shed to breakaways	Grassland.	20-50.	-27.4067	120.647	GPS	1	18/07/2006
108	120.63	-27.6626	Goodenia modesta	3	Playa form	Yakabindie Station, 30 km N from Leinster	Melaleuca interioris & Muehlenbeckia florulenta thickets with Exocarpos aphyllus	scattered individuals wi	-27.6626	120.63	GPS	1	9/12/2016
109	120.689	-27.8113	Grevillea inconspicua	4		W of Rocky's Reward Mine, Leinster			-27.8113	120.689	MAN	0	26/08/1997
110	120.557	-27.4736	Grevillea inconspicua	4	Hilly slope	S of Jones Creek,	Shrubland, Acacia linophylla, Senna sp.		-27.4736	120.557	MAN	0	5/04/1996
111	120.567	-27.45	Grevillea inconspicua	4	Flat draina	0.4 km along Six Mile Well Track along Wiluna-Leinster Road on N side by Jones C	Low open shrubland.		-27.45	120.567	MAN	0	14/12/1990
112	120.917	-28.2074	Grevillea inconspicua	4		Weebo Station, Leinster	With mulga (Acacia aneura) and Eucalyptus camaldulensis.		-28.2074	120.917	MAN	0	23/08/1997
113	120.267	-27.2667	Grevillea inconspicua	4	N slope of	E of Six Mile Well track, W of Drill Corp track	In Acacia aneura shrubland.		-27.2667	120.267	MAN	0	14/12/1990
114	121.01	-27.3781	Grevillea inconspicua	4	Outcrop. S	NW corner of Barwidgee Station, control, Morphettes Well			-27.3781	121.01	MAN	0	17/12/1997
115	120.917	-27.7667	Grevillea inconspicua	4	Greenston	3.5 km up Sandstone-Yeelirrie Rd	With Eremophila fraseri.		-27.7667	120.917	MAN	0	16/12/1990
116	121.067	-28	Grevillea inconspicua	4	Stony, iron	Anaconda Nickel's Marshall Pool leases, Weebo Station	Mulga Shrublands.		-28	121.067	MAN	4	23/08/1997
117	120.567	-27.4333	Grevillea inconspicua	4	Stoney ris	2 km S of Wanjarri Nature Reserve on Yakabindie Station	Open shrubland.		-27.4333	120.567	MAN	3	3/06/1988
118	120.5	-27.4667	Grevillea inconspicua	4	Drainage l	30 km S of Dominion Yakabindie Camp, 200 metres E of Drillcorp Camp	In Acacia aneura woodland.		-27.4667	120.5	MAN	0	15/12/1990
119	119.945	-28.0014	Grevillea inconspicua	4	Amphibolv	Booylgoo Range, 5.1 km S, then 9.1 km E from No. 1 Bore track, 3.8 km from Booyl	Ptilotus shrubland.		-28.0014	119.945	AUTO	3	16/12/1990
120	120.533	-27.5	Grevillea inconspicua	4	Ironstone	Mount Mann, 1.3 km W of Leinster-Wiluna Rd, 1.5 km S of Six Mile turnoff	In Acacia woodland.		-27.5	120.533	MAN	0	19/12/1990
121	120.917	-27.7667	Grevillea inconspicua	4	On greens	3.1 km SW of Boolylgoo Homestead track and Sandstone Yeelirrie Rd			-27.7667	120.917	MAN	0	16/12/1990
122	119.914	-27.7609	Grevillea inconspicua	4	Gradual sl	Booylgoo Station on Sandstone-Yeelirrie Road, 1.8 km E of Station turnoff	Very open Acacia aneura shrubland over Eremophila fraseri, Scaevola spp., occasi		-27.7609	119.914	GPS	1	29/10/1994
123	120.577	-27.306	Grevillea inconspicua	4	Rocky slop	Slopes of Mount Goode, Violet Range, Yakabindie Station, Austin District,	Senna artemisioides subsp. x sturtii, S. artemisioides subsp. helmsii.		-27.306	120.577	GPS	1	28/08/1998
124	120.588	-27.4707	Grevillea inconspicua	4	E facing ge	Violet Range Survey Site VIOL12, Yakbindi Station, located ca 5 km ESE Mail Chan	Sparse shrubland of Acacia sibirica and Acacia cf. resinmarginea over sparse shr	isolated plants.	-27.4707	120.588	GPS	1	12/09/2008
125	120.695	-27.8245	Grevillea inconspicua	4	Flat plain (	Approximately 15 km NE of Leinster. Occurs in land W of the Leinster Nickel Oper	Dominated by Acacias to 3 m.	5 plants.	-27.8245	120.695	GPS	1	3/06/2006
126	119.906	-27.8201	Grevillea inconspicua	4	South sout	Booylgoo Range, adjacent to survey site BOOY10. On Booylgoo Spring Station appro	Shrubland of Acacia xanthocarpa and Acacia ramulosa var. ramulosa over open shru	sparse.	-27.8201	119.906	GPS	1	4/09/2006
127	119.894	-27.7714	Grevillea inconspicua	4	West sout	Booylgoo Range, survey site BOOY18. On Booylgoo Spring Station approximately 2.2	Shrubland of Acacia xanthocarpa, Acacia ramulosa var. ramulosa and Eremophila ol	sparse.	-27.7714	119.894	GPS	1	6/09/2006
128	119.889	-27.7007	Grevillea inconspicua	4	South sout	Booylgoo Range, survey site BOOY23. On Booylgoo Spring Station approximately 4.8	Open shrubland of Acacia xanthocarpa and Acacia burkittii over open shrubland of	isolated plants.	-27.7007	119.889	GPS	1	7/09/2006
129	119.896	-27.7829	Grevillea inconspicua	4	West facin	Booylgoo Range, survey site BOOY14. On Booylgoo Spring Station approximately 3.3	Open shrubland of Acacia ramulosa var. ramulosa, Acacia xanthocarpa and Eremophi	very sparse.	-27.7829	119.896	GPS	1	5/09/2006
130	119.893	-27.6992	Grevillea inconspicua	4	South-east	Booylgoo Range, survey site BOOY24. On Booylgoo Spring Station approximately 5.1	Shrubland of Acacia burkittii, Acacia ramulosa var. ramulosa and Acacia aneura o	sparse.	-27.6992	119.893	GPS	1	8/09/2006
131	119.887	-27.7683	Grevillea inconspicua	4	Rocky gull	70 km N of Sandstone,			-27.7683	119.887	MAN	0	28/05/2000
132	120.713	-28.224	Hemigenia exilis	4	Above cre	Poison Creek on Leonora - Agnew road	Shrubland, Eucalyptus lucasii, Acacia acuminata ssp. burkittii, Ptilotus obovatu	dominant/abundant.	-28.224	120.713	GPS	1	13/11/1995
133	120.713	-28.224	Hemigenia exilis	4	Flat groun	Poison Creek on Leonora - Agnew Road	Shrubland, Acacia aneura var. latifolia, var. aneura, Eremophila platycalyx, Ere	dominant/abundant.	-28.224	120.713	GPS	1	13/11/1995
134	121.188	-28.2631	Hemigenia exilis	4	Red brown	Road to Melrose Station, 8.4 km from the Leonora - Leinster Road	Mulga woodland. Growing with Eremophila margarethae, E. latrobei and small Acaci	common.	-28.2631	121.188	GPS	1	28/10/1993
135	121.126	-28.3733	Hemigenia exilis	4	Low plain	Wilson Creek, W of Teutonic Bore Mining Centre, Leonora, Goldfields	Acacia aneura, A. quadrimarginea, Scaevola spinescens.		-28.3733	121.126	MAN	0	28/05/1996
136	120.978	-28.3994	Hemigenia exilis	4	Low plains	Wilson Creek, N of Minnirichie Well, Leonora	Acacia shrubland.		-28.3994	120.978	MAN	0	/06/1996
137	121.126	-28.3733	Hemigenia exilis	4	Low plain	Wilson Creek, W of Teutonic Bore Mining Centre, Leonora, Goldfields	Acacia shrubland with Acacia aneura, A. quadrimarginea, Scaevola spinescens, Hyb		-28.3733	121.126	MAN	0	28/05/1996
138	120.552	-27.4739	Hemigenia exilis	4	Brown silt	In Jones Creek,	Shrubland, Acacia linophylla, A. tetragonophylla. A. aneura.	occasional.	-27.4739	120.552	MAN	0	5/04/1996
139	120.901	-28.2126	Hemigenia exilis	4	Creek bed	Sturt Meadows Station, Codys Creek	Eucalyptus sp., Acacia grasbyi and Eremophila spp.	20 to 25 plants.	-28.2126	120.901	GPS	1	/10/2004
140	120.589	-27.482	Hemigenia exilis	4		Yakabindie Station, 50 km N from Leinster	Calytrix desolata low shrubland.	few.	-27.482	120.589	GPS	1	19/11/2016
141	120.532	-27.2471	Hemigenia exilis	4	Plain. Ston	Leinster	Low woodland of Acacia aneura complex and Acacia pruinocarpa over shrubland of E	1 plant.	-27.2471	120.532	GPS	1	17/08/2021
142	120.978	-28.3994	Hemigenia exilis	4	Low plains	Wilson Creek, N of Minnirichie Well, Leonora	Acacia shrubland.		-28.3994	120.978	MAN	0	/06/1996
143	120.989	-28.2928	Hemigenia exilis	4	Low plains	Marshall Creek, E of Heather Well, Leonora, Goldfields	Acacia shrubland.		-28.2928	120.989	MAN	0	/06/1996
144	120.678	-27.8493	Hemigenia exilis	4	Summit of	Leinster region	Stony Acacia, Eremophila shrubland. Associated vegetation: Acacia burkittii, A.	1000 + plants.	-27.8493	120.678	GPS	1	26/09/2007
145	121.283	-27.9167	Hemigenia exilis	4		Creek between Wilsons Pool and Lake Darlot.		rare.	-27.9167	121.283	MAN	4	/04/1895
146	121.283	-27.9167	Hemigenia exilis	4		Creek between Wilson's Pool and Lake Darlot			-27.9167	121.283	MAN	4	/04/1895
147	120.585	-27.3601	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Rock type	Adjacent to (immediately E of) the constructed haul road track to Mt Keith Satel	Granitic low shrubland with Acacia rhodophloia, Callitris glaucophylla, Calytrix	100+ plants in 5 ha.	-27.3601	120.585	GPS	1	23/03/2019
148	120.589	-27.3609	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Rock type	On edge of S facing breakaway plateaux, on the W fringe of the Wanjarri Nature R	Granitic low shrubland with Acacia rhodophloia, Callitris glaucophylla, Calytrix	20+ plants in 1 ha.	-27.3609	120.589	GPS	1	24/03/2019
149	120.586	-27.3609	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	On breaka	8 km W of Wanjarri Homestead			-27.3609	120.586	TOPO	2	3/06/1988
150	120.589	-27.3572	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Weathere	Breakaways adjacent to the Perseverance fault line, Mt Keith Satellite, within W	Thryptomene sp. Leinster, Acacia quadrimarginea sens. str., Hakea arida, Mulga (	100 + in 1 ha +.	-27.3572	120.589	GPS	1	22/08/2017
151	120.591	-27.3576	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Weathere	Breakaways adjacent to the Perseverance fault line, Mt Keith Satellite, Yakabind	Thryptomene sp. Leinster, Acacia quadrimarginea sens. str., Acacia quadrimargine	> 50 in 1 ha.	-27.3576	120.591	GPS	1	22/08/2017
152	120.563	-27.4164	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Weathere	Breakaways adjacent to the Perseverance fault line, Mt Keith Satellite, Yakabind	Thryptomene sp. Leinster, Acacia quadrimarginea sens. str.	1 plant.	-27.4164	120.563	GPS	1	8/08/2017
153	120.581	-27.3575	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Weathere	Breakaways adjacent to the Perseverance fault line, Mt Keith Satellite, Yakabind	Thryptomene sp. Leinster, Acacia quadrimarginea sens. str.	100 + in 1 ha +.	-27.3575	120.581	GPS	1	24/08/2017
154	120.566	-27.3903	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Weathere	Breakaways adjacent to the Perseverance fault line, Mt Keith Satellite, populati	Thryptomene sp. Leinster, Acacia quadrimarginea sens. str.	1000 + in 2 ha.	-27.3903	120.566	GPS	1	26/08/2017
155	120.566	-27.3754	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Weathere	Breakaways adjacent to the Perseverance fault line, Mt Keith Satellite, Yakabind	Thryptomene sp. Leinster, Acacia quadrimarginea sens. str.	1 plant.	-27.3754	120.566	GPS	1	9/08/2017
156	120.565	-27.4142	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Weathere	Breakaways adjacent to the Perseverance fault line, Mt Keith Satellite, Yakabind	Thryptomene sp. Leinster, Acacia quadrimarginea sens. str.	> 50 in 0.28 ha.	-27.4142	120.565	GPS	1	26/08/2017
157	120.585	-27.3604	Hibbertia sp. Sherwood Breakaways (R.J. Cranfield 6771)	2	Rock type	Adjacent to (immediately W of) the constructed haul road track to Mt Keith Satel	Granitic low shrubland with Acacia rhodophloia, Callitris glaucophylla, Calytrix	100+ plants in 5 ha.	-27.3604	120.585	GPS	1	25/03/2019
158	119.917	-27.743	Hibiscus sp. Perrinvale Station (J. Warden & E. Ager WB 10581)	1	West facin	Booylgoo Range, survey site BOOY29. On Booylgoo Spring Station approximately 1.7	Sparse shrubland of Acacia aneura and Acacia ramulosa var. ramulosa over open sh	isolated plants.	-27.743	119.917	GPS	1	9/09/2006
159	119.893	-27.6992	Hibiscus sp. Perrinvale Station (J. Warden & E. Ager WB 10581)	1	South-east	Booylgoo Range, survey site BOOY24. On Booylgoo Spring Station approximately 5.1	Shrubland of Acacia burkittii, Acacia ramulosa var. ramulosa and Acacia aneura o	isolated plants.	-27.6992	119.893	GPS	1	8/09/2006
160	119.977	-27.9024	Homalocalyx echinulatus	3	East north	Booylgoo Range, survey site BOOY50. On Depot Springs Station approximately 2.5 k	Open shrubland of Acacia aneura and Acacia sp. Peak Hill over open shrubland of	sparse.	-27.9024	119.977	GPS	1	14/09/2006
161	119.96	-27.9368	Homalocalyx echinulatus	3	North faci	Booylgoo Range, survey site BOOY39. On Depot Springs Station approximately 3.2 k	Open shrubland of Acacia aneura over open shrubland of Homalocalyx echinulatus a	sparse.	-27.9368	119.96	GPS	1	11/09/2006
162	120.574	-27.4287	Hybanthus floribundus subsp. chloroxanthus	3	Rock type	Yakabindie Station, Mt Keith Satellite, W of the Six Mile Deposit area on a low	Associated species: Acacia quadrimarginea, Acacia aneura, Grevillea inconspicua	50+ plants.	-27.4287	120.574	GPS	1	28/03/2019
163	120.586	-27.4217	Hybanthus floribundus subsp. chloroxanthus	3	Incised dra	Yakabindie Station, 55 km N from Leinster	Eucalyptus camaldulensis woodland over Acacia burkittii, A. pruinocarpa and A. a	few within drainage.	-27.4217	120.586	GPS	1	12/12/2016

164	120.574	-27.4289	Hybanthus floribundus subsp. chloroxanthus		3	Floodplain	Ca 5 km E, off Goldfields Highway and ca 18 km S of existing Mt Keith mining ope	Open Acacia shrubland (A. aneura, A. pruinocarpa, A. burkittii) over low open sh	28 plants.	-27.4289	120.574	GPS	1	21/09/2011
165	120.53	-27.2472	Hybanthus floribundus subsp. chloroxanthus		3	Drainage l	Leinster	Low woodland of Acacia aneura complex over shrubland of Acacia quadrimarginea an	1 plant.	-27.2472	120.53	GPS	1	17/08/2021
166	120.575	-27.4195	Hybanthus floribundus subsp. chloroxanthus		3	Watercour	Ca 5 km E, off Goldfields Highway and ca 18 km S of existing Mt Keith mining ope	Open Acacia shrubland (A. aneura, A. quadrimarginea) over low open shrubland (Er	12 plants.	-27.4195	120.575	GPS	1	21/09/2011
167	120.854	-28.0464	Korthalsella leucothrix		1	Red sandy	MRD Kent Bore Quarry, 6 km from SLK peg Kalgoorlie - Wiluna road	Open mulga woodland.	frequent.	-28.0464	120.854	TOPO	2	/10/1993
168	120.971	-28.1459	Micromyrtus chrysodema		1	Flat plain.	Ca 40 km SE of Leinster on Leinster to Leonora Road and 1 km E of road along the	Emergent Eucalyptus gongylocarpa growing to 6 m tall over Scrub dominated by Aca		-28.1459	120.971	TOPO	3	11/03/2004
169	120.251	-28.0143	Mirbelia ferricola		3		Mt Finnerty, Coolgardie Bioregion	Banksia arborea low open woodland over Acacia steedmanii high shrubland over All		-28.0143	120.251	GPS	1	23/10/2008
170	120.349	-27.2968	Olearia arida		4	Sand plain	Albion Downs Station	Spinifex hummock grassland with mallee. Associated species: Triodia basedowii.		-27.2968	120.349	UNK	2	16/09/2010
171	120.349	-27.2967	Olearia arida		4	Highly mo	Yeelirrie project area, transport corridor 150 km NW of Leinster	Sandplain Spinifex Hummock Grassland with Wattles. Acacia pachyacra, Baeckea cry	5 plants in a 20 m radius	-27.2967	120.349	GPS	1	17/05/2009
172	120.517	-27.2333	Olearia mucronata		3		Waterfall Gully			-27.2333	120.517	MAN	0	17/09/1989
173	120.364	-26.8725	Paspalidium distans		4	In and aro	Site 21, Honeymoon Well Project Area, 40 km S of Wiluna	Mulga shrubland, with other Acacia species.	rare.	-26.8725	120.364	MAN	0	12/06/1992
174	121.283	-28.1333	Philotheca tubiflora		1	On breaka	24 km E of Lichman Well, Vacant Crown Land E of Eristoun Station, 500 metres W o			-28.1333	121.283	MAN	3	24/10/1989
175	119.969	-27.1102	Sauropus sp. Woolgorong (M. Officer s.n. 10/8/94)		3		Yeelirrie Station, Murchison	Weathered grainte breakaway plateau community.		-27.1102	119.969	GPS	1	11/11/2010
176	120.705	-27.8037	Sauropus sp. Woolgorong (M. Officer s.n. 10/8/94)		3	Flat. Rocky	Leinster	Low open woodland of Acacia aneura complex over shrubland of Eremophila oldfield	1 plant.	-27.8037	120.705	GPS	1	28/07/2021
177	120.682	-27.3985	Seringia exastia	T		Flat sandp	SWATT Sandplain Survey, Wanjarri Nature Reserve survey site SWA1003B, c. 57.01 k	Open woodland of Eucalyptus gongylocarpa, over sparse shrubland of Acacia effusi		-27.3985	120.682	GPS	1	28/08/2013
178	121.6	-27.5667	Seringia exastia	T		Plain. Dry,	W of Western Bore, on Melrose boundary, Bandya Station,	Hummock grassland, Spinifex, Leptosema chambersii, Dicrastylis.	frequent.	-27.5667	121.6	MAN	3	21/09/2000
179	120.263	-27.1842	Seringia exastia	T		Breakaway	10 miles NW of Albion Downs Woolshed			-27.1842	120.263	AUTO	3	17/09/1958
180	120.917	-27.0333	Seringia exastia	T			Barwidgee Station,	Spinifex areas.		-27.0333	120.917	MAN	0	//1999
181	120.383	-27.1386	Seringia exastia	T		From bore	10 miles N of Albion Downs Station			-27.1386	120.383	AUTO	4	/07/1973
182	120.5	-27.5	Seringia exastia	T			Kathleen Valley			-27.5	120.5	MAN	4	3/09/1970
183	120.394	-26.935	Seringia exastia	T		Plain of re	Site 23, Honeymoon Well Project Area, 40 km S of Wiluna	Mulga and Eucalyptus kingsmillii over spinifex.		-26.935	120.394	MAN	0	29/08/1992
184	120.7	-27.3892	Seringia exastia	T		Flat sandp	SWATT Sandplain Survey, Wanjarri Nature Reserve survey site SWA1002D, ca. 58.02	Hummock grassland of Triodia basedowii.	isolated plants (<1%).	-27.3892	120.7	GPS	1	28/08/2013
185	120.964	-28.1309	Seringia exastia	T		Flat sandp	SWATT Sandplain Survey, Weebo Pastoral Lease, survey site SWA0902C, ca. 35.62 km	Open tall shrubland and woodland of Acacia effusifolia and Eucalyptus youngiana	isolated plants (<1%).	-28.1309	120.964	GPS	1	30/08/2013
186	120.683	-27.3985	Seringia exastia	T		Flat sandp	SWATT Sandplain Survey, Wanjarri Nature Reserve survey site SWA1003C, ca. 57.01	Open woodland of Eucalyptus gongylocarpa over sparse shrubland of Acacia effusif	very sparse (1-10%).	-27.3985	120.683	GPS	1	28/08/2013
187	120.341	-28.0867	Seringia exastia	T		Red sand.	10 miles W of Lawlers			-28.0867	120.341	AUTO	3	11/10/1953
188	120.5	-27.1333	Seringia exastia	T		Red sand.	62 miles N of Agnew on road to Wiluna	Hummock grassland.		-27.1333	120.5	MAN	3	19/08/1963
189	120.683	-27.4	Seringia exastia	T		Growing o	Wanjarri Nature Reserve, Grid Ref: 365 600	In Hummock Grassland with Triodia basedowii, Eucalyptus gonglyocarpa.		-27.4	120.683	MAN	0	29/09/1986
190	120.533	-27.5831	Seringia exastia	T		Red earth	Yakabindi Station	Spinifex and mulga, Acacia grasbyi, and a mallee eucalypt.		-27.5831	120.533	AUTO	4	/07/1973
191	120.323	-28.0108	Seringia exastia	T		At base of	24 km E of Depot Springs Homestead and ca 100 km E of Sandstone			-28.0108	120.323	AUTO	3	27/08/1970
192	120.583	-27.1961	Sida picklesiana		3	Weathere	Near the Mt Keith nickel minesite, Yeelirrie Station, 70 km SW of Wiluna	Acacia aneura, A. balsamea, A. pruinocarpa, A. quadrimarginea, Callitris glaucop	very sparse.	-27.1961	120.583	GPS	1	14/10/2010
193	119.964	-27.1086	Sida picklesiana		3	Weathere	50 km W of Mt Keith, N of Yeelirrie homestead in a smaller breakaway off Albion	Acacia aneura, A. balsamea, A. pruinocarpa, A. quadrimarginea, Callitris glaucop	very sparse.	-27.1086	119.964	GPS	1	4/11/2010
194	120.345	-26.8511	Stackhousia clementii		3	Growing o	Lake Way, ca. 30 km SSE of Wiluna	With Tecticornia aff. moniliformis, T. aff. undulata, Sclerolaena cuneata, Frank		-26.8511	120.345	GPS	1	28/11/2014
195	120.083	-27.2833	Stenanthemum mediale		1	Red clayey	4 km N of Twin Bore, Yeelirrie Station	Open scrub.		-27.2833	120.083	MAN	0	3/05/1990
196	121	-28.3173	Stenanthemum patens		1		Site 18, Marshall Pool, 70 km N of Leonora			-28.3173	121	MAN	0	20/07/1997
197	121.014	-28.3327	Stenanthemum patens		1	Low basalt	Site 49, Marshall Pool, 70 km N of Leonora	Open shrubland with Hemigenia exilis, Grevillea inconspicua, very little underst	infrequent, 50-100 plan	-28.3327	121.014	MAN	0	18/06/1997
198	120.526	-27.5719	Swainsona katjarra		1		Yakkabimbie [Yakabindie] Station			-27.5719	120.526	TOPO	2	//1984
199	120.281	-27.3407	Tecticornia cymbiformis		3	Salt lake c	Albion Downs Station, c. 8 km S of the Albion Downs-Yeelirrie Road on a track, c	Samphire flats with Melaleuca xerophila on the margins.	occasional.	-27.3407	120.281	GPS	1	16/04/2010
200	120.981	-27.1122	Tecticornia cymbiformis		3		Lake Maitland, ca. 100 km SE of Wiluna			-27.1122	120.981	GPS	1	11/01/2015
201	121.085	-27.1686	Tecticornia cymbiformis		3	On upper	Lake Maitland, ca. 105 km SE of Wiluna	With Lawrencia helmsii, Sclerolaena fimbriolata, Eremophea spinosa, Goodenia mai	locally dominant.	-27.1686	121.085	GPS	1	26/11/2014
202	120.972	-27.1128	Tecticornia cymbiformis		3	Upper edg	Near Lake Maitland, ca. 100 km SSE of Wiluna	Associated with Melaleuca xerophila, Dissocarpus paradoxus, Frankenia laxiflora,		-27.1128	120.972	GPS	1	13/10/2014
203	120.973	-27.1125	Tecticornia cymbiformis		3	Upper edg	Near Lake Maitland, ca. 100 km SSE of Wiluna	Associated with Melaleuca xerophila, Dissocarpus paradoxus, Frankenia laxiflora,		-27.1125	120.973	GPS	1	9/06/2014
204	120.451	-26.8835	Tecticornia enodis		1	Lake bed.	SW corner of Lake Way - 39.9 km SE of Wiluna. 1.7 km N of Duck Swamp	Halosarcia flats. Low Heath D to Dwarf Scrub D (Muir).	100 plants in 20 x 5 m b	-26.8835	120.451	GPS	1	13/12/2005
205	121.08	-27.1964	Tecticornia enodis		1		Lake Maitland, ca. 100 km SE of Wiluna			-27.1964	121.08	GPS	1	15/10/2014
206	120.36	-26.8501	Tecticornia enodis		1		Lake Way, ca. 25 km SSE of Wiluna			-26.8501	120.36	GPS	1	27/11/2014
207	120.327	-26.8184	Tecticornia enodis		1		Lake Way, ca. 25 km SSE of Wiluna			-26.8184	120.327	GPS	1	16/10/2014
208	121.091	-27.2124	Tecticornia enodis		1		Lake Maitland, ca. 100 km SE of Wiluna			-27.2124	121.091	GPS	1	27/11/2014
209	120.454	-26.8877	Tecticornia sp. Lake Way (P. Armstrong 05/961)		1	Lake bed.	SW corner of Lake Way - 39.9 km SE of Wiluna. 1.7 km N of Duck Swamp	Halosarcia flats. Low Heath D to Dwarf Scrub D (Muir).	500 to 1000 plants in 10	-26.8877	120.454	GPS	1	13/12/2005
210	120.451	-26.8842	Tecticornia sp. Lake Way (P. Armstrong 05/961)		1	Lake bed.	SW corner of Lake Way - 39.9 km SE of Wiluna. 1.7 km N of Duck Swamp	Halosarcia flats. Low Heath D to Dwarf Scrub D (Muir).	500 to 1000 plants in 10	-26.8842	120.451	GPS	1	13/12/2005
211	120.458	-26.8879	Tecticornia sp. Lake Way (P. Armstrong 05/961)		1	Lake bed.	SW corner of Lake Way - 39.9 km SE of Wiluna. 1.7 km N of Duck Swamp	Halosarcia flats. Low Heath D to Dwarf Scrub D (Muir).	500 to 1000 plants in 10	-26.8879	120.458	GPS	1	13/12/2005
212	120.455	-26.888	Tecticornia sp. Lake Way (P. Armstrong 05/961)		1	Lake bed.	SW corner of Lake Way - 39.9 km SE of Wiluna. 1.7 km N of Duck Swamp	Halosarcia flats. Low Heath D to Dwarf Scrub D (Muir).	500 to 1000 plants in 10	-26.888	120.455	GPS	1	7/03/2006
213	120.454	-26.8879	Tecticornia sp. Lake Way (P. Armstrong 05/961)		1	Lake bed.	SW corner of Lake Way - 39.9 km SE of Wiluna. 1.7 km N of Duck Swamp	Halosarcia flats. Low Heath D to Dwarf Scrub D (Muir).	500 to 1000 plants in 10	-26.8879	120.454	GPS	1	13/12/2005
214	120.454	-26.8879	Tecticornia sp. Lake Way (P. Armstrong 05/961)		1	Lake bed.	SW corner of Lake Way - 39.9 km SE of Wiluna. 1.7 km N of Duck Swamp	Halosarcia flats. Low Heath D to Dwarf Scrub D (Muir).	500 to 1000 plants in 10	-26.8879	120.454	GPS	1	13/12/2005
215	120.806	-27.7984	Thryptomene nealensis		3	On an irre	ca 20 km NE of Leinster townsite	Acacia aneura, A. balsamea high open shrubland over Calytrix uncinata, scattered	200+ individuals.	-27.7984	120.806	GPS	1	20/07/2007
216	120.806	-27.7983	Thryptomene nealensis		3	Growing o	Ca 20 km NE of Leinster townsite, ca 1 km S of Koonoonooka Bore	Acacia aneura, Callitris sp., Psydrax latifolia, Dodonaea petiolaris, D. microzy	200+ plants.	-27.7983	120.806	GPS	1	20/08/2007
217	120.807	-27.7991	Thryptomene nealensis		3	Growing o	Ca 20 km NE of Leinster townsite, ca 1 km S of Koonoonooka Bore	Acacia aneura, Callitris sp., Psydrax latifolia, Dodonaea petiolaris, D. microzy		-27.7991	120.807	GPS	1	20/08/2007
218	120.807	-27.7991	Thryptomene nealensis		3	Growing o	Ca 20 km NE of Leinster townsite, ca 1 km S of Koonoonooka Bore	Acacia aneuar, Callitris sp., Psydrax latifolia, Dodonaea petiolaris, D. microzy	200+ plants.	-27.7991	120.807	GPS	1	20/08/2007
219	120.807	-27.7991	Thryptomene nealensis		3	Growing o	Ca 20 km NE of Leinster townsite, ca 1 km S of Koonoonooka Bore	Acacia aneura, Callitris sp., Psydrax latifolia, Dodonaea petiolaris, D. microzy		-27.7991	120.807	GPS	1	20/08/2007
220	120.7	-27.9167	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Sandstone	2 km from Leonora to Wiluna road intersection on the road to Leicester	With Acacia aneura, Dodonaea, Thryptomene and Hakea.	common.	-27.9167	120.7	MAN	0	10/04/1992
221	120.995	-28.136	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Flat top of	Adjacent to proposed Rainbow Mine site, 3.7 km NNE of Goldfields Highway; 39 km	Open mulga with scattered tall shrubs to 2 m tall over open herbs.	uncommon - 10 plants i	-28.136	120.995	GPS	1	13/10/2004
222	120.992	-28.1404	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Plateau an	Adjacent to proposed Rainbow Mine site, 2.4 km NNE of Goldfields Highway, 37 km	Scattered tall shrubs in deeper soil pockets, with small shrubs in other areas.	uncommon - 20 plants i	-28.1404	120.992	GPS	1	13/10/2004
223	120.995	-28.136	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Flat top of	Adjacent to proposed Rainbow Mine site, 3.7 km NNE of Goldfields Highway, 39 km	Open mulga with scattered tall shrubs to 2 m tall over open herbs.	uncommon - 10 plants i	-28.136	120.995	GPS	1	13/10/2004
224	120.715	-27.7808	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	On plateau	ca 15 km NE of Leinster, within LNO Minesite tenements. To E of main pits	Acacia aneura, Acacia balsamea, Calytrix uncinata.	5 plants.	-27.7808	120.715	GPS	1	28/09/2006
225	120.706	-27.9265	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	On low gra	Leinster region	Associated vegetation: Acacia aneura, A. balsamea, A. quadrimarginea, Baeckea sp	common to co-dominan	-27.9265	120.706	GPS	1	19/09/2007
226	120.588	-27.346	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3		Northwestern corner of the Wanjarri Nature Reserve	Stony low shrubland (SILS of Thryptomene sp. Leinster 1.2-2.1 m, Calytrix uncina	approximately 200 plus	-27.346	120.588	GPS	1	6/03/2008
227	120.689	-27.7958	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Shallow so	LNO minesite, ca 15 km NE of Leinster	Associated species: Calytrix uncinata, Baeckea sp. Melita Station, Acacia balsam	78 plants.	-27.7958	120.689	GPS	1	19/07/2007
228	120.522	-27.1874	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Low stony	N of Mount Keith Operation minesite, on caprock borefield	Stony Ironstone Mulga Shrubland (SIMS).	dominant taxon in this v	-27.1874	120.522	GPS	1	4/06/2007
229	120.991	-28.1279	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	On top an	Approximately 36.8 km W to Leinster town, 6.1 km W (270deg) to Goldfields Highwa	Open scrub dominated by Acacia aneura growing to 2 m tall; over Open Low Scrub a	20 in the immediate are	-28.1279	120.991	GPS	1	17/03/2006
230	120.98	-27.9005	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	On top an	Approximately 27.9 km E to Leinster town, 25.5 km ENE (191deg) to Goldfields Hig	Open scrub dominated by Acacia aneura growing to 2 m tall; over Open Low Scrub a	10 in the immediate are	-27.9005	120.98	GPS	1	16/03/2006
231	120.706	-27.9269	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	On the pla	ca 1 km out of Leinster townsite on road to Agnew	Acacia aneura, Acacia balsamea, Calytrix uncinata.	300 + plants.	-27.9269	120.706	GPS	1	28/09/2006
232	120.59	-27.3453	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Stony.	Yakabindie Mine, 30 km N of Leinster	Low shrubland.		-27.3453	120.59	GPS	1	13/11/2010
233	119.904	-27.0445	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Quartz.	Yeelirrie Station, Murchison			-27.0445	119.904	GPS	1	3/11/2010
234	120.09	-27.2697	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3		Yeelirrie Station, 20 km N of Yeelirrie on Wiluna Road		c. 100 plants in a hectar	-27.2697	120.09	TOPO	2	13/05/2009
235	120.897	-28.1301	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Edge of lo	2.87 km W of Goldfields Highway and Weebo-Wildara Road intersection. 4.5 km S of	Dwarf Scrub (Muir 1977) - long unburnt.		-28.1301	120.897	GPS	1	16/02/2005
236	120.59	-27.3453	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Upper slop	Yakabindie Station, 65 km N from Leinster	Thryptomene sp. Leinster open shrubland with Acacia incurvaneura, A. quadrimargi	common on hilltop.	-27.3453	120.59	GPS	1	6/11/2016
237	120.526	-27.2489	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Ironstone	Leinster	Low woodland of Acacia aneura complex over Acacia quadramarginea and Thryptomer	1 plant.	-27.2489	120.526	GPS	1	17/08/2021
238	120.703	-27.925	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)		3	Skeletal re	1.3 km NE of Goldfields Highway on access road to Leinster	Open Acacia spp./Calytrix uncinata/Ptilotus sp. shrubland.	locally frequent.	-27.925	120.703	MAN	2	27/10/2000
239	120.533	-27.207	Tribulus adelacanthus		3	On hilltop.	Ca 2 km N of Mount Keith Operation minesite	Stony Ironstone Mulga Shrubland (SIMS).		-27.207	120.533	GPS	1	4/06/2007
240	120.529	-27.1996	Tribulus adelacanthus		3	Hardpan p	Ca. 81 km NNE of Leinster	Isolated low mulga trees of Acacia incurvaneura and Acacia pruinocarpa, low open	2 individuals.	-27.1996	120.529	GPS	1	4/04/2020
241	121.085	-27.2104	Triodia plurinervata		3	Growing o	Lake Maitland, ca. 105 km SE of Wiluna			-27.2104	121.085	GPS	1	28/11/2014
242	120.573	-27.3721	Verticordia jamiesonii		3	Breakaway	Breakaways near Leinster townsite. W of LNO between the village and the main hig	With Thryptomene decussata, Eremophila granitica, Acacia balsamea, Calytrix unci		-27.3721	120.573	GPS	1	13/02/2006
243	120.573	-27.3721	Verticordia jamiesonii		3	Breakaway	Leinster, on breakaway. W of LNO between the village and the main highway	With Thryptomene decussata, Eremophila granitica, Acacia balsamea, Calytrix unci		-27.3721	120.573	GPS	1	14/02/2006
244	120.708	-27.9257	Verticordia jamiesonii		3	Plateau of	Ca 1 km from Leinster along road to Agnew	Beackea sp. Melita Station, Calytrix uncinata.	50+ plants.	-27.9257	120.708	GPS	1	28/09/2006
245	120.707	-27.9265	Verticordia jamiesonii		3	Land surfa	Leinster region	Associated vegetation: Acacia aneura, A. balsamea, A. quadrimarginea, Baeckea sp	50 + plants.	-27.9265	120.707	GPS	1	19/09/2007

246	120.586	-27.3624	Verticordia jamiesonii	3	Breakaway	Six Mile Block, Yakabindie Station			-27.3624	120.586	GPS	1	15/04/2006
247	120.585	-27.3618	Verticordia jamiesonii	3	Weathered	Yakabindie Station, 60 km N from Leinster	Mixed shrubland of Thryptomene sp. Leinster, Acacia rhodophloia, A. quadrimargin	few.	-27.3618	120.585	GPS	1	11/12/2016
248	120.397	-26.9417	Vittadinia pustulata	3	Plain of re	Site 19, Honeymoon Well Project Area, 40 km S of Wiluna	Mulga and Eucalyptus kingsmillii over spinifex.		-26.9417	120.397	MAN	0	11/06/1992
1	120.615	-27.4704	Anacampseros sp. Eremaean (F. Hort, J. Hort & J. Shanks 3248)	1	In depress	Yakabindie Station (Crown Lease H-859693; Mining Lease 3600285, BHP Billiton Yak	KALGOORLIE	ESTMT			50		
2	120.729	-27.4466	Anacampseros sp. Eremaean (F. Hort, J. Hort & J. Shanks 3248)	1		Yakabindie Station (Crow Lease H-859693; Expl. Lic. 3600570, BHP Billiton Nickel	KALGOORLIE				8		
3	120.744	-27.4847	Anacampseros sp. Eremaean (F. Hort, J. Hort & J. Shanks 3248)	1		Yakabindie Station (Crown Lease H-859693; Expl. Lic. 3600570, BHP Billiton Nicke	KALGOORLIE				36		
4	119.903	-27.1779	Atriplex yeelirrie	T - VU	Low shrub	Pastoral Lease (3114-620), lot 63. Yeelirrie Station. BHP Uranium Project State	KALGOORLIE	ESTMT			80542		
5	119.933	-27.1869	Atriplex yeelirrie	T - VU	Low shrub	Pastoral Lease (3114-620), lot 63. Yeelirrie Station. BHP Uranium Project State	KALGOORLIE	ESTMT			0		
6	120.19	-27.3266	Atriplex yeelirrie	T - VU	Low shrub	Crown Land Pastoral Lease (3114-620), lot 63. Yeelirrie Station. Cameco Uranium	KALGOORLIE	ACT_CLMP			12	CLUMPS	300
7	120.203	-27.3203	Atriplex yeelirrie	T - VU	Habitat co	Pastoral Lease (3114-620), Lot 63. Yeelirrie Station. 38km west along Yeelirrie-	KALGOORLIE	ESTMT			3444		
8	120.207	-27.3159	Atriplex yeelirrie	T - VU	Dom sp: F	Pastoral Lease (3114-620), Lot 63. Yeelirrie Station. 38km west along Yeelirrie-	KALGOORLIE	ESTMT			21882		
9	120.212	-27.3165	Atriplex yeelirrie	T - VU	Self mulch	Pastoral Lease (3114-620), Lot 63. Yeelirrie Station. 38km west along Yeelirrie-	KALGOORLIE	ESTMT			2337		
10	120.216	-27.3136	Atriplex yeelirrie	T - VU	Saline play	Crown Land Pastoral Lease (3114-620), lot 63. Yeelirrie Station. Cameco Uranium	KALGOORLIE	ACT_CLMP			14	CLUMPS	80
11	120.219	-27.3183	Atriplex yeelirrie	T - VU	Dom sp: F	Pastoral Lease (3114-620), Lot 63. Yeelirrie Station. 38km west along Yeelirrie-	KALGOORLIE	ESTMT			3982		
12	120.212	-27.3239	Atriplex yeelirrie	T - VU	Habitat co	Pastoral Lease (3114-620), Lot 63. Yeelirrie Station. 38km west along Yeelirrie-	KALGOORLIE	ESTMT			58521		
13	120.2	-27.3069	Atriplex yeelirrie	T - VU	Habitat co	Pastoral Lease (3114-620), Lot 63. Yeelirrie Station. 31.5km west along Yeelirri	KALGOORLIE	ESTMT			905		
14	120.667	-27.45	Austroparmelina macrospora	3	Thicket, lo	Wanjarri Nature Reserve (R 30897). [Ca. 14km NE of Kathleen], Site 7. Shire of L	KALGOORLIE				0		
15	120.233	-27.9617	Baeckea sp. Sandstone (C.A. Gardner s.n. 26 Oct. 1963)	3		Depot Springs Station (Crown Lease 3114-585), 31.7 km west of Agnew (by road), t	KALGOORLIE				0		
16	120.851	-28.1383	Baeckea sp. Sandstone (C.A. Gardner s.n. 26 Oct. 1963)	3		Weebo Station (Crown Lease 3114-1153; Mining Lease 3600511, 2 holders), ca 6.5 k	KALGOORLIE				0		
17	120.133	-27.6465	Calytrix warburtonensis	2		Point Lilian, ca 5 km W of Connie Sue HWY, ca 173 km S of Warburton. Great Victo	KALGOORLIE	ESTMT			150		
18	121.257	-27.3381	Eremophila gracillima	3	Thick mulg	Wongonoo Station (Crown Lease 3114-1060; Expl. Lic. 3700851, Cullen Exploration)	KALGOORLIE				0		
19	120.647	-27.4067	Goodenia modesta	3	Grassland	Wanjarri Nature Reserve (Crown Reserve 30897), along track running south from sh	KALGOORLIE	ESTMT			35		
20	119.93	-27.7476	Grevillea inconspicua	4		Both sides of Sandstone-Yeelirrie Rd. 3.5km SW of jnc with Booylgoo Homestead tr	GERALDTON	ESTMT			45		
21	119.93	-27.7476	Grevillea inconspicua	4		S side of Sandstone-Yeelirrie Rd. 3.1km SW of jnc with Booylgoo Homestead track.	GERALDTON	ESTMT			30		
22	120.575	-27.4467	Grevillea inconspicua	4	Landform	ca 0.7-1.9km SW of Six Mile Well extending E(mostly) & W from track to Wiluna Rd	KALGOORLIE	ACT_IND			364		
23	120.587	-27.449	Grevillea inconspicua	4		2km SSE of Six Mile Well at Goliath deposit, E of Goliath main track. Yakabindie	KALGOORLIE	ACT_IND			28		
24	120.563	-27.4648	Grevillea inconspicua	4	Cassia sp.	For ca 1km along Six Mile Well Track from jnc with Wiluna-Leinster Rd. Both side	KALGOORLIE	ACT_IND			58		
25	120.579	-27.4556	Grevillea inconspicua	4	Landform	2.5-3km S of Six Mile Well down Drill Corp camp track. Both sides of track. Yaka	KALGOORLIE	ACT_IND			92		
26	120.569	-27.4151	Grevillea inconspicua	4	Strongly a	NW of Six Mile Well. Proposed site for Dominion Six Mile Well Nickle Mine. Yakab	KALGOORLIE	ACT_IND			902		
27	120.575	-27.4195	Grevillea inconspicua	4		NW of Six Mile Well. 0.5km NW of Dominion proposed pit site at Yakabindie. W of	KALGOORLIE	ACT_IND			99		
28	119.935	-27.7467	Grevillea inconspicua	4		On N side of Sandstone-Yeelirrie Rd, just past sign to Booylgoo homestead. ca 2k	GERALDTON	ACT_IND			5		
29	120.554	-27.6095	Grevillea inconspicua	4	On rocky r	Bellevue mine site camp. Immed. N of camp enclosure fence. Near Mt Pasco. Yakabi	KALGOORLIE	ACT_IND			20		
30	120.618	-27.9081	Grevillea inconspicua	4	Rocky slop	Mt Roberts. 400m W of track running N-S along range. ca 6.4km N of Agnew-Leinste	KALGOORLIE				0		
31	120.616	-27.9387	Grevillea inconspicua	4	Rocky slop	Mt Roberts. 400m W of track running N-S along range. ca 3km N of Agnew-Leinster	KALGOORLIE				0		
32	120.615	-27.9512	Grevillea inconspicua	4	Rocky slop	Mt Roberts. 400m W of track running N-S along range. ca 1.6km N of Agnew-Leinste	KALGOORLIE				0		
33	120.616	-27.9626	Grevillea inconspicua	4	Rocky slop	Mt Roberts. 800m W of track running N-S along range. N of Agnew-Leinster Rd. Lei	KALGOORLIE				0		
34	120.558	-27.4692	Grevillea inconspicua	4	Plain, hillt	S side of Jones Ck opp. Six Mile turnoff from Leinster-Wiluna Rd & on Mt Mann op	KALGOORLIE				0		
35	120.529	-27.529	Grevillea inconspicua	4	Rocky hills	5km W and 850m S of Kathleen Valley Hotel. E side of track covering numerous roc	KALGOORLIE	ESTMT			1000		
36	120.52	-27.527	Grevillea inconspicua	4		5km W of Kathleen Valley Hotel. S side of old telephone line rd. Where telephone	KALGOORLIE	ACT_IND			921		
37	120.529	-27.5262	Grevillea inconspicua	4		4.3km W of Kathleen Valley Hotel. S side of track along old telephone line. On d	KALGOORLIE	ACT_IND			360		
38	120.533	-27.5229	Grevillea inconspicua	4	Hilltop, Dr	3.7-4.1km W of Kathleen Valley Hotel. S side of track where joins old telephone	KALGOORLIE	ACT_IND			662		
39	120.571	-27.5215	Grevillea inconspicua	4	Rocky hills	2km E of Kathleen Valley Hotel. Around old shed and workings. On rocky hills & d	KALGOORLIE	ACT_IND			612		
40	120.547	-27.5198	Grevillea inconspicua	4		2km W of Kathleen Valley Hotel. 150-200m S of track. Yakabindie pastoral lease.	KALGOORLIE	ESTMT			700		
41	120.552	-27.5148	Grevillea inconspicua	4	Both mois	1-1.7km W of Kathleen Valley Hotel. N & S of track on slopes of rocky hills. Aro	KALGOORLIE	ACT_IND			315		
42	120.557	-27.5137	Grevillea inconspicua	4	Both mois	1km W of Kathleen Valley Hotel, then 200m S. Yakabindie pastoral lease.	KALGOORLIE	ACT_IND			283		
43	120.561	-27.5098	Grevillea inconspicua	4	Both mois	400m W of Kathleen Valley Hotel. Follows track around rock hill. Most of popn wi	KALGOORLIE	ACT_IND			915		
44	120.553	-27.492	Grevillea inconspicua	4	Both mois	2km S of Six Mile track. 1.8km WSW of main road. Yakabindie pastoral lease.	KALGOORLIE	ESTMT			500		
45	120.557	-27.5498	Grevillea inconspicua	4		3.6km E of Wiluna-Agnew Rd on road to Cork Tree Bore. Turnoff is 1.7km N of Yaka	KALGOORLIE	ACT_IND			108		
46	120.552	-27.639	Grevillea inconspicua	4		Extending for 600m along W side of Leinster-Wiluna Rd directly opp. Bellevue Min	KALGOORLIE	ESTMT			162		
47	120.551	-27.6404	Grevillea inconspicua	4		Extending for 600m along W side of Leinster-Wiluna Rd directly opp. Bellevue Min	KALGOORLIE	ESTMT			161		
48	121.173	-27.5423	Grevillea inconspicua	4		Yandal pastoral lease. Adj to holding paddock fence.	KALGOORLIE	ESTMT		0	100		
49	121.46	-27.3917	Grevillea inconspicua	4	Low mulga	Melrose Pastoral Station, northern boundary, 1km north-east of Mt Harold, spread	KALGOORLIE	ESTMT			3000		
50	120.713	-28.224	Hemigenia exilis	4	Soil:quartz	Weebo Station, ca.5km north-east of Poison Creek crossing with the Agnew-Leonora	KALGOORLIE	ESTMT			200		
51	120.678	-28.1604	Hemigenia exilis	4	growing in	Weebo Station, ca. 5km north-east of `Fourteen Mile Creek` crossing with the Agn	KALGOORLIE	ESTMT			200		
52	120.553	-27.4701	Hemigenia exilis	4	Floodplain	Yakabindie Station, ca. 2km east of Kalgoorlie-Meekatharra Road on road to Yakab	KALGOORLIE	ESTMT			420		
53	121.151	-28.3487	Hemigenia exilis	4	Acacia shr	Northern boarder of Weebo & Tarmoola Pastoral Stations, Wilson's Creek, ca. 1.2k	KALGOORLIE	ESTMT		10	112		
54	121.146	-28.3504	Hemigenia exilis	4	Acacia shr	Northern boarder of Weebo & Tarmoola Pastoral Stations, Wilson's Creek, ca. 1.8k	KALGOORLIE	ESTMT			500		
55	121.122	-28.3762	Hemigenia exilis	4	Acacia shr	Tarmoola Pastoral Station, Wilson's Creek, west of the Leonora-Leinster Road nea	KALGOORLIE	ESTMT			50		
56	121.119	-28.3767	Hemigenia exilis	4	Open Acac	Tarmoola Pastoral Station, Wilson's Creek, west of the Leonora-Leinster Road nea	KALGOORLIE	ESTMT			350		
57	121.122	-28.3773	Hemigenia exilis	4	Acacia shr	Tarmoola Pastoral Station, Wilson's Creek, west of the Leonora-Leinster Road nea	KALGOORLIE	ESTMT			200		
58	121.126	-28.3784	Hemigenia exilis	4	Acacia shr	Tarmoola Pastoral Station, Wilson's Creek, west of Leonora-Leinster Road near Wi	KALGOORLIE	ESTMT			450		
59	121.093	-28.3995	Hemigenia exilis	4	Open acac	Tarmoola Pastoral Station, Wilson's Creek, west of Leonora-Leinster Road near Wi	KALGOORLIE	ACT_IND			3		
60	121.127	-28.372	Hemigenia exilis	4	Acacia shr	Tarmoola Pastoral Station, Wilson's Creek, west of Leonora-Leinster Road near Wi	KALGOORLIE	ESTMT			150		
61	121.094	-28.3948	Hemigenia exilis	4	Open acac	Tarmoola Pastoral Station, Wilson's Creek, west of Leonora-Leinster Road near Wi	KALGOORLIE				200		
62	121.097	-28.394	Hemigenia exilis	4	Open acac	Tarmoola Pastoral Station, Wilson's Creek, west of Leonora-Leinster Road, Wilson	KALGOORLIE	ESTMT			100		
63	120.979	-28.3981	Hemigenia exilis	4	Open acac	Stuart Meadows Pastoral Station, Wilson's Creek, north of Minniritchie Well, wes	KALGOORLIE	ESTMT			40		
64	121.031	-28.3865	Hemigenia exilis	4	Open acac	Tarmoola Pastoral Station, Wilson's Creek, north of Jungle Well, west of Leonora	KALGOORLIE	ESTMT			800		
65	120.991	-28.2912	Hemigenia exilis	4	Acacia shr	Weebo Station, Marshall Creek, east of Heather Well,	KALGOORLIE	ESTMT			400		
66	120.568	-27.3904	Hemigenia exilis	4		Yakabindie Station, near McFarlanes Find Mining Centre, west boundary of Wanjarr	KALGOORLIE	ESTMT			100		
67	120.585	-27.4154	Hemigenia exilis	4		Wanjarri Nature Reserve, Jones Creek, near western boundary of Reserve.	KALGOORLIE	ACT_IND			70		
68	120.567	-27.4273	Hemigenia exilis	4	Open low	Yakabindie Pastoral Station, north-eastern corner, Mining Lease M36/398, south o	KALGOORLIE	ESTMT			1000		
69	120.566	-27.3728	Hemigenia exilis	4		Yakabindie Pastoral Station, north-eastern corner, Mining Lease M36/398, south o	KALGOORLIE	ACT_IND			5		
70	120.57	-27.3737	Hemigenia exilis	4		Yakabindie Pastoral Station, north-eastern corner, Mining Lease M36/398, south o	KALGOORLIE	ACT_IND			3		
71	120.576	-27.3853	Hemigenia exilis	4		Yakabindie Pastoral Station, north-eastern corner, Mining Lease M36/398, south o	KALGOORLIE	ACT_IND			20		
72	120.566	-27.392	Hemigenia exilis	4	Open mulg	Yakabindie Pastoral Station, north-eastern corner, Mining Lease M36/398, south o	KALGOORLIE	ESTMT			300		
73	120.581	-27.397	Hemigenia exilis	4		Yakabindie Pastoral Station, north-eastern corner, Mining Lease M36/398, south o	KALGOORLIE	ESTMT			150		
74	120.578	-27.3954	Hemigenia exilis	4		Yakabindie Pastoral Station, north-eastern corner, Mining Lease M36/398, south o	KALGOORLIE	ESTMT			100		
75	120.576	-27.4037	Hemigenia exilis	4		Yakabindie Pastoral Station, north-eastern corner, Mining Lease M36/398, south o	KALGOORLIE	ESTMT			5		
76	120.571	-27.397	Hemigenia exilis	4		Yakabindie Pastoral Station, north-eastern corner, Mining Lease M36/398, south o	KALGOORLIE	ESTMT			1500		
77	120.546	-27.2292	Hemigenia exilis	4	Stony iron	Mount Keith Pastoral Station, Mining Lease M53/167, within the approved waste du	KALGOORLIE	ESTMT		59	303		
78	121.054	-28.2741	Korthalsella leucothrix	1	Parasite. N	Weebo Station (Crown Lease 3114-1153), [ca 3 km west of] Kent Bore Quarry (MRD),	KALGOORLIE				0		
79	120.688	-27.8118	Lysiandra baeckeoides	3	Dom sp: A	Pastoral Lease (3114-899), Lot 59. Leinster Downs Station. Mining Tenement M36/4	KALGOORLIE	ESTMT			150		

80	121.137	-28.3808	Lysiandra baeckeoides	3	Sparse veg	Pastoral Lease (3114-968), Lot 79. Tarmoola Station. Mining Tenement E37/496. Te	KALGOORLIE	ACT_IND			266		
81	121.142	-28.378	Lysiandra baeckeoides	3		UCL, Lot 27. Mining Tenement M37/44 & M37/515. Teutonic Bore-Jaguar Mine Site. [	KALGOORLIE				0		
82	121.14	-28.3854	Lysiandra baeckeoides	3	Dense Aca	Pastoral Lease (3114-968), Lot 79. Tarmoola Station. Mining Tenement E37/496. Te	KALGOORLIE	ACT_IND			145		
83	120.971	-28.1459	Micromyrtus chrysodema	1	Emergent	ca 40 km SE of Leinster on Leinster to Leonora Rd. 1 km E of road along the Wate	KALGOORLIE				0		
84	120.085	-27.282	Stenanthemum mediale	1	Erect dwa	Pastoral lease (lot 63) 4 km N of Twin Bore. Yeelirrie Station, approx, 40 km S	KALGOORLIE				0		
85	121	-28.3173	Stenanthemum patens	1		Site 18, Marshall pool, 70 km N of Leonora.	KALGOORLIE				0		
86	121.014	-28.3327	Stenanthemum patens	1	Open shru	Site 49, Marshall Pool, 70 km N of Leonora.	KALGOORLIE				50		
87	120.455	-26.888	Tecticornia sp. Lake Way (P. Armstrong 05/961)	1	Halosarcia	Sw corner of Lake Way. 39.9 km SE of Wiluna. 1.7 km N of Duck Swamp.	KALGOORLIE				500		
88	120.451	-26.8842	Tecticornia sp. Lake Way (P. Armstrong 05/961)	1		SW corner of Lake Way. 39.9 km SE of Wiluna. 1.7 km N of Duck Swamp.	KALGOORLIE				500		
89	120.995	-28.1359	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3	Open Mul	Adjacent to proposed Rainbow mine site, 3.7 km NNE of Goldfields HWY, 39 km SE o	KALGOORLIE				10		
90	120.992	-28.1404	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3	Scattered	Adjacent to proposed Rainbow mine site, 2.4 km NNE of Goldfields HWY, 37 km SE o	KALGOORLIE				20		
91	120.991	-28.1279	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3		Approximately 36.8 km W to Leinster town, 6.1 km W (220 deg) to Goldfields HWY a	KALGOORLIE				20		
92	120.716	-27.7808	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3		ca 15 km N of Leinster, within LNO minesite, to E of main pits. [2.9 km NE of Pe	KALGOORLIE				5		
93	120.706	-27.9265	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3		1.3 km NE of the Goldfields HWY on access rd to Leinster. ca 1 km out of Leinste	KALGOORLIE				0		
94	120.588	-27.3461	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3	Low shrub	Northwestern corner of the Wanjarri NR. [ca 3.7 km NNE of McFarlanes Find.]	KALGOORLIE				200		
95	120.689	-27.7958	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3		LNO Minesite, ca 15 km NE of Leinster.	KALGOORLIE				78		
96	120.522	-27.1874	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3	Stony iron	N of Mt Keith Operation minesite, on caprock borefield. [ca 12 km W of Wiluna Le	KALGOORLIE				0		
97	120.98	-27.9005	Thryptomene sp. Leinster (B.J. Lepschi & L.A. Craven 4362)	3		ca 27.9 km E to Leinster town, 25.5 km ENE (191 deg) to Goldfields HWY and Darlo	KALGOORLIE				10		

Appendix 4: DBCA fauna search results

#	LONG	LAT	SPECIES	COMMON NAME	ORDER		WA RATIN	EPBC RATING	YEAR																		
22	120.651	-27.3987	Liopholis kintorei		REPTILE	Threatened - Vulnerable	VU	VU	1964	Wanjarri Nature Reserve	Kathleen Valley, now Wanjarri Nature Reserve			4899	TFAUNA	Certain	Survey	Caught or	1	1000	120.651	-27.3987	41412	Scincidae	Liopholis	kintorei		Animalia
25	120.73	-27.3559	Amytornis striatus striat	striated grasswren (sa	BIRD	Priority	P4		1987	Wanjarri Nature Reserve	Wanjarri Nature Reserve, S of rubbish dump in spinifex			7789	TFAUNA	Certain	Survey	Day sightir	1	50000	120.73	-27.3559	24539	Maluridae	Amytornis	striatus	striatus	Animalia
26	120.73	-27.3559	Amytornis striatus striat	striated grasswren (sa	BIRD	Priority	P4		1979	Wanjarri Nature Reserve	Wanjarri Nature Reserve			7793	TFAUNA	Certain	Survey	Caught or	1	50000	120.73	-27.3559	24539	Maluridae	Amytornis	striatus	striatus	Animalia
58	120.759	-27.3401	Amytornis striatus striat	striated grasswren (sa	BIRD	Priority	P4		2016	Wanjarri Nature Reserve	Wanjarri Nature Reserve			85125	TFAUNA	Moderatel	Opportuni	Sighting	2	1000	120.759	-27.3401	24539	Maluridae	Amytornis	striatus	striatus	Animalia
97	120.7	-27.4	Amytornis striatus striat	Striated grasswren (sa	BIRD	Priority	P4		1979		Eiffel Tower Bore, 1.2 km W of			0	WAM_BIR	WAM Vou	Collection	Specimen	1	0	120.7	-27.4	24539	Maluridae	Amytornis	striatus	striatus	Animalia
89	120.083	-27.2838	Apus pacificus	Fork-tailed swift	BIRD	Specially Protected - migratory	MI	MI	2015	WILUNA	Yeelirrie, Yeelirrie			1221318	FAUNASUI	Certain	Survey	Unknown	1	25000	120.083	-27.2838	25554	Apodidae	Apus	pacificus		Animalia
29	120.65	-28.25	Falco peregrinus	peregrine falcon	BIRD	Specially Protected - other specially p	OS		1974	Poison Creek	Poison Creek (approx. 100 km north of Leonora)			9803	TFAUNA	Certain	Opportuni	Day sightir	1	10000	120.65	-28.25	25624	Falconidae	Falco	peregrinus		Animalia
92	120.085	-27.9154	Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially p	OS		2000	Depot Springs Station, Lienster -	Depot Springs Station, Lienster - Sandstone Road			0	BIRDATLAS2				0	5000	120.085	-27.9154	25624	Falconidae	Falco	peregrinus		Animalia
93	120.109	-27.2822	Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially p	OS		2001	Sandstone - Paynes Find Road	Sandstone - Paynes Find Road			0	BIRDATLAS2				0	100	120.109	-27.2822	25624	Falconidae	Falco	peregrinus		Animalia
94	120.842	-27.4295	Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially p	OS		1999	Wanjarri Nature Reserve east bo	Wanjarri Nature Reserve east boundary			0	BIRDATLAS2				0	100	120.842	-27.4295	25624	Falconidae	Falco	peregrinus		Animalia
95	120.609	-27.4081	Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially p	OS		1999	Wanjarri Nature Reserve	Wanjarri Nature Reserve			0	BIRDATLAS2				0	100	120.609	-27.4081	25624	Falconidae	Falco	peregrinus		Animalia
88	120.083	-27.2838	Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	2015	WILUNA	Yeelirrie, Yeelirrie			1221314	FAUNASUI	Certain	Survey	Unknown	10	25000	120.083	-27.2838	47954	Laridae	Gelochelid	nilotica		Animalia
1	120.773	-27.282	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1997	WANJARRI NATURE RESERVE	Wanjarri Nature Reserve			1331	TFAUNA	Certain	Opportuni	Secondary	1	500	120.773	-27.282	24557	Megapodi	Leipoa	ocellata		Animalia
2	120.797	-27.313	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1997	WANJARRI NATURE RESERVE	Wanjarri Nature Reserve			1332	TFAUNA	Certain	Opportuni	Secondary	1	500	120.797	-27.313	24557	Megapodi	Leipoa	ocellata		Animalia
15	120.79	-27.247	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1998	Mount Keith	Mount Keith			1487	TFAUNA	Certain	Opportuni	Secondary	1	1000	120.79	-27.247	24557	Megapodi	Leipoa	ocellata		Animalia
23	121	-27.468	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2001	Yandal Station	Track on boundary with Barwidgee Station			5056	TFAUNA	Certain	Opportuni	Day sightir	2	10000	121	-27.468	24557	Megapodi	Leipoa	ocellata		Animalia
30	120.092	-27.279	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1984	Yeelirrie	Yeelirrie Stn			10725	TFAUNA	Moderatel	Opportuni	Sighting	0	10000	120.092	-27.279	24557	Megapodi	Leipoa	ocellata		Animalia
33	120.017	-27.428	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			47290	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.017	-27.428	24557	Megapodi	Leipoa	ocellata		Animalia
34	120.024	-27.4102	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			47291	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.024	-27.4102	24557	Megapodi	Leipoa	ocellata		Animalia
35	120.028	-27.4055	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			47292	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.028	-27.4055	24557	Megapodi	Leipoa	ocellata		Animalia
36	120.029	-27.4227	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			47293	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.029	-27.4227	24557	Megapodi	Leipoa	ocellata		Animalia
37	120.03	-27.3975	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			47294	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.03	-27.3975	24557	Megapodi	Leipoa	ocellata		Animalia
38	120.029	-27.413	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			47295	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.029	-27.413	24557	Megapodi	Leipoa	ocellata		Animalia
39	120.032	-27.425	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			47296	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.032	-27.425	24557	Megapodi	Leipoa	ocellata		Animalia
40	120.033	-27.4227	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			47297	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.033	-27.4227	24557	Megapodi	Leipoa	ocellata		Animalia
41	120.127	-27.483	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SIR SAMUEL	Yeelirrie			47298	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.127	-27.483	24557	Megapodi	Leipoa	ocellata		Animalia
42	120.146	-27.4797	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SIR SAMUEL	Yeelirrie			47299	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.146	-27.4797	24557	Megapodi	Leipoa	ocellata		Animalia
43	120.186	-27.5569	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SIR SAMUEL	Yeelirrie			47300	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.186	-27.5569	24557	Megapodi	Leipoa	ocellata		Animalia
44	120.196	-27.5486	Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SIR SAMUEL	Yeelirrie			47301	WAM_BIR	Very Certa	Survey	Sighting	1	1000	120.196	-27.5486	24557	Megapodi	Leipoa	ocellata		Animalia
45	120.017	-27.4279	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			72669	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.017	-27.4279	24557	Megapodi	Leipoa	ocellata		Animalia
46	120.024	-27.4101	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			72670	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.024	-27.4101	24557	Megapodi	Leipoa	ocellata		Animalia
47	120.028	-27.4054	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			72671	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.028	-27.4054	24557	Megapodi	Leipoa	ocellata		Animalia
48	120.029	-27.4226	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			72672	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.029	-27.4226	24557	Megapodi	Leipoa	ocellata		Animalia
49	120.03	-27.3974	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			72673	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.03	-27.3974	24557	Megapodi	Leipoa	ocellata		Animalia
50	120.029	-27.4129	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			72674	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.029	-27.4129	24557	Megapodi	Leipoa	ocellata		Animalia
51	120.032	-27.4249	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			72675	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.032	-27.4249	24557	Megapodi	Leipoa	ocellata		Animalia
52	120.033	-27.4226	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SANDSTONE	Yeelirrie			72676	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.033	-27.4226	24557	Megapodi	Leipoa	ocellata		Animalia
53	120.127	-27.4829	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SIR SAMUEL	Yeelirrie			72677	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.127	-27.4829	24557	Megapodi	Leipoa	ocellata		Animalia
54	120.146	-27.4796	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SIR SAMUEL	Yeelirrie			72678	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.146	-27.4796	24557	Megapodi	Leipoa	ocellata		Animalia
55	120.186	-27.5568	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SIR SAMUEL	Yeelirrie			72679	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.186	-27.5568	24557	Megapodi	Leipoa	ocellata		Animalia
56	120.196	-27.5485	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	2000	SIR SAMUEL	Yeelirrie			72680	TFAUNA	Moderatel	Survey	Day sightir	0	1000	120.196	-27.5485	24557	Megapodi	Leipoa	ocellata		Animalia
59	120.85	-27.45	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1952	LAKE DARLOT	1 km beyond South East boundary - Wanjarri			89786	TFAUNA	Moderatel	Opportuni	Sighting	1	1000	120.85	-27.45	24557	Megapodi	Leipoa	ocellata		Animalia
60	120.083	-27.2666	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1982	WILUNA	1 mile North of Yeelirrie RH (near townsite)			89810	TFAUNA	Moderatel	Opportuni	Sighting	1	10000	120.083	-27.2666	24557	Megapodi	Leipoa	ocellata		Animalia
61	120.14	-27.055	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1982	WILUNA	1 mile South of Community Bore			89811	TFAUNA	Moderatel	Opportuni	Sighting	1	1000	120.14	-27.055	24557	Megapodi	Leipoa	ocellata		Animalia
62	120.083	-27.2833	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1976	WILUNA	3 miles East of Middle Well, Yeelirrie Station			90078	TFAUNA	Moderatel	Opportuni	Secondary	0	10000	120.083	-27.2833	24557	Megapodi	Leipoa	ocellata		Animalia
63	120.026	-27.4257	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1982	SANDSTONE	3 miles South of Jack Bore			90080	TFAUNA	Moderatel	Opportuni	Sighting	1	1000	120.026	-27.4257	24557	Megapodi	Leipoa	ocellata		Animalia
64	120.005	-27.9658	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1999	SANDSTONE	Approx 50 km west of Agnew on Sandstone Rd			90318	TFAUNA	Moderatel	Opportuni	Sighting	1	1000	120.005	-27.9658	24557	Megapodi	Leipoa	ocellata		Animalia
65	120.65	-27.4	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1972	SIR SAMUEL	Wanjarri			91820	TFAUNA	Moderatel	Opportuni	Secondary	0	50000	120.65	-27.4	24557	Megapodi	Leipoa	ocellata		Animalia
66	120.65	-27.4	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1969	SIR SAMUEL	Wanjarri			91821	TFAUNA	Moderatel	Historical (	Secondary	0	50000	120.65	-27.4	24557	Megapodi	Leipoa	ocellata		Animalia
67	120.967	-28.0833	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1995	LEINSTER	Weebo Station			91829	TFAUNA	Moderatel	Opportuni	Sighting	1	0	120.967	-28.0833	24557	Megapodi	Leipoa	ocellata		Animalia
68	120.083	-27.2833	Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1982	WILUNA	Yeelirrie			91901	TFAUNA	Moderatel	Opportuni	Sighting	1	10000	120.083	-27.2833	24557	Megapodi	Leipoa	ocellata		Animalia
91	121.085	-28.082	Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	1979	LEINSTER	LEINSTER			0	BIRDATLAS1				0	18000	121.085	-28.082	24808	Scolopacid	Tringa	nebularia		Animalia
98	120.65	-27.4	Polytelis alexandrae	Princess parrot	BIRD	Priority	P4	VU	1964		Wanjarri; Kathleen Valley Station			0	WAM_BIR	WAM Vou	Collection	Specimen	1	10000	120.65	-27.4	24752	Psittacidae	Polytelis	alexandrae		Animalia
3	120.643	-27.4431	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1996	WANJARRI NATURE RESERVE	Wanjarri Nature Reserve			1336	TFAUNA	Moderatel	Survey	Caught or	1	1000	120.643	-27.4431	30903	Dasyuridae	Dasycercu	blythi		Animalia
4	120.735	-27.2098	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Mt Keith	Mt Keith (WMC)			1413	TFAUNA	Moderatel	Survey	Caught or	1	500	120.735	-27.2098	30903	Dasyuridae	Dasycercu	blythi		Animalia
5	120.778	-27.1887	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Mt Keith	Mt Keith (WMC)			1414	TFAUNA	Moderatel	Survey	Caught or	7	50	120.778	-27.1887	30903	Dasyuridae	Dasycercu	blythi		Animalia
6	120.517	-27.3087	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Mt Keith	Mt Keith (WMC)			1415	TFAUNA	Moderatel	Opportuni	Sighting	6	50	120.517	-27.3087	30903	Dasyuridae	Dasycercu	blythi		Animalia
7	120.538	-27.1703	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Mt Keith	Mt Keith (WMC)			1416	TFAUNA	Moderatel	Survey	Caught or	1	1000	120.538	-27.1703	30903	Dasyuridae	Dasycercu	blythi		Animalia
8	121.143	-27.2174	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1998	Barwidgee	Barwidgee			1480	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.143	-27.2174	30903	Dasyuridae	Dasycercu	blythi		Animalia
9	121.142	-27.2179	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Barwidgee	Barwidgee			1481	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.142	-27.2179	30903	Dasyuridae	Dasycercu	blythi		Animalia
10	121.161	-27.125	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Barwidgee	Barwidgee			1482	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.161	-27.125	30903	Dasyuridae	Dasycercu	blythi		Animalia
11	121.147	-27.1425	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Barwidgee	Barwidgee			1483	TFAUNA	Moderatel	Survey	Caught or	2	1000	121.147	-27.1425	30903	Dasyuridae	Dasycercu	blythi		Animalia
12	121.148	-27.1389	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Barwidgee	Barwidgee			1484	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.148	-27.1389	30903	Dasyuridae	Dasycercu	blythi		Animalia
13	121.147	-27.1395	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Barwidgee	Barwidgee			1485	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.147	-27.1395	30903	Dasyuridae	Dasycercu	blythi		Animalia
14	121.147	-27.1425	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1997	Barwidgee	Barwidgee			1486	TFAUNA	Moderatel	Survey	Caught or	2	1000	121.147	-27.1425	30903	Dasyuridae	Dasycercu	blythi		Animalia
16	120.515	-27.3069	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1998	Mount Keith Mine Site	Mount Keith Mine Site			1488	TFAUNA	Moderatel	Survey	Caught or	1	1000	120.515	-27.3069	30903	Dasyuridae	Dasycercu	blythi		Animalia
17	121.147	-27.1453	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1998	Barwidgee	Barwidgee			1489	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.147	-27.1453	30903	Dasyuridae	Dasycercu	blythi		Animalia
18	121.147	-27.1369	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1998	Barwidgee	Barwidgee			1490	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.147	-27.1369	30903	Dasyuridae	Dasycercu	blythi		Animalia
19	121.147	-27.1369	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1998	Barwidgee	Barwidgee			1491	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.147	-27.1369	30903	Dasyuridae	Dasycercu	blythi		Animalia
20	121.162	-27.1305	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1998	Barwidgee	Barwidgee			1492	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.162	-27.1305	30903	Dasyuridae	Dasycercu	blythi		Animalia
21	121.147	-27.1453	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		1998	Barwidgee	Barwidgee			1493	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.147	-27.1453	30903	Dasyuridae	Dasycercu	blythi		Animalia
27	120.498	-27.5526	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		2004	Sir Samuel	Eastern side of Jones Creek wetland			9576	TFAUNA	Moderatel	Survey	Caught or	1	1000	120.498	-27.5526	30903	Dasyuridae	Dasycercu	blythi		Animalia
28	120.498	-27.5526	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		2004	Sir Samuel	Eastern side of Jones Creek wetland			9577	TFAUNA	Moderatel	Survey	Caught or	1	1000	120.498	-27.5526	30903	Dasyuridae	Dasycercu	blythi		Animalia
31	121.133	-27.2151	Dasycercus blythi	brush-tailed mulgara	MAMMAL	Priority	P4		2007	Wiluna	Lake Maitland (LM01)			14843	TFAUNA	Moderatel	Survey	Caught or	1	1000	121.133	-27.2151	30903	Dasyuridae	Dasycercu	blythi		Animalia
83	120.605	-27.0128	Dasycercus blythi	Brush-tailed mulgara	MAMMAL	Priority	P4		2014	WILUNA	Wiluna, Lake Way			1030755	FAUNASUI	Certain	Survey	Unknown	1	100	120.605	-27.0128	30903	Dasyuridae	Dasycercu	blythi		Animalia
84	120.82	-27.0113	Dasycercus blythi	Brush-tailed mulgara	MAMMAL	Priority	P4		2014	WILUNA	Wiluna, Lake Way			1030756	FAUNASUI	Certain	Survey	Unknown	1	100	120.82	-27.0113	30903	Dasyuridae	Dasycercu	blythi		Animalia
103	120.717	-27.35	Dasycercus blythi	Brush-tailed mulgara	MAMMAL	Priority	P4		1899					0	WAM_MA	WAM Vou	Collection	Specimen	1	0	120.717	-27.35	30903	Dasyuridae	Dasycercu	blythi		Animalia
32	120.704	-27.3726	Dasycercus sp.	Brush-tailed mulgara	MAMMAL	Priority	P4		1997	Wanjarri Nature Reserve	Translocated to Wanjarri Nature reserve from Plover Bore site.			20632	TFAUNA	Certain	Translocat	Released	2	10000	120.704	-27.3726	48395	Dasyuridae	Dasycercu	sp.		Animalia
100	120.646	-27.4442	Dasycercus sp.	Brush-tailed mulgara	MAMMAL	Priority	P4		1997		WANJARRI NAT RES			0	WAM_MA	WAM Vou	Collection	Specimen	1	50000	120.646	-27.4442	48395	Dasyuridae	Dasycercu	sp.		Animalia
101	120.646	-27.4442	Dasycercus sp.	Brush-tailed mulgara	MAMMAL	Priority	P4		1997		WANJARRI NAT RES			0	WAM_MA	WAM Vou	Collection	Specimen	1	50000	120.646	-27.4442	48395	Dasyuridae	Dasycercu	sp.		Animalia
102	120.65	-27.44	Dasycercus sp.	Brush-tailed mulgara	MAMMAL	Priority	P4		1999		WANJARRI NATURE RESERVE			0	WAM_MA	WAM Vou	Collection	Specimen	1	50000	120.65	-27.44	48395	Dasyuridae	Dasycercu	sp.		Animalia
69	120.648	-27.4436	Leporillus conditor	greater stick-nest rat,	MAMMAL	Specially Protected - conservation de	CD	VU	2019	Wanjarri Nature Reserve (Wanj)				98737	TFAUNA	Certain	Opportuni	Secondary	0	50	120.648	-27.4436	24219	Muridae	Leporillus	conditor		Animalia
57	120.45	-27.241	Petrogale lateralis later	Black-flanked rock-wa	MAMMAL	Threatened - Endangered	EN	EN	2009	WILUNA	Eastern Murchison, Yeelirrie			82774	FAUNASUI	Certain	Survey	Secondary	1	100	120.45	-27.241	24142	Macropod	Petrogale	lateralis	lateralis	Animalia
90	120.083	-27.2838	Petrogale lateralis later	Black-flanked rock-wa	MAMMAL	Threatened - Endangered	EN	EN	2015	WILUNA	Yeelirrie, Yeelirrie			1221367	FAUNASUI	Certain	Survey	Secondary	1	25000	120.083	-27.2838	24142	Macropod	Petrogale	lateralis	lateralis	Animalia
99	119.958	-27.9264	Sminthopsis longicauda	Long-tailed dunnart	MAMMAL	Priority	P4		1899		DEPOT SPRINGS W.RES., BOULDER SCREE			0	WAM_MA	WAM Vou	Collection	Specimen	1	50	119.958	-27.9264	24115	Dasyuridae	Sminthops	longicaudata		Animalia
70	120.61	-27.2908	Idiosoma clypeatum	northern shield-backe	INVERTEB	Priority	P3		2011	Yakabindie				98866	TFAUNA	Certain	Targeted s	Caught or	1	50	120.61	-27.2908	48926	Idiopidae	Idiosoma	clypeatum		Animalia
71	120.205	-27.3173	Idiosoma clypeatum	northern shield-backe	INVERTEB	Priority	P3		2010	Yeelirrie Station				98867	TFAUNA	Certain	Survey	Caught or	1	50	120.205	-27.3173	48926	Idiopidae	Idiosoma	clypeatum		Animalia
72	120.359	-27.3583	Idiosoma clypeatum	northern shield-backe	INVERTEB	Priority	P3		2008	Albion Downs	70.1km NNW of Leinster			98868	TFAUNA	Certain	Survey	Caught or	1	50	120.359	-27.3583	48926	Idiopidae	Idiosoma	clypeatum		Animalia
73	120.359	-27.3583	Idiosoma clypeatum	northern shield-backe	INVERTEB	Priority	P3		2008	Albion Downs	70.1km NNW of Leinster			98869	TFAUNA	Certain	Survey	Caught or	1	50	120.359	-27.3583	48926	Idiopidae	Idiosoma	clypeatum		Animalia

74	120.683	-27.3613	Idiosoma clypeatum	northern shield-back	INVERTEB	Priority	P3		2011	Yakabindie				98870	TFAUNA	Certain	Survey	Caught or	1	50	120.683	-27.3613	48926	Idiopidae	Idiosoma	clypeatum		Animalia
75	120.683	-27.3613	Idiosoma clypeatum	northern shield-back	INVERTEB	Priority	P3		2011	Yakabindie				98871	TFAUNA	Certain	Survey	Caught or	1	50	120.683	-27.3613	48926	Idiopidae	Idiosoma	clypeatum		Animalia
76	120.683	-27.3613	Idiosoma clypeatum	northern shield-back	INVERTEB	Priority	P3		2011	Yakabindie				98872	TFAUNA	Certain	Survey	Caught or	1	50	120.683	-27.3613	48926	Idiopidae	Idiosoma	clypeatum		Animalia
77	120.692	-27.4004	Idiosoma clypeatum	northern shield-back	INVERTEB	Priority	P3		2011	Yakabindie				98873	TFAUNA	Certain	Survey	Caught or	1	50	120.692	-27.4004	48926	Idiopidae	Idiosoma	clypeatum		Animalia
78	120.396	-27.417	Idiosoma clypeatum	northern shield-back	INVERTEB	Priority	P3		2008	Abion Downs	62.6 km NNW of Leinster			98874	TFAUNA	Certain	Survey	Caught or	1	50	120.396	-27.417	48926	Idiopidae	Idiosoma	clypeatum		Animalia
79	120.396	-27.4175	Idiosoma clypeatum	northern shield-back	INVERTEB	Priority	P3		2008	Albion Downs	62.6 km NNW of Leinster			98875	TFAUNA	Certain	Survey	Caught or	1	50	120.396	-27.4175	48926	Idiopidae	Idiosoma	clypeatum		Animalia
80	120.61	-27.4377	Idiosoma clypeatum	northern shield-back	INVERTEB	Priority	P3		2011	Yakabindie				98876	TFAUNA	Certain	Survey	Caught or	13	50	120.61	-27.4377	48926	Idiopidae	Idiosoma	clypeatum		Animalia
81	120.61	-27.4377	Idiosoma clypeatum	northern shield-back	INVERTEB	Priority	P3		2011	Yakabindie				98877	TFAUNA	Certain	Survey	Caught or	1	50	120.61	-27.4377	48926	Idiopidae	Idiosoma	clypeatum		Animalia
82	120.61	-27.4377	Idiosoma clypeatum	northern shield-back	INVERTEB	Priority	P3		2011	Yakabindie				98878	TFAUNA	Certain	Survey	Caught or	1	50	120.61	-27.4377	48926	Idiopidae	Idiosoma	clypeatum		Animalia
85	120.139	-27.116	Idiosoma clypeatum	Northern shield-back	INVERTEB	Priority	P3		2015	WILUNA	Yeelirrie, Never Despair bore			1221272	FAUNASUI	Certain	Survey	Unknown	2	100	120.139	-27.116	48926	Idiopidae	Idiosoma	clypeatum		Animalia
86	120.139	-27.1165	Idiosoma clypeatum	Northern shield-back	INVERTEB	Priority	P3		2015	WILUNA	Yeelirrie, Never Despair bore			1221273	FAUNASUI	Certain	Survey	Unknown	1	100	120.139	-27.1165	48926	Idiopidae	Idiosoma	clypeatum		Animalia
87	120.138	-27.0724	Idiosoma clypeatum	Northern shield-back	INVERTEB	Priority	P3		2015	WILUNA	Yeelirrie, spider site			1221274	FAUNASUI	Certain	Survey	Unknown	1	100	120.138	-27.0724	48926	Idiopidae	Idiosoma	clypeatum		Animalia
24	120.55	-27.5	Kwonkan moriartii	Moriarty's trapdoor s	INVERTEB	Priority	P2		1962	Kathleen	Kathleen Valley Station (via Wiluna)			6336	TFAUNA	Certain	Survey	Caught or	1	50000	120.55	-27.5	33919	Nemesiida	Kwonkan	moriartii		Animalia
96	120.65	-27.4	Kwonkan moriartii	Moriarty's trapdoor s	INVERTEB	Priority	P2		1962					0	WAM_ARA	WAM Vou	Collection	Specimen	1	10000	120.65	-27.4	33919	Nemesiida	Kwonkan	moriartii		Animalia

APPENDIX C - CLEARING PERMIT CPS 7914 ANNUAL REPORT

ANNUAL CLEARING PERMIT REPORT FOR CPS 7914/2 COSMOS NICKEL OPERATION

DATE: 21 JULY 2022

DATE	NAME	CHANGE	APPROVED	REVISION
10/07/2022	Jeffrey Yates	Updated draft to IGO template		A
11/07/2022	John Cooper	Internal QA/QC Review		B
21/07/2022	Jeffrey Yates	Internal QA/QC Review	B. Williams	0

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Table 2 - Clearing Conducted under Clearing Permit 7914/2 – FY 2022

1. INTRODUCTION

Clearing activities for the purpose under CPS 7914/2 (the permit) and undertaken at the Cosmos Nickel Operation (Cosmos) by Australian Nickel Investments Pty Ltd (ANI) (subsidiary of IGO Limited) are compliant with associated conditions of the permit. An internal annual compliance audit demonstrates adherence to all permit conditions (Table 1). ANI/IGO has therefore met compliance with the permit for the annual reporting period (1 July 2021 to 30 June 2022). ANI were granted Clearing Permit 7914/2 (the permit) in March 2018.

Please note that an amendment to CPS 7914/2 was submitted to DMIRS on the 16th March 2022. The amendment intent is to redescribe the boundary and increase the clearing allowance from 157 Ha to 180 Ha. The amendment also includes extension of the permit duration until 28 February 2027. The amendment is still under assessment.

1.1 Compliance Audit – CPS 7914/2

ANI/IGO authorises clearing at Cosmos in accordance with permit conditions where required. Internal authorisation is permitted through the Land Use Permit (LUP) system and Environmental Management System (EMS). This permit system checks all relevant approvals (including CPS 7914) are in place and imposes mandatory conditions relating to clearing works (pre, during and post). Applicants and project managers have a responsibility to undertake clearing in accordance with the LUP and ensure all associated activities are supervised. The Environmental Department reviews each LUP post completion to check compliance. To date there have been no recorded deviations or incidents relating to LUPs associated with clearing under this permit.

A compliance statement for each condition of the permit has been included as Table 1 as part of the internal compliance audit undertaken on 20 July 2022 for CPS 7914/2. Clearing activities undertaken in accordance with the permit are depicted as Figure 1. Records of clearing undertaken during the reporting period is set out in Table 2.

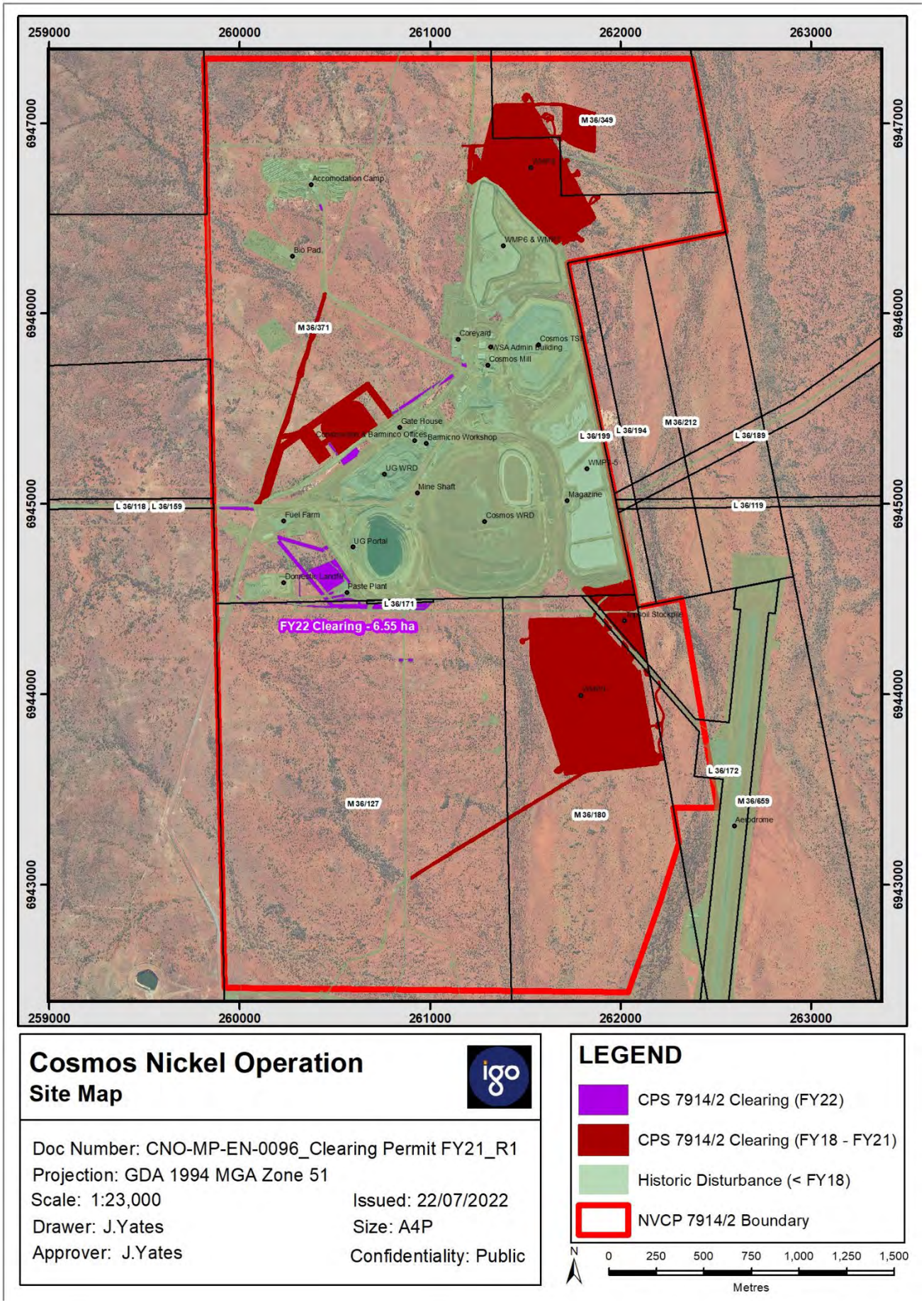
Table 1: Compliance Statement for Clearing Permit 7914/2

Number	Condition	Compliance Statement
1	Land on which clearing is to be done: Mining Lease 36/127 Mining Lease 36/180 Mining Lease 36/349 Mining Lease 36/371 Mining Lease 36/659	Clearing under this permit has been undertaken on tenements M36/127, M36/180, M36/371 and M36/349. During the reporting period (FY 2022), clearing was conducted on: • M36/127 (1.65 ha); and • M36/371 (4.90 ha).
2	Purpose for which clearing may be done: Clearing for the purpose of mineral production and associated activities	Clearing has been undertaken for mineral production and associated activities.
3	Area of Clearing The Permit Holder must not clear more than 157 hectares of native vegetation. All clearing must be within the area cross-hatched yellow on attached Plan 7914/2.	Clearing undertaken to date is 94.78 Ha, which is within the 157 Ha limit. During the reporting period (FY 2022), 6.55 Ha was cleared for transport services corridors, paste plant extension and other miscellaneous support areas.

Number	Condition	Compliance Statement
		Since the commencement of the permit, clearing has been undertaken within the cross-hatched yellow of the Permit Plan 7914/2 (Figure 1).
4	Application - This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.	ANI/IGO authorises persons to clear under the LUP system. The applicant is required to adhere to conditions under the LUP.
5	Weed control - When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of weeds: (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared; (ii) ensure that no weed-affected soil, mulch, fill or other material is brought into the area to be cleared; and (iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.	Earth moving machinery is required to be clean prior to starting earthmoving works and is then restricted to that area until works are completed. ANI/IGO undertakes weed spraying at Cosmos and maintains a site weed register for better management and control of weed affected areas. Internal LUPs include conditions relating to weed control.
6	Watercourse Management (a) Where practicable the Permit Holder shall avoid clearing riparian vegetation; and (b) Where a watercourse is to be impacted by clearing, the Permit Holder shall maintain the existing surface flow.	No riparian vegetation has been recorded within the clearing permit envelope. Surface water flow modelling was undertaken to determine associated impacts from activities. Drainage design to maintain existing surface flows was undertaken and implemented as required.
7	Records to be kept - The Permit Holder must maintain the following records for activities done pursuant to this Permit: In relation to the clearing of native vegetation authorised under this Permit: (i) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994	Records are kept by ANI/IGO within the records management system. This includes location, date, size and purpose for which the clearing was undertaken. Clearing undertaken during the reporting period is presented in Table 2.

Number	Condition	Compliance Statement
	(GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees; (ii) the date that the area was cleared; (iii) the size of the area cleared (in hectares); and (iv) purpose for which clearing was undertaken.	
8a	Reporting - The Permit Holder shall provide a report to the General Manager Environmental Compliance, Resource and Environmental Compliance Directorate, Department of Mines, Industry Regulation and Safety by 31 July each year for the life of this permit, demonstrating adherence to all conditions of this permit, and setting out the records required under Condition 7 of this permit in relation to clearing carried out between 1 July and 30 June of the previous financial year.	Three reports have been submitted for this permit covering financial year periods: - 2018/19; - 2019/20; - 2020/21; and - 2021/22.
8b	Prior to 28 February 2023, the Permit Holder must provide to the General Manager Environmental Compliance, Resource and Environmental Compliance Directorate, Department of Mines, Industry Regulation and Safety a written report of records required under Condition 7 of this Permit where these records have not already been provided under Condition 8(a) of this Permit.	Not yet applicable.

Figure 1: Clearing Activities for Clearing Permit 7914/2



1.2 Clearing Records (FY22) – Condition 7

Table 2: Clearing Conducted under Clearing Permit 7914/2 – FY 2022

Date	Location	Area Cleared (Ha)	Purpose
16/06/2022	E:260448 N:6944560	6.55	CNO mineral production and associated activities, including: • Transport services corridors; • Paste plant; and • Other miscellaneous support areas.

APPENDIX D – 2022 WEED MANAGEMENT/TREATMENT REPORT

IGO LIMITED

ENVIRONMENT

COSMOS NICKEL OPERATION

REPORT ON WEED MANAGEMENT PROGRAM

AUGUST 2022

IGO LIMITED

ENVIRONMENT

COSMOS NICKEL OPERATION

REPORT ON WEED MANAGEMENT PROGRAM

AUGUST 2022

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Background & Summary

- Western Areas Ltd provided Western Red Environmental personnel with the 'Scope of Works – Weed Control Program, Environment, Cosmos Nickel Operation' document on the 26th of April 2021.
- Western Red Environmental personnel provided a formal response to the scope of works on the 14th of May 2021 and this was formally accepted on the 14th of June 2021.
- Works were undertaken as per the scope of works and general/specific methodology, as determined and agreed upon by both parties, between the 17th and 21st of June 2021.
- Western Areas Ltd was acquired by IGO Ltd.
- IGO Ltd requested a quote from Western Red Environmental, based on eight days of weed control. This was inclusive of the scope from last year but also additional areas as advised by the Environmental Advisor on site.
- Western Red Environmental personnel commenced traveling to the site on the 26th of July 2022.
- Western Red Environmental personnel commenced traveling from the site on 04th August 2022.

Methodology

The general and specific methodology used on through the program was in keeping with the program proposal and scope.

Please see below for a brief outline of equipment, herbicide used, weed control and general daily breakdown.

Equipment

- 2021 Triton
- TTI 1000L Super Trailer
    - remote control
    - twin reel with 100m hose per reel
    - Honda pump motor
    - Bertollini pump and regulator
- Electric backpacks

Herbicide mix components and concentrations

- Titan (Glyphosate) – 1% or 1L/100L
- Surefire (Metsulfuron) – 3g/100L
- Grazon Extra (Picloram & Triclopyr) – 0.4% or 0.4L per 100L
- Pulse – (Penetrant/Surfactant) – 0.2% or 0.2L per 100L
- Endorse – (Oil Based Sticker) - 0.2% or 0.2L per 100L
- Envirodye Red (Rodamine free spray marker dye) - 0.2% or 0.2L per 100L

Weed Control

Western Red Environmental is licensed by the Department of Health as a weed control contractor (DOH License 2238). All weed control works were undertaken by licensed environmental technicians, according to Health (Pesticides) Regulations 2011 Western Australia. All weeds were controlled chemically which involved the application of herbicides using a type and technique that was suitable to specific weed species. Chemical control used in this scope of work was undertaken through a foliar spray of herbaceous weeds and grasses. The herbicides used are as listed above.

Each day was generally comprised of the following routine:

- 05.45-06.00- Daily pre-start meeting
- 06.00-06.45 – Filling up, mixing, planning, travel to work location
- 06.45-10.00 – Spray mapped work areas in keeping with scope and planning
- 10.00-10.30 – Break
- 10.30-14.00 - Spray mapped work areas in keeping with scope and planning
- 14.00-14.30 – Break/check of progress against daily & program target
- 14.30-17.30 - Spray mapped work areas in keeping with scope and planning
- 17.30-18.00 – Completion of daily administrative tasks e.g., herbicide application records and tracking of progress against targets

Discussion

Some key points of discussion regarding the implementation of the program are as follows:

Job Planning, Management, and Execution

- The 2022 weed management program consisted of eight days (26th July- 02nd August 2022)
- According to the data presented in Figure 1 and Table 1 of this report Western Red Environmental met the mapping and area criteria of the scope of work. In total for this field visit 61.91 L/Ha with an average of 97.73 hectares covered both in and around the Cosmos mine site.
- All priority areas marked (34.87 Ha) were covered in accordance with – 'Figure 2: Cosmos Site Plan and Areas of Priority' of the scope of works document (April 2021).
- Additional areas to be controlled were discussed with the Environmental Superintendent on arrival to the site.
- Western Red Environmental achieved 100% of the target.

Plant and Equipment

- The Supertrailer was useful for heavy infestations such as WWTP Irrigation spray field (Area 15), Airport north-western side of the airport.
- Electric backpacks were used efficiently in and around high-risk areas, such as hard-to-reach areas e.g. steep slopes, topsoil areas, and for light infestations around the village, and other infrastructures.

Efficacy

- The chemical herbicide mix that was used and administered to the plant leaf surface has proven to successfully control the individual weed species.
- Most of the priority weed species were targeted and controlled.
- The *Rumex vesicarius* (Ruby Dock) appeared to metabolise the herbicide mixture quickly and was wilting for the most part by the time we left the site.
- Western Red Environmental would appreciate feedback on the *Cenchrus ciliaris* (Buffel Grass) sprayed at the north-western side of the airport. *Cenchrus ciliaris* (Buffel Grass) is rated as having a high ecological impact, meaning they cause disruption of the ecological process by dominating and/or significantly altering vegetation structure and have a rapid rate of invasiveness.

Support & Supervision

- Had an optimal level of supervision, direction & guidance to enable safe and effective program delivery.
- Western Red Environmental had an appropriate level of autonomy to undertake tasks safely and efficiently by following specific worksite policies and procedures.
- Maps and intel provided were detailed and accurate which were beneficial in completing the job accurately.

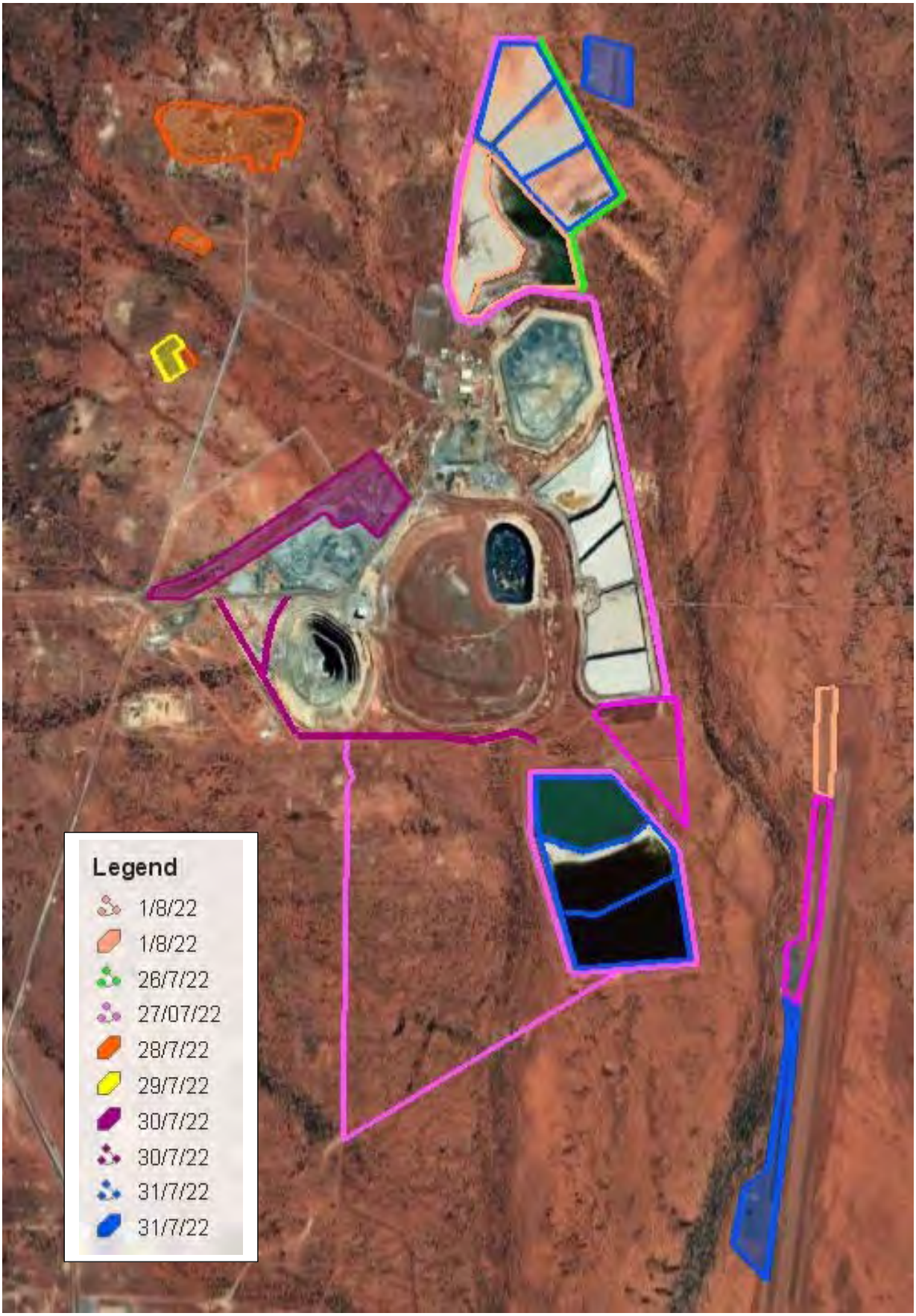

Figure 1: Cosmos Nickel Mine – weed control areas per day

Table 1. Weed Control Data for Program

Date	Map Area or Description	Hectares *	L/Ha	Weed Cover	Main Weed Species	Other Weed Species
26/07/2022	WMP 8 (Area 2)	0.668	4.49	Very Light	*Salsola australis* (Roly Poly/Prickly Saltwort),	
	Topsoil Stockpile (Area 3) and South East Road along WMP 8	3.86	5.18	Very Light	*Salsola australis* (Roly Poly/Prickly Saltwort), *Rumex vesicarius* (Ruby Dock), *Cenchrus ciliaris* (Buffel Grass)	
27/07/2022	Eastern and South Road around WMP 6-7 (Area 17)	0.843	17.79	Very Light	*Cenchrus ciliaris* (Buffel Grass), *Citrullus lanatus* (Afghan Melon), *Rumex vesicarius* (Ruby Dock), *Salsola australis* (Roly Poly/Rrickly Saltwort)	
	North West Road (leading to WMP 9)	0.528	0	Very Light	*Salsola australis* (Roly Poly/Prickly Saltwort)	
	West side of TSF (Area 6)	0.739	0		No weeds present	
	WMP 1-5 (Area 5)				No weeds present	
	Topsoil Stockpile 4 (Area 4)	8.74	0.343	Very Light	*Salsola australis* (Roly Poly/Prickly Saltwort)	
	WMP 9 (Area 1)	7.37	0.135	Very Light	*Salsola australis* (Roly Poly/Prickly Saltwort)	
	South Road	0.9	1.11	Very Light	*Cucumis myriocarpus* (Paddy Melon)	
	Airport North-Western side Fenceline	0.6693	224.1	Heavy	*Cenchrus ciliaris* (Buffel Grass), *Rumex vesicarius* (Ruby Dock)	

28/07/2022	Village	8.82	34.01	Light	*Rumex vesicarius* (Ruby Dock), *Salsola australis* (Roly Poly/Prickly Saltwort), *Cenchrus ciliaris* (Buffel Grass), *Cucumis myriocarpus* (Paddy Melon), *Citrullus lanatus* (Afghan Melon), *Solanum nigrum* (Blackberry Nightshade), *Cortula turbinata* (Funnel Weed), *Lysimachia arvensis* (Pimpernel), *Erigeron bonariensis* (Fleabane), *Euphorbia maculata* (Spotted Spurge) **	Lawn near accommodation office: *Lupinus consentinii* (Blue Lupin), *Sonchus oleraceus* (Common Sow Thistle), *Purslane portulaca* (Common Purslane), *Cortula turbinata* (Funnel Weed), *Lactuca serriola* (Prickly Lettuce)
	Old Sport Field	0.5	100	Light	*Salsola australis* (Roly Poly/Prickly Saltwort)	
	Bioremediation Area	1.4	50	Medium	*Cenchrus ciliaris* (Buffel Grass), *Rumex vesicarius* (ruby dock), *Salsola australis* (Roly Poly/Prickly Saltwort)	*Sonchus oleraceus* (Common Sow Thistle)
29/07/2022	WWTP Irrigation Spray Field (Area 15) - area to be cleared and recommissioned	1.9	942.1 ***	Medium	*Rumex vesicarius* (Ruby Dock), *Salsola australis* (Roly Poly/Prickly Saltwort/Tumbleweed), *Cenchrus ciliaris* (Buffel Grass), *Cucumis myriocarpus* (Paddy Melon), *Citrullus lanatus* (Afghan Melon)**	*Solanum nigrum* (Blackberry Nightshade), *Sonchus oleraceus* (Common Sow Thistle), *Cortula turbinata* (Funnel Weed), *Lactuca serriola* (Prickly Lettuce), *Lysimachia arvensis* (Pimpernel), *Erigeron bonariensis* (Fleabane), *Euphorbia maculata* (Spotted Spurge)
	ABCO Water System (next to the village)	0.1	40	very light	*Rumex vesicarius* (Ruby Dock), *Salsola australis* (Roly Poly/Prickly Saltwort/Tumbleweed), *Cenchrus ciliaris* (Buffel	

					Grass), *Cucumis myriocarpus* (Paddy Melon), *Citrullus lanatus* (Afghan Melon)**	
30/07/2022	Trench	3.3	15.15	Light	*Rumex vesicarius* (Ruby Dock), *Salsola australis* (Roly Poly/Prickly Saltwort), *Cenchrus ciliaris* (Buffel Grass), *Cucumis myriocarpus* (Paddy Melon)	*Euphorbia maculate* (Spotted Spurge)
	West Side of the Pit (area south of main road)	1.5	3.33	Light	*Rumex vesicarius* (Ruby Dock), *Cenchrus ciliaris* (Buffel Grass)	
	Road South of Pit			Very Light	*Rumex vesicarius* (Ruby Dock), *Cenchrus ciliaris* (Buffel Grass)	
	East/West Road to Topsoil/WMP9 (Area 1)	0.35	0		No weed present	
	Construction Offices	3.8	5.26	Light	*Rumex vesicarius* (ruby dock), *Cenchrus ciliaris* (Buffel Grass), *Salsola australis* (Roly Poly/Prickly Saltwort)	*Sonchus oleraceus* (Common Sow Thistle), *Euphorbia maculata* (Spotted Spurge)
	Rock Wall North- West Main Road (rock windrow)	0.6	21.6	Light	*Rumex vesicarius* (ruby dock), *Cenchrus ciliaris* (Buffel Grass), *Cucumis myriocarpus* (Paddy Melon),	*Sonchus oleraceus* (Common Sow Thistle
	Median North of Fuel Farm 9 (Rocky Windrow/Median leading to Construction	1.8	7.22	Light	*Rumex vesicarius* (Ruby Dock), *Cenchrus ciliaris* (Buffel Grass), *Salsola australis* (Roly Poly/Prickly Saltwort), *Cucumis myriocarpus* (Paddy Melon),	*Sonchus oleraceus* (Common Sow Thistle)

	Offices e.g., Barmico office				*Citrullus lanatus* (Afghan Melon),	
	Landfill Facility & Safety Training Ground	0.7	71.42	Light	*Rumex vesicarius* (Ruby Dock	
	Airport North-Western side (infrastructures) e.g., Old Terminal	Added in total of airport north-western side 01/08/22		Light	*Cenchrus ciliaris* (Buffel Grass)	*Sonchus oleraceus* (Common Sow Thistle)
31/07/2022	Airport North-Western Side of Fenceline			Heavy	*Cenchrus ciliaris* (Buffel Grass), *Rumex vesicarius* (Ruby Dock), *Salsola australis* (Roly Poly/Prickly Saltwort)	
	WMP 9 (Area 1) Top Access only	6.8	7.35		*Salsola australis* (Roly Poly/Prickly Saltwort), *Rumex vesicarius* (Ruby Dock), *Cenchrus ciliaris* (Buffel Grass)	
	WMP 8 (Area 2) Top Cccess and down the Pond *only for WMP 8 due to no water present	19.5	12.82	Light to Medium	All natives and weed species sprayed along the access/top for cells 1-3 in WMP 8 of the pond. In cell 1-3 of WMP 8 *Salsola australis* (Roly Poly/Prickly Saltwort), *Rumex vesicarius* (Ruby Dock) and *Cenchrus ciliaris* (Buffel Grass) were sprayed.	
1/08/2022	WMP 6, 7 (Area 17) Top access only	4.8	23.96	Light	*Rumex vesicarius* (Ruby Dock), *Cenchrus ciliaris* (Buffel Grass)**	
	Airport North-Western Side Fenceline and Infrastructure e.g., old terminal, tracks,	17.4	22.13	Heavy	*Rumex vesicarius* (Ruby Dock), *Cenchrus ciliaris* (Buffel Grass)	

	tarmac stockpiles, old fuel storage tanks, wind stock					
2/08/2022	WWTP Irrigation Spray Field (Area 15).					
Average			**61.91**			
Total		**97.73**				

* Based on tracking on site and GIS mapping post program.

**** All vegetation that was located behind dongas or in nominated setback areas within the village or otherwise was eradicated.

***** High litres per hectare as all vegetation was sprayed in this area.

Figure 2. Photo monitoring Locations

Table 2. Photo monitoring Data

Photo #	Area	Latitude	Longitude	Perspective / Direction
1	Topsoil	27°34'52.19"S	120°35'13.02"E	N
2	WMP8	27°34'55.22"S	120°35'9.84"E	SE
3	Topsoil	27°36'10.19"S	120°35'14.00"E	NNW
4	WMP9	27°36'25.54"S	120°35'23.43"E	SSE
5	East/West Road to Topsoil/WMP9	27°36'8.48"S	120°34'58.78"E	W
6	South Rd	27°36'11.14"S	120°34'37.70"E	NNW
7	Road South of Pit	27°36'2.28"S	120°34'26.66"E	SE
8	Area south of Main Rd	27°35'57.72"S	120°34'22.37"E	SE
9	10 - Landfill Facility	27°36'5.71"S	120°34'7.37"E	S
10	Median north of Fuel Farm	27°35'53.30"S	120°34'12.35"E	E
11	Rock wall northwest of Main Rd	27°35'51.77"S	120°34'10.32"E	NE
12	Construction Offices	27°35'40.85"S	120°34'38.09"E	SW
13	Village	27°34'53.88"S	120°34'29.36"E	W
14	WMP 8	27°35'08.7"S	120°35'07.2"E	NE
15	WMP 6-7	27°34'58.8"S	120°34'56.7"E	S
16	WMP 9	27°36'19.6"S	120°35'19.3"E	S
17	Airport north-western side of fence line (near old terminal)	27°37'04.0"S	120°35'31.2"E	NW
18	Airport north-western side of the fence line with rock stockpile	27°36'32.7"S	120°35'38.1"E	S
19	Bioremediation	27°35'09.2"S	120°34'14.5"E	E
20	WWTP Irrigation Spray field (Area 15)	27°35'24.6"S	120°34'13.9"E	E

Note: Photos from 1- 13 were taken on 02/08/22 (8:36am -10:17am) and photos 14-20 were taken from 27/07/22-02/08/22

Recommendations

Based on the outcomes of the 2022 weed management program, the recommendations outlined below are suggested for IGO's Limited consideration.

Table 3: Program recommendations and suggested actions

Recommendations	**Actions**
Potential hotspot for *Cucumis myriocarpus* (Paddy Melon), *Citrullus lanatus* (Afghan Melon), 27°35'38.7"S 120°34'31.2"E	Follow up control of *Cucumis myriocarpus (Paddy Melon)* and *Citrullus lanatus* (Afghan Melon) infestations shown in Figure 3.
Commencement of next program in April or May 2023	• Daylight hours are reduced in June-August • Time allowance for more field work to be conducted each day including mixing, filling and spray application
Follow up control of *Cenchrus ciliaris* (Buffel Grass) at the Airport North-Western fenceline	Further control of **Cenchrus ciliaris* (Buffel Grass) at the Airport mainly around infrastructure and fence line, as during field visit there were heavy infestations observed and some were already seeded. Best to control during active growth.
Full Foliage spray of all native and weed species around infrastructure e.g., Construction offices, along fence line.	Follow up control of both native and weed species around infrastructure

Figure 3: Landscape photo of the potential hotspot for *Cucumis myriocarpus* (Paddy Melon) and *Citrullus lanatus* (Afghan Melon)

Appendix 1- Photos for Monitoring Data

Photo 1. Topsoil (Area 3) – looking North

Photo 2. WMP8 (Area 2) – looking South East

Photo 3. Topsoil (Area 4) – looking North-North -West

Photo 4. WMP9 (Area 1)- looking South-South-East

Photo 5. East/West Road to Topsoil/WMP9- looking West

Photo 6. South Road – looking North-North-West

Photo 7. Road of South Pit - looking South-East

Photo 8. Area South of Main Road - looking South-East

Photo 9. Landfill Facility - looking South

Photo 10. Median of Fuel Farm - looking East

Photo 11. Rock wall Northwest of Main Road - looking North-East

Photo 12. Construction Offices - looking South-West

Photo 13. Village (Old Sport Field) – looking West

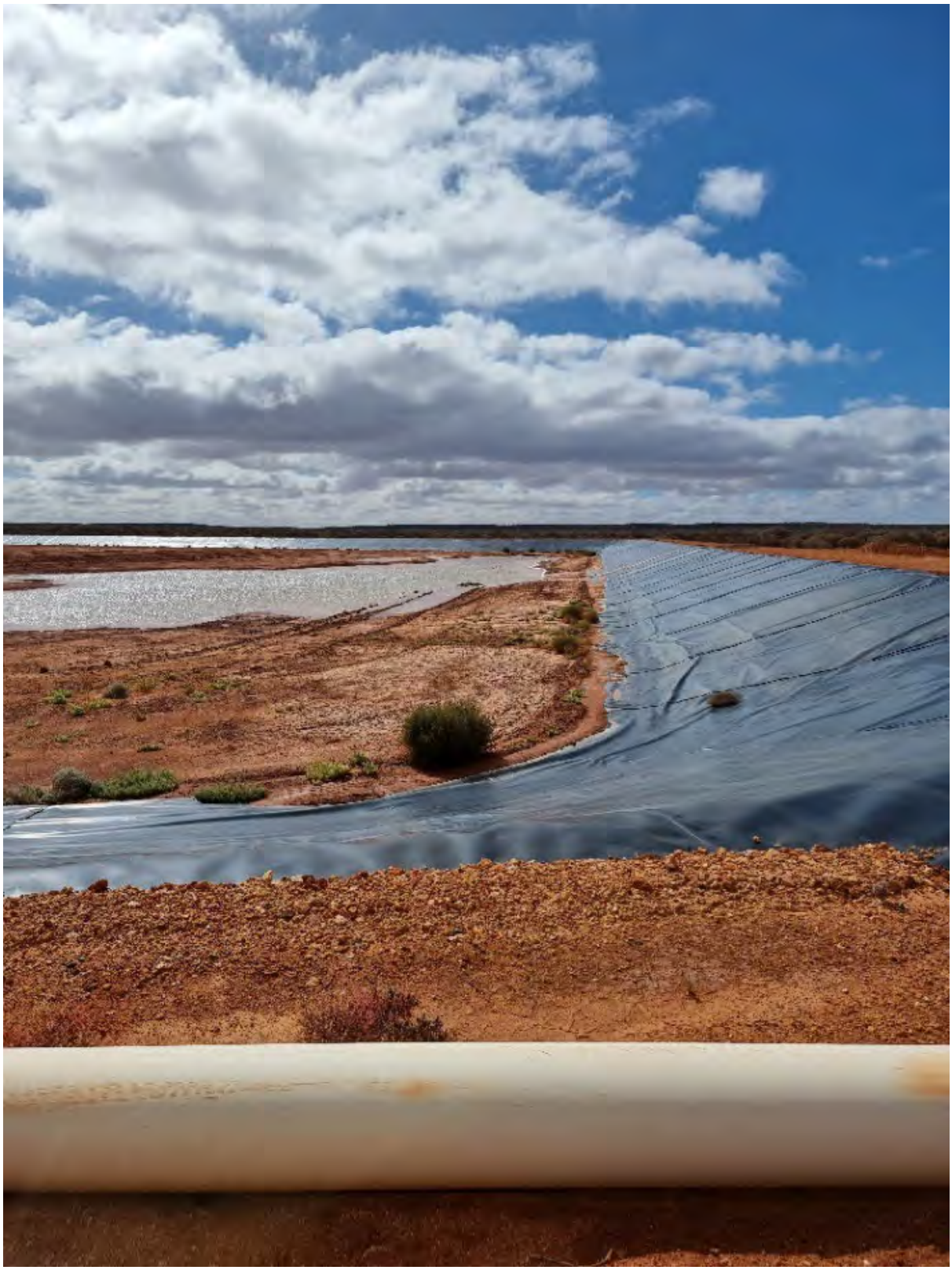

Photo 14. South end of WMP 8 looking North-East

Photo 15. WMP 6-7 (Area 17)- looking South

Photo 16. WMP9 (Area 1)- looking South

Photo 17. Airport north-western fence line - looking North-West

Photo 18. Airport north-western fence line – looking south

Photo 19. Bioremediation area mainly *Cenchrus ciliaris* (Buffel Grass) were chemically controlled – looking east

Photo 20. WWTP Irrigation Spray Field (Area 15) - looking East