Clearing Permit Application Environmental Assessment

Cue Operations - Stage 2

Application Details		
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Tenement Details	**Tenement**	**Tenement Holder**
	M 21/106	Musgrave Minerals Limited
	M 58/224	Musgrave Minerals Limited
	M 58/366	Musgrave Minerals Limited
	M 58/367	Musgrave Minerals Limited
	L 58/42	Musgrave Minerals Limited

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1. INTRODUCTION

The purpose of this document is to provide additional information to support a clearing permit application required to develop Stage 2 of the Cue Project. The application is for the clearing of up to 250ha of native vegetation within a 414ha footprint (assessment area) as shown in Figure 1-1. Clearing will be completed upon tenements held by Musgrave Minerals Limited (M 21/106, M 58/224, M 58/366, M 58/367 & L 58/42).

The Cue Project is located approximately 45km north-east of the town of Mount Magnet and 25km south-west of the town of Cue in the Murchison Region of Western Australia. The Project is situated on tenements adjacent to the Great Northern Highway south of Lake Austin and located on the Wanarie pastoral lease.

Clearing for Stage 1 of the project is managed under the approved clearing permit CPS 10464.

Stage 2 development of the Project will include additional pits and the Break of Day underground mine. A site layout is shown as Figure 1-2. Surface disturbances include:

- 6 additional pits (Amarillo, Big Sky pits (1800, 2500, 3500, 4200) and Numbers)
- 5 additional waste rock landforms (WRLs) (Amarillo, Big Sky (3500 West, 3500 East, 1800), and Numbers).
- Increase footprint of the West WRL.
- 4 additional Mine or pads (MOPs)
- Transport corridors
- Laydown / hardstand areas
- Topsoil / laterite stockpiles
- Break of Day underground mine
- Underground offices and workshop

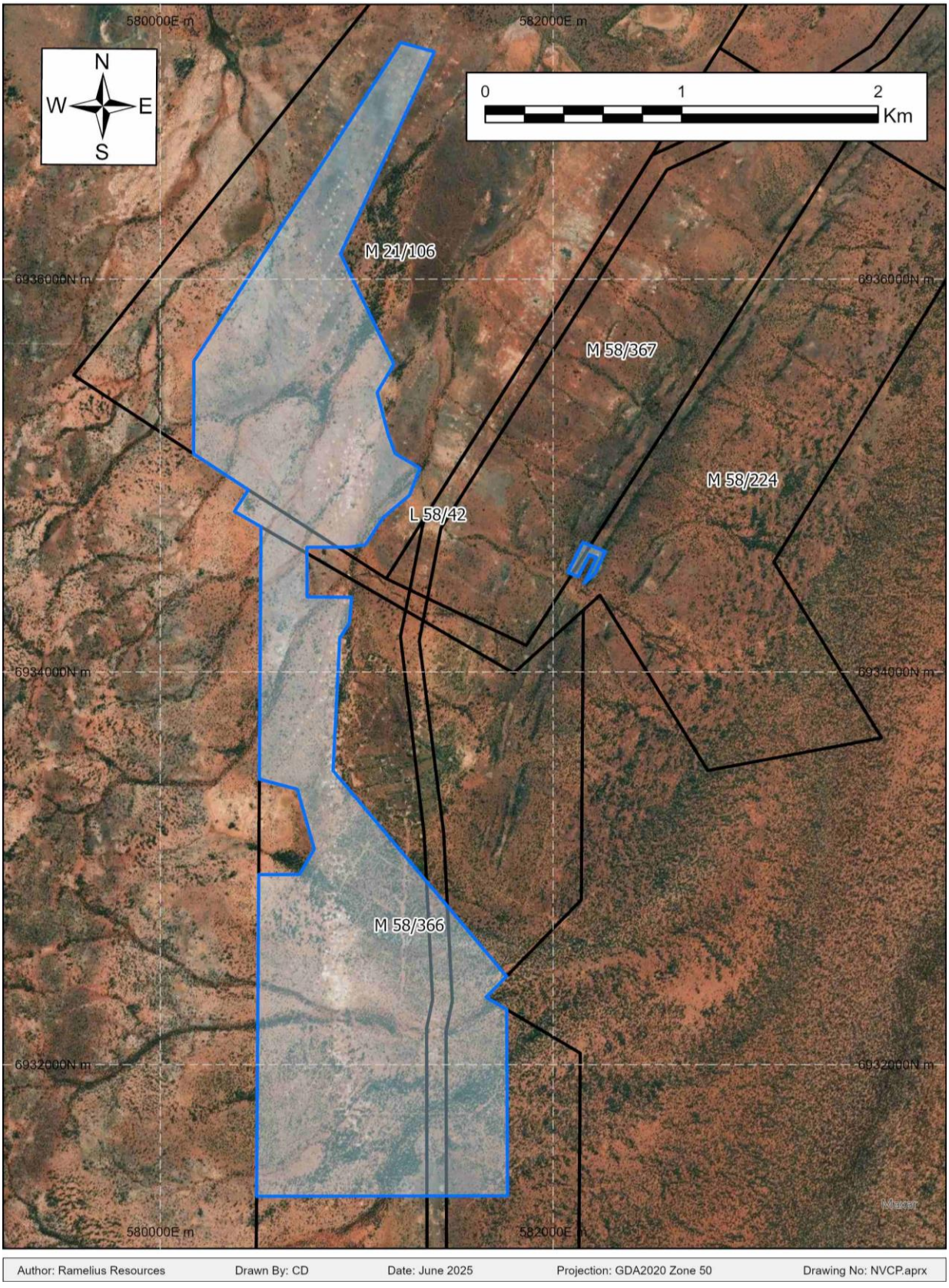

Figure 1-1 Assessment Area

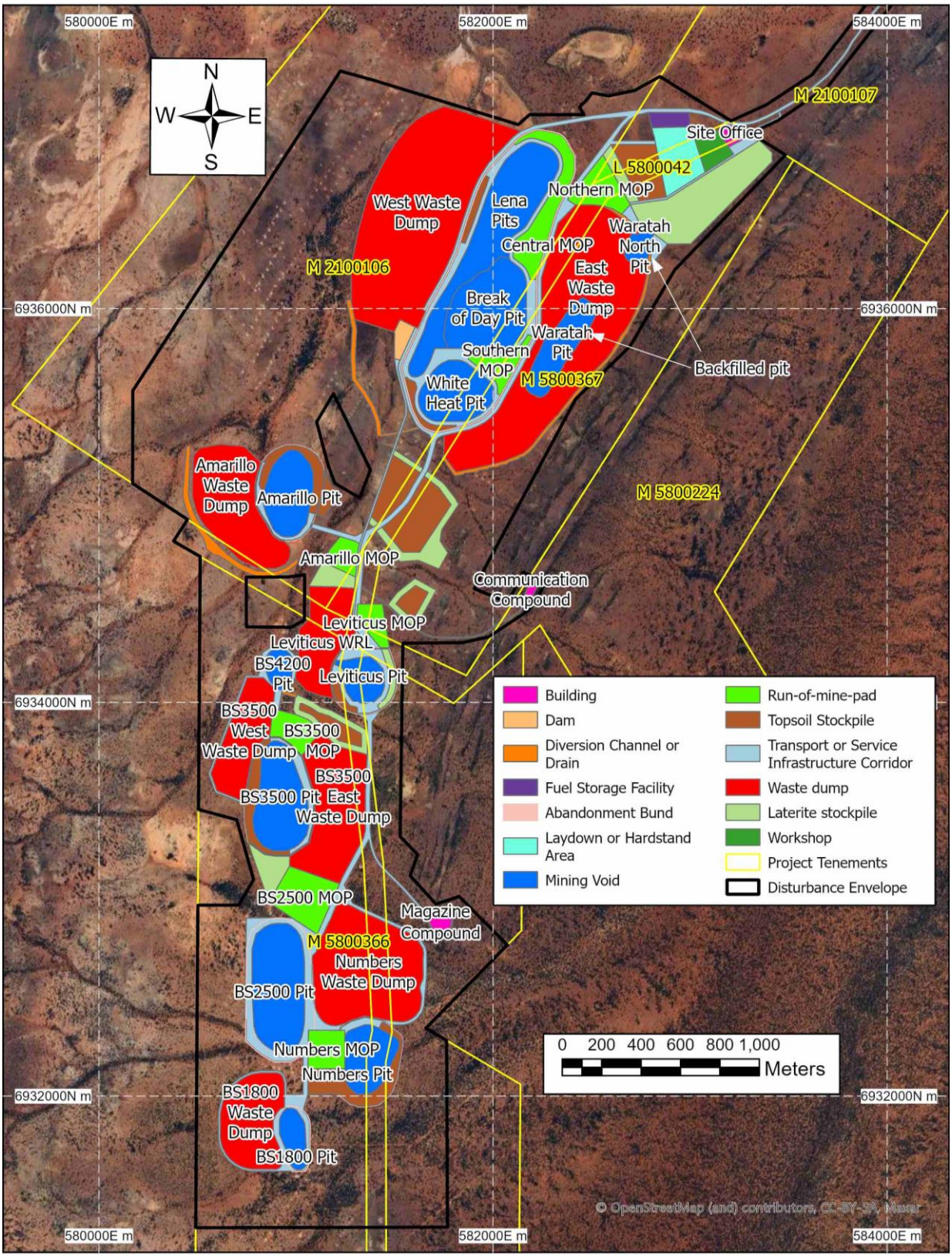

Figure 1-2: Proposed Site Layout of the Cue Project - Operational Area

2. ENVIRONMENT

2.1. REGIONAL SETTING

The Assessment area is located within the Murchison Province. The Murchison Province is characterised by hardpan wash plains and sandplains on the granitic rocks and greenstone of the Yilgarn Craton. The Murchison Province is divided into seven soil-landscape zones and the Survey Area lies in the Yalgoo Plains Zone. This zone is described as Hardpan wash plains (with some sandplains, stony plains, mesas, and granite outcrops) on granitic rocks (with some greenstone) of the Yilgarn Craton (Murchison Domain). Red loamy earths and red shallow loams (often with hardpans) with red deep sands and red shallow sands and some red shallow sandy duplexes. Mulga shrublands with bowgada shrublands (and some halophytic shrublands).

The Assessment area does not intersect any major watercourses or water bodies (Department of Water and Environmental Regulation, 2016). The closest waterbody to the Survey Area is Lake Austin, which occurs directly north of the Survey Area. The Assessment area is not located within the defined boundary of Lake Austin.

2.2. LAND SYSTEMS

Land systems (are described as discreet units of landforms, soils, vegetation, and geology. Land Systems are an important tool in assessing the potential risks to biodiversity by quantifying the extent and condition of potential habitat for conservation significant species and vegetation complexes. Five land systems are mapped (Figure 2-1) in the Assessment Area and presented in Table 1.

Table 1 Project Area Land Systems

Land System	Description
Austin system	Saline stony plains with low rises and drainage foci supporting low halophytic shrublands with scattered mulga and snakewood.
Carnegie system	Salt lakes with fringing saline alluvial plains, kopi dunes and sandy banks, supporting halophytic shrublands and acacia tall shrublands
Gabanintha system	Greenstone ridges, hills and foot slopes supporting sparse acacia and other mainly non-halophytic shrublands.
Jundee system	Hardpan plains with variable gravelly mantles and minor sandy banks supporting weakly groved mulga shrublands.
Violet system	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.

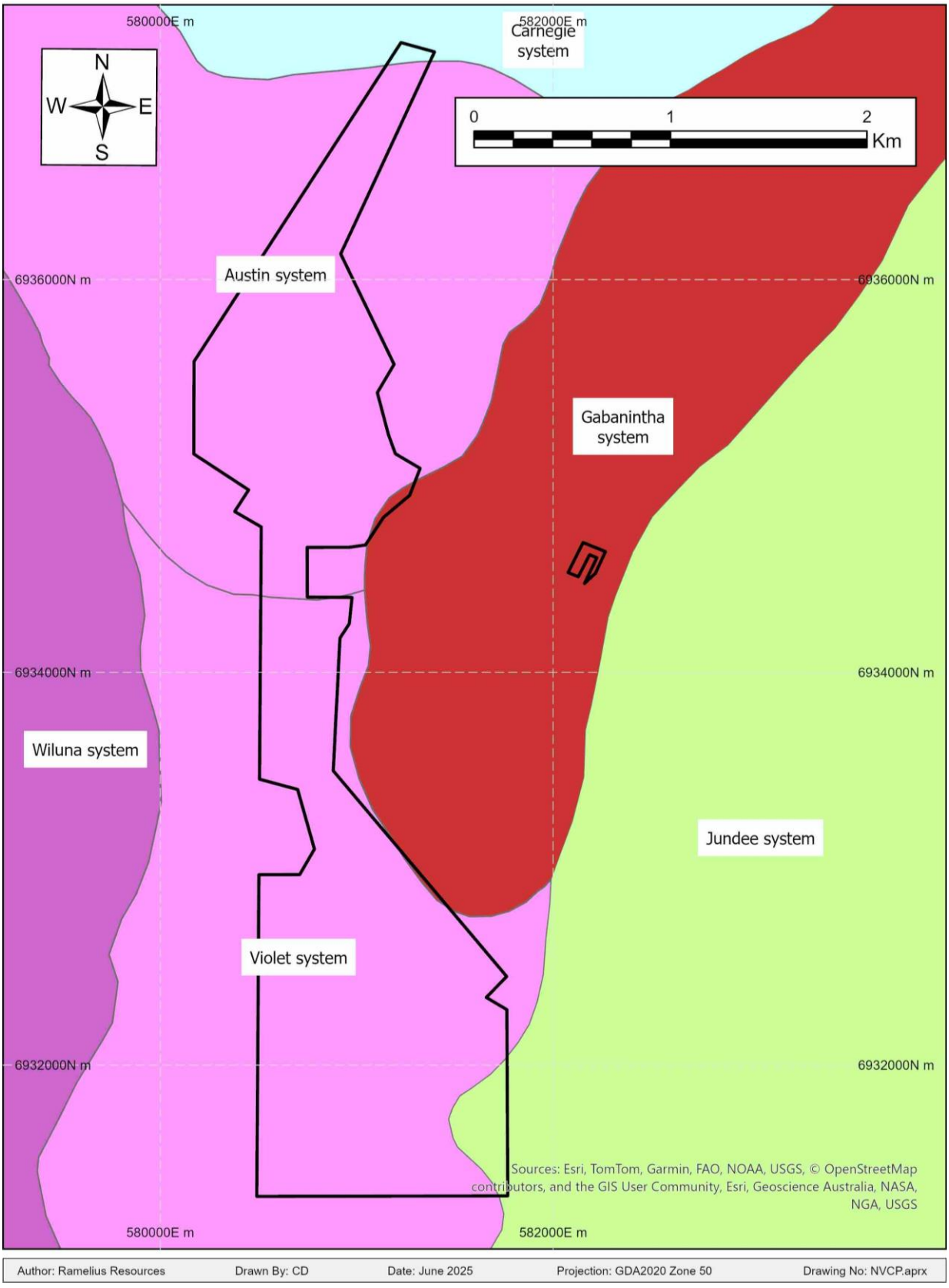

Figure 2-1: Soil Landscape Systems

2.3. CONSERVATION VALUES

No Threatened Ecological Communities (TEC) listed under the Commonwealth EPBC Act, or the Western Australian BC Act are known to occur within the assessment area or within 40 km of the assessment area. Five Priority Ecological Communities (PEC) as listed by DBCA occur within 40 km of the assessment area one of which intersects the assessment area (Table 2).

Table 2: Priority Ecological Communities

Community	Conservation Status	Description (DBCA, 2021)	Locality
Austin Land System	Priority 3	Saline stony plains with low rises and drainage foci supporting low halophytic shrublands with scattered mulga; occurs mainly adjacent to lakes Austin and Annean below greenstone hill systems.	Intersects the western boundary of the assessment area
Lake Austin calcrete groundwater assemblage type on Murchison palaeodrainage on Austin Downs Station	Priority 1	Unique assemblages of invertebrates have been identified in the groundwater calcretes.	Located approximately 21 km north-west of the assessment area
Lake Austin vegetation complexes (banded ironstone formation)	Priority 1	Not available	Located approximately 1 km west of the assessment area
Mount Magnet vegetation complexes (banded ironstone formation)	Priority 1	Not available	Located approximately 20 km south of the assessment area
Taincrow calcrete groundwater assemblage type on Murchison palaeodrainage on Taincrow Station	Priority 1	Unique assemblages of invertebrates have been identified in the groundwater calcretes.	Located approximately 36 km north of the assessment area

There are no Ramsar wetlands or wetlands of national importance (ANCA Wetlands) within the assessment area or within 40 km of the assessment area. There are no Environmentally Sensitive Areas (ESA) as listed under the EP Act within the assessment area. The nearest ESA is located approximately 50 km west of the assessment area.

There are no proposed nor gazetted conservation reserves within the assessment area. The closest gazetted conservation reserve is the Lakeside Conservation Park, located approximately 5km north-west of the assessment area.

2.4. VEGETATION AND FLORA

The Pre-European vegetation association spatial mapping dataset (DPIRD, 2018) identified two vegetation associations as occurring within the assessment area. The association descriptions and their remaining extent, as specified in the 2018 Statewide Vegetation Statistics (Government of Western Australia, 2019) is provided in Table 3. Areas retaining less than 30% of their pre-European vegetation extent generally experience exponentially accelerated species loss, while areas with less than 10% are considered “endangered” (EPA, 2000). None of the vegetation associations within the assessment area are below the 30% threshold.

Table 3: Pre-European vegetation associations within the assessment area

Vegetation Association	Current Extent (ha)	Pre-European extent remaining (%)	% Protected for Conservation	Floristic Description	Extent within assessment area
Upper Murchison 18	260,502.07	99.99	0	Low woodland; mulga (Acacia aneura)	115 ha (28%)
Upper Murchison 313	33,493.32	97.80	0	Succulent steppe with open scrub; scattered *Acacia sclerosperma* & *A. victoriae* over bluebush	299 ha (72%)

The flora and vegetation of the assessment area and surrounds are well understood with numerous studies having been conducted across the area. Most recently, a detailed flora and vegetation assessment and targeted flora survey was conducted by Maia Environmental Consultancy in 2022/2023 spring/summer seasons. A detailed flora and vegetation assessment was undertaken by 360 Environmental in September 2020 following a detailed flora and vegetation survey conducted in 2018. Coffey Environments have conducted multiple flora and vegetation surveys across the area in 2013 as well as surveys conducted in surrounding areas including Lake Austin.

Twenty vegetation types were mapped over the Survey Area by Maia Environmental Consultancy (2023), nine of which are located within the assessment area as shown in Table 4. Two PECs (Lake Austin vegetation complexes (banded ironstone formation) and Austin Land System) were represented by vegetation within the assessment area.

Table 4: Summary of vegetation types of the Cue Gold Project and extent in assessment area

Vegetation Type	Vegetation Code	Representative Priority Ecological Community	Extent within assessment area
Disturbed	N/A	N/A	2.4 ha (0.6%)
Lake bed	N/A	N/A	0 ha
Sparse Tussock Grassland of Eragrostis falcata with a mixed Low Sparse Shrubland mainly of Frankenia laxiflora, Atriplex nana and Sclerolaena fimbriolata with +/- Isolated Tall Shrubs of Grevillea sarissa and / or Eremophila oldfieldii subsp. angustifolia	EfTG	N/A	0 ha
Mixed Tall Acacia Shrubland mainly of Acacia fuscaneura, A. grasbyi and A. tetragonophylla with a Sparse Low Shrubland of Maireana triptera, Solanum lasiophyllum and Sclerolaena densiflora and Isolated Low Trees of Acacia fuscaneura	MATSL (1)	Austin Land System (P3) PEC	39.8ha (9.6%)
Mixed Acacia Tall Shrubland mainly of Acacia aptaneura, A. fuscaneura and A. grasbyi with a Sparse mixed Shrubland mainly of Eremophila georgei, E. forrestii and E. latrobei subsp. glabra and a Low Sparse Shrubland of Ptilotus obovatus and P. schwartzii	MATSL (2)	Lake Austin vegetation complexes (banded ironstone formation) P1 PEC	0.5 ha (0.1%)
Mixed Acacia Tall Shrubland / Low Woodland to Isolated Tall Shrubs / Low Trees mainly of Acacia aptaneura, A. fuscaneura and A. incurvaneura with a Sparse Shrubland of Eremophila georgei and E. forrestii and a Low Sparse Shrubland of Ptilotus obovatus and Isolated Low Trees of Acacia pruinocarpa	MATSL (3)	Lake Austin vegetation complexes (banded ironstone formation) P1 PEC	0 ha

Vegetation Type	Vegetation Code	Representative Priority Ecological Community	Extent within assessment area
Mixed Acacia Tall Shrubland mainly of A. tetragonophylla, A. craspedocarpa and A. caesaneura with a mixed Sparse Shrubland mainly of Eremophila forrestii, Solanum lasiophyllum and Ptilotus obovatus	MATSL (4)	Austin Land System (P3) PEC	91.1 ha (22%)
Mixed Acacia Tall Shrubland mainly of Acacia tetragonophylla, A. craspedocarpa and A. caesaneura with a mixed Sparse Shrubland of Eremophila galeata and / or Teucrium teucriiflorum and Isolated Low Shrubs of Ptilotus obovatus	MATSL (5)	Austin Land System (P3) PEC	138.9 ha (33.6%)
Mixed Acacia Tall Shrubland mainly of Acacia aptaneura, A. ramulosa var. ramulosa and A. caesaneura with a mixed Sparse Shrubland of Eremophila forrestii subsp. forrestii, E. latrobei subsp. latrobei and E. georgei and Isolated Low Shrubs of Ptilotus obovatus	MATSL (6)	Austin Land System (P3) PEC	92.7 ha (22.4%)
Mixed Acacia Tall Shrubland mainly of Acacia aptaneura, A. caesaneura, A. grasbyi with a mixed Shrubland mainly of Philotheca brucei subsp. Brucei, Thryptomene decussata and Eremophila latrobei subsp. latrobei with +/- Isolated Low trees of Acacia pruinocarpa	MATSL (7)	Lake Austin vegetation complexes (banded ironstone formation) P1 PEC	0 ha
Mixed Tall Shrubland mainly of Acacia tetragonophylla, A. eremaea and A. caesaneura with a mixed Shrubland mainly of Eremophila forrestii subsp. forrestii, E. galeata and Senna sp. Meekatharra and mixed Isolated Low Shrubs mainly of Enchylaena tomentosa subsp. tomentosa, Rhagodia drummondii and Maireana trichoptera	MATSL (8)	Austin Land System (P3) PEC	8.7 ha (2.1%)
Mixed Low Chenopod Shrubland mainly of Maireana pyramidata, Sclerolaena cuneata and Atriplex codonocarpa with a Sparse Tall Shrubland of Hakea preissii	MLCSL	Austin Land System (P3) PEC	0 ha
Open Low mixed Shrubland mainly of Maireana pyramidata, M. triptera and Ptilotus obovatus with a Sparse mixed Shrubland mainly of Eremophila galeata, Rhagodia drummondii and Senna sp. Meekatharra (E. Bailey 1-26) and Isolated Tall Shrubs of Hakea preissii, Acacia tetragonophylla and A. aptaneura	MLSL (1)	Lake Austin vegetation complexes (banded ironstone formation) P1 PEC	39.2 ha (9.5%)
Mixed Low Shrubland mainly of Maireana pyramidata, Ptilotus obovatus and Alyogyne pinoniana var. pinoniana with a mixed Tall Sparse Shrubland of mainly Acacia grasbyi, A. incurvaneura and A. caesaneura with a Sparse Tussock Grassland of Eragrostis eriopoda, Monachather paradoxus and Eriachne helmsii	MLSL (2)	Austin Land System (P3) PEC	0 ha
Mixed Low Samphire Shrubland mainly of Tecticornia pruinosa, T. peltata and T. fimbriata	MLSSL (1)	Austin Land System (P3) PEC	0 ha
Mixed Low Samphire Shrubland mainly Tecticornia pruinosa, Tecticornia sp. Dennys Crossing (K.A. Shepherd & J. English KS 552) and Tecticornia sp. aff. auriculata with Isolated Tussock Grasses of Eragrostis falcata	MLSSL (2)	N/A	0 ha
Mixed Low Samphire Shrubland mainly of Tecticornia pergranulata subsp. pergranulata, T. indica subsp. bidens and T. sp. aff. auriculata with a Sparse Shrubland of Atriplex amnicola	MLSSL (3)	Austin Land System (P3) PEC	0 ha
Mixed Shrubland mainly of Cratystylis subspinescens, Lycium australe and Rhagodia drummondii with a mixed Low Chenopod Shrubland mainly of Maireana trichoptera, M. carnosa and Sclerolaena cuneata with Isolated Tall Shrubs to a Sparse Tall Shrubland of Acacia victoriae and Eremophila longifolia	MSL (1)	N/A	0 ha

Vegetation Type	Vegetation Code	Representative Priority Ecological Community	Extent within assessment area
Mixed Sparse Shrubland mainly of Eremophila longifolia, Hakea preissii and Acacia victoriae with a mixed Sparse Low Shrubland mainly of Frankenia laxiflora, Maireana pyramidata and Solanum lasiophyllum	MSSL	Austin Land System (P3) PEC	0 ha
Tall Closed Shrubland of Melaleuca stereophloia with an Open Shrubland of Exocarpos aphyllus	MsTCSL	N/A	0 ha
Mixed Tall Open Shrubland mainly of Acacia victoriae subsp. victoriae, Eremophila longifolia, A. craspedocarpa with a mixed Low Open Shrubland mainly of Maireana trichoptera, Solanum lasiophyllum, Salsola australis and an Open Tussock Grassland of Enneapogon caerulescens and / or Eragrostis falcata	MTOSL	Austin Land System (P3) PEC	0 ha
Low Open Samphire Shrubland of Tecticornia laevigata with a +/- Tall Shrubland of Casuarina obesa and mixed Isolated Shrubs mainly of Lycium australe, Eremophila pantonii and Scaevola spinescens	TlLSSL	N/A	0 ha

Green shaded cells-indicates vegetation types within the assessment area

2.4.1. Vegetation Condition

Based on the vegetation condition rating scale adapted from Keighery (1994) and Trudgen, (1988), native vegetation condition within the assessment area was categorized as 'excellent' to 'completely degraded' (Table 5). Disturbances within the assessment area are from historic grazing, mining, and exploration activities.

Table 5: Vegetation Condition rating within the assessment area

Condition rating	Description	Extent within assessment area
Degraded	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.	2 ha (0.6%)
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.	3 ha (0.8%)
Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.	43 ha (10.4%)
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.	364 ha (88.2%)

2.4.2. Significant Flora

According to the DBCA flora database search results (DBCA, 2023a), there are no DBCA known records of Threatened or Priority flora within the assessment area (Figure 2-2).

No Threatened flora were recorded during flora surveys within the assessment area.

One Priority flora taxon was recorded during flora surveys within the assessment area; Hibiscus sp. Perrinvale Station (J. Warden & E. Ager WB 10581) (P1). Of the 49 plants recorded during the field

survey, a total of one plant (one record) is located within the assessment area (Figure 2-3). A total of 50 plants are known to occur within the local area. The proposed clearing of one plants represents a potential impact of impact of 2% of the known local population of this taxon.

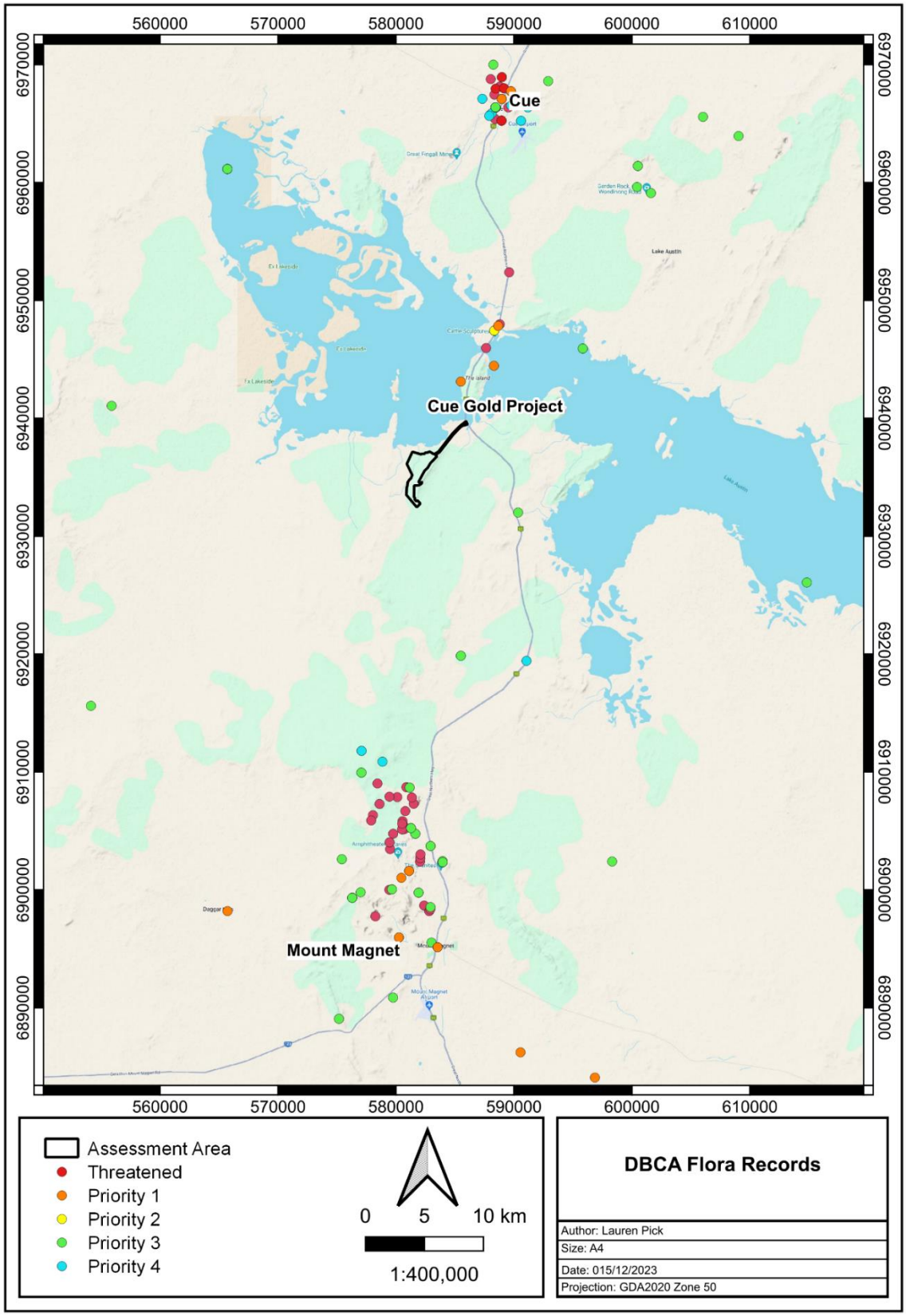

Figure 2-2: DBCA flora database records (DBCA, 2023a)

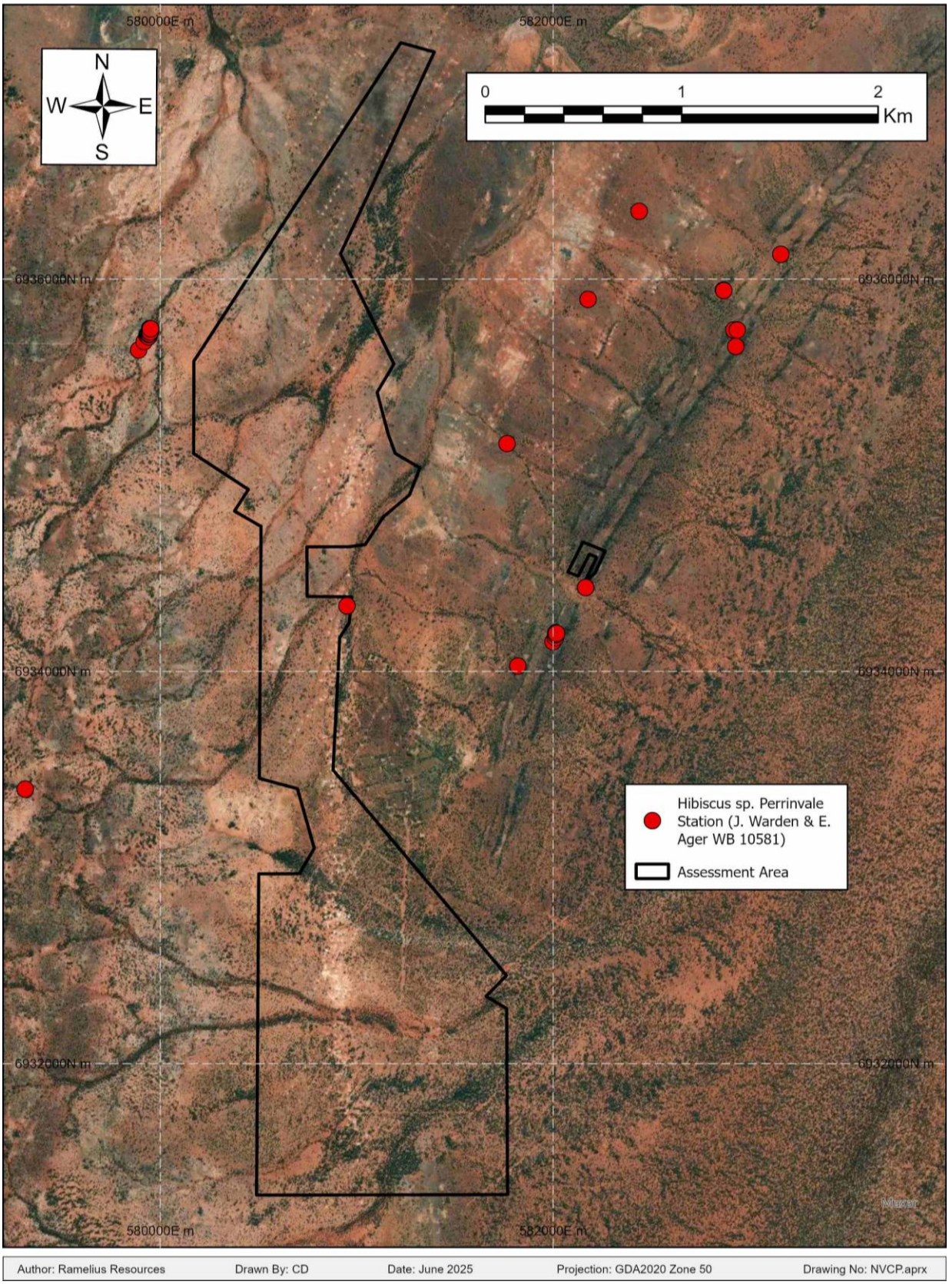

Figure 2-3: Flora Survey - significant flora records

2.4.3. Significant Vegetation

No Threatened Ecological Communities were identified within the assessment area. Two Priority Ecological Communities were identified within the assessment area; Lake Austin vegetation complexes (banded ironstone formation) (Priority 1) and Austin Land System (Priority 3). The extent of these communities within the assessment area and potential impacts from clearing within the assessment area are provided in Table 2-6.

Table 6: Significant vegetation within the assessment area

Ecological Community	Total Extent (ha)	Extent within assessment area (ha)	% impact
Lake Austin vegetation complexes (banded ironstone formation)	35,510	11	0.03
Austin Land System	22,443	213	0.95

2.5. FAUNA

A detailed terrestrial vertebrate fauna survey was undertaken in September 2020 by 360 Environmental. The survey included trap sites installed within areas of suitable and representative habitat. Motion sensitive cameras were used in conjunction with systematic trapping sites and positioned in locations of particular interest. Autonomous Recording Units (ARUs) were used to target bat species and the Night Parrot (Perzoporus occidentalis).

A subsequent vertebrate fauna survey and risk assessment was conducted by Terrestrial Ecosystems in 2022 and 2024 to assess fauna habitat and their condition as well as assessing presence of conservation significant fauna to develop mitigation and management strategies. Previous surveys include a Level 2 fauna assessment by Coffey Environments in 2011 which extended north of the Cue Gold Project.

The field assessment and available reports indicate the vertebrate fauna assemblage present in the Project area is likely to be like that in the many square kilometres of similar habitat in the adjacent areas. Terrestrial Ecosystems identified four broad fauna habitats within the Assessment area as shown in Table 7 and Figure 2-4:

- Banded Ironstone rises, breakaways and rocky areas
- Mixed open shrubland
- Mulga drainage
- Mulga woodland

Table 7: Fauna Habitat type within the assessment area

Condition rating	Description	Extent within assessment area
Banded Ironstone rises, breakaways and rocky areas		0.5 ha (0.1%)
Mixed Open shrubland		200 ha (48.4%)
Mulga Drainage		37.6 ha (9.1%)

Condition rating	Description	Extent within assessment area
Mulga Woodlands		158 ha (38.2%)
Disturbed	N/A	17.3 ha (4.2%)

Fauna habitat types represented in the project area are abundant and in similar condition in adjacent areas, and the project area is unlikely to support a high level of fauna diversity due to a lack of understory and leaf litter. The fauna assemblage that is present in the project area is also present and abundant in the adjacent areas (Terrestrial Ecosystems, 2023). The uncleared fauna habitat present in the Project area is generally in good condition.

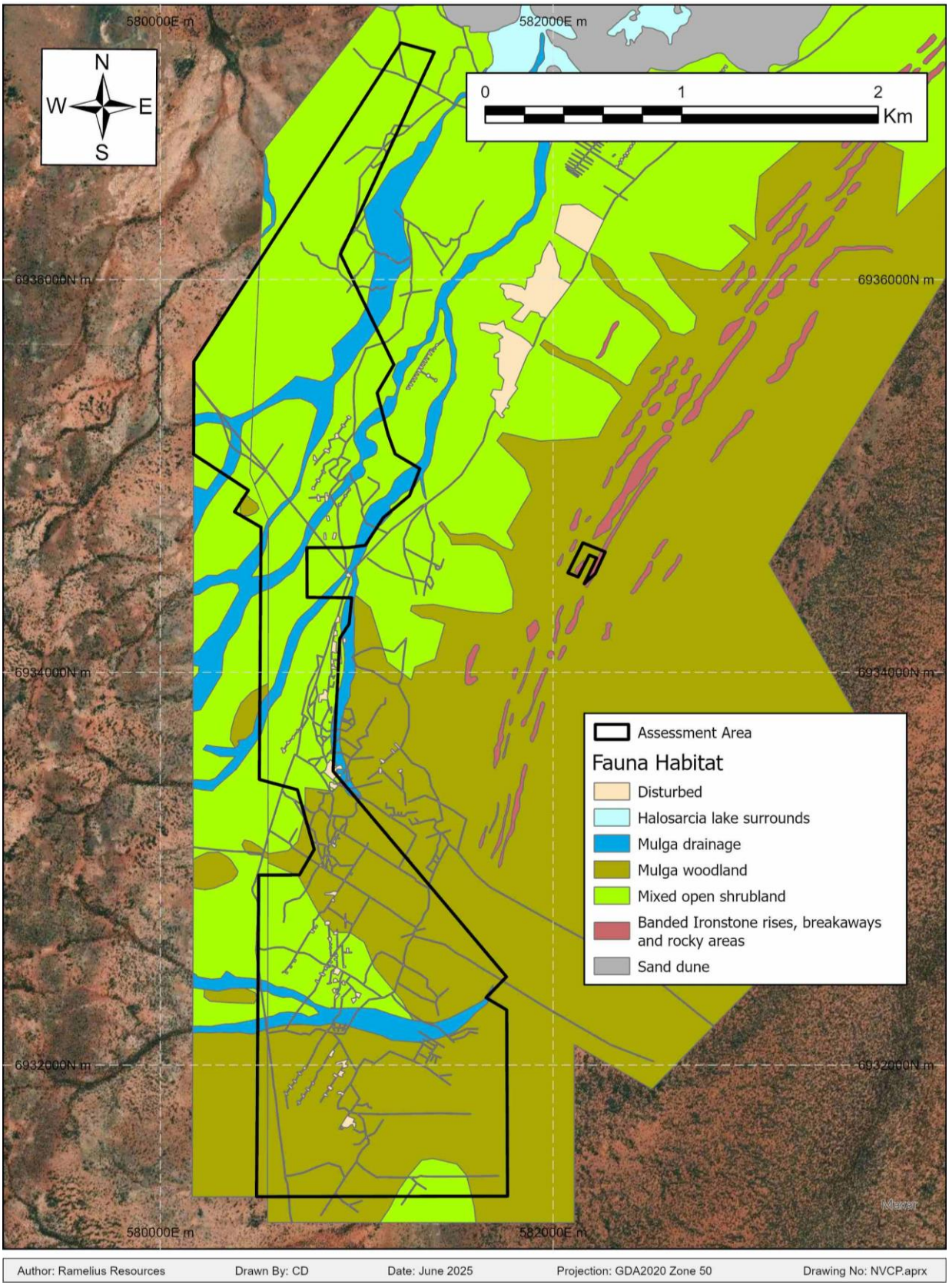

Figure 2-4: Fauna Habitats

2.5.1. Significant Fauna

According to the DBCA fauna database search results (DBCA, 2023b), there are no DBCA known records of Threatened or Priority fauna within the assessment area (Figure 2-5).

No Threatened, Priority or otherwise significant fauna were recorded during fauna surveys within the assessment area. As summarised in Table 8, the potential impacts on significant fauna from vegetation clearing within the assessment area is considered low.

Table 8: Potential for significant fauna

Species	DBCA Priority	Status under Commonwealth EPBC Act	Potential impacts of vegetation clearing
Night Parrot *Pezoporus occidentalis*	Critically Endangered	Endangered	Highly unlikely to be in the project area due to a lack of suitable habitat and recent records. The potential for impacting this species is, therefore, very low.
Western Spiny-tailed Skink *Egernia stokesii badia*	Endangered	Endangered	Highly unlikely to be in the project area due to a lack of suitable habitat. The potential impact on this species is, therefore, very low.
Greater Stick-nest Rat *Leporillus conditor*	Vulnerable	Vulnerable	It is not present in the project area.
Australian Painted Snipe *Rostratula australis*	Endangered	Endangered	Highly unlikely to be in the project area due to a lack of suitable habitat. The potential impact on this species is, therefore, very low.
Grey Falcon *Falco hypoleucos*	Vulnerable	Vulnerable	Highly unlikely to be in the project area due to a lack of suitable habitat. The potential impact on this species is, therefore, very low.
Malleefowl *Leipoa ocellata*	Vulnerable	Vulnerable	Highly unlikely to be in the project area due to a lack of suitable habitat and feral fauna. The potential for impacting this species is, therefore, very low.
Southern Whiteface *Aphelocephala leucopsis*	Vulnerable	Vulnerable	Potentially in the project area, but is geographically widely dispersed and relatively abundant, it will readily move if disturbed, so it is unlikely to be significantly impacted.
Fork-tailed Swift *Apus pacificus*	Migratory	Migratory	Although it may be seen very infrequently in the region, clearing vegetation is unlikely to impact this aerial species.
Grey Wagtail *Motacilla cinereal*	Migratory	Migratory	It is highly unlikely to be present in the project area, so the potential for impacting this species is low.
Yellow Wagtail *Motacilla flava*	Migratory	Migratory	It is highly unlikely to be present in the project area, so the potential for impacting this species is low.
Peregrine Falcon *Falco peregrinus*	OS		It may infrequently be seen in the region; however, clearing vegetation is unlikely to impact this species.

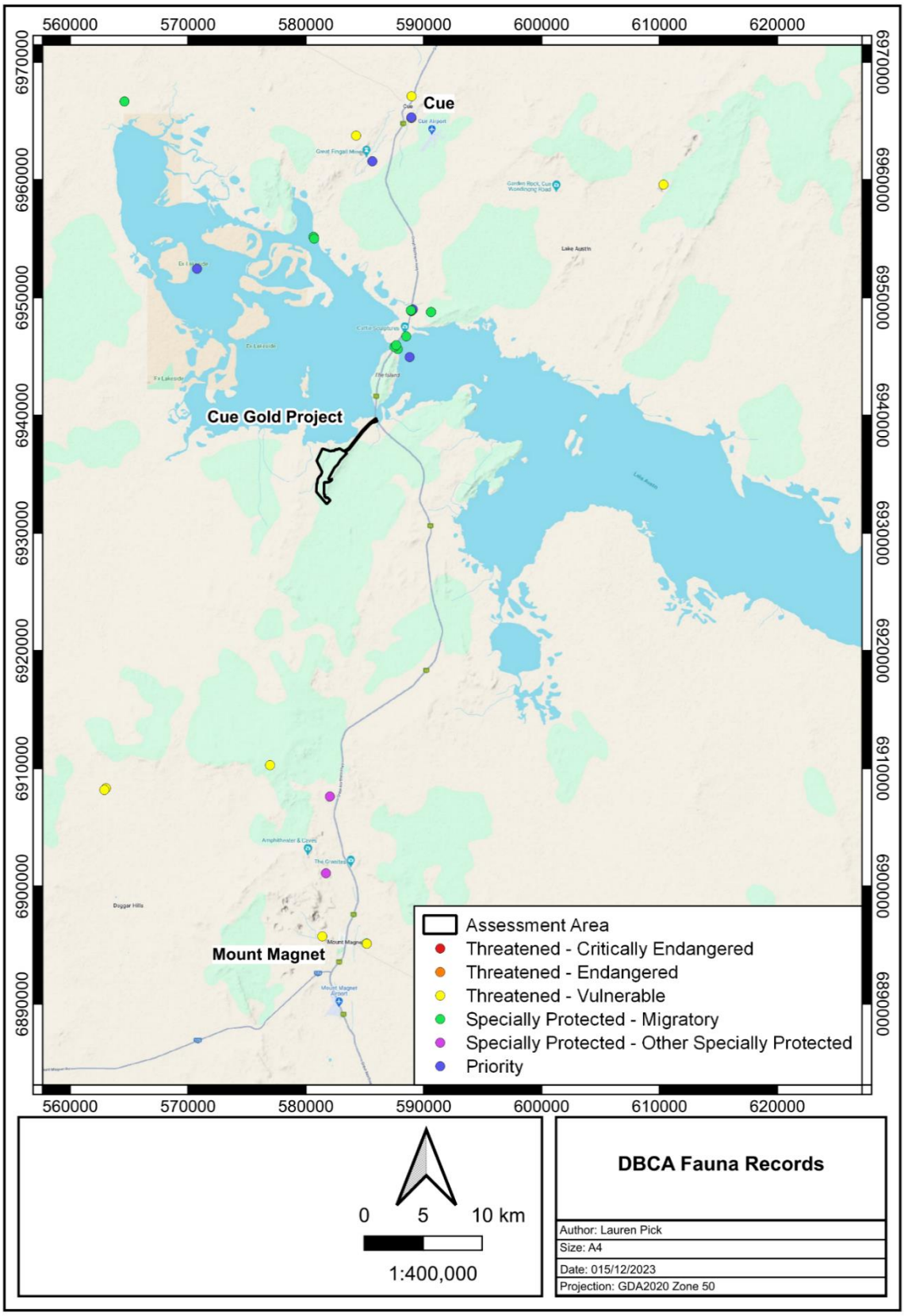

Figure 2-5: DBCA fauna database records (DBCA, 2023b)

3. NATIVE VEGETATION CLEARING PRINCIPLES

The proposed clearing within the assessment area has been assessed against the native vegetation clearing principles as shown in Table 9. The assessment found that the proposed vegetation clearing activities are not at variance or unlikely to be at variance with the clearing principles.

Table 9: Assessment of clearing against native vegetation clearing principles

Letter	Principle	Assessment	Outcome
Native vegetation should not be cleared if it:			
(a)	comprises a high level of biological diversity.	Vegetation within the assessment area is not considered to be of high biological diversity and is well represented outside the assessment area.	Clearing is unlikely to be at variance with this principle
(b)	comprises the whole or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to WA.	There are no known records of Threatened Fauna within the assessment area. Clearing vegetation will not result in the loss of significant habitat for indigenous fauna.	Clearing is unlikely to be at variance with this principle
(c)	includes, or is necessary for the continued existence of rare flora.	No Threatened Flora taxa, pursuant to the BC Act and the EPBC Act were identified within the assessment area.	Clearing is not at variance with this principle
(d)	comprises the whole or part of or is necessary for the maintenance of a threatened ecological community (TEC).	No Threatened Ecological Communities were identified within the assessment area.	Clearing is not at variance with this principle
(e)	is significant as a remnant of native vegetation in an area that has been extensively cleared	Two pre-European vegetation associations occur within the assessment area, all of which retain >97% of their pre-European extent. No remnant vegetation occurs within the assessment area.	Clearing is not at variance with this principle
(f)	is growing, in, or in association with, an environment associated with a watercourse or wetland	There are no inland waters, wetlands or perennial drainage lines within the assessment area. Minor ephemeral drainage lines intersect the assessment area. Vegetation associated with ephemeral drainage lines (Mulga woodland) represents 9.1% of the total assessment area.	Clearing is unlikely to be at variance with this principle
(g)	Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	Clearing within the assessment area is not considered likely to increase land degradation issues such as salinity, water logging or acidic soils.	Clearing is unlikely to be at variance with 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.	The assessment is not located within and proposed or gazetted conservation reserves.	Clearing is unlikely to be at variance with 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.	There are no inland waters, wetlands or perennial drainage lines within the assessment area. Minor ephemeral drainage lines intersect the assessment area. Vegetation associated with ephemeral drainage lines (Mulga	Clearing is unlikely to be at variance with this principle

Letter	Principle	Assessment	Outcome
Native vegetation should not be cleared if it:			
		woodland) represents 5.5% of the total assessment area. It is unlikely that the clearing of the vegetation in the assessment area will cause deterioration in the quality of underground water, as groundwater salinity in the assessment area is indicated to be > 35,000 mg/L (DWER, 2018). Clearing activities are unlikely to impact hydrological systems.	
(j)	Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding	The climate of the Eastern Murchison subregion is characterised as an arid climate with summer and winter rainfall of approximately 200 mm annually Clearing within the assessment area is not likely to increase the incidence or intensity of flooding within the assessment area or surrounds.	Clearing is unlikely to be at variance with this principle

4. CONCLUSION AND SUMMARY

- Nine vegetation types are present within the assessment area. Vegetation within the assessment area was representative of two Priority Ecological Communities; Lake Austin vegetation complexes (banded ironstone formation)-clearing represents 0.03% impact on total extent and Austin Land System-clearing represents 0.95% impact on total extent.

- No Threatened flora were recorded within the assessment area (no DBCA known records and no records during field surveys). One Priority flora was recorded within the assessment area; Hibiscus sp. Perrinvale Station (J. Warden & E. Ager WB 10581) (P1). The proposed clearing of one plant represents a potential impact of impact of 2% of the known local population of this taxon.

- Four fauna habitats are present within the assessment area. Fauna habitat types represented in the assessment area are abundant and in similar condition in adjacent areas, and the project area is unlikely to support a high level of fauna diversity due to a lack of understorey and leaf litter. The fauna assemblage that is present in the project area is also present and abundant in the adjacent areas.

- No Threatened or Priority fauna were recorded within the assessment area (no DBCA known records and no records during field surveys).

- The clearing permit area has been designed to avoid clearing impacts to Lake Austin and to minimise clearing within BIF habitats with vegetation associated with banded ironstone rises, breakaways and rocky areas only representing 0.1% of the total assessment area.

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