

Native Vegetation Clearing Permit (Purpose) Application: Supporting Documentation

Tower Hill Stage 2 Project



Prepared By Genesis Minerals Ltd

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Document Information

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1	04/05/2026	Emma Feint Senior Advisor Environmental Approvals and Closure	Tim Pavlos Principal Environmental Approvals and Closure	Tim Pavlos Principal Environmental Approvals and Closure

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APPENDIX C Basic Vertebrate Fauna Reconnaissance Survey and Risk Assessment

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APPENDIX E Genesis Minerals - Tower Hill Expansion SRE Fauna Survey Report

1 Introduction

1.1 Background

The Tower Hill Project (Project) is located approximately 1 kilometre (km) southwest of Leonora, in the Goldfields region of Western Australia (WA) (Figure 1-1). It forms part of the Genesis Leonora Operations Project which includes the Gwalia, Admiral, Harbour Lights and Ulysses operations. Tower Hill is an existing open cut pit, preliminary works in preparation for mining have commenced. The site has existing disturbance including a tailings dam, waste rock landform and access roads.

Genesis Minerals (Leonora) Pty Ltd (Genesis) acquired the Tower Hill tenements from St Barbara Limited (St Barbara) on 30 June 2023 (GMD ASX Release 3 July 2023). Genesis had a registered Power of Attorney with the Department of Mines, Energy and Petroleum (DMPE) to manage the tenements on behalf of St Barbara whilst Stamp Duty Assessment was underway. The tenement transfer to Genesis commenced in November 2025. Details of relevant tenements for this Native Vegetation Clearing Permit (NVCP) application are included in Table 1-1.

Table 1-1 Project Tenements Held by Genesis

Tenement	Tenement Area (ha)	Date Granted	Expiry Date	Status
L 37/263	244.36	28 th July 2023	27 th July 2044	LIVE
L37/290	3,8822.26	9 th July 2025	8 th July 2046	LIVE
M 37/25	823.50	26 th April 1995	29 th April 2027	LIVE
M 37/251	745.70	12 th November 1990	15 th November 2032	LIVE
M 37/55	362.20	3 rd September 1985	22 nd September 2027	LIVE
M 37/622	37.51	7 th January 2008	9 th January 2029	LIVE
M 37/689	513.40	7 th January 2008	9 th January 2029	LIVE

Under Section 51C of the *Environmental Protection Act 1986* (EP Act), the clearing of any native vegetation requires an approved clearing permit, unless an exemption applies. Exemptions for mining generally apply to areas of low impact mining and exploration, or for proposals that have already been assessed by the Environmental Protection Authority (EPA), Department of Water, Environment and Regulation (DWER) or DMPE through a separate process. This Project does not have an applicable exemption, and a clearing permit is therefore required.

CPS 10734/1 was approved in September 2025 to allow clearing of up to 399.13ha of native vegetation within a NVCP boundary of 618.79ha.

This application is essentially an extension of CPS 10734/1 and is required to facilitate the Tower Hill Stage 2 mining. The application is made up of three additional parcels abutting the existing permit. It is intended the new Clearing Permit will allow for a total 122.44ha within a 135.35ha boundary (Figure 1-2).

Figure 1-3 illustrates the differences between the existing CPS 10734/1 boundary and that proposed in this application.

1.2 Purpose of Clearing Permit Application

The purpose of this NVCP supporting document is to present the results of an assessment of the clearing required for this Project against the ten clearing principles as outlined in the clearing permit guidelines - *A guide to the assessment of applications to clear native vegetation (2014)* under Part V Division 2 of the EP Act. This report identifies the potential environmental impacts associated with the proposal based on the best available data. This report and accompanying NVCP Purpose Permit application form will be submitted to DMPE for assessment.

1.3 Proposed Timeframe

Clearing relating to this application is proposed to commence in January 2028 with mining likely to be completed by 2038.

1.4 Responsible Applicant

Genesis Minerals (Leonora) are responsible for the implementation of the clearing described within this report. Correspondence relating to this NVCP application should be addressed to:

Tim Pavlos

Principal – Environmental Approvals and Closure

Genesis Minerals Limited

PO Box Z5024, St Georges Terrace, Perth, WA 6831

Phone: (08) 6323 9094

Email: environmentalapprovals@genesisminerals.com.au

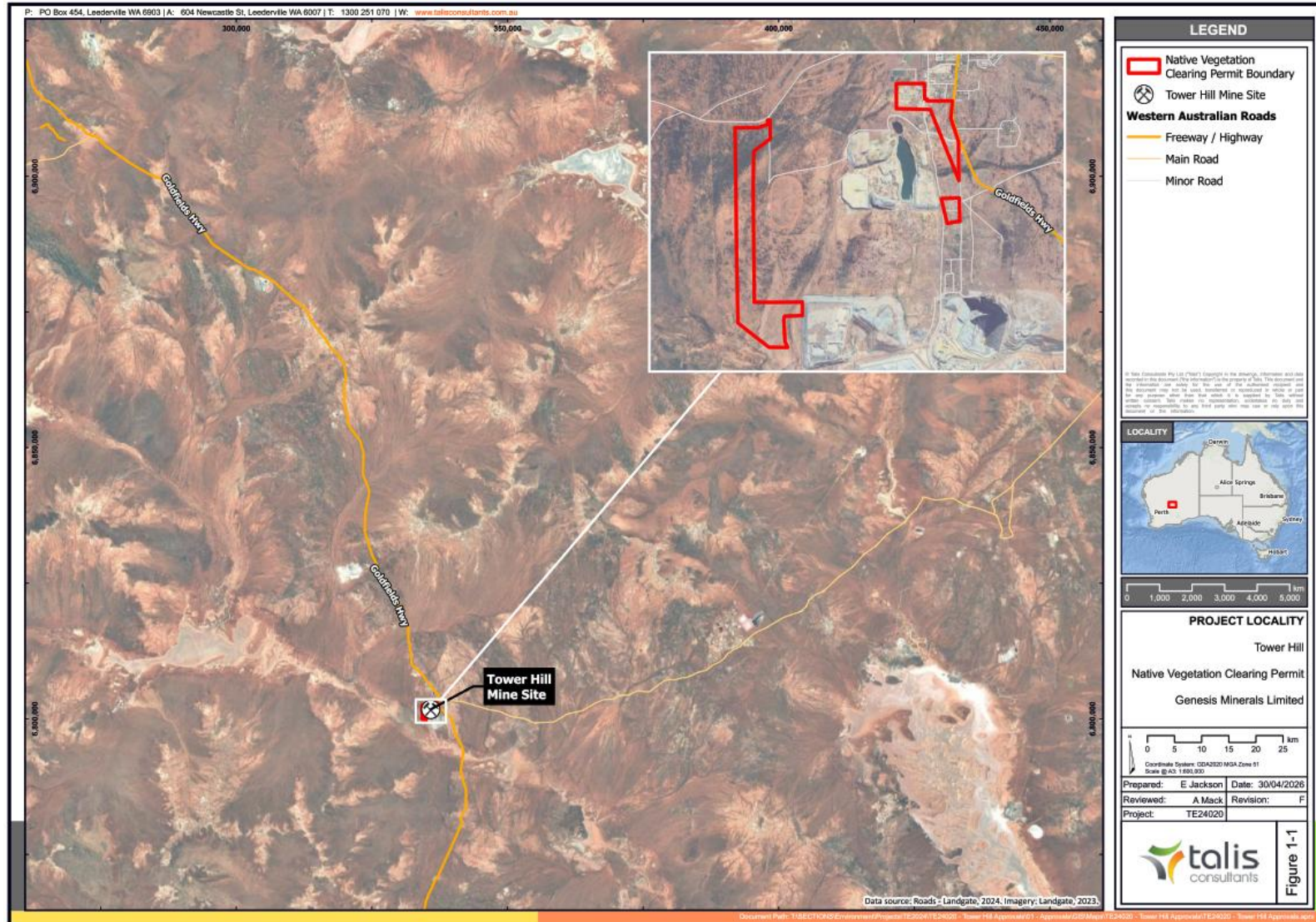


Figure 1-1 Tower Hill Project Locality

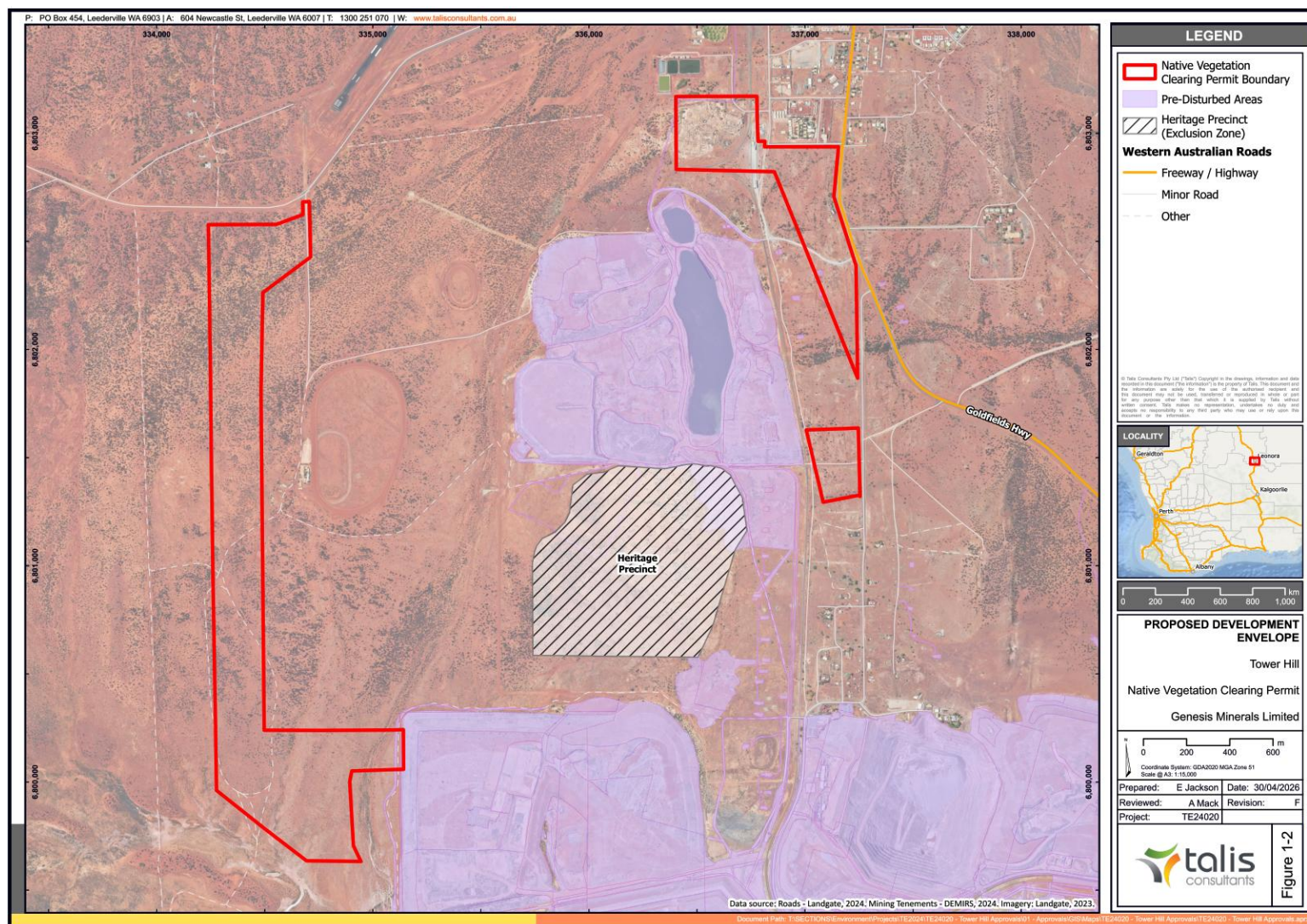


Figure 1-2: Proposed NVCP Boundary

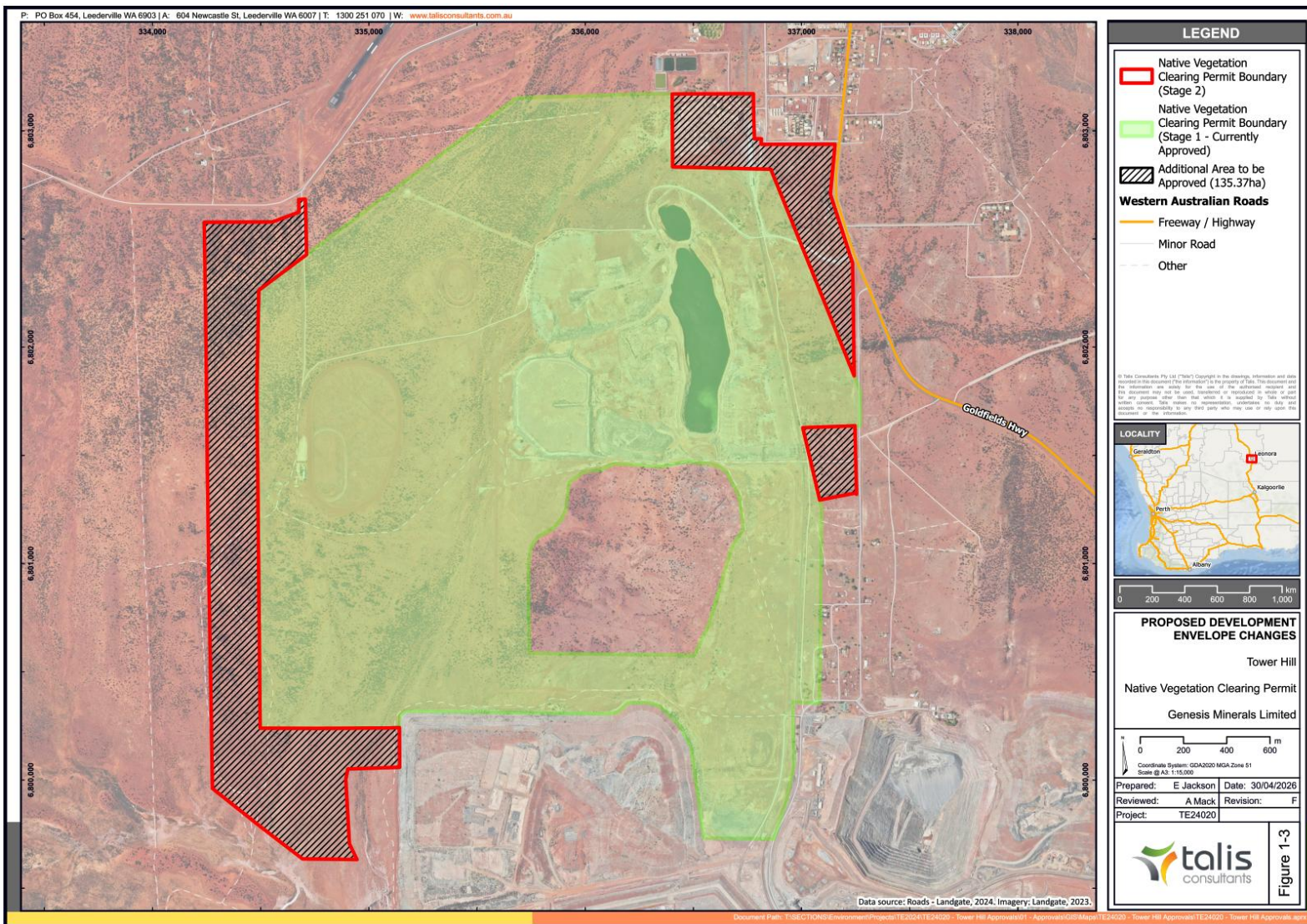


Figure 1-3: Proposed NVCP Boundary vs Current Boundary

2 Site Overview

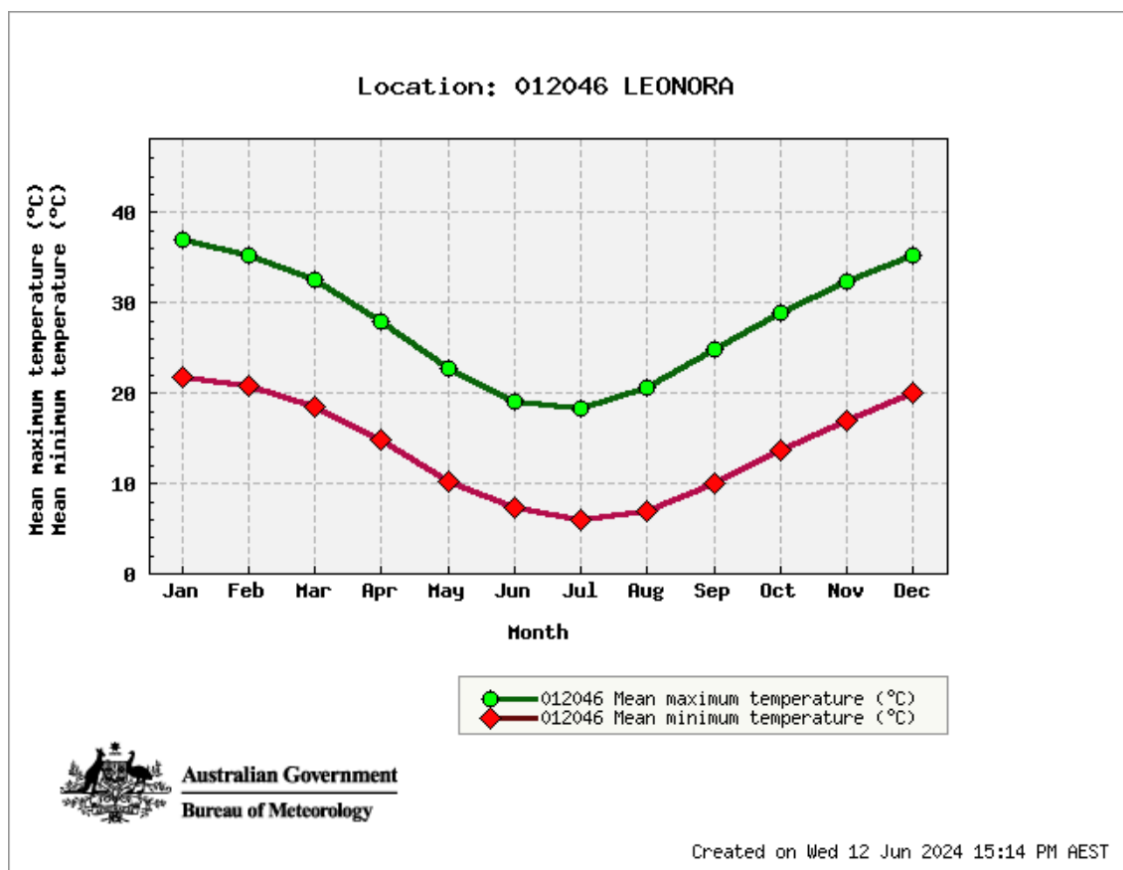
2.1 Climate

The Project is located in the Goldfields-Esperance region of WA, approximately 1 km Southwest of the town of Leonora. The local climate is classified as semi-arid, and is characterised by hot, dry summers and mild to warm winters with low and irregular rainfall. The region experiences significant temperature variations between day and night, and rainfall is usually sparse and unpredictable, often concentrated in short periods.

The monthly mean maximum temperatures range from 18.4 degrees Celsius (°C) in July to 37.0°C in January, while the mean minimum temperatures range from 6.1°C in July to 21.8°C in January. The annual mean minimum temperature is 14°C and the annual mean maximum temperature 27.9°C (Figure 2-1).

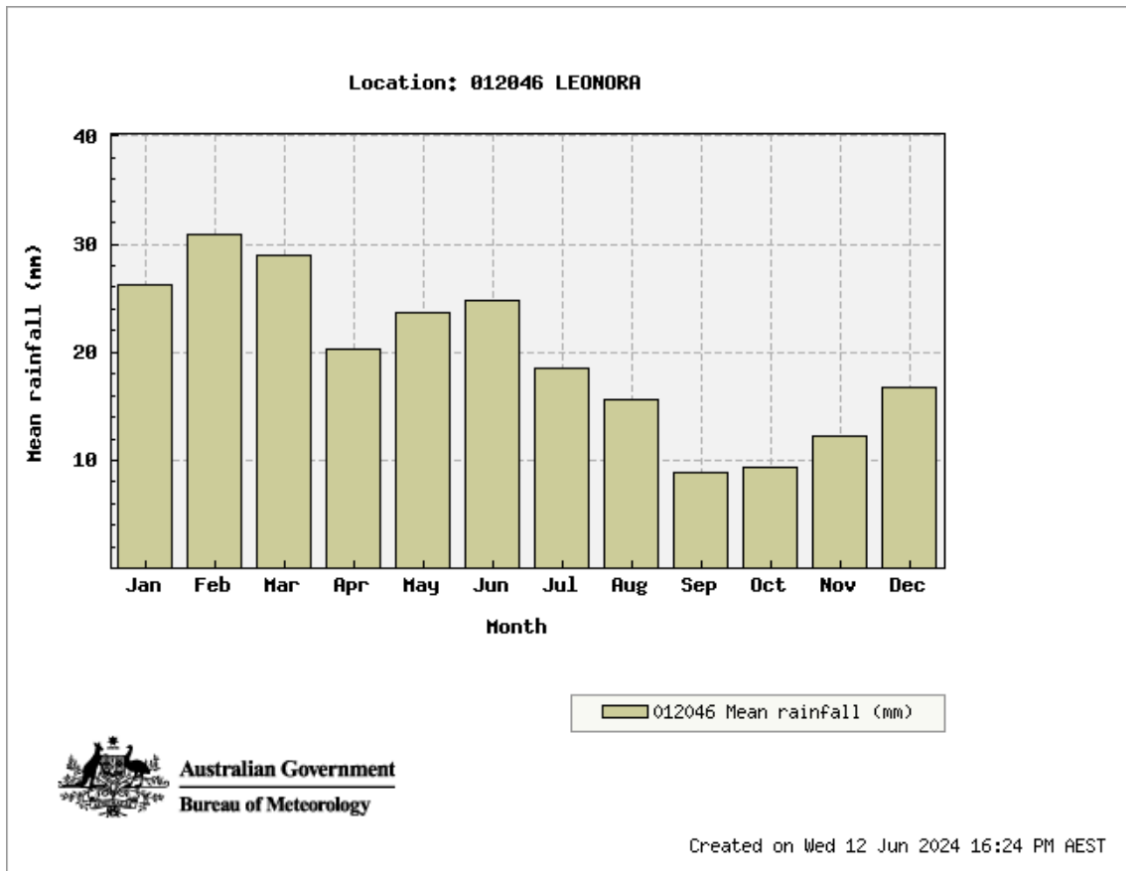
The mean rainfall at Leonora is lowest during September at 8.9 millimetres (mm) and at highest during February at 30.9 mm (Figure 2-2). Prevailing winds are easterly in the mornings (0900hrs) with an average speed of 9.8 kilometres per hour (km/h) (BoM, 2024). In the afternoons, direction varies by season between easterly and westerly.

Figure 2-1: Mean Maximum/Minimum Temperature for Leonora



Source: Bureau of Meteorology, 2024

Figure 2-2: Mean Rainfall (mm) for Leonora



Source: Bureau of Meteorology, 2024

2.2 Topography

The area immediately surrounding Leonora has elevations ranging from approximately 370 metres Relative Level (mRL). A prominent range of hills extends north-northwest from south of Leonora, rising approximately 60 metres (m) above the surrounding plain, including Mt Leonora, which is one of the most prominent topographic features visible from the township of Leonora (MBS, 2023).

The Tower Hill Pit trends north to south and is located approximately 1.5 km south-west of Leonora. The Tower Hill cuts an old drainage line that trends east-west, which prior to pit development, carried water through to Lake Raeside. When mine was operational drainage was diverted around the northern end of the pit. During care and maintenance drainage ran into the pit void. Until a temporary diversion was installed in 2023 that diverted water to the north of the Tower Hill Pit. Installation of diversion infrastructure, proposed as part of the Tower Hill Project will allow drainage from the Wilson Creek tributaries to connect with the Lake Raeside catchment for the first time since mining commenced.

2.3 Interim Biogeographic Regionalisation of Australia (IBRA)

The Interim Biogeographic Regionalisation of Australia (IBRA) divides Australia into 89 bioregions based on major biological, geographical, and geological attributes. These bioregions are subdivided

into 419 subregions as part of a refinement of the IBRA framework (Department of Climate Change, Energy, the Environment and Water, 2023).

The Project is located within IBRA Bioregion of Murchison (sub-region of Eastern Murchison) which is generally characterised by arid climate, with mainly winter rainfall. Landscapes comprise of low hills and mesas separated by flat colluvium and alluvial plains. Salt Lake systems are associated with the occluded paleodrainage system. Broad plains of red-brown soils and breakaway complexes as well as red sandplains are widespread. Vegetation is dominated by mulga woodlands and is often rich in ephemerals, hummock grasslands, saltbush shrublands (on calcareous soils) and Halosarcia shrublands. The Murchison region is one of the main pastoral areas in WA (ACRIS, 2008).

2.4 Soil Landscape Systems

Soil landscapes and land system mapping of WA describes broad soil and landscape characteristics from regional to local scales, and has been captured at scales ranging from 1:20,000 to 1:250,000. The Project was mapped across several Soil Landscape Systems by Spectrum (2022). The systems present within the project boundary at Tower Hill are summarised in Table 2-1 below:

Table 2-1: Soil Landscapes identified within the Project Boundary

Land System ID	Description
Carnegie Land System	Salt lakes with fringing saline alluvial plains, kopi dunes and sandy banks, supporting halophytic shrublands and acacia tall shrublands.
Gundockerta Land System	Extensive, gently undulating calcareous stony plains supporting bluebush shrublands.
Leonora Land System	Low greenstone hills and stony plains supporting mixed chenopod shrublands.
Rainbow Land System	Hardpan plains supporting mulga tall shrublands.

2.5 Hydrology

2.5.1 Surface Water

Local catchments within the Project area are small and localised, with drainage previously interrupted by both existing and historic mining infrastructure. Locally around the existing Tower Hill pit, surface water drainage runs into the pit. On the eastern side, surface water runs off waste dump slopes towards the east and the Leonora railway line, however the majority of the mine area drains east to west towards the larger Wilson Creek, that runs down the western side of the existing mine.

The mine site is externally impacted by a creek on the east side of the mine, which previously ran west through the current location of the Tower Hill pit and into Wilson Creek. Wilson Creek South runs directly east to west towards the pit in a shallow channel and ~0.4% bed grade. It crosses the Goldfields Highway and Tower Street (via culverts and floodways) and then passes beneath the Leonora railway (box culverts), with the catchment at the railway being 5.5km². The creek is currently diverted just west of the railway line, via a 750m channel north along the eastern edge of the pit, and into Wilson Creek.

Genesis engaged AQ2 and Agilitus to conduct surface water assessments for Tower Hill, to inform our site layout, diversion channel design and proposed operations. The Project will expand the area of

mining infrastructure to approximately 135Ha. The majority of surface drainage will continue to run west to the Wilson Creek floodplain.

The proposed eastern expansion of the pit will intersect the existing Wilson Creek diversion, requiring relocation. The new diversion is planned to be diverted south between the mine footprint (including the waste dump and noise bund) and the Leonora railway rail reserve boundary.

The revised alignment will pass through an area that is currently occupied by an existing waste dump which is scheduled for removal as part of the development works. The diversion will then discharge water overland towards the existing Gwalia waste dump and eventually into Wilson Creek. The design, which has been developed in collaboration with Traditional Owners, ensures continuity of surface water flow while accommodating the expanded mine layout and maintaining environmental, aboriginal cultural heritage, and operational integrity.

Proposed surface water management and sediment infrastructure for the Tower Hill Project is shown in Figure 2-3.

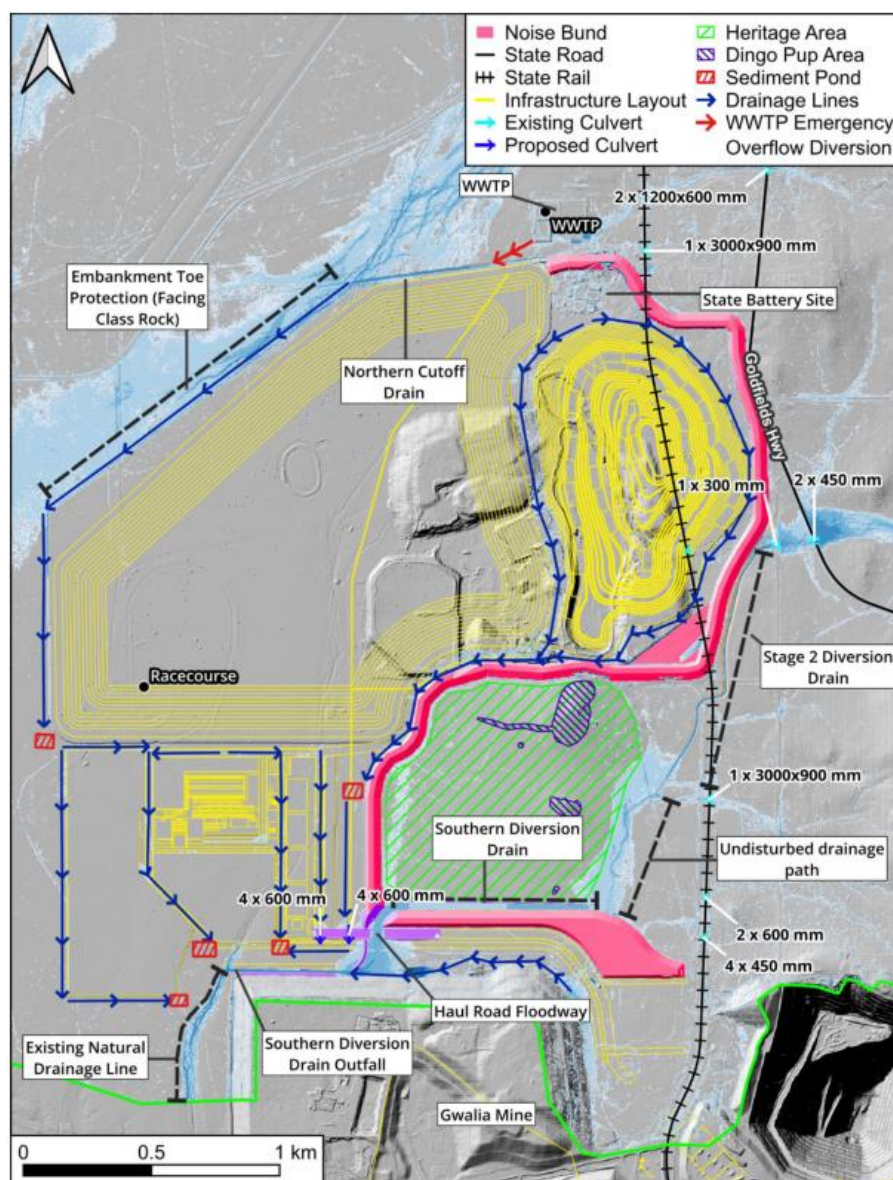


Figure 2-3: Proposed Surface Water and Sediment Management

2.5.2 Groundwater

The regional hydrogeology of the area comprises of metamorphosed, moderately to highly deformed volcanic and sedimentary rocks (referred to as greenstones) which have significant granitic intrusions (Steward 2004 as cited in GHD 2010). Groundwater in the Project area is primarily contained within two main aquifer systems in the Leonora-Tower Hill area: the Upper Alluvial Aquifer and the Werillup Palaeochannel Aquifer (Pennington Scott, 2024).

2.5.2.1 Upper Alluvial Aquifer

The Upper Alluvial Aquifer is an unconfined, highly heterogeneous, and anisotropic system. Permeable zones within this aquifer are primarily found in sandy portions and in small cavities commonly present in silcrete, calcrete, and ferricrete. Generally, the aquifer has low to moderate permeability, though it can become highly transmissive in areas of extensive and karstic calcrete (Pennington Scott, 2024).

This aquifer was historically exploited by the Gwalia Western borefield, located approximately 3 km south-southwest of Tower Hill and west of the Gwalia mine, however this borefield has been inactive since 1998 (Pennington Scott, 2024). This borefield consisted of six production bores drilled to a depth ranging from 17.5 m to 65.5 m, targeting alluvial clay, limonite-pebble gravels, sand, and calcrete. The yields ranged from 100 to 700 m³/day of saline to hypersaline water (Pennington Scott, 2024).

Pennington Scott (2024) noted that typically, the alluvium exhibits low permeability and specific yield due to its silty composition, with hydraulic conductivity values below 2.5 m/day and a specific yield of 3%, as measured in the Albion Downs Borefield (Berry, 1997). However, intervals with relatively low clay and silt content, such as sand and gravel layers, can exhibit significantly higher permeability and specific yields, reaching up to 20%. Bands of high secondary permeability and porosity are often found in ferruginous and siliceous zones within the alluvium. For example, at Marshall Creek, a palaeotributary to the Raeside palaeovalley, pumping tests revealed a hydraulic conductivity of 0.1 m/day or less in the upper catchment, which increased to up to 10 m/day in the lower reaches. The specific yield was consistently 3%.

2.5.2.2 Werillup Palaeochannel Aquifer

The Werillup Palaeochannel Aquifer is a highly productive palaeochannel aquifer as is present in the deepest parts of palaeovalleys upon the northeastern Yilgarn. It is confined below the Perkolilli Shale aquitard and bounded laterally and below by weathered to fresh bedrock. The aquifer comprises a basal coarse-grained sand and gravel with frequently clayey medium-grained sand and interbedded clay in the upper portion (Pennington Scott, 2024).

Permeability is highest through the lower aquifer zone, which can have a hydraulic conductivity of up to 15 m/day or greater. In the Leonora area the Werillup Palaeochannel aquifer is present in the sub-surface extending east-southeast roughly coincident with the Raeside palaeodrainage. There is no record of any borefield development in the aquifer about Leonora (Pennington Scott, 2024).

Recharge to the confined Werillup Palaeochannel aquifer occurs via vertical leakage through the overlying Perkolilli Shale where there is a downward hydraulic gradient, as well as from weathered and fractured bedrock flanking the palaeochannel. However, recharge rates to the confined aquifer are inferred to be so low that they are considered negligible (Pennington Scott, 2024).

2.5.3 Local Hydrology

To ensure the protection of the nearby Melita Calcrete (a registered priority ecological community (PEC), Genesis engaged Pennington Scott to develop a 3D numerical groundwater simulation model. Built in accordance with Australian Groundwater Modelling guidelines, the model provides a high level of confidence in the feasibility of the dewatering strategy and assesses the potential impacts to groundwater from the development of the project. This model was undertaken to assess the final potential Tower Hill pit impacts and a depth of 320 mBGL.

The most significant drawdowns from the Tower Hill pit expansion will occur to the north and south, with limited westward propagation due to the presence of impermeable granite bedrock and the Gwalia tailings storage facility. Drawdown impacts will extend about 1.1 km to the south and 1.3km to the east, with minimal impacts to the north and west. The increased drawdown to the south is largely confined to mafic formations, which provide most of the dewatering yield. The pit will have minimal drawdown impact to the west, where the granite bedrock and tailings storage facility act as barriers (Pennington Scott, 2024).

Ephemeral creeks within the application area flow towards the Melita PEC, and it is unknown if the clearing of riparian vegetation associated with these ephemeral creeks will negatively impact the PEC (DBCA, 2025). Creek line vegetation occurs within the application area however no typical groundwater dependent species were recorded within the application area (Genesis Minerals, 2025B; NVS, 2023). *Eucalyptus camaldulensis* subsp. *obtus*a (Blunt-budded River Red Gum) was recorded in the application area, *Eucalyptus camaldulensis* species are known to utilise groundwater when surface water is absent, even if saline (DPI 2016; Mensforth et al., 1994).

In addition to the final potential depth of 340 mBGL model, Pennington Scott's assessment produced a contour map of the predicted 2m drawdown associated with Stage 2 of the Project. The modelling, in conjunction with a Targeted Stygofauna Survey (Bennelongia, 2025) suggest that the development of the Project is unlikely to affect the stygofauna species that constitute the PEC given most of the Project development will occur at the east and the north sections of the PEC, where stygofauna richness appears to be lowest.

Furthermore, Genesis is committed to groundwater monitoring, already monitoring water levels in several observation bores around the TSF as part of its groundwater licence, including four near to the modelled 2-metre drawdown impact zone. There are four other existing observation wells that will be included in the Tower Hill Project to monitor the development of drawdown impacts in relation to the PEC. The bores are located both inside and outside the PEC boundary so that any significant changes in groundwater outside the PEC can be identified and used as an early warning to ensure mitigations are put in place before it affects the groundwater associated within the PEC.

2.6 Conservation Features

There are no conservation reserves or estates located within or immediately adjacent to the proposed boundary. No conservation reserve was located within 100 km of the survey area. Bulga Downs & Cashmere Downs Pastoral leases portions, is a Nature Reserve in progress, is located just outside of the 100 km buffer (Spectrum, 2022).

Desktop studies from both NVS (2023) and Spectrum (2022) found that no Environmental Sensitive Area (ESA) is located within the proposed disturbance footprint. There are two ESAs within a 100 km buffer zone being Lake Ballard (67.2 kms south) and Lake Marmion (81.1 km South).

There were no Threatened Ecological Communities (TEC) identified within the proposed boundary during the studies by Spectrum (2022). Two Priority Ecological Communities (PEC) were found within proximity to the Project. One of the PECs; Melita Calcrete was identified in the survey overlapping the Tower Hill proposed disturbance footprint, and the other PEC, Sturt Meadows calcrete which is found roughly 25 kms northwest from the Project. Further details are provided below in Section 4.3.

3 Flora and Vegetation Assessment

A number of Flora and Vegetation surveys have been undertaken for the Project since 2006. For the purpose of this assessment, surveys that are dated more than three years have been excluded to describe the baseline biodiversity of the Project. This is to ensure survey relevancy and describe the environment in its current form.

In 2021, Spectrum Spatial and Ecology (Spectrum) undertook a comprehensive Flora and Vegetation Desktop Assessment which included a site visit. As a result from the findings of the Spectrum assessment, a further detailed Flora and Vegetation Survey was undertaken by Native Vegetation Solutions (NVS) in September 2022. The findings of these assessments are detailed below in Section 3.1, including the assessment against the Clearing Principles (Section 5).

3.1 Flora Assessment

Spectrum conducted a basic fauna survey and a flora site visit in November 2021 (Appendix A). The areas surveyed included four distinct mining areas; Gwalia, Tower Hill, Harbour Lights, Jaspers and two proposed railway corridors. Spectrum identified a total of 86 significant flora taxa during the flora desktop search. Of these, five were assigned a High Likelihood of occurrence, while ten were assigned a Medium Likelihood of occurrence. No TEC were recorded within 50 km of the survey area. However, the desktop assessment recorded two PEC within 50 km of the survey area which are both listed as Priority 1. One PEC intersects the survey area at both Gwalia and Tower Hill (Spectrum, 2022) whilst it was noted that the other PEC was located approximately 25 kms northwest of the Project area.

In 2022, NVS conducted a Detailed Flora and Vegetation Survey (Appendix B) with a survey area encompassing three distinct areas; Gwalia (2,015 ha), Tower Hill (1,143 ha) and Harbour Lights (400ha). During the initial desktop study, NVS identified the 'potential' occurrence of Conservation Significant flora and confirmed two PECs within close proximity to the Project area. The detailed field survey later confirmed no Threatened or Priority flora or ESAs in the survey area (NVS, 2023).

The detailed field survey across the three areas found two-hundred and one species with 176 species recorded within quadrats. 42 families and 95 genera were recorded overall (NVS, 2023). The vegetation condition in the survey area was classified by good to very good condition using Keighery's, (1994) vegetation conditions definitions. The disturbance present within the Tower Hill survey area mostly attributed to, existing roads, historical open pits, waste landforms and exploration related activities. The vegetation more than 0.5 m from existing tracks was assessed as mostly in good condition (NVS, 2023). NVS concluded that results from the survey indicated the majority of the flora within the survey area is not unique and is common throughout the Eastern Murchison Subregion and adjoining regions and that the vegetation condition of the areas had been impacted by historical exploration and mining activities as well as grazing. (NVS, 2023).

Majority of the vegetation in the northeastern parcel of the application area is considered is considered completely degraded or degraded. Vegetation in the southeastern portion of the application area is considered good. Vegetation within the western portion of the application area is considered good with approximately 24.01Ha considered very good.

Vegetation condition is shown in Figure 3-1.

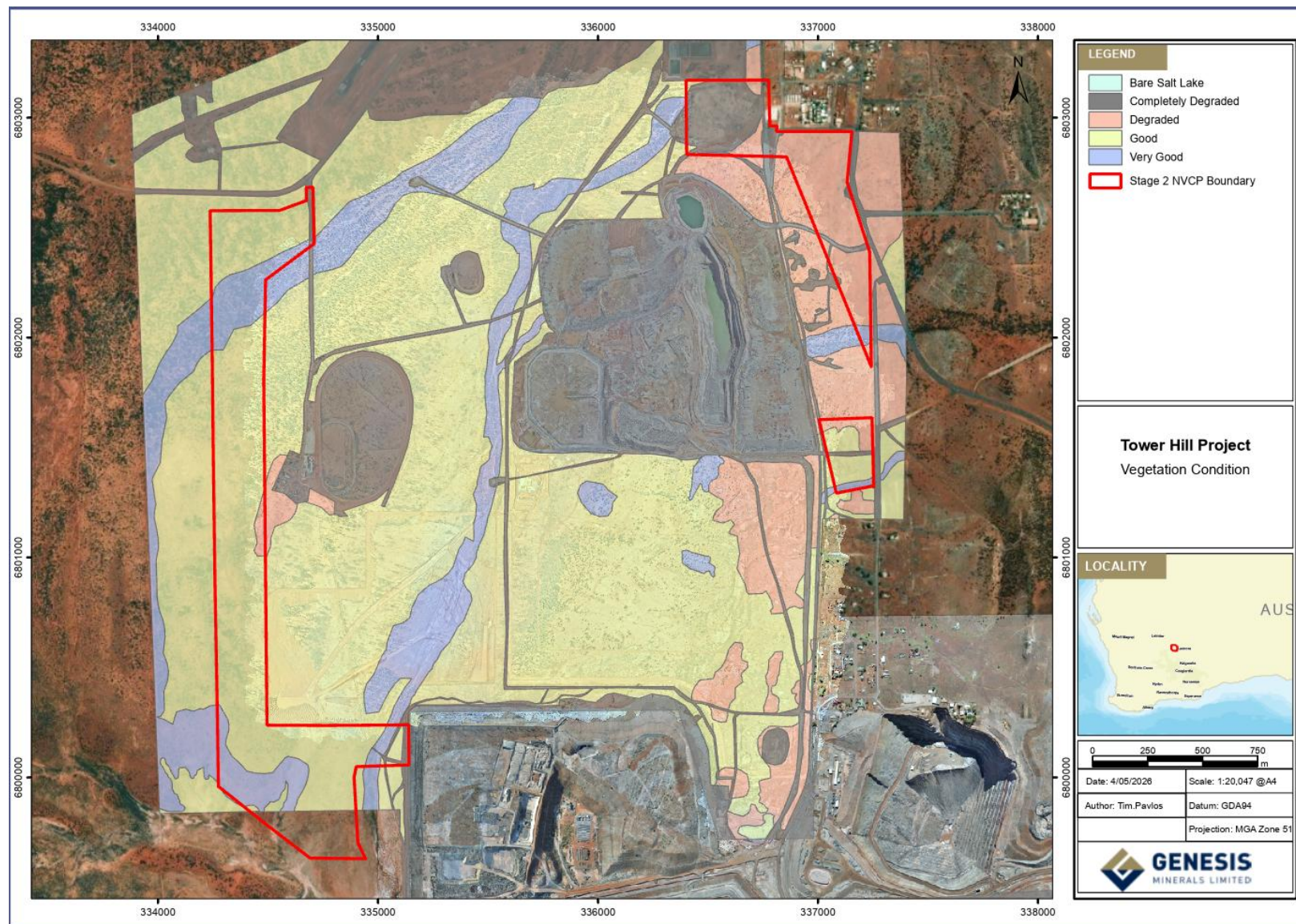


Figure 3-1: Vegetation Condition

3.1.1 Broad Vegetation Types

Mapping of pre-European broad vegetation within Western Australia was completed on a broad scale (1:1,000,000) by Beard (1976). Three of Beard's pre-European vegetation associations are mapped within the survey area (Figure 3-2):

- Association 18: Low woodland; mulga (*Acacia aneura*);
- Association 28: Open low woodland; mulga; and
- Association 39: Shrublands; mulga scrub.
- Association 676: Samphire (*tecticornia* ssp)

The extent of Beard vegetation units within the survey area is less than 1.5 percent (%) for all Vegetation types, and each are well above the 30 % threshold at a State, bioregional and subregional level (NVS, 2023).

Table 3-1 details the remaining proportion of the vegetation units that lie within the proposed clearing footprint.

Table 3-1: Extents of vegetation associations mapped within the survey area

Vegetation Association	Scale	Pre-European extent (ha)	Current extent (ha)	Remaining (%)	Hectares (ha) within NVCP boundary	% of current extent within NVCP boundary
18	State: WA	19,892,306	19,843,148	99.75	19.9	<0.1
	IBRA Sub-region: Murchison (MUR01)	12,403,172	12,363,252	99.68		<0.1
	LGA: Shire of Leonora	2,010,057	2,002,508	99.62		<0.1
28	State: WA	395,895	392,171	99.06	99.4	0.1
	IBRA Sub-region: Murchison (MUR01)	224,291	220,583	98.35		0.3
	LGA: Shire of Leonora	126,344	124,136	98.25		0.5
39	State: WA	6,613,567	6,602,578	99.83	11.1	<0.1
	IBRA Sub-region: Murchison (MUR01)	1,148,400	1,138,064	99.10		<0.1
	LGA: Shire of Leonora	252,141	245,994	97.56		<0.1

676	State: WA	2,061,241	1,962,930	95.23	4.9	<0.1
	IBRA Sub-region: Murchison (MUR01)	369,324	369,212	99.97		<0.1
	LGA: Shire of Leonora	221,870	221,809	99.97		<0.1

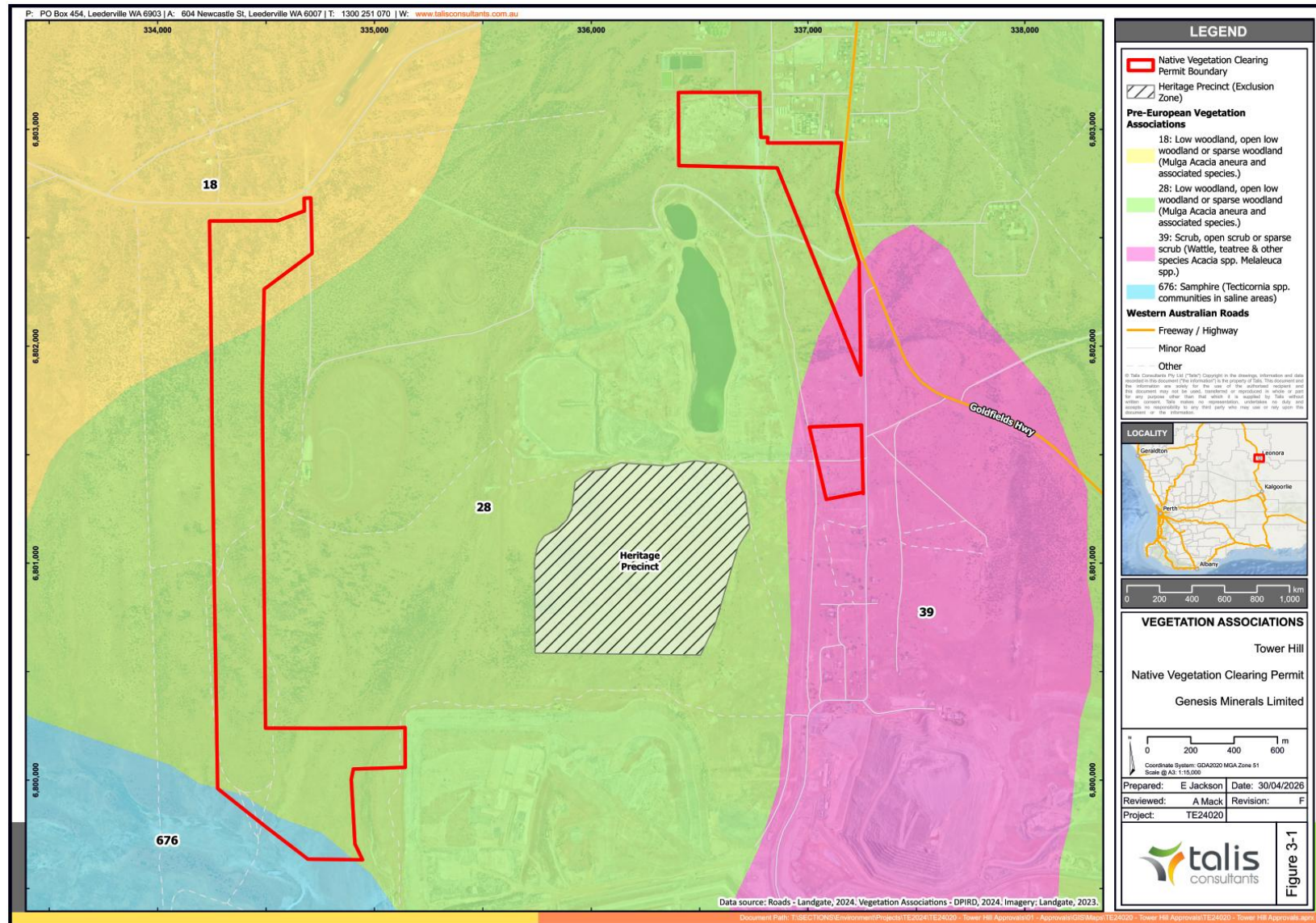


Figure 3-2 Beard's Pre-European Vegetation Associations

3.1.2 Vegetation Communities

The Spectrum (2022) survey and site visit identified 3 ecological communities within the Tower Hill area:

Table 3-2: Ecological Communities Recorded at Tower Hill.

Ecological Community	Ha
<i>Acacia</i> (Mulga) spp. over mixed shrubs on quartz outcrop	1.9
<i>Eremophila</i> over <i>Tecticornia</i> open plain on fine gravel	6.5
Low open shrubland of <i>Acacia</i> spp. over mixed chenopods and grasses on pebbles and quartz on lower slopes	61.8
Cleared/Disturbed	279.1
Open shrubland of <i>Acacia</i> (Mulga) spp. over mixed chenopods with pebbles and quartz on flats and lower slopes	153.0
Open woodland of <i>Acacia</i> spp. (Mulga) over sparse shrubs on sandy-loam on flats and lower slopes	240.0
Woodland of <i>Acacia</i> (Mulga) spp. over sparse shrubs and grasses on sandy-loams on flats and flowlines	35.5

The ecological communities within the survey area that contain rocky ridges, rocky outcropping, and chenopods such as *Tecticornia* spp. were noted as potentially significant due to the possibility for rare or threatened species to be present (Spectrum, 2022). These communities will not be disturbed as part of the Tower Hill Project.

The application area contains approximately 18.1Ha of creekline vegetation and 1.6Ha *Acacia burkittii* creekline vegetation. *Eucalyptus camaldulensis* subsp. *obtus*a (Blunt-budded River Red Gum) has been recorded in Creekline Vegetation. *Acacia burkittii* and *Eucalyptus camaldulensis* subsp. *obtus*a are known to occur along waterways including ephemeral creeks, and utilise groundwater when surface water is unavailable, even if groundwater is saline. Clearing of riparian vegetation will be avoided where possible.

Vegetation Communities in relation to the applied areas is shown in Figure 3-3.

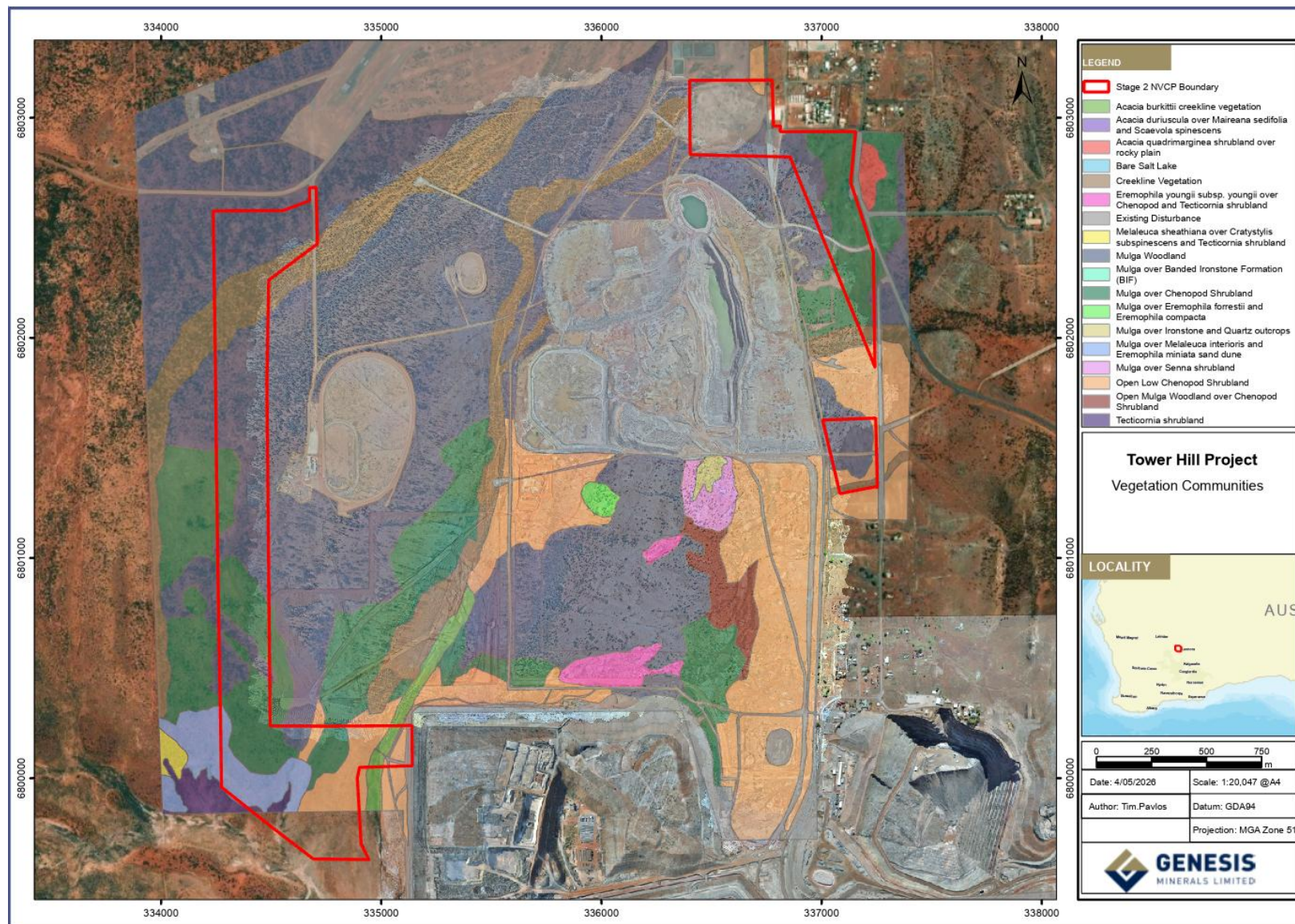


Figure 3-3: Vegetation Communities

3.1.3 Conservation Significant Flora

Eighty-six (86) significant flora taxa were identified during the flora desktop searches by (Spectrum, 2022). Of these, five were assigned a 'High Likelihood' of occurrence, while ten were assigned a 'Medium Likelihood' of occurrence (Spectrum, 2022).

No conservation significant flora species were recorded during the field survey (NVS,2023). However, two conservation significant flora species records, located within close proximity to the survey area, were investigated. The findings are in Table 3-3 below.

Table 3-3: Conservation significant flora in proximity to survey areas.

Taxon		Conservation Status	Findings
<i>Acacia sp.</i> Marshall Pool (G. Cockerton 3024)		P3	The precision rating for the coordinates is three, which indicates the individual is located within 10 km of the record location. Record was located in the middle of Leonora indicating that the locality of Leonora may have been used instead of an GPS location (Spectrum, 2022).
<i>Frankenia glomerata</i>		P4	Record was located just west of the Tower Hill boundary and the species could not be located. The accuracy of the location is questionable as the record was located in Acacia shrubland on red loam soils; however, the species preferred habitat is white sand with Samphire and pigface (around salt lakes etc.). This species is expected to occur around the Lake Raeside drainage where suitable habitat exists (Spectrum, 2022).

Genesis Minerals has reached out to Western Botanical (Geoff Cockerton) for advice related to the *Acacia sp.* Marshall Pool. The provided Technical Memo concludes:

- *Acacia sp.* Marshall Pool is a small tree to 4m with dark green linear phyllodes to 90 mm which are square in transverse section and with prominent red resinous margins. It is readily identified using the above characteristics, and although the presence of flowers and fruits can also assist in this regard, these are not necessary for a definitive identification.
- It occurs exclusively on greenstone (massive basalt and basaltic schist) hills and outcrops. It does not occur on alluvial or colluvial fans or plains with Mulga. It is not morphologically close to any other *Acacia* species growing on greenstone hills in the N.E. Goldfields and readily be identified by a reasonably competent botanist whether flowers or fruits are present or not.
- *Acacia sp.* Marshall Pool is known from three populations:
 - Population 1a, Minara Station, 32 to 43 km east of Leonora, both north and south of the Leonora – Laverton Road, 20,625 plants over an area of 188 sq. km.
 - Population 1b, Glenorn Station, 44 km ESE of Leonora, south of the Leonora – Laverton Rd, 5,000 plants (minimum) over an area of 33.7 sq km.

- Population 2, Melita Station, 300 plants (minimum) over an area of 6.9 sq km (probably larger area), 26 km SE of Leonora, 24 to 30 km north of Kookynie.
- Population 3 Weebo Station, 70 Km NNW of Leonora, 50 Km SE of Leinster, 15 km west of the Goldfields Hwy, estimated minimum 6,600 plants over an area of 25.5 sq km. See Figure 9 of attached Memo.

Western Botanical suggest it is highly unlikely that *Acacia* sp. Marshall Pool is present within the NVCP area boundary. It is very likely that the collection made by B. Severne in 1970 was located on a greenstone hill in the region near the Leonora townsite and that may well have been at any of the known populations of this species or perhaps at another site not yet well recorded.

Western Botanical is confident the species will not occur within the NVCP footprint.

3.1.4 Threatened and Priority Ecological Communities

No TECs were recorded within 50 km of the survey area (NVS, 2023). Two PECs were found within 50 km of the survey area, both of which are listed as Priority 1:

- Melita Calcrete Groundwater Assemblage Type on Raeside Paleodrainage on Melita (Sons of Gwalia); and
- Sturt Meadows Calcrete Groundwater Assemblage Type on Raeside Paleodrainage on Sturt Meadows Station.

Melita Calcrete Groundwater Assemblage Type on Raeside Paleodrainage on Melita (Sons of Gwalia) Station intersects the survey area at both Gwalia and Tower Hill (NVS, 2023).

Figure 3-4 shows the Melita Calcrete community in comparison to the proposed project boundary and further detail of the community is detailed in Section 4.3 and Appendix D. Sturt Meadows Calcrete Groundwater Assemblage Type on Raeside Paleodrainage on Sturt Meadows Station lies roughly 25 kms northwest of the Project area. It was assigned a 'Low likelihood' to occur within the survey area based on the restriction to a paleodrainage system on Sturt Meadows Station (NVS, 2023).

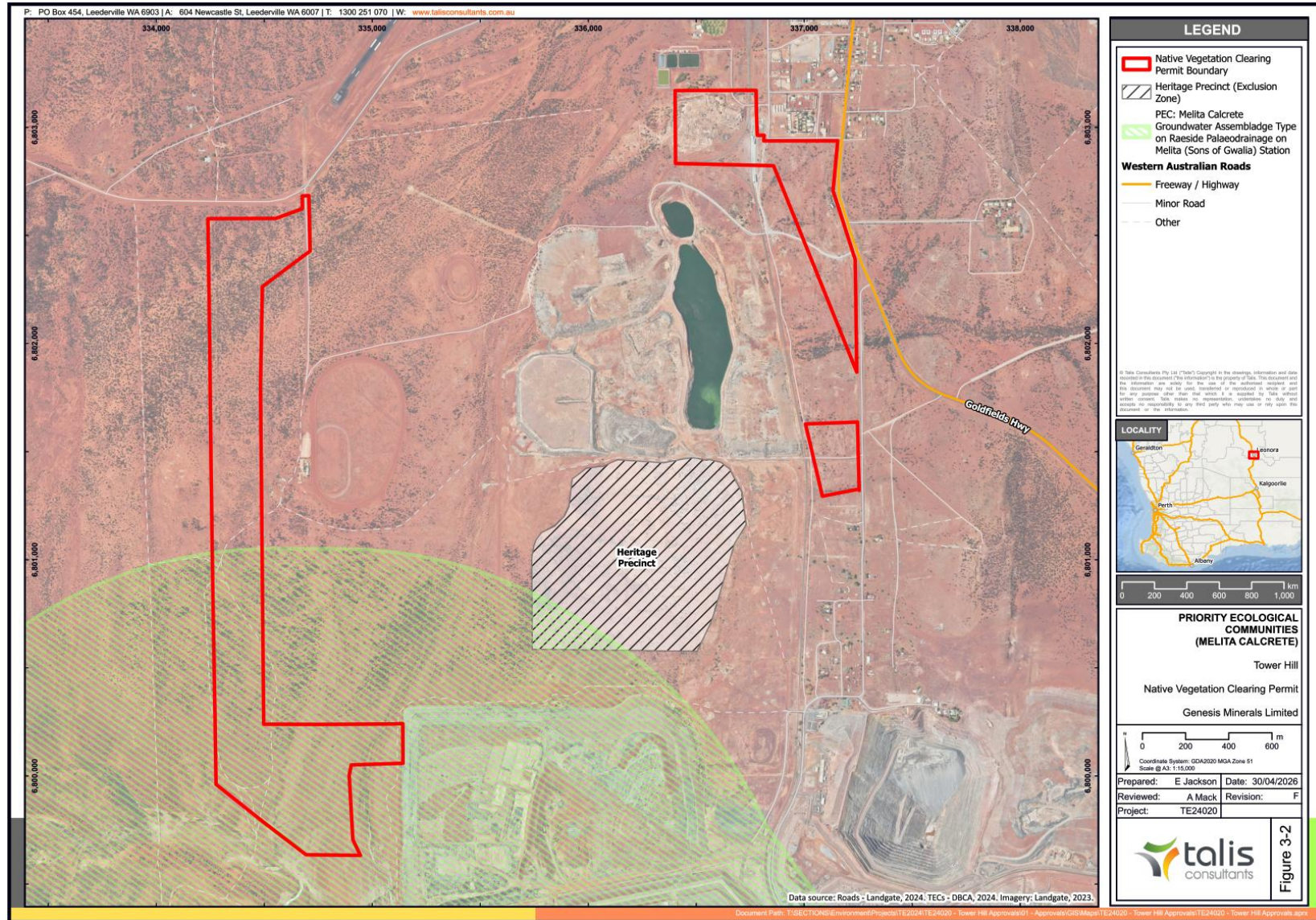


Figure 3-4: Melita Calcrete Vicinity to Project Area

3.1.5 Introduced Species

Eighteen introduced weed species were detected within the survey area. Three of these are considered Declared Pests (DPIRD, 2023), *Cylindropuntia imbricata*- s22(2) C3 Restricted, *Opuntia stricta*- s22(2) C3 Restricted and *Rumex vesicarius*- Prohibited s12 C1 Prohibited (NVS, 2023).

4 Fauna Assessment

Seven fauna assessments have been completed for the Project since 2022. The following assessments form the basis of this assessment.

- 2022 Basic Terrestrial Fauna Assessment by Spectrum (2022);
- 2023 Vertebrate Survey completed by Terrestrial Ecosystems (2023);
- 2023 Detailed Flora and Vegetation Survey of the Leonora Project;
- 2023 Subterranean Assessment conducted by Bennelongia (2024); and
- 2023 Short Range Endemic (SRE) Fauna Survey completed by Bennelongia (2024).
- 2025 St Barbara Leonora Province Expansion SRE Fauna Assessment (Update) (2025)
- 2025 Leonora Operations – Targeted Stygofauna Survey Supporting Document (2025)

4.1 Fauna Habitat

Terrestrial Ecosystem (2023) recorded five broad fauna habitats within the Project area (Figure 4-1):

- Bare salt lakes;
- Ephemeral creek lines;
- Tall shrublands;
- Low shrublands; and
- Open mulga woodlands.

In addition, there are disturbed areas that are largely devoid of vegetation, including large and deep mining pits, some of which contain water, waste dumps, tailings storage facilities, mining infrastructure, parts of the Leonora airstrip, the Leonora racecourse and some residential housing (Terrestrial Ecosystems, 2023).

The density of trees and shrubs in the relatively undisturbed areas varied across the Project area but was mostly sparse. The fauna habitat varied from highly degraded to good; the highly degraded areas are due to historical and recent mining activity and grazing. There are numerous access tracks in the Project area, but these are narrow and mostly only wheel tracks on a sand-clay substrate (Terrestrial Ecosystems, 2023).

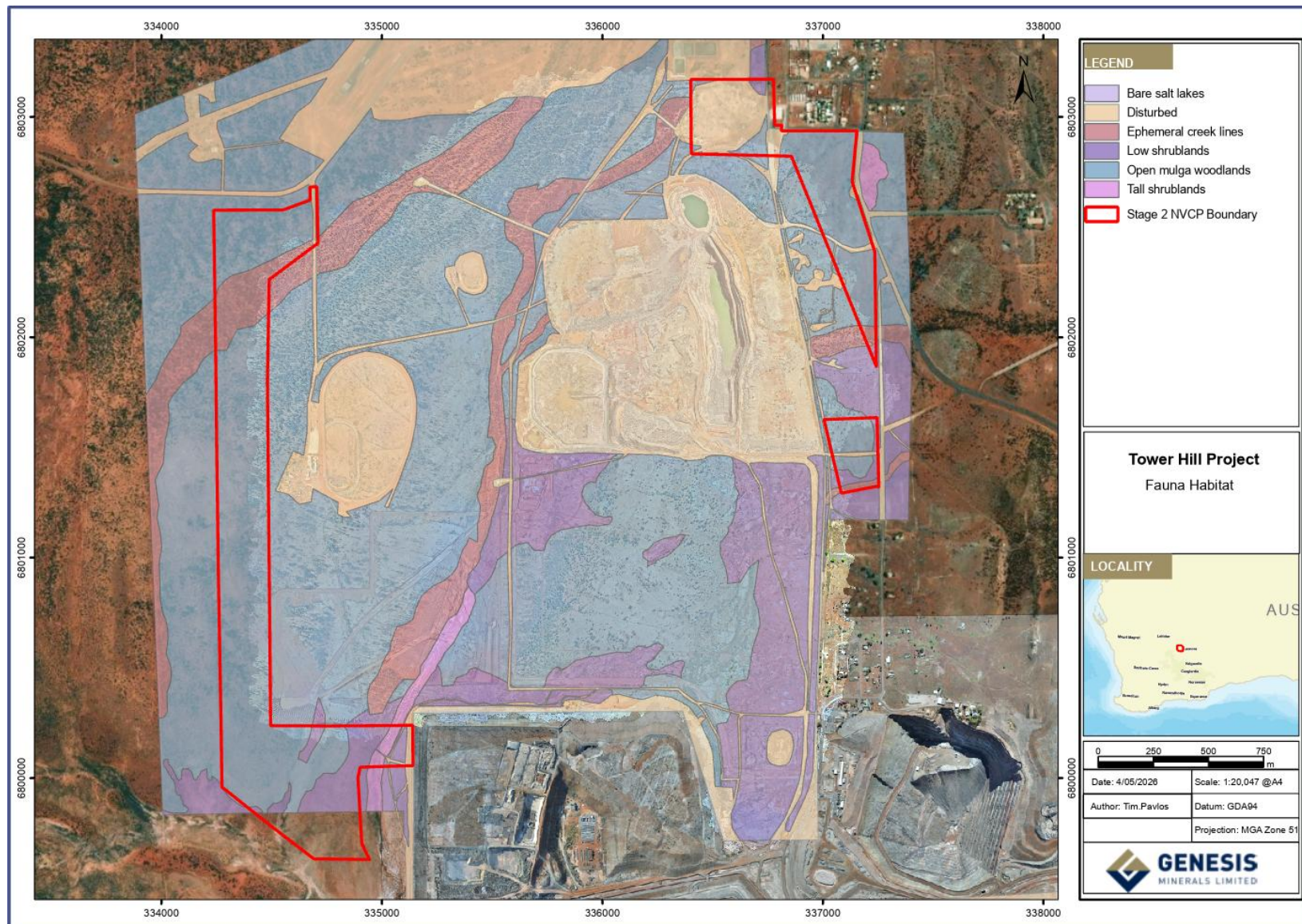


Figure 4-1: Fauna Habitat

4.2 Conservation Significant Species

Terrestrial Ecosystems assessed the potential presence of a conservation significant fauna species within the Project area. The likelihood of occurrence of conservation significant species were mostly found to be unlikely in the Project area. Table 4-1 below summarises these findings.

Table 4-1: Assessment of the potential presence of a Conservation Significant Fauna species in the Project Area

Species	DBCA Schedule/ Priority	EPBC Act Status	Likelihood of occurrence
Night Parrot (<i>Pezoporus occidentalis</i>)	Critically Endangered	Endangered	Highly unlikely to be in the Project area, due to a lack of suitable habitat.
Sandhill Dunnart (<i>Sminthopsis psammophilia</i>)	Endangered	Endangered	Highly unlikely to be in the Project area due to a lack of suitable habitat.
Western Spiny-tailed Skink (<i>Egernia stokesii badia</i>)	Endangered	Endangered	Highly unlikely to be in the Project area, as the Project area is well outside its geographic range.
Malleefowl (<i>Leipoa ocellata</i>)	Vulnerable	Vulnerable	No active or recently active mounds were recorded. It is likely that there are a few isolated Malleefowl in the Project or adjacent areas.
Giant Desert Skink (<i>Liopholis kintorei</i>)	Vulnerable	Vulnerable	Highly unlikely to be in the Project area due to a lack of suitable habitat.
Chuditch <i>Dasyurus geoffroii</i>	Vulnerable	Vulnerable	Highly unlikely to occur in the Project area, as it has not been recorded in the region for many decades.
Princess Parrot <i>Polytelis alexandrae</i>	Priority 4	Vulnerable	May infrequently be seen in the region, however, unlikely to be a resident species.
Mulgara <i>Dasycercus blythi</i>	Priority 4		Highly unlikely to be in the Project area, due to a lack of suitable habitat.
Oriental Plover <i>Charadrius veredus</i>	IA	Migratory	Unlikely to be in the Project area due to a lack of suitable habitat.
Fork-tailed Swift <i>Apus pacificus</i>	IA	Migratory	May very infrequently be seen in the region, however, clearing vegetation is

			unlikely to impact on this aerial species. Rarely seen in the Goldfields.
Grey Wagtail <i>Motacilla cinerea</i>	IA	Migratory	Highly unlikely to be present in the Project area.
Yellow Wagtail <i>Motacilla flava</i>	IA	Migratory	Highly unlikely to be present in the Project area.
Peregrine Falcon <i>Falco peregrinus</i>	OS		May infrequently be seen in the region, however, unlikely to be a resident species.
Long-tailed Dunnart <i>Sminthopsis longicaudata</i>	Priority 4		Unlikely to be in the Project area due to a lack of its typical breakaway habitat requirements and a high density of feral fauna.

Source: *Terrestrial Ecosystems (2023)*

Terrestrial Ecosystems (2023) confirmed that the proposed Project is unlikely to significantly impact a conservation significant vertebrate fauna species, so a referral under the *Environmental Protection Conservation Act 1999* (EPBC Act) would not be required. Further details of the survey completed by Terrestrial Ecosystems can be found in Appendix C.

4.3 Subterranean Fauna

Recognising the potential for the development of Tower Hill to affect subterranean communities, Genesis commissioned Bennelongia Environmental Consultants to assess subterranean biological values in the Project area.

A desktop assessment of an area 100 x 100 km centred on the Project recovered 69 records of 990 individuals attributable to at least 16 species of stygofauna, and 38 records of 40 individuals attributable to at least 14 species of troglifauna. Besides two stygofauna samples collected from the Melita calcrete, which partially overlaps with the Gwalia lease, none of the subterranean samples were collected within 25km of the project. The Melita calcrete is located approximately 1km southwest of the Tower Hill Project, and partially overlaps disturbed land associated with the Gwalia mining area. The Melita calcrete is defined as a priority ecological community (PEC) for subterranean fauna.

Following on from the desktop survey, Bennelongia (2024) undertook a field survey of ten boreholes (Appendix D). Out of the five bores from the Melita calcrete, four were found to hold stygofauna specimens, with salinity ranging from 10,800-120,100 $\mu\text{S}/\text{cm}$ (seawater is approximately 50,000 $\mu\text{S}/\text{cm}$). The survey indicates a rich assemblage of stygofauna occurs in the Melita calcrete, thought to be due to its small size (2.5km²) and isolation. Bennelongia stated ‘it is evident that the stygofaunal community has acclimated to any changes in groundwater regimen as a result of mining at Gwalia, which has been ongoing for over a century’.

A targeted survey to map suitable stygofauna habitat was completed in September 2025 (Bennelongia, 2025). Survey results suggest that stygofauna are likely to be constrained to what has been identified in Pennington Scott (2025) as the “calcrete possible” area which is found towards the centre and western sections of the PEC. Only three of the boreholes sampled in the eastern section of

the PEC yielded stygofauna, with only 1 or 2 species and 3 or fewer specimens. This conforms with Pennington Scott's (2025) suggestion that stygofauna species richness and abundance are lower in the eastern section of the PEC.

Current data suggest that the development of the Project is unlikely to affect the stygofauna species that constitute the PEC, given most of the Project development will occur at the east and the north sections of the PEC, where stygofauna richness appears to be lowest.

In order to monitor any potential drawdown impacts on the Melita Calcrete PEC, Genesis will undertake groundwater monitoring in the area and develop a Stygofauna Management Plan should drawdown impacts be observed in the monitoring bores.

4.4 Short Range Endemic Species

Bennelongia were also commissioned to conduct an SRE desktop assessment to determine the presence and composition of the SRE community that may exist at the Project (Appendix E). A comprehensive review of literature and invertebrate fauna databases were conducted on a 100 x 100 km search area and included a review of habitat types within and surrounding the Project. None of the SRE species in the search had sufficient taxonomic certainty and representation in collections to be classified as confirmed SREs, and there for the conclusion was that further surveys were required.

Therefore, Bennelongia conducted a field survey for SRE groups in the vicinity of the Project area in March 2023 (Appendix E). Eight habitats were identified as being potentially prospective for species from SRE groups in the Project area. Two habitats stand out as the most likely to host SRE species: stony plains with bluebush shrubland, and hardpan plains with mulga shrubland, both of which are abundant inside and outside the Project area.

A total of 61 specimens from at least 18 identifiable species belonging to SRE Groups were collected during the field survey. Seven species were categorised as Widespread, and five species were categorised as Data Deficient. Six species were categorised as Potential SREs, three as Likely Potential SREs, and three as Unlikely Potential SREs:

- The pseudoscorpion:
 - o Indolpium `BPS496` - Likely Potential SRE;
- The scorpions:
 - o Urodacus `BSCO055` - Unlikely Potential SRE; and
 - o Urodacus `BSCO070` - Unlikely Potential SRE;
- And the mygalomorph spiders:
 - o Aname `BMYG222` `mellosa group` - Unlikely Potential SRE
 - o Idiosoma `BMYG221` - Widespread, and
 - o Idiosoma `MYG256` - Unlikely Potential SRE.

The pseudoscorpion Likely Potential SRE (BPS496) was collected from a widespread habitat outside of the proposed Tower Hill disturbance envelope and are also 'expected to occur in other habitats which extend beyond the Project area'.

The unlikely SREs *Urodacus* burrowing scorpions (BSCO055 and BSCO070) also occur outside the Project area, in localities approximately 75 km and 150km NE of the Project. This is similar to the *Idiosoma* (MYG256) unlikely SRE, which is known to occur abundantly outside of the Project area and from numerous localities; some >150km away from the Project.

The mygalomorph spiders which are unlikely Potential SREs and widespread (BMYG222 and BMYG221) were collected from both within the proposed disturbance envelope but also from areas outside of the proposed disturbance envelope. Bennelongia concluded that these species were also 'expected to occur in other habitats which extend beyond the Project area'.

During assessment of the original CPS 10734/1 assessment DMPE requested additional information the mygalomorph spiders *Aname* 'BMYG222' and *Idiosoma* 'BMYG221', and the centipedes *Mecistocephalus* 'BGE074' and *Lamyctes* 'BLITH003'. Both mygalomorph spiders were categorised as Likely Potential SREs, while both centipedes were categorised as Data Deficient Potential SREs. Since the time of submission of the SRE report (April 2024), Bennelongia (2025) has revised its SRE categorisation criteria, conducted SRE surveys in nearby localities, increased its molecular sequence library, and, following RFI advice, reached out to WA Museum for advice on the relevant species. The above has resulted in modifications to the SRE categorisation for three of the four species as follows:

- *Aname* 'BMYG222' — SRE categorisation has changed from Likely Potential SRE to Unlikely Potential SRE based on the number of records and the widespread nature of the habitat (stony plains with bluebush shrubland) where it has been recorded. It is therefore, expected to occur outside of the Project area and is unlikely to be affected by the Project development.
- *Idiosoma* 'BMYG221' — SRE categorisation has changed from Likely Potential SRE to Widespread based on recent molecular matches from near Apollo Hill, approximately 50 km SE from the Project area. Additionally, WAM was able to match Bennelongia sequences to sequenced specimens known under the identification code *Idiosoma* 'MYG824', which have been collected from near Mount Richardson/Bulga Downs. These records, in addition to Bennelongia records, result in the known linear range of *Idiosoma* 'BMYG221' now being more than 165 km. Morphological and molecular data show this species is not part of the *nigrum*-group which contains priority and listed species, but rather it is part of the *Idiosoma manstridgei*-group which is widespread throughout Western Australia and South Australia (Atlas of Living Australia 2025).
- *Mecistocephalus* 'BGE074' — remains as a Data Deficient Potential SRE due to paucity of records. However, given the habitats and microhabitats (*Acacia* sp. litter sieve and tree dig) where it has been recorded, it is expected to occur outside of the Project area. Current knowledge of the species distribution may be limited due to the cryptic nature of the genus and the difficulty of finding them during field surveys.
- *Lamyctes* 'BLITH003' — SRE categorisation has changed from Data Deficient Potential SRE to Widespread based on sequence matches with specimens recently collected from the Kimberley region. The strong molecular matches (100% COI match) are not unheard of within this group, with genetic matches for widespread species such as *Lamyctes africanus* spanning over continents (specimens in Germany matching 100% genetically with those collected in Sydney) (Decker et al. 2017). This suggests interspecific distances in the group are very small and the genus tends to have widespread distributions.

Based on the updated SRE categorisations, the widespread nature of SRE habitats, and the relatively small area proposed for clearing at a regional scale, it is considered that the clearing of native

vegetation will have, at most, only minor impacts on populations of the SRE species known to occur within the Project area.

5 Assessment Against the Ten Clearing Principles

Table 5-1 below provides an assessment against the ten clearing principles.

Table 5-1: Assessment Against the Ten Clearing Principles

Principle	Assessment	Outcome
Principle (a) – Native vegetation should not be cleared if it comprises a high level of biological diversity.	The remnant vegetation of the Project area is not comprised of a high level of biological diversity according to field work conducted by Bennelongia (2023 & 2024), NVS (2023), Spectrum (2022) and Terrestrial Ecosystems (2023). Targeted surveys for Threatened flora indicated there are no Threatened flora species within the proposed clearing area (NVS, 2022). Terrestrial Ecosystems concluded that the Project is unlikely to significantly impact conservation significant vertebrate fauna species and Bennelongia also confirmed SRE species will not be impacted by the clearing of native vegetation for the Project. There are no TECs located within or adjacent to the survey area. Two PECs were found within 50 km of the Project area, one being the Melita calcrete groundwater assemblage type on Raeside Paleodrainage which intersects the Project area in the southwestern corner of the Project (Bennelongia 2023a). The other PEC, Sturt Meadows Calcrete Groundwater Assemblage Type on Raeside Paleodrainage is not within or adjacent to the proposed NVCP boundary and is not considered to be impacted by the Project. Due to the habitat distribution within the Project boundary, it is unlikely that the clearing will be a variance to this Principle.	Not likely to be a variance to this Principal
Principle (b) – Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a	The vegetation present within the Project area is unlikely to provide significant habitat values or support indigenous Fauna. No potentially present species identified during the surveys within the proposed clearing area are considered solely dependent on any of the terrestrial habitat types identified. Disturbance within the proposed clearing area is unlikely to significantly impact any of the potentially present species listed due to the presence of similar habitat within the vicinity of the area. The extensive	Not likely to be a variance to this Principal

significant habitat for fauna indigenous to Western Australia.	distribution of the SRE habitats in the area means no significant impacts are expected on SRE species as a result of the Project. Subterranean fauna is also unlikely to be impacted by the clearing of vegetation. The proposed NVCP boundary is not considered necessary for the maintenance of significant habitat for fauna indigenous to WA and therefore the proposed clearing of 122.44ha is unlikely to be at variance with this Principle.	
Principle (c) – Native vegetation should not be cleared if it includes, or is necessary for the continued existence of rare flora.	No declared or priority flora species occur or are likely to occur within the Project boundary. No Threatened or Priority Flora were identified by NVS (2022) or Spectrum (2022) during the two flora and vegetation surveys. A detailed flora survey was conducted in 2022 to identify any individuals potentially within the NVCP boundary and survey area. No representatives of the Threatened flora species were identified during the survey completed by NVS. Given the results of NVS's (2022) flora survey the Project area is not necessary for the continued existence of any Threatened species. The closest Threatened flora P3 species, identified during the desktop survey, just outside of the Tower Hill project area, <i>Frankenia glomerata</i> is highly unlikely to be present due to the unsuitability of the habitat for the previous record, NVS additionally checked the area for the species and were unable to locate the threatened flora species. It is therefore unlikely that the native vegetation cleared will discontinue the existence of the species. In the original CPS 10734/1 assessment DEMIRS (now DMPE) stated <i>Priority 3 flora species, Acacia sp. Marshall Pool (G. Cockerton 3024), is known to occur within the local area and there is reasonable probability that this species may occur within the application area.</i> Genesis reached out to Western Botanical (Geoff Cockerton) for advice related to the Acacia Sp. Marshall Pool who concluded; - <i>Acacia</i> sp. Marshall Pool is a small tree to 4m with dark green linear phyllodes to 90 mm which are square in transverse section and with prominent red resinous margins. It is readily identified using the above characteristics, and although the presence of flowers and fruits can also assist in this regard, these are not necessary for a definitive identification. - It occurs exclusively on greenstone (massive basalt and basaltic schist) hills and outcrops. It does not occur on alluvial or colluvial fans or plains with Mulga. It is not morphologically close to any other Acacia species growing on greenstone hills in the N.E. Goldfields and readily be identified by a reasonably competent botanist whether flowers or fruits are present or not. - <i>Acacia</i> sp. Marshall Pool is known from three populations:	Not likely to be a variance to this Principal

	• Population 1a, Minara Station, 32 to 43 km east of Leonora, both north and south of the Leonora – Laverton Road, 20,625 plants over an area of 188 sq. km. • Population 1b, Glenorn Station, 44 km ESE of Leonora, south of the Leonora – Laverton Rd, 5,000 plants (minimum) over an area of 33.7 sq km. • Population 2, Melita Station, 300 plants (minimum) over an area of 6.9 sq km (probably larger area), 26 km SE of Leonora, 24 to 30 km north of Kookynie. • Population 3 Weebo Station, 70 Km NNW of Leonora, 50 Km SE of Leinster, 15 km west of the Goldfields Hwy, estimated minimum 6,600 plants over an area of 25.5 sq km	
Principle (d) – Native vegetation should not be cleared if it comprises the whole or a part of or is necessary for the maintenance of a Threatened Ecological Community (TEC).	No TECs were identified by Spectrum (2022) during the commissioned studies. The PEC of Melita calcrete groundwater assemblage type on Raeside Paleodrainage is near the Project area, and the buffer area overlaps part of the Project area at Tower Hill. The buffer area within the Tower Hill boundary contained one new species of harpacticoid amphipod <i>Nitocrella</i> `BHA368` but was expected to not be negatively affected by Project development due to the colluvium habitat type and distribution of the particular habitat type (Bennelongia, 2026). Current data suggest that the development of the Project is unlikely to affect the stygofauna species that constitute the PEC given most of the Project development will occur at the east and the north sections of the PEC, where stygofauna richness appears to be lowest. The other PEC identified during the studies, Sturt Meadows Calcrete Groundwater Assemblage Type on Raeside Paleodrainage is too far from the project to be impacted by the project. The two PECs found are underground habitat types so no TEC or PEC is likely to be affected by the clearing of vegetation.	Not likely to be a variance to this Principal
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 vegetation proposed to be cleared consists of commonly occurring vegetation communities and is unlikely to have significance. The Project area falls within the vegetation associations 18, 28, 39 and 676 as mapped by Beard and Burns (1976). Information from both desktop and site assessments concluded that the extent of Beard vegetation units within the survey area is less than 1.5 % for all vegetation types, and each are well above the 30% threshold at a State, bioregional and subregional level (NVS, 2022). The closest nature reserves are Lake Ballard (67.2 kms south) and Lake Marmion (81.1 kms South), given their distance from the proposed clearing footprint, no harm is likely to occur to the ESA's. The extent of the vegetation communities in the Project area is unlikely to be impacted by the proposed clearing.	Not likely to be a variance to this Principal

Principle (f) – Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.	The Project is not located within any proclaimed Surface Water Areas and has no major fresh waterways or tributaries within its tenements. Surface water channels are ephemeral and do not feature year-round baseflow. Surface water modelling and assessments (AQ2, 2024 and Agilitus 2025) have informed the Surface Water Management Plan and diversion infrastructure designs which will ensure surface water flows are unimpeded. The application area contains approximately 18.1Ha of creekline vegetation and 1.6Ha <i>Acacia burkittii</i> creekline vegetation. <i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i> (Blunt-budded River Red Gum) has been recorded in Creekline Vegetation. <i>Acacia burkittii</i> and <i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i> are known to occur along waterways including ephemeral creeks, and utilise groundwater when surface water is unavailable, even if groundwater is saline. Clearing of riparian vegetation will be avoided where possible.	Not likely to be a variance to this Principal
Principle (g) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	The Department of Environmental Regulation, 2014 (now DWER) has defined land degradation as: • The clearing of vegetation; • Decline in vegetation condition; • Soil erosion and soil acidity (caused by wind and water erosion due to vegetation clearing); • Salinity; or • Waterlogging/flooding. The surrounding land use is heavily disturbed, as the proposed boundary of the Project is an existing mine footprint, clearing vegetation within the survey area is unlikely to cause appreciable land degradation to the areas adjacent to the proposed disturbance envelope. Based on arial images of the vicinity the previously disturbed areas within the Project area have not had significant erosion or further degradation of land. NVS (2023) confirmed that vegetation 0.5 m from existing tracks were mostly considered to have good vegetation condition. The works associated with the clearing are unlikely to cause appreciable land degradation that is different or more significant than what has already occurred within the Project tenements and the surrounding area to date. Potential erosion impacts as a result of the proposed clearing can be minimised by the implementation of a staged clearing condition to ensure large areas are not void of vegetation cover for extended.	Not likely to be a variance to this Principal

	periods.	
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 Project is not located within or within close proximity to any ESAs. Clearing of vegetation is unlikely to impact on the environmental values of the bioregion as the proposed disturbance envelope would account to less than 1.5 % reduction of Beards vegetation associations. Given the Project area overlaps an existing mine footprint the expansion of its operations is not likely to create any impact to any conservation areas. The Project is not adjacent to any site that contains significant conservation values.	Not likely to be a variance to this Principal
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.	The proposed NVCP area has no major fresh waterways or tributaries within its boundary. Surface water channels are ephemeral and do not feature year-round baseflow. Surface water modelling and assessments (AQ2, 2024 and Agilitus 2025) have informed the Surface Water Management Plan and diversion infrastructure designs which will be ensure surface water flows are unimpeded. In 2024, Genesis commissioned Penninton Scott to develop a 3D numerical groundwater model, to assess the feasibility of the dewatering strategy and evaluate its potential impacts on the subterranean fauna and other factors. This report was prepared to assess impacts of the Tower Hill project. The report concludes: Despite some uncertainties in the southeastern part of the study area due to historical Gwalia mining and dewatering activities, the model suggests that the Tower Hill Project poses negligible risks to ecological and social values.	Not likely to be a variance to this Principal
Principle (j) – Native vegetation should not be cleared if clearing the	Surface water modelling and assessments (AQ2, 2024 and Agilitus 2025) have informed the Surface Water Management Plan and diversion infrastructure designs which will be ensure surface water flows are unimpeded. Surface water modelling of a pre- and post – development environment indicates the	Not likely to be a variance to this Principal

vegetation is likely to cause, or exacerbate, the incidence of flooding.	western waste rock landform and other mining infrastructure will not cause or exacerbate the likelihood of flooding.	
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6 Summary of Assessment

The assessment concludes that this application to clear 122.44ha within a 135.35ha boundary for the further development of the Project is not likely to be at variance with the Ten Clearing Principles.

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8 Appendices

APPENDIX A

Leonora Operations Flora and Vegetation Site Visit and Basic Terrestrial Fauna Assessment

APPENDIX B

Detailed Flora and Vegetation Survey of the Leonara Project

APPENDIX C

Basic Vertebrate Fauna Reconnaissance Survey and Risk Assessment

APPENDIX D

Bennelongia Subterranean Fauna Report

APPENDIX E

Genesis Minerals - Tower Hill Expansion SRE Fauna Survey Report
