Native Vegetation Clearing Permit (Purpose): Supporting Documentation

Leonora Rail Terminal Relocation

	Name	Position
Prepared By	[redacted]	
Approved By		
Signature		

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1 Introduction

1.1 Background

Genesis Minerals Limited (Genesis) has been appointed by DPLH (Appendix A) to act as its agent for the puposes of seeking a Native Vegetation Clearing Permit (NVCP) for the following crown land and the following purposes:

Sites:

- Reserve 7521 Lot 92 on Deposited Plan 243239 Crown Land Record Volume 3033 Folio 91;
- Reserve 42061 Lot 78 on Deposited Plan 190413 Crown Land Record Volume 3093 Folio 38 and
- Unallocated crown land being closed road (Polygon 711261).

Purposes:

1) Construction, operation and maintenance of an Intermodal Rail Facility within a portion of R7521 and R42061; and
2) Construction, operation and maintenance of end of line facilities straddling the existign railway within a portion of R7521.

The proposed clearing area is located approximately 5 kilometres (km) southeast of Leonora, in the Goldfields region of Western Australia (WA) (**Error! Reference source not found.**).

Genesis Minerals (Leonora) Pty Ltd, a subsidiary of Genesis Minerals Limited (Genesis) acquired the Project tenements listed in Table 1-1 from St Barbara Limited (St Barbara) on 30 June 2023 (GMD ASX Release 3 July 2023). Genesis has a registered Power of Attorney with The Department of Mines, Petroleum and Exploration (DMPE) to manage the tenements on behalf of St Barbara whilst Stamp Duty Assessment is underway. The tenements are expected to be transferred to Genesis Minerals (Leonora) Pty Ltd within the next 6–12 month period.

Table 1-1: Associated Tenements

Tenement	Tenement Area (ha)	Date Granted	Expiry Date	Status
M 37/849	228.45	17th January 2008	28th January 2029	LIVE
M 37/454	774.2	16th January 2008	30th 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. This Project does not have an applicable exemption and a clearing permit is therefore required.

This NVCP application is to clear up to up to 35.17 hectares (ha) of native vegetation within the Disturbance Envelope (DE) of 61.00 ha (Figure 1-2). This application does not apply to the area cut out of the DE for the rail reserve to the north, as Arc Infrastructure has already applied separately for the area covered within the rail corridor.

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. As the clearing purpose for rail does not fall under mining operations, this report and accompanying NVCP Purpose Permit application form will be submitted to DWER for assessment.

1.3 Proposed Timeframe

Clearing is proposed to commence in Q4 2026.

1.4 Responsible Applicant

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

[redacted]

Figure 1-1: Project Locality

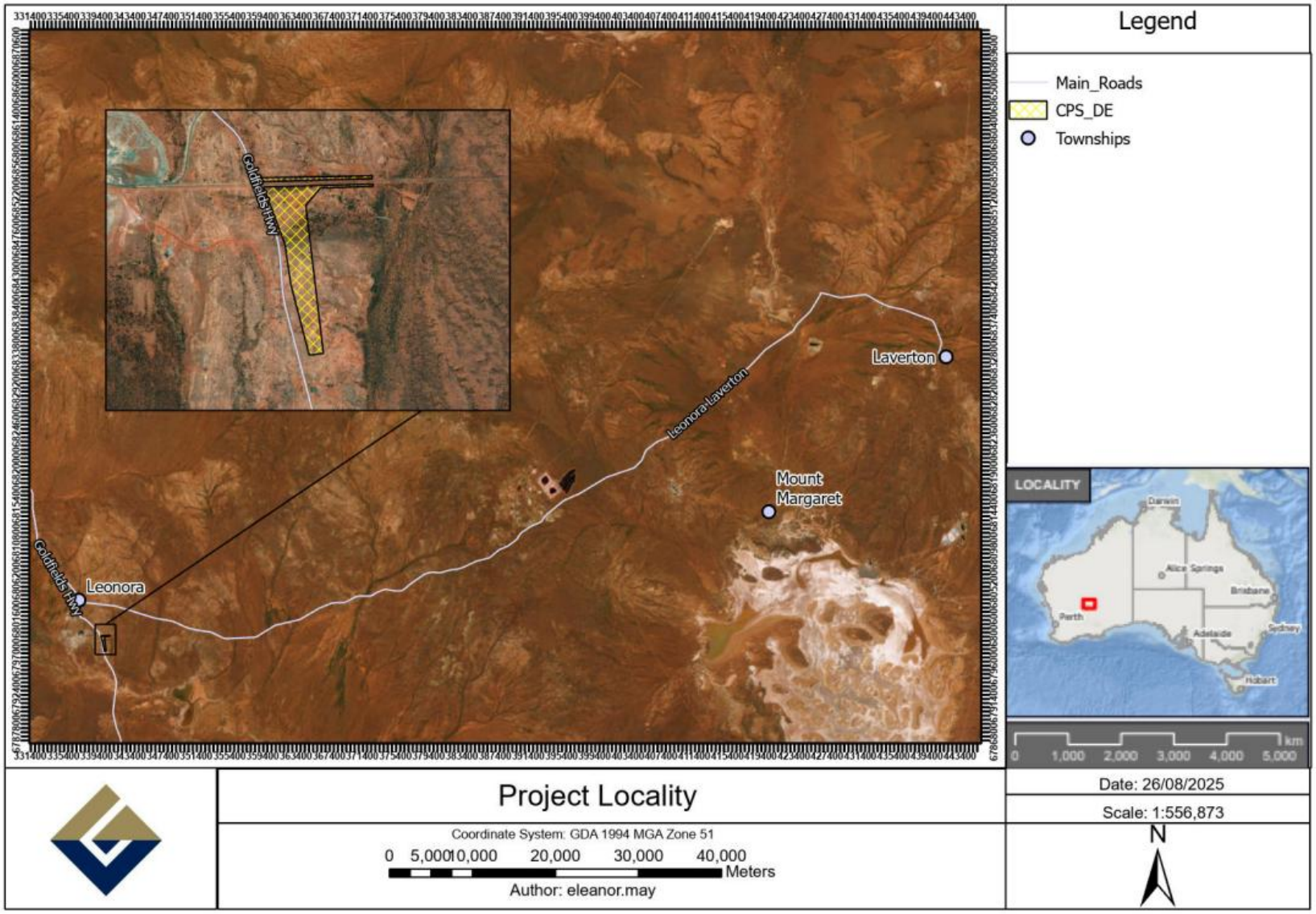


Figure 1-2: Project Disturbance Envelope

2 Site Overview

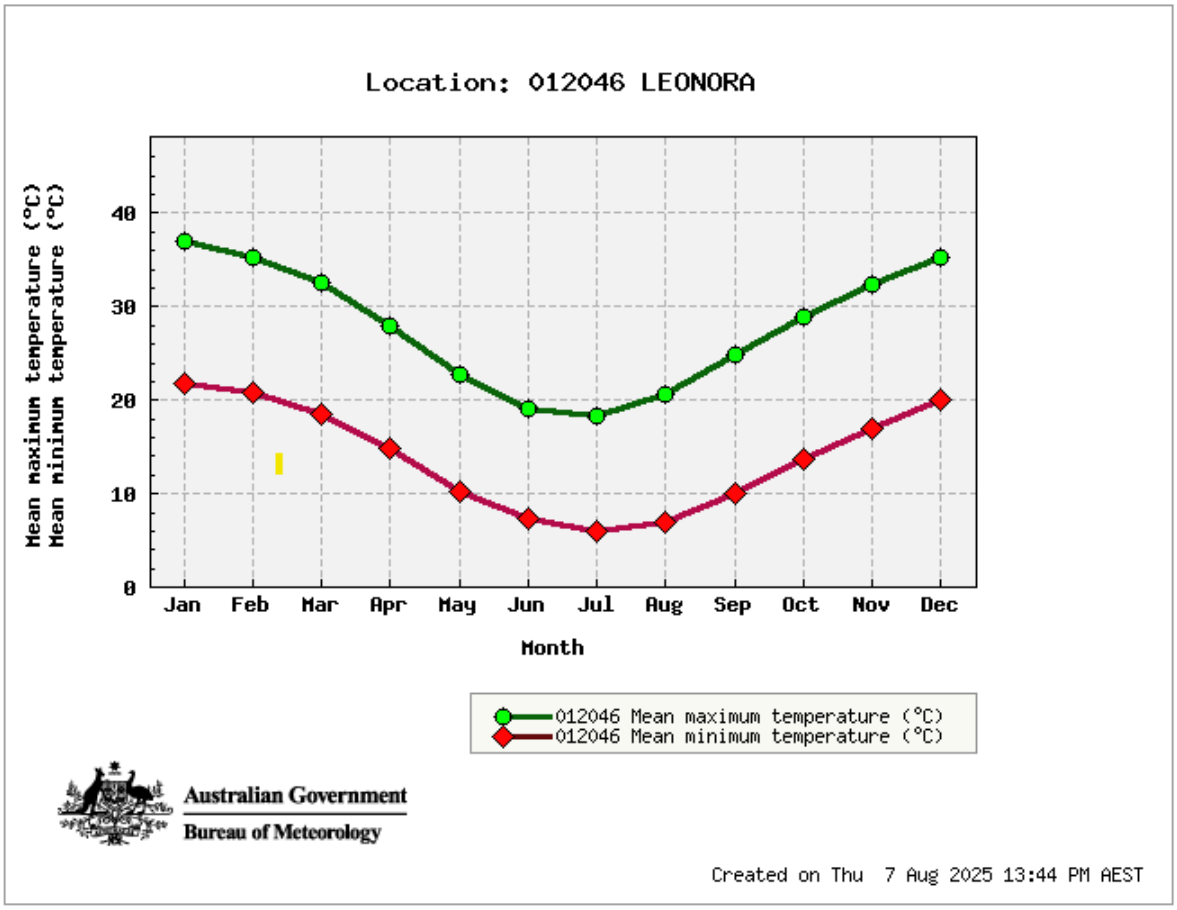
2.1 Climate

The Project is located in the Goldfields-Esperance region of WA, approximately 5 km SouthEast 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 (**Error! Reference source not found.**).

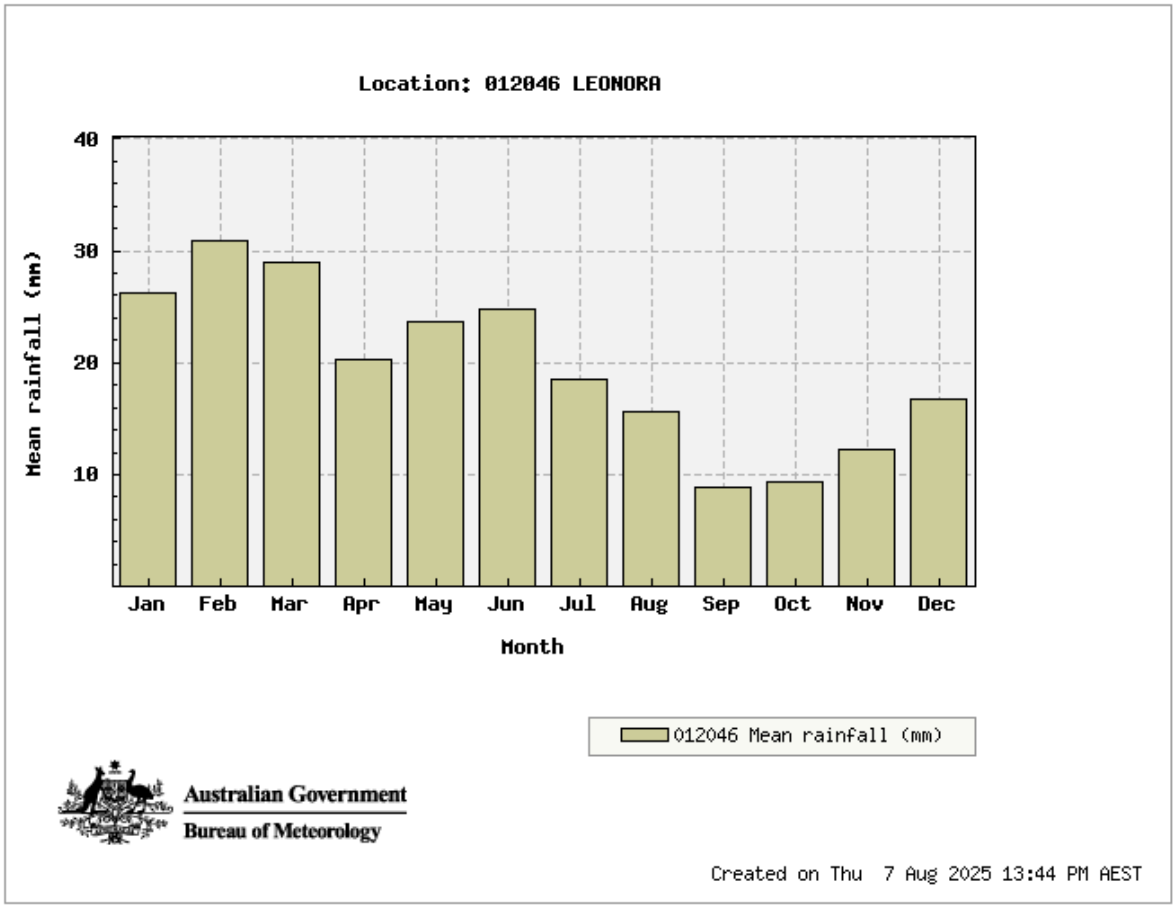
The mean rainfall at Leonora is lowest during September at 8.9 millimetres (mm) and at highest during February at 30.9 mm (Figure 2-2). Prevailing winds are easterly in the mornings (0900hrs) with an average speed of 9.8 kilometres per hour (km/h) (BoM, 2024). In the afternoons, direction varies by season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

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



Source: Bureau of Meteorology, 2025

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



Source: Bureau of Meteorology, 2025

2.2 Topography

The area immediately surrounding Leonora has elevations ranging up to 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).

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 Gundockerta Land system present within the project area is summarised in Table 2-1 below:

Table 2-1: Soil Landscape identified within the Project DE

Land System ID	Description
Gundockerta Land System	Extensive, gently undulating calcareous stony plains supporting bluebush shrublands.

2.5 Hydrology

2.5.1 Surface Water

There are no permanent surface water resources within the immediate vicinity of the proposed rail terminal. Lake Raeside, an ephemeral salt lake, is located approximately 4.4 km to the West of the Project area. The proposed disturbance envelope is situated away from any surface water flows, drainage lines or wetlands.

2.5.2 Groundwater

Groundwater in the project area predominantly occurs within the weathered regolith profile and within joints, faults and shear zones in the underlying bedrock aquifer. The thickness of the weathered profiles within the area varies from a few metres near fresh bedrock outcrops and sub-crops, to more than 100 metres within the nearby Raeside Palaeochannel.

The proposed rail terminal is located approximately 3.8 km from Genesis' existing operational Eastern Borefield. Groundwater monitoring here consists of both high total dissolved solids (TDS) and low TDS bores. The salinity of the Eastern Borefield ranges from 2,670 mg/L TDS to 122,000 mg/L TDS.Groundwater levels in the Eastern Borefields have a relatively high level of variability, with depths ranging from 12.42m to 29.49m.

2.6 Conservation Features

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

Desktop studies from both NVS (Appendix C, 2025) and Spectrum (2022) found that no Environmental Sensitive Area (ESA) is located within the proposed disturbance footprint. There are two ESA's 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 DE during the studies by Spectrum (2022). Two Priority Ecological Communities (PEC) were found within proximity to the Project. The Melita Calcrete PEC boundary is situated approximately 3 km west of the Project, and the Sturt Meadows calcrete is found roughly 30 km northwest from the Project. Further details are provided below in Section 4.3, yet there is no expected impact to either PEC from the proposed clearing, especially considering the vegetation is sparse and not groundwater dependent.

3 Flora and Vegetation Assessment

In 2021, Spectrum Spatial and Ecology (Spectrum) undertook a comprehensive Flora and Vegetation Desktop Assessment which included a visit to the project vicinity. 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). To support this NVCP application, a further desktop study was done by both NVS and Terrestrial Ecosysyems in August 2025 to ensure the entire DE had been surveyed.

3.1 Flora Assessment

Spectrum conducted a basic fauna survey and a flora site visit in November 2021 (Appendix B). 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.

Therefore in 2022, NVS conducted a Detailed Flora and Vegetation Survey with a survey area encompassing three distinct areas; Gwalia (2,015 ha), Tower Hill (1,143 ha) and Harbour Lights (400 ha) to further investigate the potential for significant flora. Two-hundred and one species were recorded within the survey area with 176 species recorded within quadrats. 42 families and 95 genera were recorded overall. The vegetation condition in the survey area was in good to very good condition. 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 (NVS, 2023).

NVS (2023) identified that there were no Threatened Ecologic Communities (TECs) or Commonwealth Reserves occurring within the project area. Furthermore, no known locations of Threatened or Priority Flora occur within the survey area. In July 2025, NVS extended the desktop search area to encompass the entirety of this applications DE, to ensure a thorough understanding of the project area. The recent report illustrated that were no priority flora, TECs, environmental sensitive areas (ESAs), water bodies or PECs within the proposed rail reserve.

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). Two of Beard's pre-European vegetation associations are mapped within the survey area (**Error! Reference source not found.Error! Reference source not found.**):

- Association 28: Open low woodland; mulga; and
- Association 39: Low shrublands; mulga scrub.

The extent of Beard vegetation units within the survey area is less than 1.5 percent (%) for both 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 DE	% of current extent within DE
28	State: WA	395,895	392,171	99.06	25.07	<0.1
	IBRA Sub-region: Murchison (MUR01)	224,291	220,583	98.35		<0.1
	LGA: Shire of Leonora	126,344	124,136	98.25		<0.1
39	State: WA	6,613,567	6,602,578	99.83	33.75	<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

Figure 3-1: Beard's Pre-European Vegetation Associations

3.1.2 Vegetation Communities

The NVS (2025) survey and site visit identified 6 ecological communities within the proposed application area:

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

Ecological Community	Ha
Mulga Woodland	25.07
Open Low Chenopod Scrub	23.29
Mulga over Chenopod Shrubland	8.28
Mulga over *Senna* Shrubland	0.80
Eremophila youngii subsp. youngii over Chenopod and Tecticornia Shrubland	1.39
Existing Disturbance	2.11

3.1.3 Conservation Significant Flora

No conservation significant flora species (e.g no threatened or priority flora) were recorded during the field survey (NVS, 2023). However, NVS also investigated the two conservation significant flora species recorded previously by Spectrum (2022), which were located in relative proximity to the proposed clearing.

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

Taxon		Conservation Status	Findings
Acacia sp. 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). Furthermore, a targeted survey (G. Cockerton – Western Botanical 2018) has found >32,000 species of *Acacia sp.* Marshall Pool (G. Cockerton 3024) in the nearby region.
Frankenia glomerata		P4	Record was located approximately 6km to the west of the proposed railway reserve, 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).

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.

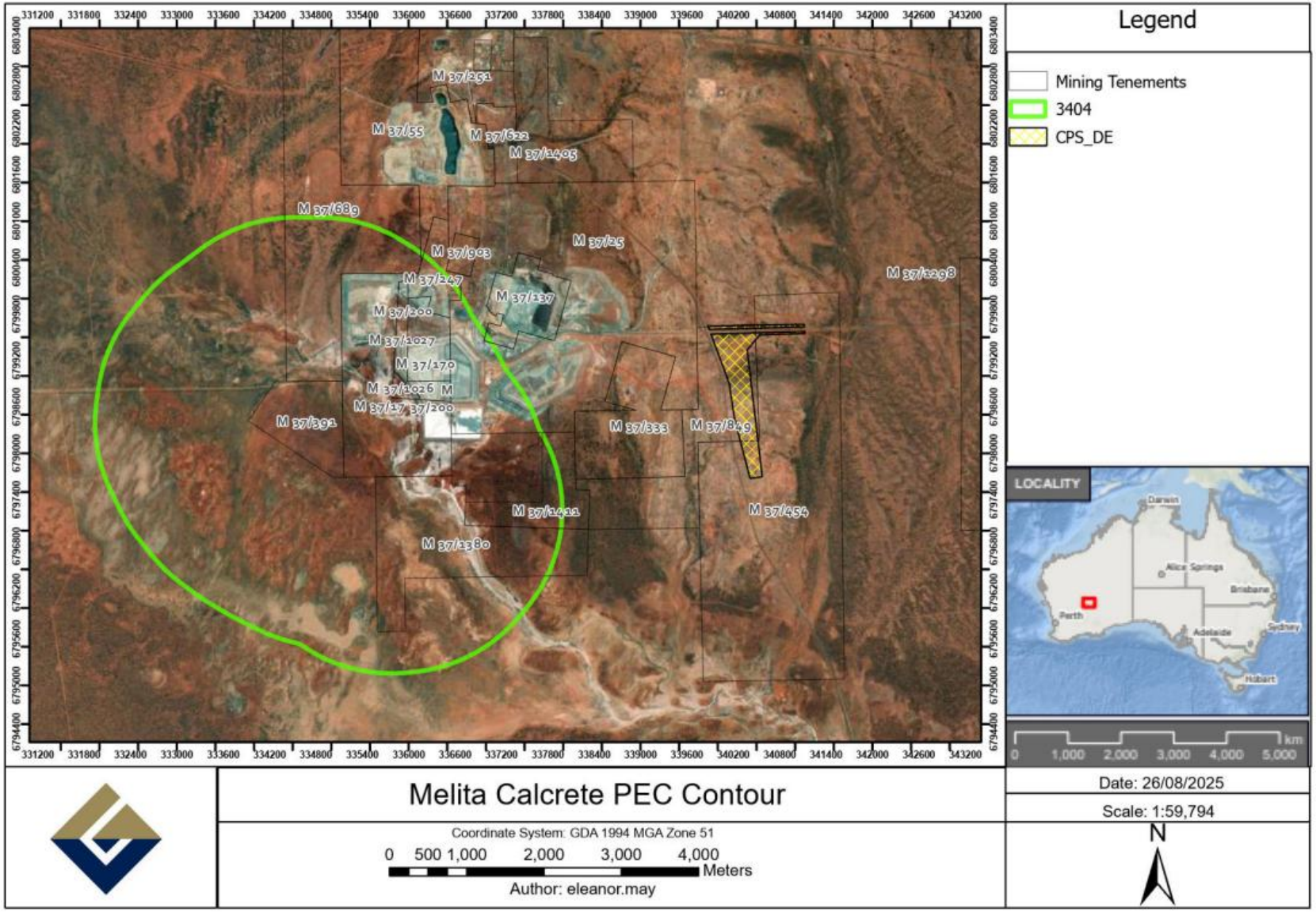
Melita Calcrete Groundwater Assemblage Type on Raeside Paleodrainage on Melita (Sons of Gwalia) Station intersects the survey area at both Gwalia and Tower Hill (NVS, 2023), however not the proposed terminal facility.

Figure 3-2 shows the Melita Calcrete community in comparison to the proposed DE 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 30 km 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).

3.1.5 Introduced Species

Eighteen introduced weed species were detected within the total survey area across the Leonora Operations. 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).

Figure 3-2: Melita Calcrete Vicinity to Project Area



4 Fauna Assessment

Four 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, updated in 2025);
- 2023 Subterranean Assessment conducted by Bennelongia (2023); and
- 2023 Short Range Endemic (SRE) Fauna Survey completed by Bennelongia (2024).

4.1 Fauna Habitat

Terrestrial Ecosystem (2025) recorded two broad fauna habitats within the Project area:

- Low shrublands; and
- Open mulga woodlands.

In addition, there is existing disturbance consisting of cleared tracks and access roads that are largely devoid of vegetation (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 production 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).

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 (*Pezoporus occidentalis*)	Critically Endangered	Endangered	Highly unlikely to be in the Project area, due to a lack of suitable habitat.
Sandhill Dunnart (*Sminthopsis psammophilia*)	Endangered	Endangered	Highly unlikely to be in the Project area due to a lack of suitable habitat.

Western Spiny-tailed Skink (*Egernia stokesii badia*)	Endangered	Endangered	Highly unlikely to be in the Project area, as the Project area is well outside its geographic range.
Malleefowl (*Leipoa ocellata*)	Vulnerable	Vulnerable	Highly unlikely to be in the Project area as no active or recently active mounds were recorded.
Giant Desert Skink (*Liopholis kintorei)*	Vulnerable	Vulnerable	Highly unlikely to be in the Project area due to a lack of suitable habitat.
Chuditch *Dasyurus geoffroii*	Vulnerable	Vulnerable	Highly unlikely to occur in the Project area, as it has not been recorded in the region for many decades.
Princess Parrot *Polytelis alexandrae*	Priority 4	Vulnerable	May infrequently be seen in the region, however, unlikely to be a resident species.
Mulgara *Dasycercus blythi*	Priority 4		Highly unlikely to be in the Project area, due to a lack of suitable habitat.
Oriental Plover *Charadrius veredus*	IA	Migratory	Unlikely to be in the Project area due to a lack of suitable habitat.
Fork-tailed Swift *Apus pacificus*	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 *Motacilla cinereal*	IA	Migratory	Highly unlikely to be present in the Project area.
Yellow Wagtail *Motacilla flava*	IA	Migratory	Highly unlikely to be present in the Project area.
Peregrine Falcon *Falco peregrinus*	OS		May infrequently be seen in the region, however, unlikely to be a resident species.
Long-tailed Dunnart *Sminthopsis longicaudata*	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 (2025) 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 E.

4.3 Subterranean Fauna

Bennelongia (2023) conducted a field survey in March 2023 within the Project area from ten boreholes from the Leonora area. No stygofauna were collected from within the proposed disturbance envelope, but several species were found from the 10 monitoring bores sampled between Gwalia and Tower Hill. Although these species were identified, Bennelongia stated 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'. Furthermore the rich stygofaunal community within the Melita Calcrete was thought to be due to the overall small size (the smallest of any calcrete known in the Yilgarn) and isolation.

Therefore, Bennelongia stated that 'further cumulative impact over the stygofaunal community is unlikely', with this statement encompassing impact from a proposed re-comissioning of the nearby Tower Hill open pit. Futhermore, impact from the proposed rail clearing is deemed to be negligible to the stygofaunal community. Further details of their assessment are provided in the Bennelongia 2023 Subterranean Survey (Appendix D).

4.4 Short Range Endemic Species

Bennelongia conducted a field survey for SRE groups in the vicinity of the Project area (Appendix E), and found no SRE's within the proposed disturbance envelope. According to Bennelongia's SRE habitat mapping identified a single habitat type overlapping the Project area, namely, stony plains with bluebush shrubland, showing 'almost barren areas in most of the Project's extent' (Bennelongia, 2025).

Within the vicinity of the Project, there are no likely potential SRE's. A species of an unlikely potential SRE (*Indolpium* 'BPS496') was collected from nearby the Project area, yet this species has been collected from widespread habitats and microhabitats abundant outside the vicinity of the Project.

Therefore, Bennelongia have stated that it is not expected that there will be any significant impacts on the populations of the Potential SRE species due to the clearing for the rail terminal. A further technical memorandum released by Bennelongia in August 2025 (Appendix G) for the purpose of covering the entire proposed area summarised:

> "We assess that the proposed clearing of native vegetation within the Project area is unlikely to impact populations of these species at a regional scale, with only minor effects anticipated for local individuals".

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 & 2025), Spectrum (2022) and Terrestrial Ecosystems (2023 & 2025). Targeted surveys for Threatened flora indicated there are no Threatened flora species within the proposed clearing area (NVS, 2025). Terrestrial Ecosystems concluded that the Project is unlikely to significantly impact conservation significant vertebrate fauna species and Bennelognia 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, and the Melite Calcrete PEC has shown to not be impacted by the proposed clearing, due to the small scale of the proposed clearing (>50 ha) alongside the distance away from the PEC. The history of ground disturbances and condition and extent of the vegetation in the proposed application area contribute to the determination that the likelihood of high biological diversity in the area is low.	**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 significant habitat	The vegetation present within the Project area is unlikely to provide significant habitat values or support indigenous Fauna, given its sparse nature, the small scale of clearing and the history of ground disturbances in the area. 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 in 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 distribution of the SRE	**Not likely to be a variance to this Principal**

for fauna indigenous to Western Australia.	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 DE is not considered necessary for the maintenance of significant habitat for fauna indigenous to WA and therefore the proposed clearing of 35.17 ha 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 & 2025) 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 DE and survey area. No representatives of the Threatened flora species were identified during the survey completed by NVS. Given the results of NVS' (2025) flora survey the DE is not necessary for the continued existence of any Threatened species. It is therefore highly unlikely that the native vegetation cleared will discontinue the existence of the species.	**Not likely to be a variance to this Principal**
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 Threatened Ecological Communities (TECs) are known to occur within the local area, and none are likely to occur within the application area based on known vegetation types within the application area (Spectrum, 2022). The nearest mapped conservation significant ecological community is the 'Melita calcrete groundwater assemblage type on Raeside palaeodrainage on Melita (Sons of Gwalia) Station', a Priority one, Priority Ecological Community (PEC) mapped approximately three kilometres west from the application area. This community is characterised as unique assemblages of invertebrates identified in groundwater calcretes (DBCA, 2020). Noting this PEC is associated with groundwater environments and the absence of a watercourse in the application area, the proposed clearing is not likely to impact this community. No TECs were identified by Spectrum (2022) during the commissioned studies and the land proposed to be cleared is not necessary for the maintenance of any TEC.	**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	The vegetation proposed to be cleared consists of commonly occurring vegetation communities and is unlikely to have significance. The DE falls within the vegetation associations 28 and 39 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	**Not likely to be a variance to this Principal**

that has been extensively cleared.	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.	
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. There is no environment present that is associated with a watercourse or wetland. As per hydrography linear spatial data (DWER-031), there is no notable water courses in or around the Project area. The location was chosen for the project to avoid any drainage lines or interactions with water courses.	**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. Based on aerial images of the vicinity the previously disturbed areas adjacent to 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.	**Not likely to be a variance to this Principal**

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 consists of predominantly sparse and low shrubland, it is highly unlikely that the proposed clearing will have an environmental impact. Furthermore, 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 DE has no major fresh waterways, tributaries or surface water features within its boundary. A desktop assessment of the surface water drainage showed no major ephemeral or permanent waterways in the clearing permit area. Given the small size (35.17 ha within the 61.00 ha DE) of the NVCP DE, it is not expected to have an impact at a regional level.	**Not likely to be a variance to this Principal**
Principle (j) – Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.	The DE has no major fresh waterways, tributaries or surface water features within its boundary. A desktop assessment of the surface water drainage showed no major ephemeral or permanent waterways in the clearing permit area. Given the small size (35.17 ha within the 61.00 ha DE) of the NVCP DE, it is not expected to have an impact at a regional level. Furthermore, given that no significant water courses or wetlands are recorded within the application area and the purpose of the clearing, the proposed clearing is unlikely to contribute to waterlogging.	**Not likely to be a variance to this Principal**

6 Summary of Assessment

The assessment concludes that the clearing of up to 35.17 ha of native vegetation for the further development of the Project is not at variance with the Ten Clearing Principles. Field assessments of vegetation types found that <1.5 % of each vegetation association will be impacted by the disturbance footprint. There are no PEC's or TEC's present within the proposed Project area, alongside no potential SRE's and evidence from Bennelongia stating that the clearing associated with the project will have no regional impact on SRE species. The lack of surface water features within the DE provide little to no pathway for impacts to water quality, and thus any potential impacts of this clearing is proposed to be insignificant.

7 References

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8 Appendices

APPENDIX A

DPLH Approval Letter

APPENDIX B

Spectrum Flora and Fauna Assessment

APPENDIX C

NVS Flora and Vegetation Survey

APPENDIX D

Bennelongia Subterranean Fauna Assessment

APPENDIX E

Terrestrial Ecosystems Fauna Assessment

APPENDIX F

Bennelongia SRE Fauna Assessment

APPENDIX G

Bennelongia SRE Technical Memo