

Chapter 9
Land Use Planning

ESMERALDA GRAPHITE PROJECT

aarc ENVIRONMENTAL SOLUTIONS
APEM Group

GRAPHINEX

Table of Contents

Glossary, acronyms and abbreviations 1

9 Land use planning 1

9.1 Environmental objectives 1

9.2 Existing environment 1

9.2.1 Regional land use overview 1

9.2.2 Project area land use 1

9.2.3 Infrastructure 4

9.2.4 Land contamination 4

9.2.5 Key resource areas 4

9.2.6 Queensland Agricultural Land Audit 4

9.2.7 Soil conservation 4

9.2.8 Restricted areas 5

9.2.9 Land use planning instruments— state, regional and local planning 5

9.3 Potential impacts 7

9.3.1 State, regional and local land use planning instruments 7

9.3.2 Temporary and permanent changes to land use 8

9.4 Mitigation and management measures 9

9.4.1 Decommissioning and rehabilitation 10

9.5 TOR Reconciliation table 16

List of Figures

Figure 9-1: Underlying and adjacent land use 3
Figure 9-2: Proposed PMLUs - Mining and production area 13
Figure 9-3: Proposed PMLUs - Transport corridor 14

List of Tables

Table 9-1: Summary of proposed PMLUs 11

Glossary, acronyms and abbreviations

Acronym or Abbreviation	Meaning
AARC	AARC Environmental Solutions Pty Ltd
CLR	Contaminated Land Register
DESI	Department of Environment, Science and Innovation
DILGP	Department of State Development, Infrastructure, Local Government and Planning
DSDIP	Department of State Development, Infrastructure and Planning
EA	Environmental Authority
EIS	Environmental Impact Statement
EMR	Environmental Management Register
EP Act	*Environmental Protection Act 1994*
EP Regulation	Environmental Protection Regulation 2019
GRDP	Gulf Regional Development Plan
GSD	Gulf Savannah Development
IAA	Important Agricultural Areas
KRA	Key Resource Areas
MLA	Mining Lease Application
NC Act	*Nature Conservation Act 1992*
NUMA	Non-use management areas
PAA	Priority Agricultural Areas
PLA	Priority Living Areas
PMLU	Post-mining land use
PRCP	Progressive rehabilitation and closure plan
RA	Rehabilitation areas
RPI Act	*Regional Planning Interests Act 2014*
SARA	State Assessment and Referral Agency
SC Act	*Soil Conservation Act 1986*
SCA	Strategic Cropping Areas
SDAP	State Development Assessment Provision
SEA	Strategic Environmental Areas
SPP	State Planning Policy

Acronym or Abbreviation	Meaning
TOR	Terms of Reference
TSF	Tailings Storage Facilities
WRD	Waste rock dump

9 Land use planning

This chapter details the land use planning considerations for the Project site by identifying existing and proposed land uses, discussing potential impacts of the proposed use of the land and the mitigation measures that may be required to prevent or mitigate any adverse impacts.

9.1 Environmental objectives

This chapter has been prepared to enable an assessment of the Project with respect to the environmental objectives stated in the Terms of Reference (TOR), in relation to land use planning. A compliance check of this chapter content against the relevant components of the TOR is in Section 9.5 of this chapter.

9.2 Existing environment

9.2.1 Regional land use overview

The Project is located within the Gulf Savannah region, about 70 km from the town of Croydon in the Croydon Shire Council. It is part of the Gulf Plains Bioregion, which encompasses approximately 121,000 km^2 of low-lying country and offshore islands of north-west Queensland.

The Tagalaka People are the traditional custodians of the land.

The Project is in Croydon Shire, an area of 29,538 km^2, is centred around the main town of Croydon. Croydon is 529 km west of Cairns, in the Gulf Savanna. Historically a thriving gold mining hub in the late 1800s, the current population of the town is about 300 residents. In addition to gold mining, the region has supported pastoralism from the 1880s.

The current land use is predominantly cattle grazing with extensive cattle stations in the region (Figure 9-1), including the wetland and marsh areas, that are used for grazing when conditions allow, with such areas generally accessible to livestock.

Tourism includes the Croydon Shire's many historic areas such as the Croydon Heritage Precinct and the historic rail service connecting Croydon and Normanton through the Gulflander train (Gulf Savannah Development 2026). Community events such as rodeos, cultural festivals and cattle musters are central to the shire's social fabric.

There are no World Heritage areas within 150 km of the project footprint. There are some protected areas such as the Tagalaka National Park (also listed as Littleton Resources Reserve), the Rungulla National Park and several Nature Refuges (state protected areas established under the NC Act) located within 100 km of the Project. The Esmeralda Nature Refuge is located over 40 km to the west of the Project. This Nature Refuge may present some tourism values, including for bird watching.

9.2.2 Project area land use

Land within and surrounding the Project area is designated as 'Rural' under the Croydon Shire Planning Scheme 2019. It is currently used for low-intensity cattle grazing of native vegetation.

The Project MLAs are entirely within a single pastoral lease, Lot 75 on SP273198, known as the Esmeralda property. The Proponent has entered into a commercial arrangement to acquire the relevant portion of the underlying pastoral lease, on which the Project MLAs are located. To finalise the transaction, an application to subdivide the pastoral lease into separate titles under the *Land Act* 1994 (Land Act) is expected to be finalised prior to Project commencement. The binding option to acquire the land directly under both MLAs will be exercised within 2.5 years and is subject to the subdivision being granted, giving the Proponent title to the land subject to the MLAs. Lot 75 on SP 273198 will be cancelled upon registration creating new lot 75 and 76 on SP 353379.

No historical mining has occurred in the Project area. Exploration drilling has been conducted as part of resource definition and to develop groundwater monitoring bores.

The landscape character of the Project area is flat and typical of the Shire of Croydon. No Heritage listings are within the Project area.

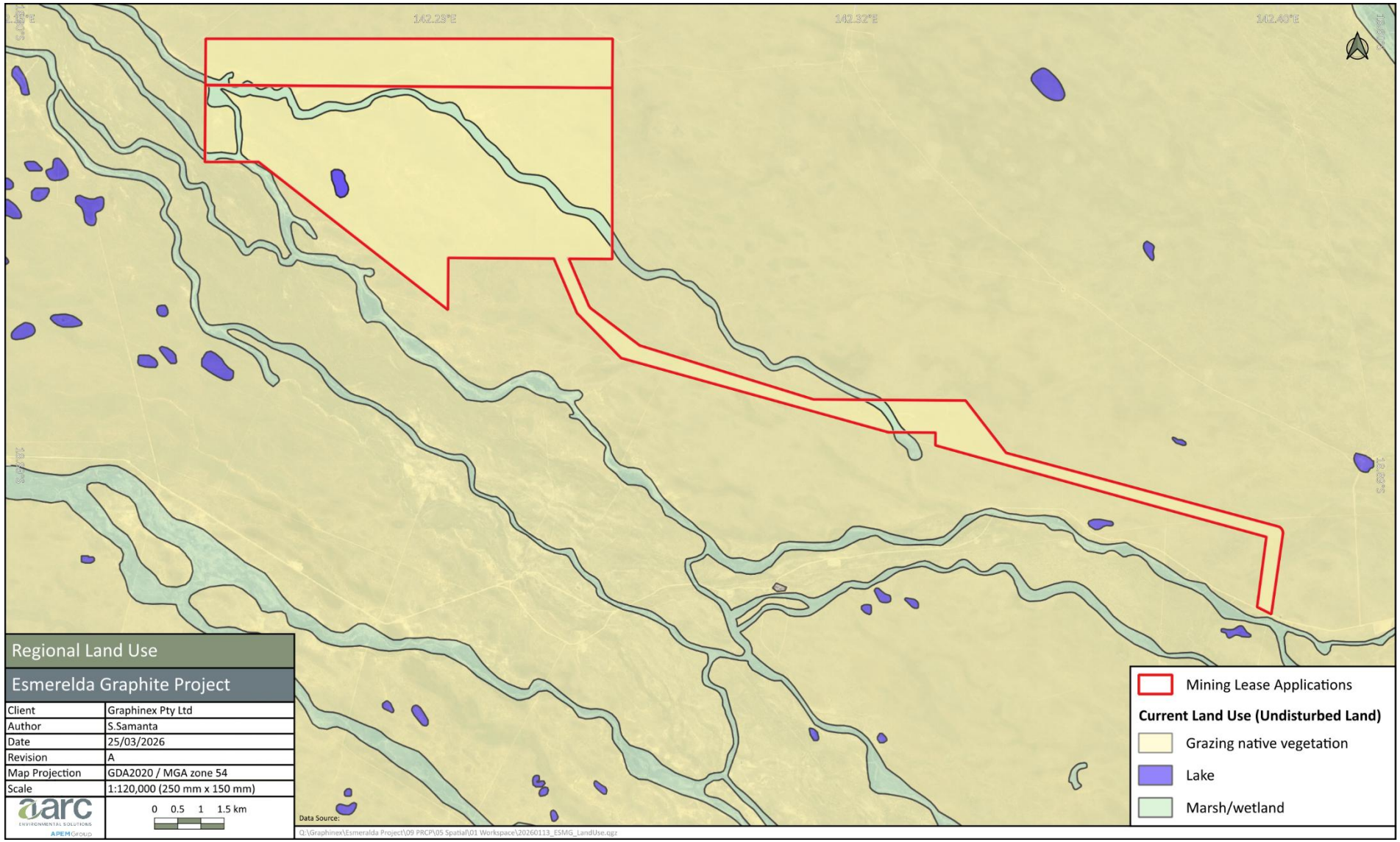


Figure 9-1: Underlying and adjacent land use

9.2.3 Infrastructure

The nearest residential town is Croydon. There are no areas zoned for future use or future residential areas intersecting the Project. The closest local existing health and education infrastructure are located in Croydon.

The public roads within the vicinity of the Project are the Richmond Croydon Road and Esmeralda Prospect Road, both local council roads. The Esmeralda Prospect Road will be used to provide access to local properties and the southern boundary of the MLAs. The Richmond Croydon Road is a sealed and gravel road linking the Esmeralda Prospect Road, to the Flinders Highway via Richmond. The Flinders Highway provides access to Townsville and the Bruce Highway, along Queensland's east coast (refer to Chapter 25, Traffic and Transport and Appendix N, Transport Impact Assessment).

The closest connections to the regional electricity grid supply and water supply infrastructure are both located in the township of Croydon.

Regional airports include Normanton Airport, Cloncurry Airport and Mount Isa Airport. Due to the distance of these airports from the Project site, the use of these airports is not considered for transport of the workforce – unless as a source of connecting flights to the on-site airstrip. Due to the location and facilities, the Port of Townsville is likely to be used to export product and import supplies. Alternative port options include the Port of Karumba, in the Gulf of Carpentaria.

9.2.4 Land contamination

The Environmental Management Register (EMR) and Contaminated Land Register (CLR) were utilised to determine the presence of contaminated land on the properties underlying the Project site. The EMR identifies properties that are at risk of being contaminated due to notifiable activities having been undertaken. The CLR identifies properties that have been established as contaminated through scientific investigation and where it is necessary to take action to remediate the land.

A search of both the EMR and CLR, at the time of the preparation of this document, did not return any properties underlying the Project site listed as contaminated or at risk of being contaminated (Attachment 3).

9.2.5 Key resource areas

Key Resource Areas (KRAs) are applied to locations across Queensland that contain extractive resources of state significance. The Project is not in a KRA (GeoRes Globe 2026).

9.2.6 Queensland Agricultural Land Audit

The Queensland Agricultural Land Audit is updated annually and identifies land important to current and future agricultural production and the constraints to agricultural development. The Project does not fall under any important agricultural area (AgTrends Spatial 2026), and is further discussed in Section 9.2.9.1.

9.2.7 Soil conservation

Soil conservation plans outline how runoff can be managed and directed across a property to minimise erosion. Under the *Soil Conservation Act 1986* (SC Act), these plans can take the form of property plans or project plans. Plans that are not approved under the Act are considered non-statutory. Soil conservation plans function as a legislative tool to coordinate runoff flows between adjoining properties.

There are no statutory or non-statutory soil conservation plans under the SC Act in the Project area (Qld Globe 2026).

9.2.8 Restricted areas

Under Section 97 of the Mineral Resources Regulation 2013, certain areas are excluded from a mining lease. These include existing tenements, designated protected areas, residential zones, infrastructure areas and land that has been specifically excluded such as Commonwealth land.

Restricted land is also any area within 200 metres of a permanent building, including: residences; businesses; hospitals; churches; childcare; and sporting facilities. Additionally, any area within 50 metres of artesian wells, bores, dams, water storage facilities, stockyards, or cemeteries is considered a restricted area.

The Project is not located within the restricted zone of any of these features. Furthermore, it is not situated on Commonwealth land (refer to Chapter 8, Tenure including Native Title, Section 8.2.6).

9.2.9 Land use planning instruments— state, regional and local planning

The relevant land-use planning instruments applicable to the Project footprint are discussed in this section with the purpose of identifying potential impacts, the preferred development in the Project footprint and the proposed post-mining land use.

9.2.9.1 Relevant provisions of the State Planning Policy

A State Planning Policy (SPP) is used to define specific matters of state interest in land use planning and development. As core concepts in which local government planning schemes should be informed; the 'State Interest guideline – Agriculture' (DILGP 2016) defines Important Agricultural Areas (IAA) and Agricultural Land Class A and Class B, using the Agricultural Land Classification approach.

There are no important agricultural areas mapped within 80 km of the Project site. State mapping databases classify the Project area as Agricultural Land Class C2, indicating Pasture Land – native pastures.

The SPP also integrates 17 State interests in land use planning and development, classifying them into five broad themes of — liveable communities and housing, economic growth, environment and heritage, safety and resilience to hazards, and infrastructure. SPP outcomes are required to be delivered through relevant parts of local government planning schemes (DILGP 2016). Of relevance to the Project area, these themes have been integrated into the Croydon Shire Planning Scheme.

The Project will generate significant employment and economic growth and support the community of Croydon Shire Council. The Project will not have any significant impact on housing supply as it does not intersect any residential land use area; the closest being in Croydon, over 70 km from the site. Each theme of the SPP has been addressed within relevant chapters in the EIS, including Chapter 11 First Nations Cultural Heritage, Chapter 12 Non-Indigenous Cultural Heritage, Chapter 20, Social, Chapter 21, Economics and Chapter 22 Hazards, Health and Safety.

The Project will assist the renewable energy transition for Queensland and nationally by enabling graphite to be produced locally, and be available to be used in batteries, renewable energy products, and other markets.

9.2.9.2 Areas of regional Interest

The *Queensland Regional Planning Interests Act 2014* (RPI Act) regulates impacts from resource and other regulated activities on identified areas of regional interest. This includes Strategic Cropping Areas (SCA), Strategic Environmental Areas (SEA), Priority Agricultural Areas (PAA) and Priority Living Areas (PLA).

SCA is land that is, or is likely to be, highly suitable for cropping because of a combination of land's soil, climate, and landscape features. The Project area is not mapped within the Strategic Cropping trigger map.

SEAs identify areas where the impact of a prescribed activity will not result in a widespread or irreversible impact on an environmental attribute of a strategic environmental area. The Project area is not mapped within a SEA.

PAAs are strategic areas, identified on a regional scale, containing significant clusters of the region's high value intensive agricultural land uses. Within a PAA, high value intensive agricultural land uses are recognised as the priority land use over other proposed land uses. The Project area is not mapped within a PAA.

A PLA is an area that includes the existing settled area of a city, town or other community, and other areas considered necessary or desirable for the future growth of the existing settled area and as a buffer between the existing or a future settled area and resource activities. The Project area is not mapped within or adjacent to a PLA.

9.2.9.3 Gulf Regional Development Plan

The non-statutory Gulf Regional Development Plan (GRDP) was also designed to promote a 'robust regional economy capable of providing wealth creation and employment opportunities for Gulf communities, with opportunities to work with the mining industry and maximize benefits to the region (Gulf Regional Development Plan 2000). The newly accorded Gulf Savannah Development (GSD) initiative also includes the resources and renewable sectors as critical to the region's future, underpinning its attractiveness as a place to live, work, play and invest (Gulf Savannah Development 2026).

9.2.9.4 Areas of local interest

The land within, and surrounding the Project's MLAs is designated as 'Rural' under the 'Croydon Shire Planning Scheme' (Croydon Shire Council 2019). Queensland Land Use Mapping classifies the Project area as 'Grazing Native Vegetation'. A 'Rural' zone is to:

a) provide for rural uses and activities; and

b) provide for other uses and activities that are compatible with:

    i) existing and future rural uses and activities;

    ii) the character and environmental features of the zone; and

    iii) maintain the capacity of land for rural uses and activities by protecting and managing significant natural resources and processes.

Some of the key outcomes to be achieved through the designation of a 'Rural' zone are:

a) The zone primarily accommodates grazing and value-adding rural uses where they do not conflict with petroleum or mining leases or facilities or stock routes.

b) Existing rural uses should be protected from the impacts of any proposed extractive industry and associated activities.

c) New extractive industry activities are established where they have minimum impact on the viability of existing agricultural, residential and tourist uses.

9.2.9.5 State Development Assessment Provisions (SDAP) codes

The State Development Assessment Provision (SDAP) codes provide assessment benchmarks for the assessment development applications involving the State Assessment and Referral Agency (SARA). The SDAP is a performance-based code that regulates specific outcomes, rather than regulating development through prescription (DSDIP 2026).

The SDAP codes considered potentially relevant to the Project are:

a) State code 10: taking or interfering with water;

b) State code 14: Queensland heritage;

c) State code 16: native vegetation clearing;

d) State code 18: constructing or raising waterway barrier works in fish habitats;

e) State code 21: hazardous chemical facilities;

f) State code 22: environmentally relevant activities;

g) State code 26: solar farm development; and

h) State code 27: battery storage development facility.

State code 12 (development in a declared fish habitat area) is not considered for the Project as it is not located within a declared fish habitat area.

The Project will be exempt from state code 18 (Constructing or raising waterway barrier works in fish habitats) as Project development works occur in a waterway will be undertaken within a mining lease. However requirements to have address the code are discussed in Chapter 18, Flora and Fauna, Section 18.5.2.2).

9.2.9.6 Native title and Indigenous Land Use Agreements

The Project area is subject to a Native Title determination (refer to Chapter 8, Tenure including Native Title, Section 8.2.27). No Indigenous Land Use Agreements have been pursued. Instead, the Proponent is in a Right to Negotiate process with the traditional owners and has entered into a negotiating agreement.

9.3 Potential impacts

9.3.1 State, regional and local land use planning instruments

The land use impact assessment area is defined by the Project footprint. As such, the Project has been assessed against applicable state, regional and local land use planning instruments, permissible land uses and applicable mitigation measures.

The Project development will be consistent with local, regional and state planning instruments, and will be compatible with the land uses within and adjacent to the Project site.

In accordance with the assessment benchmarks for rural zone codes in the Croydon Shire Planning Scheme, the Project is expected to support the 'Rural' zoning and the relevant key outcomes outlined in the Croydon Shire Planning Scheme. The Project's operational activities will support mining development in the area. The Project's rehabilitation activities are to achieve a post-mining land use (PMLU) of 'low-intensity cattle grazing with native pastures', which will support the agricultural industry in the area.

The Project is aligned with the strategic intent of the council to encourage economic growth. With mining as a historically significant economic driver in the region, Croydon is well positioned to support the development of the critical minerals industry needed to meet renewable energy targets. Additionally, the Project will contribute to the liveability and economic growth objectives of the SPP. Where practicable, the Project will offer local employment and support the Croydon community, including through local procurement of goods and services.

The Project is not expected to impact tourism values for the Croydon Shire Council, including the Esmeralda Nature Refuge (located approximately 40 km from the Project area). This includes that the access road for the Project does not cross with the entry to the Nature Refuge, and that noise modelling indicates noise impacts from the Project will not reach the Refuge.

The Project has considered and will continue to consider the GRDP and the newly initiated GSD initiative (Section 9.2.9.3) as part of Project development and operations to ensure outcomes are beneficial and

consistent with region-wide development expectations. There will be no inconsistency between the Project objectives and the local, regional and state planning instruments, or incompatibility with the land uses within and adjacent to the Project site.

Given the Project is not located within an SCA, PLA, PAA or SEA (refer to Section 9.2.9.2) – the RPI Act will not apply to the Project.

The Proponent has lodged an application to acquire the underlying pastoral lease associated with the Project MLAs. As such, no significant impacts are expected on landholders. Overall, consultation with the surrounding community and relevant stakeholders has commenced and will continue during the environmental and social impact assessment process. Refer to Chapter 20, Social, for further details on consultation methods and outcomes.

Surveys have been conducted to avoid impacting cultural heritage. Aboriginal cultural heritage assessments did not elicit the presence of Aboriginal Cultural heritage. However, the Proponent will follow all reasonable and practicable measures for meeting the duty of care under the Aboriginal *Cultural Heritage Act 2003*, as discussed further in Chapter 11, First Nations Cultural Heritage. Assessments for non-Indigenous heritage have been conducted with no significant impact expected (refer to Chapter 12, Non-Indigenous Cultural Heritage). Consultation with Traditional custodians and landholders is ongoing, as addressed in Chapter 7, Stakeholder Consultation and Engagement.

9.3.2 Temporary and permanent changes to land use

This section contains a description of the potential temporary and permanent changes to land use within the project footprint and adjacent to the project footprint, including identifying any incompatible land uses.

The predominant land use within the Project footprint is grazing land. The potential permanent impacts as a result of the Project activities are a change in use from grazing land. The Project may impede livestock movement or access to water resources, and affect the economic viability of farming operations on properties through loss of grazing land, fragmentation, access to infrastructure and alterations to stock routes.

Activities at the Project will cause surface disturbance, posing a risk to indigenous and non-indigenous cultural heritage. These potential impacts are considered further in Chapter 10, Land —geology, geomorphology, topography and soils, Chapter 11, First Nations Cultural Heritage, and Chapter 13, Rehabilitation and Closure.

Blasting and transportation activities associated with the Project may temporarily impact rural amenity and existing uses, and this is considered further in Chapter 24, Noise and vibration.

While the Project is expected to cause some temporary landscape impacts by modifying the landscape during its operation, it is not expected to cause any permanent landscape changes that will create a distinct landscape character, and the impacts on visual amenity have been assessed as low risk and magnitude. There are three homesteads around the Project area that are considered sensitive receptors of the Project's potential visual amenity impacts. The Project may be visible from one homestead during the night operations, and none during the daytime operations. The Project will not be visible from any highways. There will be no visual impacts on sensitive receptors following rehabilitation and closure of the mine. Potential impacts and appropriate mitigation and management measures are further considered in Chapter 28, Visual Amenity.

An assessment of the road and rail network was undertaken (refer Chapter 25, Traffic and Transport). Various mitigations to improve transport safety and efficiency, and transport infrastructure were identified. It is expected that an infrastructure agreement with the local or state governing bodies will be entered into, to address the ongoing use of road infrastructure and any future upgrades required.

No impacts to stock routes are expected (refer to Chapter 8, Tenure including Native Title, Section 8.2.5.2).

There will be no impacts to existing water and the power grid infrastructure as they will be managed on-site. An on-site solar farm will be developed, supported by diesel generators and batteries. Process plant water will be supplied from recycled sources on the mine site, including pit dewatering groundwater abstracted to enable the mining operations and process water returned from the tailings (refer to Chapter 14, Water resources,

Section 14.2.3.3). The Project will construct and operate an on-site sewage treatment plant for waste management (refer to Chapter 17, Waste, Section 17.6.3).

Activities that are ancillary to the Project operation have the potential to contaminate land. These activities are referred to as 'notifiable activities' and are listed in Schedule 3 of the EP Act. The Project will involve notifiable activities, specifically, the inappropriate storage and handling of chemicals and waste present a potential risk of land contamination. Soil contamination, which is an aspect of land contamination, may also occur. Soil contamination is discussed further in Chapter 10, Land – geology, geomorphology, topography and soils.

Further information on the hazardous materials and activities with risk to land contamination and associated mitigation measures are discussed in Chapter 22, Hazards, Health and Safety. Information on potential water impacts due to the Project's land uses are discussed in Chapter 15, Water Quality.

No Key Resource Areas will be impacted by the Project.

While there no existing statutory or non-statutory conservation plans, disturbance of vegetation and the topsoil layer due to Project activities, including clearing of vegetation; topsoil stripping and stockpiling; and infrastructure construction; may lead to topsoil being prone to wind and water erosion. However, these impacts are limited to the duration of the Project and will be suitably managed and mitigated through relevant measures (refer to Chapter 10, Land – geology, geomorphology, topography and soils).

The presence of restricted land may constrain the extent of mining activities by preventing access and disturbance in designated areas. However, there are no restricted areas or land as designated under Section 97 of the Mineral Resources Regulation 2013.

The Project will not impact any third-party tenement holders as the Project has no overlapping tenure (refer to Chapter 8, Tenure including Native Title), and Project activities will not impact access to adjoining tenements.

9.4 Mitigation and management measures

To mitigate impacts on grazing land, the Project will progressively rehabilitate the land, with the objectives of restoring land capability and connectivity. Land impacted by the Project footprint will be progressively rehabilitated to the designated post-mining land use (PMLU) in accordance with the progressive rehabilitation and closure plan (Appendix T, PRCP). Rehabilitation will aim to re-establish contiguous grazing areas and minimise long-term fragmentation of grazing land. Access to infrastructure will be reinstated where practicable. Rehabilitation will be completed with 10 years after mining operations cease, this is discussed further in Section 9.4.1.

Overall, the Project is expected to achieve the outcomes of Croydon Shire Planning Scheme's rural zone code, including adequate separation and management of temporary impacts from noise, light, dust and vibration.

Relevant assessments have been undertaken for cultural heritage, non-indigenous heritage, soil, noise, vibration, visual amenity, hazardous materials, groundwater and surface water. Appropriate mitigation and management measures have been identified accordingly to minimise impacts of the Project during its lifetime. These are detailed in referenced chapters.

Management plans to be implemented include a Cultural Heritage Management Plan, and Erosion and Sediment Control Plan, a Waste Management Plan.

A comprehensive consultation program will ensure that relevant community members are made aware of the Project, its benefits, and its potential impacts. Consultation is ongoing and it ensures all stakeholders are afforded the opportunity for input into Project development considerations, rehabilitation requirements and on issues of relevance. All consultation outcomes are documented in a register. These are further detailed in Chapter 7, Stakeholder Consultation and Engagement, and Chapter 20, Social.

9.4.1 Decommissioning and rehabilitation

This section provides a summary of the proposed progressive rehabilitation and closure plan (PRCP) that will be implemented for the Project. Its purpose is to maximise the progressive rehabilitation of the land to a stable condition before the Environmental Authority (EA) can be surrendered. In accordance with the 'Statutory Guideline: Progressive Rehabilitation and Closure Plan (PRC Plan)' (DESI 2023b), it is a requirement that the PRCP is submitted concurrently with this EIS submission to obtain an EA.

This section has been prepared to demonstrate that the rehabilitation of the environment disturbed by the construction, operation and decommissioning of the Project can meet the environmental objectives and performance outcomes in Schedule 8A of the EP Regulation.

In Queensland, mine rehabilitation are prescribed in the EP Act. The State Government's Mined Land Rehabilitation Policy (Queensland Government 2018) provides the framework to ensure that for land disturbed by mining activities:

- the land is safe and structurally stable;
- there is no environmental harm being caused by anything on or in the land; and
- the land can sustain a post-mining land use.

These three objectives comprise the foundation of rehabilitation goals for the Project.

A PRCP has been developed for the Project in accordance with the requirements of the EP Act, which will be submitted concurrently with the draft EIS. This plan will represent the Proponent's objective to provide a rehabilitation strategy that benefits both environmental and stakeholder interests.

The PRCP covers rehabilitation of all operational activities and associated infrastructure areas for the Project on the mine site, which includes the open-cut mining area, waste rock dump, stockpile areas, mine infrastructure areas, and water storage areas. Further details of the progressive rehabilitation works are provided in the PRCP.

9.4.1.1 Post-mine land use strategy

At closure, the proposed PMLU for most of the disturbed land is 'low-intensity cattle grazing with native pastures' with the exception of retained infrastructure, one tailings storage facility and waste rock dump. Due to the remote location of the Project, consultation consisted of local landholders and the Croydon Shire Council, including analysis of sustainable land use options post-mining. The decision for the proposed PMLU is strongly supported by the clear preference expressed by the landholder and Croydon Shire Council for the impacted land to return to grazing land use as much as possible. Additionally, the proposed PMLU for cattle grazing is consistent with local, regional, and state plans and supports the 'rural' zoning of the Project area, as discussed in Section 9.2.2.

The return of majority of the disturbed land to low intensity cattle grazing as the PMLU is also supported by the land suitability assessment conducted by AARC (refer to Soils and Land Suitability Assessment, Appendix H). The land suitability assessment examined if the existing land is suitable for the pre-mining land use of grazing native pastures. It concluded that, given the limited moisture availability in the land, the land is not suitable for higher productivity uses such as cropping but is suitable for low-intensity cattle grazing of native pastures. Supported by the existing pre-mining land use of cattle grazing, it is concluded that the native pastures are adapted to the adverse soil conditions and hence, can sustain low-intensity cattle grazing after Project completion.

Non-mine affected water storage dams, access tracks, additional infrastructure such as roads, air strips, buildings and power lines at the end of the Project life may be retained upon agreement with the landholder for their own logistical and agricultural uses.

There are no non-use management areas (NUMAs) proposed.

A summary of the proposed PMLU by mine activity is presented in Table 9-1, and shown in Figure 9-2 and Figure 9-3.

Table 9-1: Summary of proposed PMLUs

PMLU	Description	Rehabilitation areas
Grazing native vegetation (low intensity)	Targeting a modified woodland ecosystem similar to that of the land use of surrounding areas.	• Mine infrastructure area • Supporting Surface Activities • Water management infrastructure • Backfilled void and levee • Rehabilitated TSFs and WRD
Retained infrastructure	Roads and other infrastructure providing benefit to agricultural production.	• Retained roads and buildings • Airfield • Cattle exclusion fencing • Sediment dam
Grassland	Grassland typically on slopes comprising a mix of native and pasture species providing agricultural value and surface stability on artificial landforms	• Retained WRD • Retained TSF
Water Storage	Dams to remain as water body, for stock watering	• Raw water dam • Pit dewatering dam • Sediment dams
Riparian ecosystem	Native vegetation community consistent with the existing landscape reinstated along restored drainage lines, providing biodiversity values and surface stability functions	• Diversion

9.4.1.2 Rehabilitation areas (RAs)

To develop the PRCP schedule, that satisfies the requirements of the PRCP Guideline, discrete rehabilitation areas (RAs) have been defined for the Project. An RA is defined by the EP Regulation as an area of land in the PMLU to which a rehabilitation milestone for the post-mining use relates. RAs are nominated for areas of disturbance within the Project with consideration for the disturbance type and the proposed PMLU.

Further details related to nominated RAs can be found in Chapter 13, Rehabilitation and Closure.

9.4.1.3 Rehabilitation methodology

Decommissioning and rehabilitation will be carried out in accordance with the milestones and completion criteria established in the PRCP. Milestones will be implemented as soon as practicable once land becomes available for rehabilitation. Land is considered available for rehabilitation upon the completion of mining, except where it continues to be used for operational infrastructure, topsoil stockpile placement or retained post-closure infrastructure.

Milestones that involve revegetation activities, including monitoring revegetation, include provisions for unfavourable growing seasons and unforeseen events such as droughts or storms that could negatively impact vegetation establishment. Rehabilitation includes contingency for complex management requirements, and the development of a dataset supporting successful rehabilitation.

It is expected that the rehabilitation of the Project site will conclude approximately 10 years after mining operations cease. Rehabilitation are detailed further in the Project PRCP (Appendix T), and Chapter 13, Rehabilitation and closure.

9.4.1.4 Rehabilitation activities

Rehabilitation activities include, but are not limited to:

- disconnection and removal of all infrastructure including buildings, machinery, equipment, road base, concrete slabs, water management structures, pipelines, and fences that are not being retained by landholder agreement;
- topsoil stripping and stockpiling to maximise the long-term viability of the growth media;
- investigating potentially contaminated land and where necessary, undertaking remediation activities;
- landform development where backfilling, reprofiling, reshaping and/or compaction works are required;
- revegetation involving topsoil application, ripping and seeding (or planting) and applying soil ameliorants, as required;
- mine affected water dams will be subject to sediment removal, and re-profiling and seeding of the dam banks. Sediment removed from the dam will be disposed of in the residual voids;
- the open cut pit will be backfilled with waste rock material and tailings, including a low permeability capping layer over the tailings, and treated with an appropriate surface preparation;
- any retained waste rock dumps and tailings storage facilities will be recontoured including grading and compaction to create stable landforms that are compatible with the surrounding landform. Their geotechnical stability will be assessed;
- ongoing monitoring of the physical and chemical stability of rehabilitated areas will be undertaken; and
- rehabilitated areas meeting and/or exceeding completion criteria will be certified.

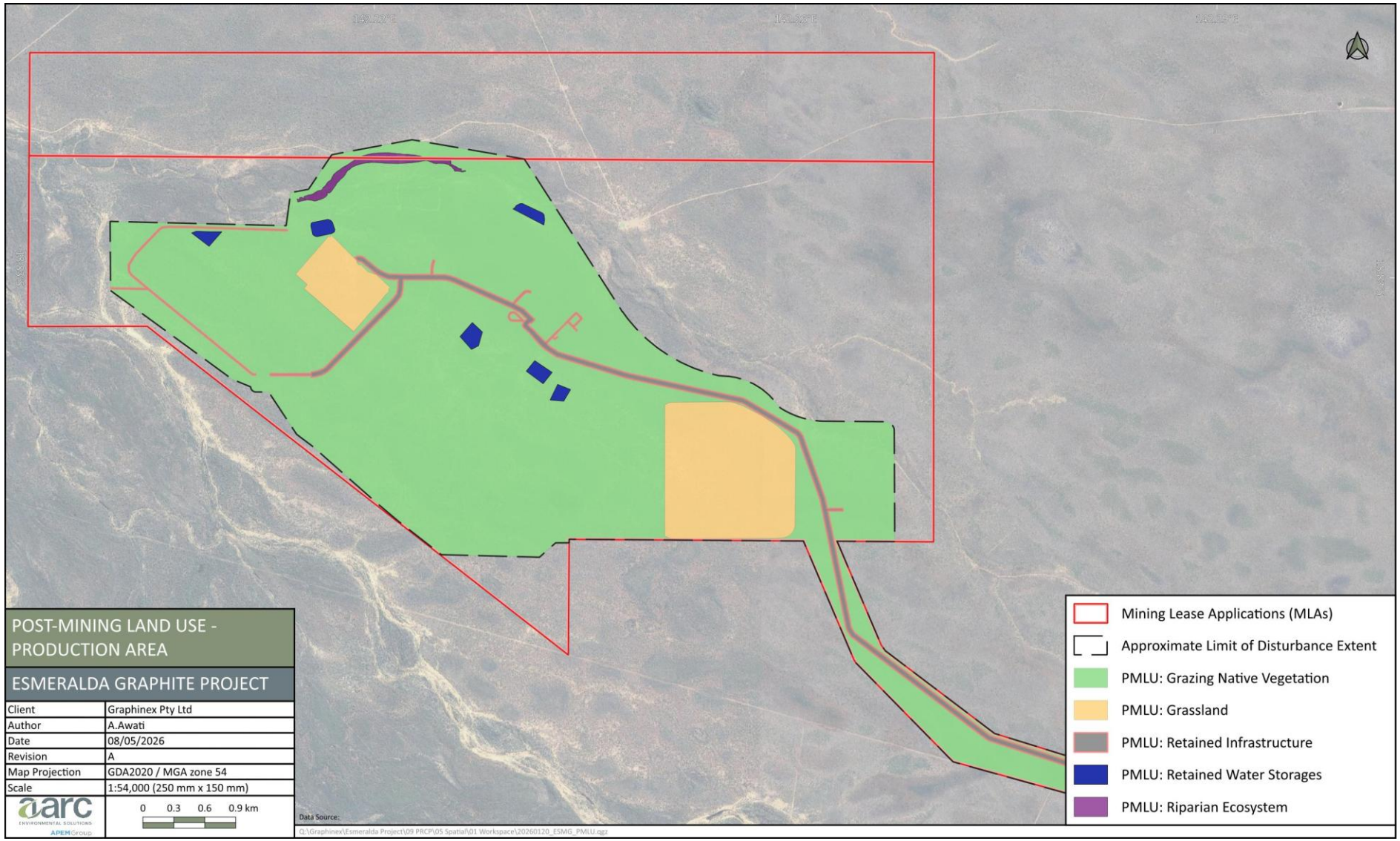


Figure 9-2: Proposed PMLUs - Mining and production area

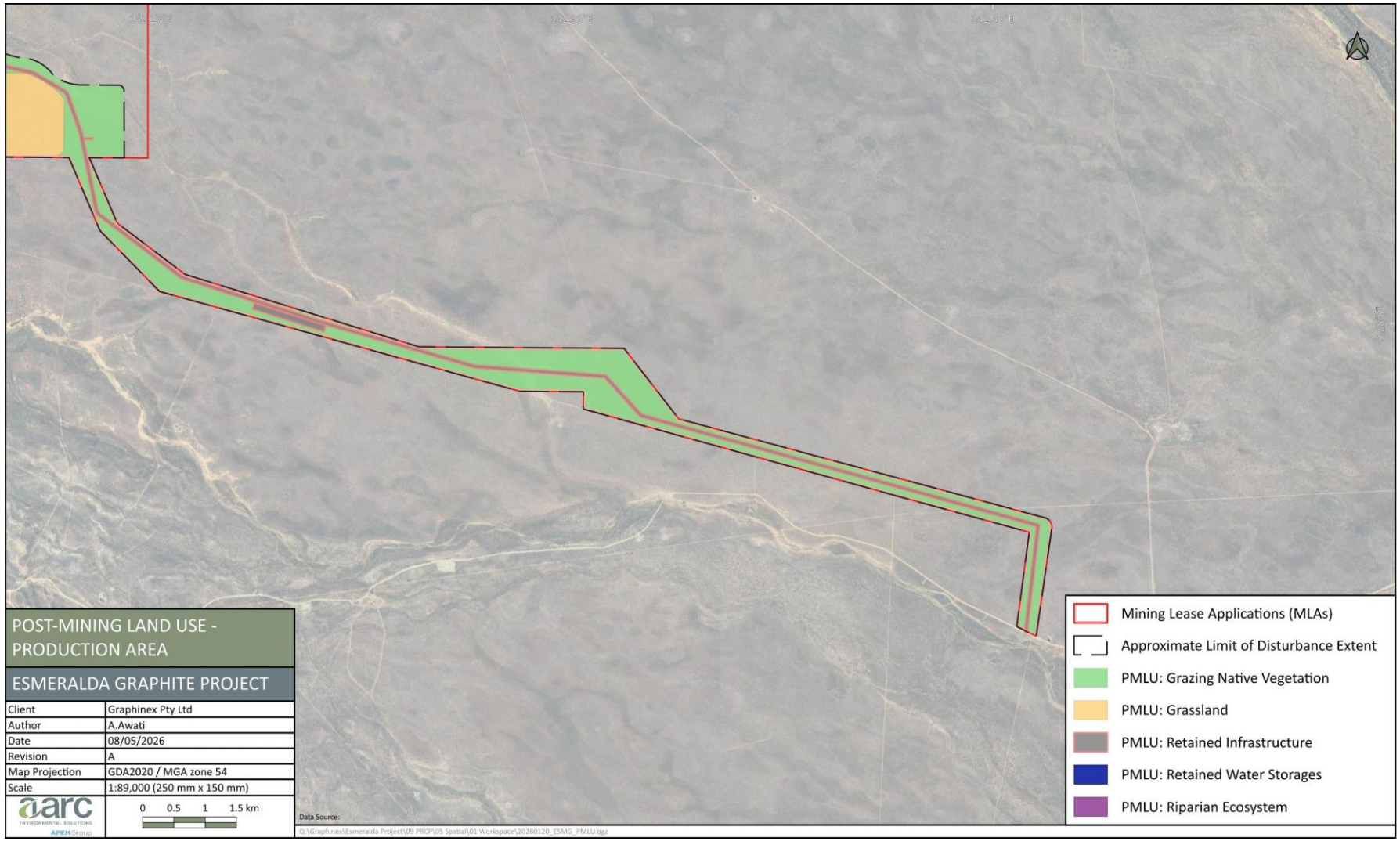


Figure 9-3: Proposed PMLUs - Transport corridor

9.4.1.5 Rehabilitation monitoring and maintenance program

Rehabilitation indicators and visual observations gathered as part of an annual monitoring process will be used to identify any aspects of the rehabilitated area that are of concern or suggest that rehabilitated land is at risk of not meeting the required PRCP completion criteria. These may include, but are not limited to:

- evidence of active erosion;
- inadequate vegetation cover or growth;
- invasive weed or pest species;
- soil dispersion / instability; and
- soil infertility.

Following an annual monitoring process, areas of rehabilitation will be assessed for maintenance. An annual visual inspection of all rehabilitated areas will be undertaken to provide an overview of the status of the rehabilitation and identify any noticeable issues such as erosion or inadequate vegetation cover or growth. This information, along with monitoring results, will be used to inform the maintenance schedule. Maintenance may include repairing areas of excessive soil erosion or undertaking supplementary plantings or seeding to increase floristic diversity and cover to assist in achieving completion criteria. If issues re-occur, an investigation will be carried out to determine the reason and allow for remediation. Modification of rehabilitation methods and specifications may be required, and rehabilitation and maintenance planning updated accordingly. The final landform will be designed with sloping batters to blend with the surrounding landscape and be vegetated with species like that in the surrounding areas.

9.5 TOR Reconciliation table

Terms of reference - Content requirements of the EIS		EIS Section
Section 9 – Land use planning		
Land use planning - Existing environment		
9.1	For the project footprint and surrounding area identify and describe all current and historic land use, including the following detail: (a) lot on plan descriptions (b) key infrastructure (c) recreational sites and tourist destinations (d) residential, commercial, and industrial areas (e) key resource areas (f) findings of the Agricultural Land Audit (including land of agricultural state interest under the State Planning Policy) (g) areas of regional interest under the Regional Planning Interests Act 2014 (h) any land that is listed on the environmental management register or the contaminated land register, or that has been subject to a notifiable activity under the EP Act (i) any non-statutory and statutory soil conservation plans under the Soil Conservation Act 1986 (j) any restricted areas and any unavailable land under section 97 of the Mineral Resources Regulation 2013.	Lot on plan descriptions – Chapter 8, Section 8.2.1, Section 9.2
9.2	Identify any land use planning instruments that apply to the project footprint, including: (a) relevant provisions of the State Planning Policy (b) the applicable regional plan that applies to the land, including the relevant provisions of the regional plan (c) relevant provisions of the Regional Planning Interests Act 2014 (d) the applicable local government planning scheme, including the relevant provisions of the local government planning scheme (e) relevant State codes under the State Development Assessment Provisions (SDAP).	Section 9.2.9
Land use planning - Impact assessment		
9.3	Assess the project against the land use planning instruments that apply to the project.	Section 9.3.1
9.4	If the project is exempt from compliance with a land use planning instrument, identify the exemption and extent, along with any limitations on the exemption.	Section 9.3.1
9.5	Where non-compliance with a land use planning instrument is identified, provide commentary setting out whether the non-compliance is appropriate and provide reasons for the non-compliance.	Section 9.3.1
9.6	Describe potential temporary and permanent changes to land uses within the project footprint and adjacent to the project footprint, including identifying any incompatible land uses.	Section 9.3.2

Terms of reference - Content requirements of the EIS		EIS Section
9.7	For any impacts on mining or resource exploration activities, liaise with relevant authorised tenement holders. Describe consultation outcomes and potential impacts on tenement holders.	Section 9.3.2
9.8	Provide an assessment against the relevant prescribed solution(s) for any priority living area impacted by the project, if relevant.	N/A
Land use planning - Mitigation measures		
9.9	Detail proposed mitigation measures for potential impacts on land uses.	Section 9.4
9.10	Demonstrate how the project will meet the environmental objectives and performance outcomes relevant to land use in Schedule 8 of the EP Regulation.	Section 9.4.1