Roe Gold Project

Section 38 Referral Supporting Document

Prepared for Ramelius Resources Pty Ltd

3 March 2026

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1.0	Final	25/02/2026	VM/LC	AJM	

Executive Summary

Introduction

This document supports a referral under section 38 of the *Environmental Protection Act* 1986 by Lake Roe Gold Mining Pty Ltd to develop a greenfield gold mining project (Project). Lake Roe Gold Mining Pty Ltd is a wholly owned subsidiary of Ramelius Resources Ltd (Ramelius). The Project will be operated by Ramelius, and the workforce will either commute from local centres such as Kalgoorlie or fly in-fly out and be accommodated at the nearby Ramelius owned Rebecca processing hub.

The purpose of this document is to present the environmental impacts for the Project. Consistent with the reference document 'Instructions: Referral of a Project under section 38 of the Environmental Protection Act 1986 (March 2024)', Ramelius has provided sufficient information to enable the Environmental Protection Authority (EPA) to determine whether the Project is valid and requires assessment.

Overview of the Project

Ramelius is seeking to develop the Project, located approximately 150 km east of Kalgoorlie in the Goldfields Region of Western Australia. The Project is located on granted mining tenements M28/388 and L28/103, situated on the Yindi pastoral lease LPL N049512 and on Kakarra Native Title lands. This referral will focus on the mining area and associated service corridor.

The Project is to develop and operate a greenfield gold mine. Ore mined at the Project will be transported offsite for processing. Ore will be mined from three open pits; Bombora (BOM) 1800, Bombora (BOM) 1100 and Bombora (BOM) 700. At the conclusion of open pit mining, underground mining will commence with three declines established within the BOM 1800 pit.

The Project includes the following activities and elements:

- Activity of an open pit and underground mining operation with associated ore stockpiles and waste rock landforms (WRL);
- Mining related infrastructure including administration offices, workshops, laydown area, mine dewatering infrastructure and explosives magazine;
- General Infrastructure including power supply, communications systems, and internal roads; and
- Approximately 50 km service corridor.

The Project comprises a Disturbance Footprint of 557.7 ha within an Activity Envelope of approximately 1,543 ha. As identified in the botanical and terrestrial fauna surveys, some of

this area is exposed lake bed and there has been previous disturbance within the pit shell boundaries by exploration activities under numerous Program of Works (POW) approvals. The proposed clearing is regarded as a modest extent for a mining operation; this is achieved by several key factors:

- The Project is a satellite mining operation;
- Utilisation of shared accommodation facility and airstrip; and
- Backfilling one pit, reducing overall WRL footprint.

The Project will mine an estimated 7.85 Mt of ore and produce approximately 23.21 Mt of mine waste over the 9 year mine life. Mining will be undertaken in the following schedule:

- Excavation of the Bombora 1800 pit with mine waste placed on the Bombora 1800 WRL;
- Excavation of Bombora 700 pit with mine waste placed on the Bombora 700 WRL; and
- Excavation of Bombora 1100 pit with mine waste used to backfill Bombora 700 pit. Surplus waste will be placed on the Bombora 700 WRL; and
- Underground portals will be established within the Bombora 1800 pit at the conclusion of open pit mining.

The key characteristics of the Project are set out in the tables below (ES Table 1-1 and ES Table 1-2).

ES Table 1-1: Summary of the Project

Item	Description/ Summary
Project Title	Roe Project
Project Name	Lake Roe Gold Mining Pty Ltd
Short Description	Project to construct and operate a greenfield mine, located approximately 150 km east of Kalgoorlie in the Goldfields Region of Western Australia. The Project is located on the Yindi pastoral lease and on Kakarra Native Title lands in the vicinity of Lake Roe. The Project requires a total Disturbance Footprint of 557.7 ha within an Activity Envelope of 1,543 ha. The Project includes the following activities and elements: • Operation of an open pit and underground mining Project with associated ore stockpiles and waste rock landforms; • Mining related infrastructure including workshops, laydown areas and offices, mine dewatering infrastructure and explosives magazines;

Item	Description/ Summary
	• General Infrastructure including administration offices, power supply, communications systems and roads; and • Approximately 50 km service corridor (access road/haulage route).

ES Table 1-2: Project Content Elements

Project Element	Extent /Capacity
Key Mining Activities: • Open pits (BOM700, BOM1100, BOM1800); • Underground mine; and • Waste Rock Landforms.	Total clearing of native vegetation 92.8 ha.
Supporting Infrastructure: • Ancillary infrastructure; • Mine Ore Pads (MOPs); and • Stockpiles.	Total clearing of native vegetation 140.3 ha.
Transport/ Service Corridor: • Access road; • Haul road; and • Bores.	Total clearing of native vegetation 324.6 ha.
Mining	The Project will generate 7.85 Million tonnes (Mt) of ore and 23.21 Mt of mine waste rock during the 9 year mine life.
Waste Rock Landforms	Mine waste will be deposited onto two WRLs. One WRL will incorporate backfilling of one open pit.
Mine Dewatering	Dewatering will be required to allow open pit and underground mining. Dewatering volumes abstracted will be used for dust suppression and construction purposes, any excess will be discharged into evaporation ponds. There will be no discharge of dewatering to Lake Roe.

GHG emissions will not exceed 100,000 tonnes $CO_{2\text{-}e\text{-}}$ per year of operation. The GHG details for the Project are detailed in ES Table 1-3.

ES Table 1-3: Greenhouse Gas Emissions

Project Elements with Greenhouse gas Emissions	
Project Lifetime	
Emissions for the Project will not exceed the 100,000 tonnes $CO2_{\text{-}e}$ per year. Emissions will be generated from the following activities: • Diesel consumption of mobile equipment; • Diesel or gas consumption by generators; and • Land clearing, vegetation windrows and topsoil stripping.	Scope 1
Power will be supplied by diesel or gas generators on site. There will be no Scope 2 emissions. The onsite power station is a facility where 100% of power generated is consumed by the Project. The emissions from the power station are therefore categorised as Scope 1.	Scope 2
Scope 3 emissions will be reported annually in accordance with the GHG Protocol Corporate Value Chain Accounting and Reporting Standard.	Scope 3
Rehabilitation	
Progressive rehabilitation will be undertaken during the life of the Project.	
Other elements which affect extent of effects on the environment	
Maximum Project Life	12+ years
Construction Phase	6-12 months
Operations Phase	9 years
Decommissioning and Closure	1-3 years

Summary of Potential Impacts, Proposed Mitigation and Outcomes

During consideration of the Project the following key Environmental Factors were identified to be relevant for the Project:

- Flora and Vegetation;
- Terrestrial Fauna; and
- Inland waters.

Development of the Project will have minimal impacts on the identified key Environmental Factors above. The potential impacts, proposed management measures and predicted Outcomes are summarised in ES Table 1-4.

Ramelius is committed to minimising environmental impact of the Project. An avoidance and mitigation hierarchy has been developed to ensure the most appropriate environmental Outcomes are realised. Results from baseline surveys have been used to develop the mitigation and management strategies.

ES Table 1-4: Summary of Potential Impacts, Proposed Mitigation and Proposed Environmental Outcomes

EPA Factor	Flora and Vegetation
EPA Objectives	*To protect flora and vegetation so that biological diversity and ecological integrity are maintained*
Potential Impacts	Disturbance of 557.7 ha. None of the vegetation types to be cleared are considered threatened or priority ecological communities. Clearing of native vegetation will result in minor fragmentation of vegetation types at a local scale which may also reduce the condition of fringing vegetation along linear infrastructure. • Dust: can lead to decreased vegetation health by smothering; • Possible change of fire frequency/intensity which may have adverse impacts on adjacent vegetation; and • Introduction or spread of weed taxa.
Mitigation Hierarchy	**Avoid** Ramelius has considered opportunities to avoid impact to native vegetation. The following avoidance measures will be adopted: • No threatened flora, TECs, or PECs were identified in baseline surveys, avoiding impact to these factors; • Site layout avoids areas of vegetation where the Keighery Vegetation Scale is ≥ very good; • WRL and infrastructure designed to avoid location of P1 population of *Calandrinia quartzitica*. Exclusion zone and fencing placed

EPA Factor	Flora and Vegetation
	around the P1 population of *Calandrinia quartzitica* to avoid disturbance to these plants; • WRL designed to avoid riparian zone; • Realign service corridor with tenement L28/103 to avoid all *Eremophila arachnoides* subsp. t*enera* (P3); and • Adoption of the Ramelius Ground Disturbance Permit prior to the commencement of any ground disturbance work. **Minimise** Ground disturbance will be carefully managed to ensure compliance with regulatory approvals and to minimise environmental impact. Key strategies to minimise impact to include: • Ensuring all areas subject to ground disturbance are located within the approved Activity Envelope; • Clearing will not exceed approved clearing limits; • Vegetation clearing will follow best practice including progressive clearing to avoid soil erosion, excessive dust generation and weed introduction/spread; • Monitor vegetation health adjacent to disturbance areas during the life of the Project for possible indirect impacts; • Ongoing dust suppression on trafficable areas; • Adoption of the Ramelius Weed Management Plan including vehicle hygiene practices. **Rehabilitation** Rehabilitation activities will be undertaken progressively over the life of the Project. A Mine Development and Closure Proposal (MDCP) will be submitted to DMPE. At completion of the Project, Ramelius will meet closure Outcomes in accordance with the Mine Closure Plan.

EPA Factor	Flora and Vegetation
Residual impacts including assessment of significance	• No residual impact to the two conservation-listed species within the AE. • *Calandrinia quartzitica* (P1) in the mine tenement and *Eremophila arachnoides* subsp. t*enera* (P3) in the Service corridor. • Two *Tecticornia* species are recorded within the Activity Envelope; however, they could not be identified to species levels. Ramelius has altered the Project layout to avoid these *Tecticornia* populations. The Project is expected to result in minimal residual impacts on Flora and Vegetation under the EPA's Factor Guideline.
Proposed environmental Outcomes	Outcomes are predicted to align with the EPA objectives for Flora and Vegetation to "protect flora and vegetation so that biological diversity and ecological integrity area maintained" (EPA 2016). The following Outcomes are predicted: • A total clearing of 557.66 ha of vegetation for the whole Project; • No loss of terrestrial groundwater dependent ecosystems; • No record or loss of any Threatened or priority flora species; • No residual impact to two conservation significant species within the AE; and • No significant risk of an increase in weeds. By implementing management measures as outlined above, the residual impacts are not considered significant and no offsets are considered to be required.
EPA Factor	**Terrestrial Fauna**
EPA Objectives	*To protect terrestrial fauna so that biological diversity and ecological integrity are maintained*

EPA Factor	Flora and Vegetation
Potential Impacts	Vegetation clearing will result in the loss of some small fauna that are unable to move away from the clearing activity. Larger terrestrial animals and avian species will most often move to adjacent areas. Loss of fauna habitat is unlikely to have a significant impact when considered in a bioregional context. Other indirect impacts may include: • Habitat fragmentation and/or degradation through clearing and edge effect; • Dust plumes or salt migration widening the impact area; • Road fauna deaths; and • Increased abundance of introduced species through human activity.
Mitigation Hierarchy	**Avoid** To avoid indirect impacts to fauna habitat: • No threatened or conservation significant fauna species were recorded; • High quality habitats are preserved as the site layout design avoids removal of vegetation where the Keighery Vegetation Scale is ≥ very good; and • There will be no dewatering discharge into Lake Roe, avoiding impact to aquatic values. **Minimise** Minimisation strategies will include: • Adopt Fauna Management Plan; • Ground Disturbance Permit required prior to the commencement of ground disturbance activities; • Undertake a targeted survey for Southern Whiteface if vegetation clearing is undertaken between breeding period (July and October). If active nests are identified, an exclusion zone will be established; • Vegetation clearing will be conducted in accordance with Native Vegetation Clearing Permit conditions; and • Speed limits will be applied to reduce likelihood of fauna strikes on roads. **Rehabilitation** Rehabilitation activities will be undertaken progressively during the life of the Project.

EPA Factor	Flora and Vegetation
Residual impacts including assessment of significance	• No impact to conservation listed species; and • Bombora 1800 and BOM 1100 pit voids will have a minor reduction in playa surface area in Lake Roe.
Proposed environmental Outcomes	Outcomes are predicted to align with the EPA objectives for Terrestrial Fauna to "*To protect terrestrial fauna so that biological diversity and ecological integrity are maintained*" (EPA 2016b). The following Outcomes are predicted: • A total clearing of 557.66 ha of native vegetation for the whole Project; • No impacts to threatened or conservation significant fauna species within the Activity Envelope; • Preservation of high quality habitats as the site layout design avoids removal of vegetation where the Keighery Vegetation Scale is ≥ very good; and • No dewatering discharge into Lake Roe, avoiding impact to aquatic values. • By implementing management measures as outlined above, the residual impacts are not considered significant, and no offsets are considered to be required.
EPA Factor	**Inland Waters**
EPA Objectives	*To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.*
Potential Impacts	The following impacts were identified as potentially occurring: • Altered hydrology impacts to aquatic ecosystems; • Discharge of contaminants to surface water features; • Rainfall event transports accumulated salt load from dust suppression into surrounding environment; • Formation of post-mining pit lakes; and • Dewatering results in AMD.
Mitigation Hierarchy	**Avoid** • There will be no discharge into Lake Roe to avoid impacts to aquatic ecology;

EPA Factor	Flora and Vegetation
	• Bombora WRL footprint is designed to avoid riparian vegetation of the lake Roe shoreline; • Flood levees are designed to 5m high around the open pits. This provides a wall height equivalent to the 1% AEP plus a 1m freeboard level. This avoids flood water entering the pit voids and depriving this volume of fresh water entering the lake playa system; • Culverts installed into the causeway between open pits will avoid interruption of natural surface water flows into Lake Roe and surrounding claypans; • Baseline materials characterisation assessed mine waste as net acid neutralising (acid consuming), indicating a negligible risk AMD post closure; and • Site layout contemplates minimal vegetation clearing to avoid sediment loading of natural drainage flows. **Minimise** • Groundwater is hypersaline >200,000 mg/L Total Dissolved Solids (TDS). There are no other beneficial users or groundwater dependent ecosystems; • Dewatering will be managed in accordance with groundwater licence conditions; • Localised surface water infrastructure is designed to retain water quality and quantity by diverting surface flows around Project infrastructure and back into the downstream receiving environment; • Mine dewater will be pumped to evaporation ponds and used for dust suppression. Sediments will be contained in an unlined pond and excavated periodically; • Evaporation ponds will be HDPE lined to eliminate seepage; • The BOM 700 pit will be backfilled and become part of the WRL; and • A Ground Water Management Plan and Surface Water Management Plan will be developed. **Rehabilitation** The following will be implemented at part of the rehabilitation process: • At mine closure, minor diversion drains will be removed and pre-mining surface water flow paths reinstated;

EPA Factor	Flora and Vegetation
	• Causeway between open pits will be removed to restore natural surface flows; and • Flood bunds around open pits will remain in perpetuity to avoid surface inflow and to comply with abandonment bund requirements of Mining Act.
Residual impacts including assessment of significance	• Bombora 1800 and 1100 pit voids will remain at closure; • Hydrogeological regime will remain altered and the pits will act as groundwater sinks; • Management of these will be addressed through approvals under the Mining Act.
Proposed environmental Outcomes	Outcomes are predicted to align with the EPA objectives for Inland Waters to "*maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected*" (EPA 2018a). The following Outcomes are predicted: • No contamination to surface water or groundwater; and • No detrimental impacts to hydrological and ecological function.

Environmental Factors that are not key factors were also considered. These are presented in ES Table 1-5.

Based on the baseline studies undertaken and the avoidance and mitigation strategies employed, Ramelius considers that the Project can be appropriately managed through the Part V process and does not warrant Part IV assessment. Therefore, the expected outcome of the EPA's decision for this referral is "Not Assessed".

ES Table 1-5: Other Environmental Factors

Factor	Receiving Environment	Mitigation	Outcomes
Subterranean fauna	There are no subterranean fauna habitats (interconnected voids or open fractures), and the water quality is not conducive to subterranean fauna colonisation No stygofauna or troglofauna species were recorded during subterranean fauna surveys.	No mitigation measures required.	No impact.
Landforms	The regional landscape consists of undulating plains, granitic rocks and greenstone of the Yilgarn Craton. Soils range from calcareous loamy earths, red loamy earths, salt lake soils to red deep sands, yellow sands and shallow loamy duplexes. The dominant Mx43 land system represents 69.6% of the Activity Envelope. The gently undulating valley plains of the Carnegie land system, salt lakes and saline alluvial plains cover the remaining 30.4% of the Activity Envelope.	Mine waste is non-acid forming with low risk of metalliferous leaching, therefore minimising risk of contamination to the surrounding environment. The Bombora 700 pit will be backfilled reducing the overall Project footprint. The post mining landscape is designed with consideration of the surrounding topography and will be revegetated consistent with closure Outcomes.	No significant impact.
Terrestrial Environmental Quality	Geomorphology is closely related to the underlying geology. The Project sits along the south-western margin of Lake Roe bordered by numerous smaller peripheral claypans.	Impacts to the surrounding environment will be mitigated through the following initiatives: mined materials managed to prevent erosion and sedimentation	No significant impact.

Factor	Receiving Environment	Mitigation	Outcomes
	Most of the Project area is gently undulating and of subdued relief, with elevations between 310 to 350m AHD.	storage of hazardous chemicals, rubbish and materials will be managed to prevent contamination management plans will be implemented to ensure there is no increase of weed species or introduced fauna species. suitable topsoil and growth medium will be preserved for use in rehabilitation.	
Social Surroundings	The Project lies within the Kakarra Native Title claim area and the Yindi pastoral lease.	Ramelius will continue to engage with Traditional Owners in accordance with the Native Title Mining Agreement. Numerous surveys have been conducted and no Aboriginal Heritage sites were recorded within the Activity Envelope. An Agreement is also in place with the pastoral leaseholder.	No impact.

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APPENDIX O : Aboriginal Cultural Heritage (ACH) Survey Report 2025 (Confidential

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1 Introduction

1.1 Purpose and Scope

Lake Roe Gold Mining Pty Ltd is a wholly owned subsidiary of Ramelius Resources Pty Ltd (Ramelius). Ramelius is proposing to develop and operate a greenfield gold mine, located on the western margin of Lake Roe, in the eastern Goldfields region of Western Australia (WA). The Project is located approximately 150 kilometres (km) east of the City of Kalgoorlie Boulder and 65 km south-west of Ramelius owned Rebecca processing hub (Figure 1-1), where ore from the Project will be processed.

The purpose of this document is to support referral of the Project to the Environmental Protection Authority (EPA) in accordance with Section 38 (s38) of the *WA Environmental Protection Act 1986* (EP Act) by providing an evaluation of the potential impacts on the identified Environmental Factors related to the Project's implementation. The document will facilitate the EPA's decision as to whether the Project requires Assessment under section 38G of the EP Act.

Proposed mitigation strategies and an assessment of likely outcomes is provided in ES Table 1-4. In addition, information on the Project's potential impacts to Matters of National Environmental Significance (MNES) in accordance with the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) have been considered.

The document provides:

- Describes the key operational and infrastructure elements of the Project and their extent, that have the potential to have a significant (and/or unacceptable) impact on the environment;
- Describes the local and regional context and natural values within which the Project will be implemented, incorporating specific biological and technical studies that have been completed;
- Identifies and describes the potential impacts resulting from implementing the Project;
- Outlines overarching mitigation strategies the Proponent is proposing to avoid, minimise and manage potential adverse environmental impacts;
- Examines an array of early design and layout options that have been considered and how they have either been included or discarded;
- Considers both cumulative and holistic impacts resulting from the Project; and
- Enables a reliable and knowledge-based environmental impact assessment to be conducted.

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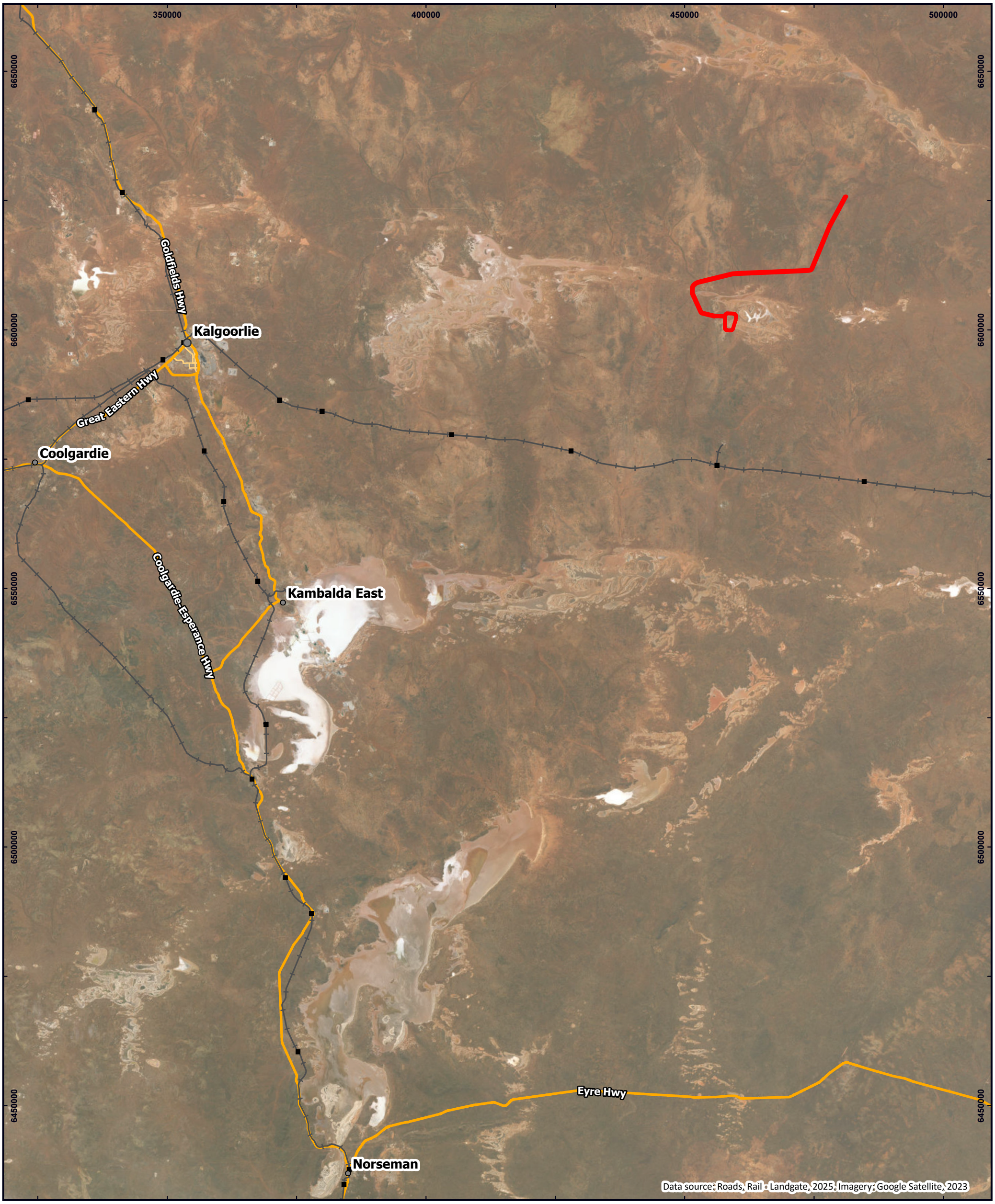


LEGEND

- Activity Envelope

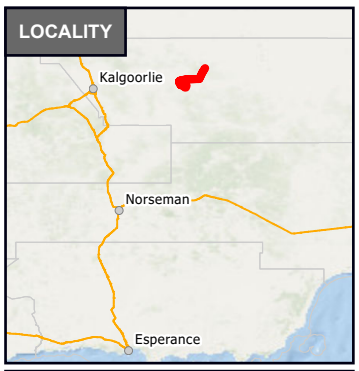
Rail Network

- Railway Stations
- Railway Lines

Western Australian Roads

- Freeway / Highway
- Main Road

LOCALITY



SITE LOCALITY

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

0 5 10 15 20 km

Scale @ A3: 1:700,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	L Carlsson
Project:	TE24094
Revision:	A
Date:	11/02/2026

Figure 1-1

talis consultants

1.2 Proponent Details

Ramelius is the proponent for this Project. The nominated contact details for this Project are provided in Table 1-1.

Table 1-1: Proponent Details

Item	Details
Company Name	Lake Roe Gold Mining Pty Ltd
Australian Business Number (ABN)	19 659 699 626
Registered Office address	Level 13, 58 Mounts Bay Road, Perth WA, 6000
Postal Address	PO BOX 2714, Cloisters Square, PO WA 6850
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1.3 Pre-referral Discussions

1.3.1 Environmental Protection Authority (EPA)

Ramelius met with the EPA Services on 30 January 2025 to provide a scope of the Project and seek feedback. The outcomes of this meeting are provided in Table 1-2.

Table 1-2: EPA Pre-referral Discussions Outcomes

Item	Notes
Agenda	Introducing the Project for the purposes of providing the EPA with a scope; seek guidance in relation to potential impact; and to seeking clarification on the approvals pathway.
Attendees	Helen Chernoff, Ramelius, Peter Ganza, Ramelius, Andrew Mack Talis, Annarie Boer EPA
Outcomes	A Project scope and timeline was presented to the EPA and various environmental considerations were discussed in particular impacts to Inland Waters. The EPA expressed no concerns however encouraged Ramelius to consider potential impacts to Lake Roe. (NB this referral does not contemplate any discharge to Lake Roe)

1.3.2 Department of Mines, Petroleum and Exploration (DMPE)

A scoping consultation was held with DMPE in August 2024. The outcomes are provided in Table 1-3.

Table 1-3: DMPE Pre-referral Discussions Outcome

Item	Notes
Agenda	Introducing the Project for the purposes of providing DMPE with a scope; seek guidance in relation to potential impact; and to seeking clarification on the approvals pathway.
Attendees	Helen Chernoff, Ramelius, Peter Ganza, Ramelius, Laura Sprenkles, DMPE
Outcomes	A Project scope and timeline was presented to the DMPE and various environmental considerations were. The DMPE requested that Ramelius provides a strategy for management of lake sediments in the mined waste materials. (NB WRL designs incorporate encapsulation of lake sediment waste type)

2 The Project

2.1 Background

The Project will be managed by Ramelius and will operate 24 hours a day, 7 days a week. The workforce will either commute from local centres such as Kalgoorlie or fly in-fly out and be accommodated at the nearby Ramelius owned Rebecca processing hub.

Historical holders of the Project area include Poseidon Limited, WMC Resources Ltd, Aberfoyle, Mt Kersey Mining NL, and Great Gold Mines NL. Exploration drilling undertaken between 1991 and 1998 identified a zone of strong gold anomalism extending over a potential distance of 4 kilometres beneath thin cover (5–10 metres). Recent exploration by the Breaker Resources NL (Breaker) commenced exploration in May 2015, and the primary discovery of Bombora was made in February 2016.

In April 2021, Breaker released a new Mineral Resource Estimate for the Project. In May 2023, Ramelius acquired Breaker and following extensive drilling propose development of the Project.

2.2 Land Tenure

The Project is located on the Yindi pastoral lease. Project tenure is detailed in Table 2-1 and shown in Figure 2-1.

Table 2-1: Roe Gold Project Tenure

Lease	Commence	Expiry	Area
M28/388	20/2/2019	19/2/2040	3,753 ha
L28/103	10/2/2026	9/2/2047	1,202 ha

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460000 470000 480000 490000

6640000 6630000 6620000 6610000 6600000

L 28/103

M 28/388

Data source: Roads - Landgate, 2025; Tenure - DMES, 2025; Imagery: Google Satellite, 2023

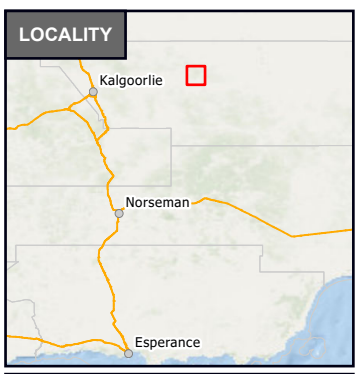
LEGEND

- Activity Envelope
- Mining Tenements

Western Australian Roads

- Minor Road
- Other

LOCALITY



PROJECT TENURE

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

km 0 1 2 3 4

Scale @ A3: 1:150,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	L Carlsson
Project:	TE24094
Revision:	A
Date:	11/02/2026

Figure 2-1

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2.3 Project Justification

The Project is a satellite mining operation; ore will be transported offsite for processing. The footprint is consolidated through utilising shared infrastructure (aerodrome and accommodation village). Ramelius will continue to support social and economic development within the region through:

- Royalties and taxation payments;
- Agreement with Native Title holder;
- Agreement with pastoral leaseholder;
- Demand for goods and services, prioritising local providers;
- Community contributions, sponsorship and in-kind support; and
- Employment opportunities

2.4 Project Key Elements

Development of the Project will include:

- Three open pits, one underground mine and associated mine ore pads (MOP) WRLs
- Site infrastructure including workshops, administration buildings, laydown areas, water management infrastructure, explosives magazine, power supply, communications tower and transport corridors

The key components for the Project are described in the following sections.

2.4.1 Disturbance Footprint

Table 2-2 shows the Disturbance Footprint for the Project split into disturbance type and by tenement.

Table 2-2: Disturbance Area

Item	Tenement	Tenement area (ha)	Description	Disturbance (ha)
Mine Site	M28/388	3753.5	MOPs	13.4
			Mine voids	41.3
			WRLs	51.4
			Infrastructure	108.4
			Topsoil Stockpiles	18.5
M28/388 subtotal				**233.1**
Service corridor	L28/103	1202	Access Road	324.6

Item	Tenement	Tenement area (ha)	Description	Disturbance (ha)
Total		**4955.5**		**557.7**

The Project's Activity Envelope is defined as:

- For the mine tenement M28/388 - the red polygon shown on Figure 2-5. This is 600ha in area; and
- For the Service Corridor on tenement L28/103 - the 200m wide tenement width for the length of the service corridor. This is 943ha in area.

The Disturbance Footprint is 557.7 ha within a total Activity Envelope of 1,543 ha.

2.4.2 Mining Methods

Open Pit Mining

Open pit mining will occur at three open pits (Bombora (BOM) 1800, BOM 1100 and BOM 700). The open pit layout is presented as Figure 2-2.

Mining will commence by stripping and stockpiling surface soils for future use in rehabilitation activities. Some soils, such as lake sediments and some of the soil management units, described in Section 11 of this document, exhibit high dispersive or saline properties and are not suitable for rehabilitation purposes. These soils will be stripped and encapsulated within the WRLs shown in Figure 2-2.

Open pits will be mined using drill and blast methods. Excavators and haul trucks and ancillary equipment will be used. Ore will be hauled to the MOP and transported offsite for processing.

Mined waste will be hauled to the WRLs. Competent mine waste will be utilised to construct water management infrastructure and abandonment bunds.

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458000 459000 460000

6603000 6602000 6601000 6600000

WRL

Mine Pit

Mine Pit

Mine Pit

WRL

Mine Pit

Data source: Roads - Landgate, 2025; Imagery: Google Satellite, 2023

LEGEND

Activity Envelope

Site Layout

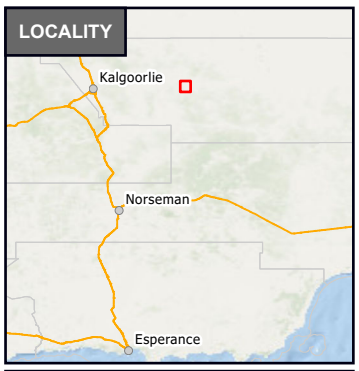
Waste Rock Landform

Mining Void

Western Australian Roads

Other

LOCALITY



0 100 200 300 400 km

PITS & WRLS LAYOUT

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

0 100 200 300 400 m

Scale @ A3: 1:11,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	V Mugabe
Project:	TE24094
Revision:	A
Date:	17/02/2026

Figure 2-2

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Underground Mining

Underground mining will commence at the completion of open pit mining. The underground mine will be accessed via three portals located within the BOM 1800 pit. Underground workings will extend north of BOM 1800 pit and south beneath the BOM 1100 and BOM 700 pits to a depth of 550m below surface (-244mRL). (Figure 2-3)

Mining will be undertaken with mobile diesel-powered fleet and equipment as well as electric hydraulic drills. Primary ventilation and exhaust will be installed within the BOM 1800 pit.

2.4.3 Dewatering

Mining will occur below the groundwater level requiring dewatering of the open pit and underground mines. Ramelius engaged AQ2 to conduct a hydrogeological dewatering study to investigate a zone of enhanced permeability, confirm local aquifer parameters and to determine likely dewatering rates.

Groundwater is hypersaline, with values recorded at over 200,000mg/L Total Dissolved Solids (TDS) and has no other beneficial uses.

The predicted groundwater inflows are considered relatively low although will progressively increase as mining transitions from open pit to underground mining. Dewatering will be used for dust suppression and other mining requirements and is estimated to be 1,300kL/day (15L/s). Excess volumes will be pumped into evaporation ponds. Evaporation ponds will be constructed 2m below surface with excavated material used to construct 2m high perimeter bunding. No dewatering will be discharged to the environment.

Considering the generally low permeability environment, the local bedrock aquifer is highly unlikely to sustain borehole pumping and the use of pit-perimeter dewatering bores is not feasible (AQ2,2025b). Ramelius will therefore capture inflows using in-pit sumps, with a contingency pumping capacity for peak rainfall periods. Contained water will be pumped into sediment ponds to settle suspended solids before use in dust suppression. Surplus water will be pumped to the evaporation ponds.

Ramelius will apply for a Works Approval and subsequent operating licence for Category 6 – Mine dewatering >50,000t/yr under Part V of the EP Act.

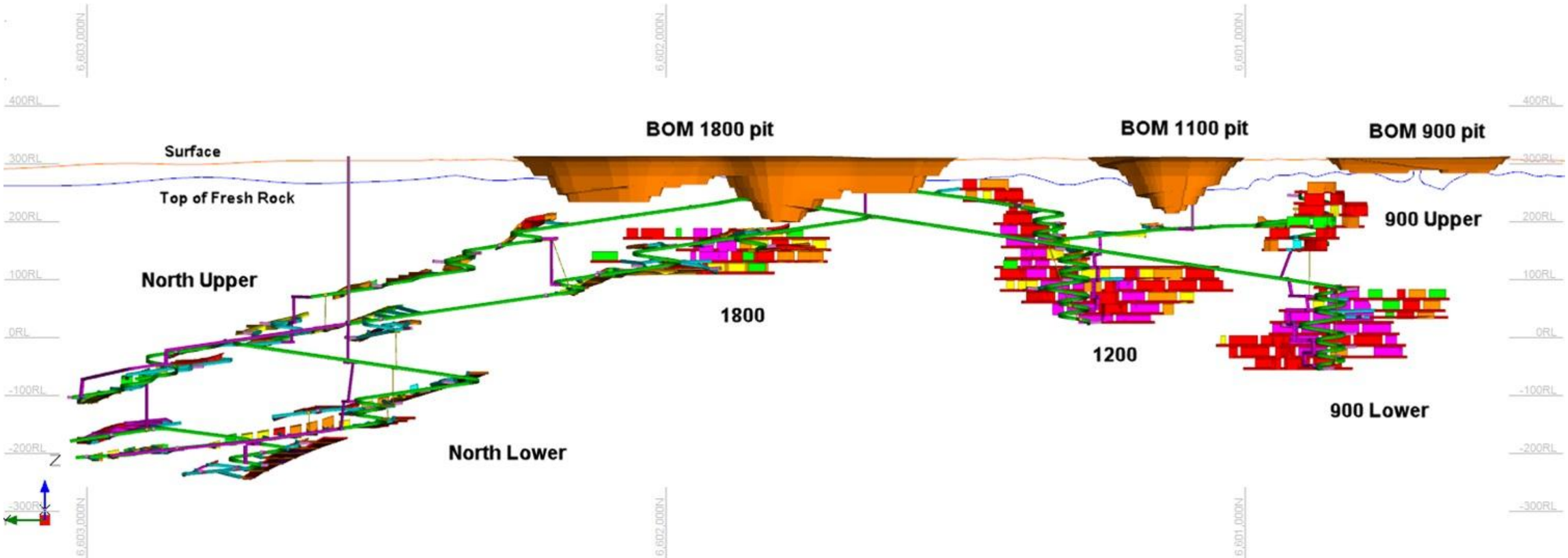


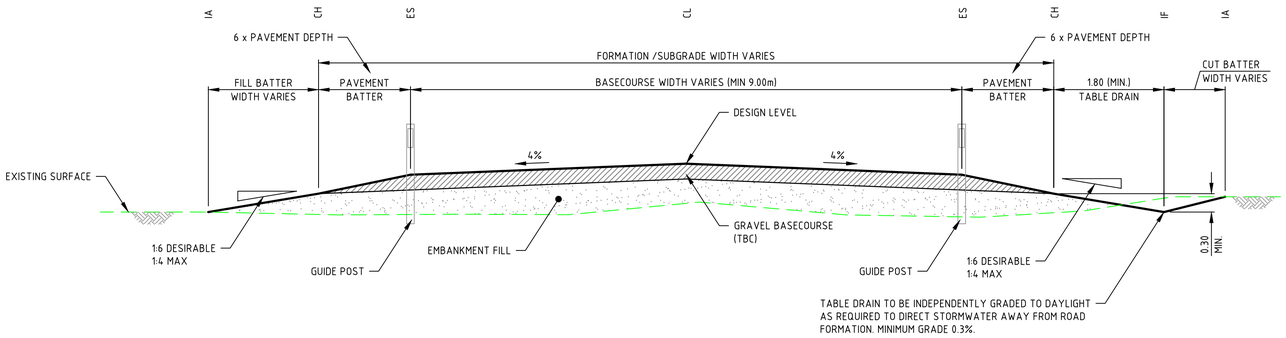
Figure 2-3:Roe Underground Mine Long Section

2.4.4 Service Corridor

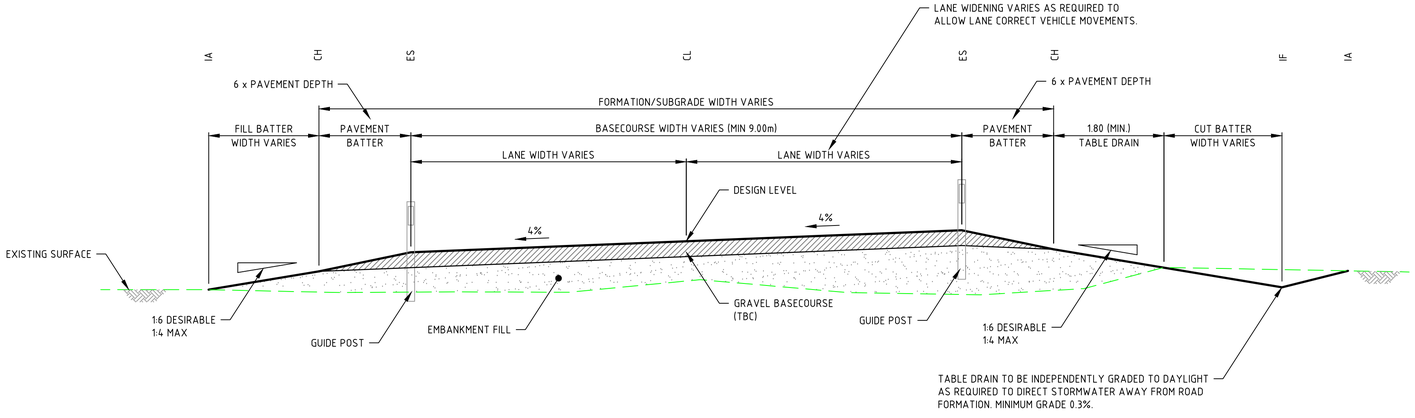
A 50 km service corridor will be constructed on tenement L28/103 to access site and transported ore. The road will be constructed to a width of between 25-30m. A conceptual cross section of the road design is shown in Figure 2-4. A clearing envelope of up to 70m allows for windrows, vegetation and topsoil stockpiles as well as turning bays, water pipeline and truck watering fill up points. The 200 m wide tenement width provides flexibility for the road to avoid any sensitive environmental values identified in baseline surveys. The proposed road route is shown in Figure 2-1.

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION
3. TYPICAL SECTIONS TO BE USED AS A GUIDE/INFORMATION ONLY AND TO BE AMENDED AS REQUIRED TO SUIT DESIGN, ROAD, AND EXISTING CONDITIONS



TYPICAL FORMATION
1:50



SUPERELEVATION TYPICAL FORMATION
1:50

GUIDE POST SPACING

GUIDEPOSTS SHALL BE PLACED AT KEY POINTS REGARDLESS OF CULVERT LOCATIONS AND THEN ADDING ADDITIONAL GUIDEPOSTS AT CULVERT SITES. IF THE CULVERT IS LOCATED WITHIN 15m OF A NORMAL GUIDEPOST LOCATION, THE GUIDEPOST SPACING SHOULD BE ADJUSTED TO MATCH WITH THE CULVERT SITE.

STRAIGHTS:

- THE SPACING SHALL BE ARRANGED SO THAT AT LEAST ONE PAIR OF DELINEATORS SHALL AT ALL TIMES BE VISIBLE, EXCLUDING ANY POSTS AND DELINEATOR CLOSER THAN 40 METRES.
- ALONG STRAIGHTS, NOT AT CREST LOCATIONS, SPACING OF GUIDEPOSTS AND DELINEATORS SHALL BE EITHER 150 METRES OR A MAXIMUM OF 300m AS PER AUSTRALIAN STANDARD 1742.2-2009 CLAUSE 4.2.4.

CURVES:

GUIDEPOSTS ON CURVES SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING TABLE:

CURVE RADIUS (m)	SPACING (m)	
	ON OUTSIDE OF CURVE	ON INSIDE OF CURVE (NOTE 1)
	6	12
100 – 199	10	20
200 – 299	15	30
300 – 399	20	40
400 – 699	30	60
700 – 1199	60	60
1200 – 2000	90	90
>2000	150	150

TABLE NOTES:

1. EACH POST ON THE INSIDE OF A CURVE IS PLACED OPPOSITE A POST ON THE OUTSIDE OF THE CURVE WHEREVER PRACTICABLE
2. GUIDEPOSTS SHALL BE PLACED ON BOTH SIDES OF THE ROAD AT THE START AND FINISH OF THE CURVE
3. GUIDE POSTS ARE SPACED UNIFORMLY

FLOODWAYS:

1. IN ADDITION, A PAIR OF GUIDE POSTS SHOULD BE PROVIDED APPROXIMATELY EVERY 25m TO DELINEATE THE EDGE OF THE ROAD PAVEMENT

Figure 2-4

REV	DATE	REVISION DESCRIPTION	CHK	APP	DRG No.	REFERENCE DRAWING TITLE
A	08.01.26	ISSUED FOR INFORMATION	JB	JB		

CLIENT: RAMELIUS RESOURCES

SCALE @A1 HORIZ: 1:50

PROJ. DATUM HORIZONTAL: N/A VERTICAL: N/A

LOCAL AUTHORITY: SHIRE OR CITY

SHAWMAC

INFORMATION ONLY

PROJECT INFORMATION	
DESIGNED BY:	N/A
DRAWN BY:	JG
PROJECT No.	2511025
PROJ. MANAGER	JB

RAMELIUS RESOURCES
TYPICAL SECTIONS
SHEET 1 OF 3

DRAWING NUMBER: 2511025-SK-001

REV. A

SCALE 1:50

A1

FILE REF: \\shawmacserver\NewData\Jobs Active 2025\CE - Roads & Drainage\Ramelius_Wind Farm Access_2511025\4. Drawings\4.5 Sketches\2511025-SK-001 to 003

LAST SAVED BY: Jgonzalez DATE: 8 January 2026 9:02 AM

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458000
459000
6603000
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TS
Evaporation Ponds
Sprayfield
Ancillary Infrastructure
Evaporation Ponds
Laydown
Magazine
Ancillary Infrastructure
Haul Road
TS
Evaporation Ponds
Settling Pond
MOP
MOP
WRL
Mine Pit
Abandonment Bund
Mine Pit
Road
MOP
Mine Pit
WRL
TS
Ancillary Infrastructure

Data source: Roads - Landgate, 2025; Imagery: Google Satellite, 2023

LEGEND

- Activity Envelope

Site Layout

- Transport or Service Infrastructure Corridor
- Laydown or Hardstand Area
- Topsoil Stockpile
- Mine Operational Area
- Magazine
- Other Cleared Land
- Water Management Structures
- Waste Rock Landform
- Mining Void

LOCALITY

Kalgoorlie
Norseman
Esperance

0 100 200 300 400 km

PROPOSED SITE LAYOUT

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

0 100 200 300 400 m

Scale @ A3: 1:11,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	V Mugabe
Project:	TE24094
Revision:	B
Date:	11/02/2026

Figure 2-5

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2.4.5 Infrastructure

2.4.5.1 *Site Infrastructure*

The site layout is shown in Figure 2-5. Site infrastructure will include buildings (offices, first aid, workshop, stores warehouse), vehicle wash-down facility with oily water separator, waste oil storage tank, hardstand, go bay, vehicle parking, laydown, ablutions and water tanks and power supply generators. All infrastructure will be located within the yellow area shown in Figure 2-5.

2.4.5.2 *Power Supply and Distribution*

Generators will provide 5MW of power to the site. The demand falls under the Prescribed Premises Category 52 threshold; electric power generation-premises (other than premises within category 53 or an emergency or standby power generating plant) on which electrical power is generated using a fuel. 20 megawatts or more in aggregate (using natural gas) or 10 megawatts or more in aggregate (using a fuel other than natural gas). A Works Approval and Licence is therefore not required. Power supply infrastructure will be located within the yellow area shown in Figure 2-5.

2.4.5.3 *Fuel Storage*

Diesel fuel for power supply and the mining fleet will be transported to site and stored in self-bunded tanks, compliant with AS 1940:2017. A Dangerous Goods licence application will be submitted to the Department of Local Government, Industry Regulation and Safety. Fuel supply infrastructure will be located within the yellow area shown in Figure 2-5.

2.4.5.4 *Waste Management*

A wastewater treatment plant (WWTP) will be constructed to service ablutions. The capacity of water treatment falls under *Category 85- Sewage facility threshold of >20kL but < 100kL/day* and therefore a Works Approval or Licence/Registration will not be required Department of Health (DoH) approval will be required.

An onsite landfill will be required for domestic/putrescible items and general waste. An application will be made to DWER for a Works Approval and subsequent Registration for a *Cat 89- Putrescible Landfill* to be located within the WRL.

Workshop waste oil, oily waste and e-waste will be removed from site by a licenced contractor for recycling or disposal.

2.5 Transport Corridors

Site access will be via a service corridor on tenement L28/103. A network of internal roads on tenement M28/388 will also connect mining and administration areas. Powerlines and pipelines are included in this footprint and consideration of the impacts of this corridor is provided as part of this assessment.

The corridor is shown in Figure 2-5.

2.6 Rehabilitation and Closure

Effective closure and rehabilitation planning are required to minimise the ongoing impact to the environment and develop self-sustaining natural ecosystems. A Mine Closure Plan (MCP) will be submitted to the DMPE.

Rehabilitation and closure Outcomes focus on ensuring that mining activities are rehabilitated and closed in a manner to make them physically safe to humans and animals, geotechnically stable, geo-chemically non-polluting and non-contaminating, and capable of sustaining the agreed post-mining land use with consideration of cultural values and without unacceptable liability to the State.

Rehabilitation, both at the end of the mine life and progressively throughout the life of mine, will be carried out to ensure there are no ongoing adverse environmental impacts. Topsoil and competent NAF rock is recognised as an important resource for successful rehabilitation. Topsoil types and volumes are well understood and will be stockpiled for future rehabilitation works.

Maximising topsoil recovery during site establishment is important to ensure that there is sufficient topsoil available for rehabilitation. Topsoil will be stripped from cleared areas to a depth of approximately150mm and stockpiled no greater than 2m high to preserve nutrients and prevent erosion of materials.

Competent rock resources are required for construction of stormwater infrastructure, abandonment bunds and placement as cover for the WRL's. Materials will also be managed to provide protection for topsoil stockpiles during operation.

The MCP will discuss specific details relating to the decommissioning and rehabilitation of each domain to achieve closure Outcomes. Table 2-3 provides a summary of closure domains and Table 2-4 summarises rehabilitation commitments for each domain.

Table 2-3: Closure Domains

Domain	Disturbance Description	Area (ha)
Open Pits	There will be 2 open pits (BOM 1800, BOM 1100), that will remain as pit voids at closure. BOM 700 pit will be backfilled. This domain also includes the Bombora Underground.	41.3
Waste Rock Landforms	There will be 2 Class 1 WRLs (BOM 1800, BOM 1100) remaining at closure.	51.4
Infrastructure	Infrastructure includes buildings and workshops, water management infrastructure and service corridors. Infrastructure will be decommissioned and removed from site at closure except for the surface water diversion and bunds.	140.4

Table 2-4: Rehabilitation Commitments

Domain	Mine Feature	Rehabilitation/ Closure Commitment
Open Pit	Open Pits Underground	All pits will remain at closure except for BOM 700 pit that will be backfilled to surface and covered by the BOM 700 WRL. Abandonment bunds, safety bunds and signage will be installed to prevent inadvertent access by public and fauna. The post-closure evolution of the final pit lakes is typical of mining pits in the Goldfields region. External runoff of stormwater will be excluded and diverted around the Project area. The post-closure pits will become a groundwater sink with no risk of groundwater or surface water discharge. Hydraulic flow into these pits via groundwater and surface water levels and quality will continue to be monitored to confirm that post-closure management activities have been successful. Equipment will be decommissioned and removed from site. Access ramps will be blocked by construction of a bund across the upper portion of the ramp at the crest of pit. Entrances to the underground mine will be backfilled and sealed via non-trafficable steel gates. Vertical openings to underground workings (ventilation raises, escape shafts) will be sealed with a concrete cover. A bund, fence and appropriate signage will be erected.
Waste Rock Landform		All saline waste materials will be capped with NAF competent material to ensure slope stability. The batters will be pushed profiled to form a linear slope with an overall angle of 15 degrees. Spread topsoil on the batters and top surface of the WRL's to a depth of ~200 mm. The top surface of the WRLs will be built with an inward-sloping surface. Construct a 2m high crest bund on the top surface to minimise water shedding over the batters. Cells will be

Domain	Mine Feature	Rehabilitation/ Closure Commitment
		constructed on the top of the WRLs to discourage concentration of storm water in one area. Shallow rip top WRL surfaces and slopes on the contour to assist with water infiltration and provide niches for seeds. Apply native seed mix to outer slopes and top surface of WRLs.
Infrastructure	Buildings & Workshops	Buildings will be decommissioned and removed from site except where there is an agreement in place with the pastoral lease holder and Pastoral Lands Board for buildings to remain. Decommissioning activities include: Disconnect power/water supply and communications networks. Empty contents of fuel and waste oil tanks and buildings. Remove equipment for salvage; dispose of rubbish in landfill, set aside any recyclable materials. Decommission and empty any sewage/water treatment infrastructure. Segregate waste hydrocarbons, chemicals, hazardous wastes or contaminated materials for collection and disposal off-site by a licensed contractor, where necessary. Break up concrete foundations, pads, slabs, pathways, service pits and containment infrastructure and bury within the WRL. Re-contour the disturbed footprint to restore the natural surface drainage as far as practicable and deep rip to promote infiltration, respread topsoil, rip, and apply native seed mix.
	Water Management	Surface water management infrastructure including flood protection bunds and diversion drains will remain post-closure. Flood bunding that is determined to be redundant at closure will be removed. Removal of rock aprons where pipelines and roads intersect water courses. Decommission and remove equipment (gensets, pumps, pipelines and tanks) for reuse or disposal. Respread topsoil, rip and apply native seed mix to rehabilitated areas.
	Evaporation Ponds	Pump excess water stored in evaporation ponds to the pit at closure. HDPE liner within each pond will be folded inwards and buried, alternatively, the HDPE liner will be removed and disposed of in the landfill. Evaporation pond walls will be flattened, and the footprint recontoured to restore the natural surface drainage as far as practicable. Topsoil respread, ripped and native seed mix applied. Decommission and remove equipment (gensets, pumps, pipelines) for reuse or disposal.

Domain	Mine Feature	Rehabilitation/ Closure Commitment
	Roads & Access Tracks	Where it is determined that roads and tracks are redundant, they will be rehabilitated as follows: Remove signs, fences, culverts and delineators for salvage or disposal, set aside any recyclable materials. Re-contour the disturbed footprint and deep rip to restore the natural surface drainage as far as practicable and respread topsoil, rip, and apply native seed mix.

3 Consideration of Alternative Designs

The site layout is designed to minimise impact to the surrounding environment. Ramelius has progressively redefined the Project layout informed by results of baseline surveys and consideration of alternative designs.

Processing of Ore Offsite

Ore will be processed offsite which reduces the Disturbance Footprint by excluding features such as a processing plant and tailings storage facility which would typically support this activity.

Accommodation and Aerodrome

The workforce will commute to site and be accommodated at Ramelius' neighbouring Project. The use of shared accommodation and aerodrome avoids duplication of infrastructure thereby reducing the overall Disturbance Footprint.

Dewatering Discharge

The initial concept was to discharge surplus dewatering onto Lake Roe and was the trigger to consult with the EPA.

A lengthy detailed options analysis was undertaken to identify the storage capacity of pans in Lake Roe as well as assessing potential impacts to the lake ecology and fringing riparian vegetation. Conclusions from the options analysis were as follows:

- Most of the pans could not viably sustain discharge due to the storage capacity of the pan being insufficient to prevent discharge breaching the zone of riparian vegetation. This could be as a direct impact during the discharge process itself or create a legacy 'indirect impact' with the possibility of a large rain event mobilising the deposited salt and inundating fringing vegetation with hypersaline water;
- Large pans capable of containing the discharge volume were identified but found to contain higher aquatic biota values. Therefore, the accumulated salt load was identified as a potential risk whereby rainfall events could mobilise the deposited salt and possibly change the salinity phases of the pan, altering the initial low saline phase crucial for many aquatic groups to complete their life cycle; and
- Defining a 'low discharge' option was found to be acceptable. This option assessed an emergency / short term scenario such as when cyclonic rainfall eliminates the need for site dust suppression usage for a short period. Discharge to a pan for short periods per year was found to not deposit a salt load beyond the range of salinities experienced in many goldfield salt lakes and therefore considered to be within the assimilative capacity of lake biota and fringing vegetation. While this option was

considered acceptable for periodic discharge, it does not address the sustained dewatering requirement of the Project.

Based on the above it was decided that sustained discharge to Lake Roe was not viable due to potential impacts to the hydrological regime of the lake and its biota. The decision was made to construct a number of land-based evaporation ponds to retain surplus dewatering volume and dispose of the dried salt in the base of completed open pit voids or encapsulate in the WRL. The design and location of evaporation ponds is discussed in Section 10.3.2.2. This avoids all likely impacts from mine dewatering discharge to the environment.

Disturbance Footprint

To avoid impacts to potential significant flora or vegetation the Disturbance Footprint has been refined to protect those features. These changes include:

- Relocate BOM1800 WRL away from lake edge to provide a buffer, avoiding disturbance to fringing riparian vegetation;
- Exclusion zone delineated around a population of P1 plants north of the BOM1800 WRL. This avoids disturbance to this flora species; and
- The 70m wide service corridor has been meandered within the 200m wide tenement L28/103 to avoid all populations of P3 plants.

4 Legislative Framework

4.1 Environmental Impact Assessment Process

The *Environmental Protection Act 1986* (EP Act) is the primary environmental legislation governing environmental protection and impact assessment in Western Australia. Part IV of the EP Act provides for the consideration and assessment of Projects that may, or will, have a significant impact on the environment. The Part IV process is administered by EPA Services of DWER. This Referral Supporting Document has been prepared in accordance with EPA Instructions for 'Referral of a Project under section 38 of the *Environmental Protection Act 1986*' (EPA 2021).

4.2 Other Approvals and Regulation

Other approvals and regulation relevant to the Project are presented in Table 4-1.

Table 4-1: Other Required Approvals

Agency	Relevant Legislation	Environmental Factor Regulated/Affected	Relevant Approval Requirement
DWER	*Environmental Protection Act 1986*	Prescribed Premises	A works approval application will be submitted for: Category 6 Mine Dewatering; and Category 89 Putrescible landfill site. The prescribed premises will be managed in accordance with Licence and Registration conditions.
	Rights in Water and Irrigation Act 1914	Surface water and groundwater resources	A 5C Licence to abstract groundwater has been applied for on tenement M28/388 and is pending approval. Water abstraction will be managed in accordance with the groundwater licence conditions.
	Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (WA)	Clearing native vegetation.	Clearing of native vegetation will be managed in accordance with the conditions of a clearing permit *(delegated authority under Mining Act 1978)* if the EPA decision on this referral is 'not assessed'.
DMPE	*Mining Act 1978*	Biodiversity, flora, fauna, and ecosystem; Water resources; Mine closure	MDCP and MCP will be submitted to DMPE. All Project tenure is granted.
LGIRS	*Dangerous Goods Act 2004 (DG Act)*	The storage, transport, and use of Dangerous Goods on site	Storage and handling of chemicals and hydrocarbons is managed in accordance with the Dangerous Goods Act. Storage and handling of explosives is managed in accordance with the Explosive Storage Licence.
DBCA	*Biodiversity Conservation Act and Regulations 2018*	DBCA Managed Lands	No impacts to DBCA lands.
DPLH	*Aboriginal Heritage Act 1972 (AH Act)*	protection of Aboriginal heritage values	Surveys completed showed that no heritage sites are located within the Activity Envelope.

Agency	Relevant Legislation	Environmental Factor Regulated/Affected	Relevant Approval Requirement
DOH	*Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste)* Regulations 1974	Waste water treatment	Application for a wastewater treatment system will be submitted to DoH
DWER	*Contaminated Sites Act 2003*	Land and water contamination sources	Identification of contaminated sites during operation and investigation and reporting at closure if required.

5 Existing Environment

5.1 Regional Context

The Eastern Goldfields subregion lies on the Yilgarn Craton's Eastern Goldfields Terrain, which is described as gently undulating plains with a subdued relief, interrupted in the west with low hills and ridges of Archaean greenstones and in the east by a horst of Proterozoic basic granulite. The underlying geology is of gneisses and granites eroded into a flat plane covered with tertiary soils and with scattered exposures of bedrock. Calcareous earths are the dominant soil group and cover much of the plains and greenstone areas. A series of large playa lakes in the western half are the remnants of an ancient major drainage line (Cowan, 2001).

The Eastern Murchison subregion comprises the northern parts of the craton's Southern Cross and Eastern Goldfields Terrains and is characterised by internal drainage and extensive areas of elevated red desert sandplains with minimal dune development. Salt Lake systems are associated with the occluded paleodrainage system. Broad plains of red-brown soils and breakaways complexes as well as red sandplains are widespread. Vegetation is dominated by Mulga woodlands and is often rich in ephemerals, hummock grasslands, saltbush shrublands and Samphire shrublands (McKenzie, May and McKenna, 2002).

5.1.1 Regional Geology

The Project is located on the western margins of Lake Roe. The Lake Roe catchment area is approximately 1,515 km^2 along the southern limit of the Raeside-Ponton Catchment. Lake Roe is an endorheic salt lake with a surface area of some 90 km^2, approximately half of which comprises islands of low relief up to 10m high (Groundwater Resource Management, 2018: AQ2,2025a).

The greenstone geology can be divided into the Yindi (Western) domain and the Edjudina (Eastern) domain. The Yindi Domain is centred around the Roe Shear Zone corridor. Lithology is dominated by mafic amphibolite, fine-to coarse-grained felsic-intermediate schists, and turbiditic siltstone-shale (AQ2, 2025b).

The Edjudina domain is distinguished from the Yindi domain by major lithological, metamorphic and structural changes that occur across the interpreted western branch of the Claypan Shear Zone. A major lithological distinction is the presence of large volumes of high-Fe tholeiitic mafic rocks, mostly in the form of fractionated dolerite sills (AQ2,2025b). The Bombora Sill is the largest of these bodies and hosts most of the gold mineralisation at Bombora. The main body of the Bombora Sill is 150-300m in true thickness at the centre of the Activity Envelope, but magmatic and/or structural duplication creates a sill complex up to ~500m true thickness towards the southern end of the Resource area (Landloch, 2025).

5.1.2 Local Geology

Figure 5-1 shows local geology in the area around the Project site. The dominant host lithology at Bombora is the Bombora Sill, a fractionated quartz dolerite. In the deposit area, the sill is consistently ~ 300m in thickness, dips ~ 45 to 60° east (flatter dips towards the southern fold hinge) and is overturned (lounging westward/down). The sill was emplaced into a 5 to 15m wide fine grained interflow sedimentary unit (sulphide shale, siltstone) deposited between a volcanic sequence (hanging wall; stratigraphically below the sill) and a low-iron basalt-dolerite sequence (footwall; stratigraphically above the sill). Three major faults, the Argus Thrust, the Inlet Fault, and the Peninsula Fault, significantly modify the architecture of the Bombora Sill at the deposit scale (AQ2, 2025b).

Gold mineralisation at Bombora is largely strata bound, occurring preferentially in an iron-rich granophyric quartz dolerite zone of the Bombora Sill (western zone) over a 3 km strike length. Mineralisation is hosted in three main lode orientations: north northwest striking, subvertical steep lodes; gently north to northeast dipping flat lodes and moderately west dipping west lodes. Lamprophyre dykes run the full length of Bombora, mainly in a 30 to 40m wide moderately west dipping swarm, subparallel to mineralised west lodes (Ramelius, 2024). Individual dykes are typically 1 to 10 in thickness. The lamprophyres are interpreted to post-date most or all gold mineralisation (AQ2, 2025b).

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456000 464000 472000 480000

6632000 6624000 6616000 6608000 6600000

Data source: Roads - Landgate, 2025. Geology - Geoscience Australia, 2025. Imagery: Google Satellite, 2023

LEGEND

Activity Envelope

Surface Geology (GA)

fault, concealed

Abe: Basalt, high-Mg basalt, minor mafic intrusive rocks; some andesite; agglomerate; mafic schist; amphibolite; dolerite; komatiitic basalt; carbonated basalt; basaltic andesite; mafic rock interleaved with minor granitic rock

Ade: Mafic intrusive rocks, medium to coarse-grained; layered mafic to ultramafic intrusions - dolerite, gabbro, olivine gabbro, peridotite, pyroxenite, leucogabbro, quartz dolerite, quartz gabbro, gabbronorite

Afe: Quartz-feldspar (meta-) porphyry, porphyritic microgranite; rhyolite, dacite, rhyodacite, andesite; agglomerate, breccia tuff; felsic schist; felsic volcanic and volcaniclastic rocks; dacite and rhyodacite tuff; dacite porphyry;

Ag: Undifferentiated felsic intrusive rocks, including monzogranite, granodiorite, granite, tonalite, quartz monzonite, syenogranite, diorite, monzodiorite, pegmatite. Locally metamorphosed, foliated, gneissic. Local abundant mafic and ultramafic inclusions

Agh: Monzogranite, granodiorite, tonalite, quartz monzonite; in places recrystallised and foliated; some mixed granite and country rock assemblages; high-Ca granite

Aghd: Equigranular biotite monzogranite; High Ca granite

Aghy: Fine- to medium-grained, equigranular monzogranite. High Ca granite.

Ags: Syenite, alkali-feldspar syenite, hornblende quartz monzonite, syenogranite, monzogranite; syenite group

Aje: Felsic (silicic or intermediate) volcaniclastic conglomerate, sandstone, tuff, breccia; metasedimentary rock derived from or with felsic volcanogenic provenance; minor volcanic rocks and quartz-feldspar schist.

Ase: Phyllitic schist, siltstone, sandstone, greywacke, pelite, conglomerate, quartzite, phyllite, shale, slate, claystone, chert, minor felsic volcanic and volcaniclastic rocks; arkose, para- and orthoamphibolites; rare banded iron formation

Aty: Amphibolite, mafic schist, mafic rock intercalated with granite, para-amphibolite; metabasalt, metagabbro, metapyroxenite and metadolerite; Youanmi Terrane

Ave: Felsic and mafic volcanic rocks, some granite intercalations

Awe: Undivided sedimentary (non-volcanic) and felsic volcanic rocks

Czl: Ferruginous duricrust, laterite; pisolitic, nodular, vuggy; may include massive to pisolitic ferruginous subsoil, mottled clays, magnesite, reworked products of ferruginous and siliceous duricrusts, calcrete, gossan; residual ferruginous saprolite

Czs: Sand or gravel plains; may include some residual alluvium; quartz sand sheets commonly with ferruginous pisoliths or pebbles; local clay, calcrete, laterite, silcrete, silt, colluvium

Qa: Channel and flood plain alluvium; gravel, sand, silt, clay; may be locally calcreted

Qdlu: Quartz and gypsum dunes and mounds (kopi); may include minor silt, sand, gravel, and clay flats adjacent to playas; locally includes some playa sediments

Qrc: Colluvium and/or residual deposits, sheetwash, talus, scree; boulder, gravel, sand; may include minor alluvial or sand plain deposits, local calcrete and reworked laterite

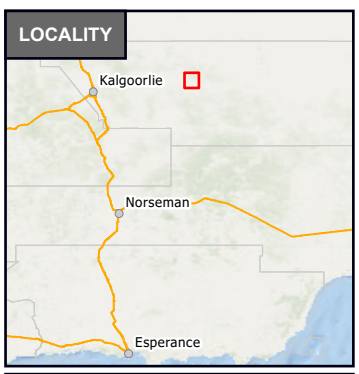
Qt: Lake and swamp deposits; mud, silt, evaporites, limestone; minor sand, peat

Western Australian Roads

Minor Road

Other

LOCALITY



REGIONAL GEOLOGY

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

km 0 1 2 3 4

Scale @ A3: 1:120,000

Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	V Mugabe
Project:	TE24094
Revision:	A
Date:	11/02/2026

Figure 5-1

talis consultants

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5.1.3 Geomorphology

The Project is mapped along the south-western margin of Lake Roe, which forms part of the Roe Palaeodrainage system. This system extends from west of Kalgoorlie, with drainage flowing eastward toward Lake Yindarlgooda and Lake Roe (Landloch, 2025). The Salt Lake playas along this drainage system contain clay, silt, and sand, interbedded with evaporite minerals such as gypsum and halite. The playas are naturally saline but are sometimes bordered by numerous smaller peripheral claypans that often contain non-saline water (Campagna, 2007; Stantec, 2020).

Most of the Project is gently undulating and of subdued relief, with elevations between 310 to 350 m AHD (metres above Australian Height Datum) (AQ2,2025).

5.2 Bioregion

Under the Interim Biogeographic Regionalisation of Australia (IBRA), the Project lies within the Eastern Goldfields (COO3) subregion of the Coolgardie Bioregion and the Eastern Murchison (MUR1) subregion of the Murchison Bioregion (DCCEEW,2020). Table 5-1 shows the remaining extent of pre-European vegetation association occurring within the Project, as specified in the 2018 Statewide Vegetation Statistics (DBCA, 2019).

Table 5-1: Beard Vegetation Associations

Location	IBRA Subregion	Vegetation Association	Pre-European Extent Remaining	Vegetation Description
Mine Activity Envelope	Eastern Goldfields (COO3)	Zanthus_125	99.83	Salt lake, lagoon, clay pan
		Zanthus_480	100	Maireana spp. with *Acacia aneura, A. papyrocarpa, Allocasuarina cristata*
		Zanthus_481	99.99	Woodland / Shrub (mallee) steppe
Service Corridor Activity Envelope	Eastern Murchinson (MUR1)	Barlee-20	99.78	Mulga *Acacia aneura* and associated species

5.3 Land Systems

Land systems are defined as an area or group of areas throughout which there is a recurring pattern of topography, soils and vegetation (Tille 2006). An assessment of land systems provides an indication of the occurrence and distribution of vegetation types within and surrounding the Ramelius (Pringle *et al.*, 1994).

The Project lies within the Kalgoorlie Province. The landscape consists of undulating plains (with some sandplains, hills and salt lakes) on the granitic rocks and greenstone of the Yilgarn Craton. Soils range from calcareous loamy earths and red loamy earths with some salt lake soils to red deep sands, yellow sandy earths, shallow loams and loamy duplexes. Vegetation communities are predominately Eucalypt woodlands with some acacia-casuarina thickets, mulga shrublands, halophytic shrublands and spinifex grasslands (Tille, 2006).

The Kalgoorlie Province is further divided into six soil-landscape zones, with the Project area located within the Kambalda Zone (265) and the Norseman Zone (266).

The Kambalda zone (265) contains flat to undulating plains (with hills, ranges and some salt lakes and stony plains) on greenstone and granitic rocks of the Yilgarn Craton. Soils consist of calcareous loamy earths and red loamy earths with salt lakes soils and some red brown hardpan shallow loams and red sandy duplexes. Vegetation includes red mallee, blackbutt-salmon gum-gimlet woodlands with mulga and halophytic shrublands and some spinifex grasslands (Tille, 2006).

The Norseman Zone (266) is described as undulating plains and uplands (with some sandplains and salt lakes) on granitic rocks of the Yilgarn Craton. Calcareous loamy earths, Yellow sandy and loamy earths, Red loamy earths, Red deep sands and Salt lake soils. Salmon gum-redwood-merrit-red mallee-gimlet woodland with acacia casuarina thickets (and some mulga shrublands and spinifex grasslands). Located in the southern Goldfields between Koolyanobbing, Menzies, Zanthus (Trans-Australian Railway), Norseman and Lake Hope (Tille, 2006).

The soil landscape zones are further divided into soil landscape systems. The Project is located within 16 landscape systems (Table 5-2) (Botanica 2025).

Table 5-2: Kambalda Zone Land Systems

Zone	Landscape System/ Mapping Unit	Description
Kambalda (265)	Bandy (265Ba)	Gritty-surfaced plains and low outcrops of granite with scattered acacia shrublands.
	Bevon (265 Bv)	Irregular low ironstone hills with stony lower slopes supporting mulga shrublands.
	Bunyip (265 By)	Gilgaied drainage tract, draining greenstone hills supporting mixed halophytic shrublands occasionally with a black oak overstorey.
	Campsite (265 Cm)	Alluvial plains supporting eucalypt woodlands with halophytic understoreys and acacia shrublands.
	Carnegie (265 Ca)	Salt lakes with fringing saline alluvial plains, kopi dunes and sandy banks, supporting halophytic shrublands and acacia tall shrublands.

Zone	Landscape System/ Mapping Unit	Description
	Deadman (265 De)	Calcareous plains supporting acacia, black oak and mallee shrublands/woodlands adjacent to salt lake systems.
	Doney (265 Do)	Calcareous alluvial plains with eucalypt woodlands adjacent to salt lake systems.
	Gumland (265 Gm)	Extensive pedeplains supporting eucalypt woodlands with halophytic and non-halophytic shrub understoreys.
	Gundockerta (265 Gu)	Extensive, gently undulating calcareous stony plains supporting bluebush shrublands.
	Helag (265 Hg)	Hardpan plains and central drainage tracts with mulga shrublands and minor chenopod shrublands.
	Illaara (265 Il)	Plains with ironstone gravel or calcrete mantles supporting eucalypt woodlands and mulga-casuarina shrublands.
	Leonora (265 Le)	Low greenstone hills and stony plains supporting mixed chenopod shrublands.
	Moriarty (265 Mo)	Low greenstone rises and stony plains supporting chenopod shrublands with patchy eucalypt overstoreys.
	Mx43 atlas (265 k9)	Gently undulating valley plains and pediments; some outcrop of basic rock
	Yowie (265 Yo)	Sandy plains supporting tall shrublands of mulga and bowgada with patchy wanderrie grasses.
Norseman (266)	Kirgella (265 Ki)	Gently undulating sandplains, with scattered granite outcrop supporting spinifex hummock grasslands, mulga shrublands and mallees.

5.4 Climate

The Project is within the Eastern Goldfield subregion which is characterised by an arid climate with hot summers and cool winters (Pringle et al 1994). Temperatures in the eastern Goldfields region range from below zero in winter to greater than 40°C during summer. Rainfall is typically erratic but more regular in autumn and early winter than in spring and summer. Annual average Class A pan evaporation rate of 2,420 mm and an annual average Morton's shallow lake evaporation rate of 1,560 mm (from SILO interpolation at Cowarna Downs) (AQ2 2026).

The nearest weather station with long term climate data is the Kalgoorlie Boulder Airport Station (No: 012038), located approximately 150 km west of the Project. The long-term average rainfall for station is 265.6 mm, with the highest rainfall falling in February and the lowest in September. Mean maximum temperature for the region is 33.70 with the highest temperatures experienced in January and mean minimum temperature are experienced in July at 5.10. Figure 5-2 is a representation of the long-term climate for the Project area (BOM,2025b).

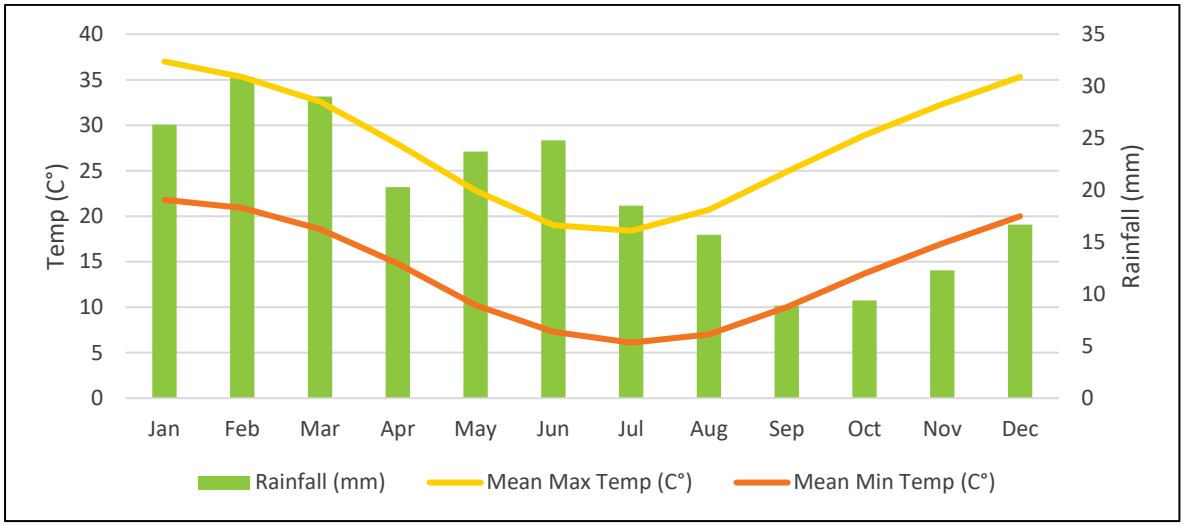

Figure 5-2: Longterm climate data for Kalgoorlie Boulder Airport Station (N0:012038)

5.5 Conservation Areas

There are no National Parks, Nature Reserves, Ramsar wetlands of international importance or sites listed in the Directory of Important Wetlands (DIWA) within 40 km of the Project. There are no Environmentally Sensitive Areas (ESA) as listed under the EP Act recorded within or surrounding the Project (Botanica, 2025).

The nearest gazetted Reserve - Wallaby Rocks Timber Reserve (R1974) is located approximately 10 km south of the Project. The reserve is gazetted for the purposes of 'timber-sandal wood' by the Conservation and Parks Commission of WA (Botanica,2025).

5.6 Water Supply

Water for dust suppression and mining activities will be sourced from mine dewatering. Potable water will be transported to site.

5.7 Inland Waters

5.7.1 Hydrology

Lake Roe is not classified as a RAMSAR wetland or Wetland of National Importance. It is not listed in any conservation reservation and is not considered an Environmentally Sensitive Area (ESA). It is not a DIWA wetland and is listed as a 'Non-perennial Lake' in the Surface Hydrology (Regional) data set (Geoscience Australia, 2015). According to the BoM Atlas of Groundwater Dependent Ecosystems database there are no known or potential aquatic GDEs in the Project area (BoM 2025a, Botanica 2025). As such, its value must be considered on its merits based on the assessment and survey work completed as part of this referral.

The region lies within an arid zone characterised by large dryland creek systems and highly variable hydrological conditions, which range from prolonged droughts to episodic flood events. Due to these extreme variables, there are no natural permanent watercourses or wetlands within the Project (AQ2,2025a). The drainage lines are small and intermittent, flowing only after major rainfall events. Drainage is considered internal, terminating in salt lakes and clay pans and surface drainage is only significant immediately following rainfall events (AQ2,2025a). Following cyclonic thunderstorms, local flooding may occur.

The Project is located within the catchment area of Lake Roe which is a complex of interconnected smaller lake sub-areas which span approximately 90 km in length (west to east), situated within a broader paleo-drainage system that historically flowed from northwest to southeast. Over time, the gradient of the paleo-drainage system has reduced, and the climate changed, the system has become a number of salt lakes which become terminal drainage points under most runoff events (AQ2,2025a).

Lake Roe receives surface water inflow from a series of catchments that surround the lake. There is one minor ephemeral drainage line which drains into Lake Roe, located within the Project.

5.7.2 Hydrogeology

5.7.2.1 *Regional Hydrogeology*

The occurrence of groundwater across the region is mainly associated with the following main aquifer systems:

- **Weathered/ fractured bedrock**: low yielding, saline to hypersaline aquifer associated with partially weathered bedrock (i.e. saprock zone) at the base of weathering profiles (especially over coarse-grained felsic rocks), vuggy secondary minerals such as a calcrete and silcrete developed within weathered bedrock, and fresh fractured bedrock related to local and regional structures (i.e. fractures, faults, shear zones). This aquifer varies in extent and hydraulic properties, depending upon structural integrity, degree of weathering, bedrock depth and lithology. The weathered bedrock is generally in hydraulic connection with the underlying fractured bedrock;
- **Tertiary-age sediments**: high yielding, hypersaline aquifer associated with alluvial sands and gravels deposited within the base of the paleo valleys (paleochannel aquifers). This aquifer can provide stable, long-term sustainable yields, due to 'high' permeability, large groundwater storage and significant leakage from the overlying clays and surrounding basement rocks; and
- **Quaternary age sediments**: deposited along modern drainage lines - low yielding, shallow and intermittent brackish to saline aquifer associated with the alluvial and

lacustrine deposits, which are sporadically saturated after heavy rainfall events, with the water table close to the surface in playa lake environments (AQ2,2025b).

The water table across the region ranges from less than 1 mbgl in playa-lake environments to more than 40 mbgl in elevated areas (AQ2,2025b). However, the regional water table may be absent in high areas where the weathered and fractured zone is unsaturated or where fractures are poorly developed. Groundwater flow is generally to the east towards the major palaeodrainage systems, the ephemeral lakes and salt pans. Directions of groundwater flow and variation in salinity are closely related to topography (AQ2,2025b).

Recharge to the aquifers is via rainfall infiltration and is thought to be minimal due to high evaporation rates and low vertical infiltration rates. Groundwater discharge occurs mainly by evaporation from salt lakes, with a small amount by throughflow within the paleochannel aquifers. Groundwater in the region is of saline or hypersaline quality. Lower salinity concentrations typically occur in low elevated areas of enhanced recharge and are typically located within unweathered fractured bedrocks (Kern, 1995) or in the uppermost reaches of paleochannel systems (AQ2,2025).

5.7.2.2 *Local Hydrogeology*

The local and regional bedrocks have little to no primary aquifer properties and aquifer potential is associated with fracture and weathering induced secondary permeability and porosity (AQ2,2025b). No evidence of the Roe basal paleochannel aquifer has been recorded within the footprint of the proposed mining area. Hydrological field investigations completed for the Project concluded that:

- Bedrock within the proposed underground mining areas essentially comprise fresh quartz dolerite, lamprophyre and dolerite;
- Quartz dolerite is generally extremely strong, while lamprophyre is generally very strong;
- Within assessed geotechnical domains, the underground rock mass at Bombora is typically of good quality. Limited intervals of very poor-quality rock are recorded across assessed domains, and these zones are generally related to drill intersections of discrete shear structures, often comprising broken rock and smooth chlorite infilled defect surfaces;
- The fresh bedrock across the Project is mostly massive (unfractured). There were some fractures identified in the northern part of the deposit. Most of assessed fractures occur between 300 to 450 mbgl with only minor isolated zones of fractures encountered below 450m depth;
- All fractures identified were clean, tight, with no large wide fractures and with only localised Fe staining. There were some zones of intense, closely spaced fracturing,

which often corresponded to veins (<1m in length). Overall, the bulk of the core had fractures spaced apart, with no evidence of any water movement; and

- Overall, the permeability of the bedrock below 150m depth is likely to be low to very low (in order of 10^{-3} to 10^{-4} m/d) and would decrease with increasing depth (AQ2,2025b).

The depth to groundwater across the Project ranges from 0.2m below ground level (mbgl) to 5.4m mbgl, with shallower water levels recorded proximal to the lake area (0.2 to 1.4mbgl) and deeper water levels recorded on the land (1 to 5.4 mbgl). Groundwater quality assessment indicates that:

- Groundwater is hypersaline with electrical conductivity (EC) values ranging from 200,000 µS/cm (WPB26) to 210,000 µS/cm (WPB33 and WMB29). Total Dissolved Solids (TDS) values were reported between 220,000 to 260,000 mg/L;
- Laboratory measurements of pH ranged from 6.8 to 7.1, indicating that the groundwater is mildly acidic to neutral;
- The groundwater is dominantly a sodium chloride type, with subsidiary high concentrations of magnesium and sulphate. It is also extremely hard, with total hardness between 30,000 to 37,000 mg/L $CaCO_3$;
- The sampled waters have a very low variation in chemical composition based on the calculated percentage equivalents of the major ions; and
- Concentrations of metals were mostly low (below the limit of reporting), with only iron and manganese concentrations being elevated in some samples, together with lower levels of zinc and potassium (AQ2,2025b).

5.8 Flora and Vegetation

The vegetation of the COO03 subregion is described as: Mallees, Acacia thickets and shrub heath on sandplains. Diverse Eucalyptus woodlands occur around salt lakes, on ranges and in valleys. Salt Lake support dwarf shrublands of samphire. Woodlands and Dodonaea shrubland occur on basic granulite's of the Fraser Range. The area is rich in endemic Acacias (Cowan, 2001). The vegetation of the MUR01 subregion is described as: dominated by Mulga woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands (Cowan, 2001a).

The Activity Envelope intersects four pre-European vegetation associations according to DPIRD's (2019) mapping. The data can be segregated by state, region or local government area. Table 5-3 summarized the extent of pre-European vegetation remaining with the local government area of the City of Kalgoorlie Boulder and displayed on Figure 5-3. The pre-European vegetation associations that occur within the Project all have over 99.5% of their

extent remaining in Western Australia (Department of Biodiversity Conservation and Attractions, 2019).

Table 5-3: Pre-European Vegetation Associations

Vegetation Association	Pre-European System	Description	City of Kalgoorlie Boulder		
			Original extent (ha)	Current extent (ha)	% Remaining
Eastern Murchison (MUR01) subregion					
20	Barlee	Low woodland, open low woodland or sparse woodland. Mulga *Acacia aneura* and associated species.	728,313	726,233	99.71
Coolgardie (COO03) subregion					
125	Zanthus	Bare areas, salt lake, lagoon, clay pan.	112,542	112,244	99.74
480	Zanthus	Saltbush/bluebush with scattered low trees Mulga, other Wattle, Casuarina, Atriplex spp. Maireana spp. with *Acacia aneura, A. papyrocarpa, Allocasuarina cristata.*	77,360	77,360	100.00
481	Zanthus	Woodland/Shrub (Mallee) Steppe. Mosaic: Medium woodland; Salmon Gum & Red Mallee/Hummock grasslands, Mallee steppe; Red Mallee over Spinifex *Triodia scariosa*	656,688	656,590	99.99

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458000 459000 460000

6603000 6602000 6601000 6600000

Calandrinia quartzitica

Tecticornia sp Roe 2

Tecticornia sp Roe 3

Calandrinia quartzitica

Calandrinia quartzitica

481

480

125

480

Data source: Roads - Landgate, 2025. Pre-European Vegetation - DPIRD, 2025. Imagery: Google Satellite, 2023.

LEGEND

Activity Envelope

Site Layout

Conservation Listed Flora

Priority 1

Calandrinia quartzitica

Convervation Status TBD

Tecticornia sp Roe 2

Tecticornia sp Roe 3

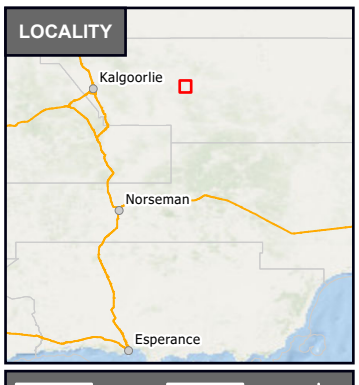
Pre-European Vegetation

125: Salt lake, lagoon, clay pan

480: Saltbush and/or bluebush with scattered low trees

481: Woodland / Shrub (mallee) steppe

LOCALITY



PRE-EUROPEAN VEGETATION (MAIN MINE SITE)

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

0 100 200 300 400 m

Scale @ A3: 1:12,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	L Carlsson
Project:	TE24094
Revision:	B
Date:	25/02/2026

Figure 5-3A

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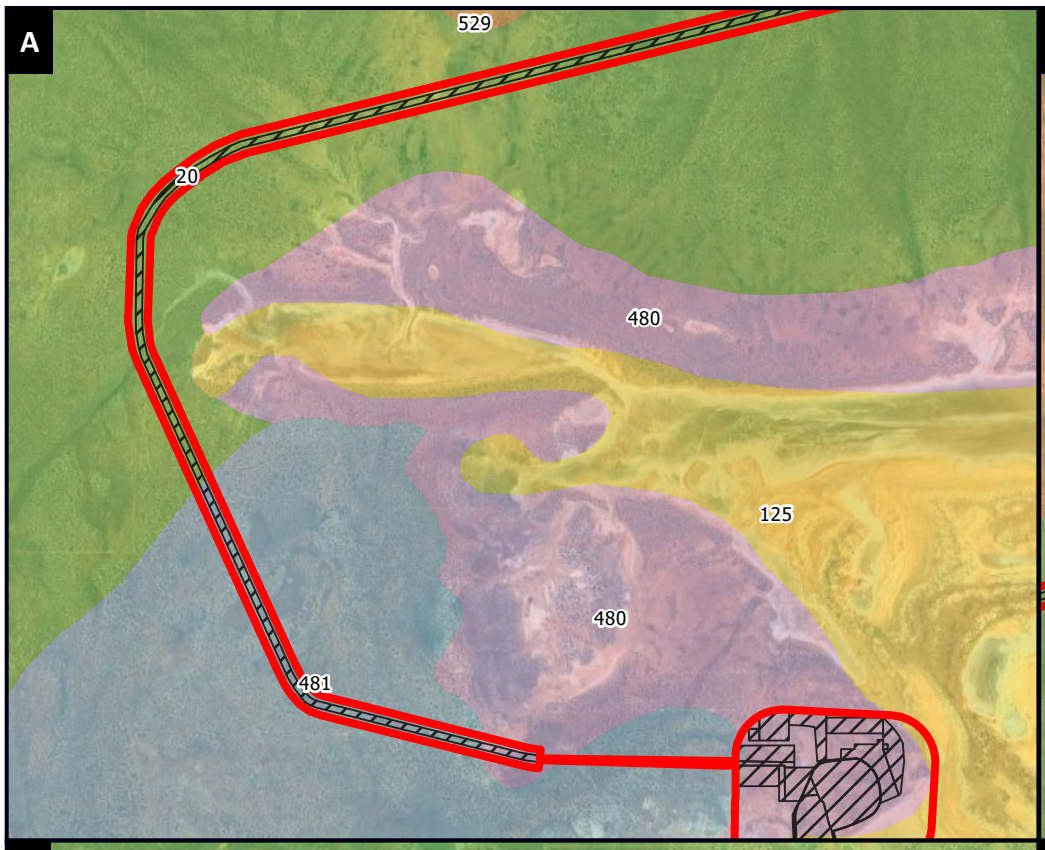
A



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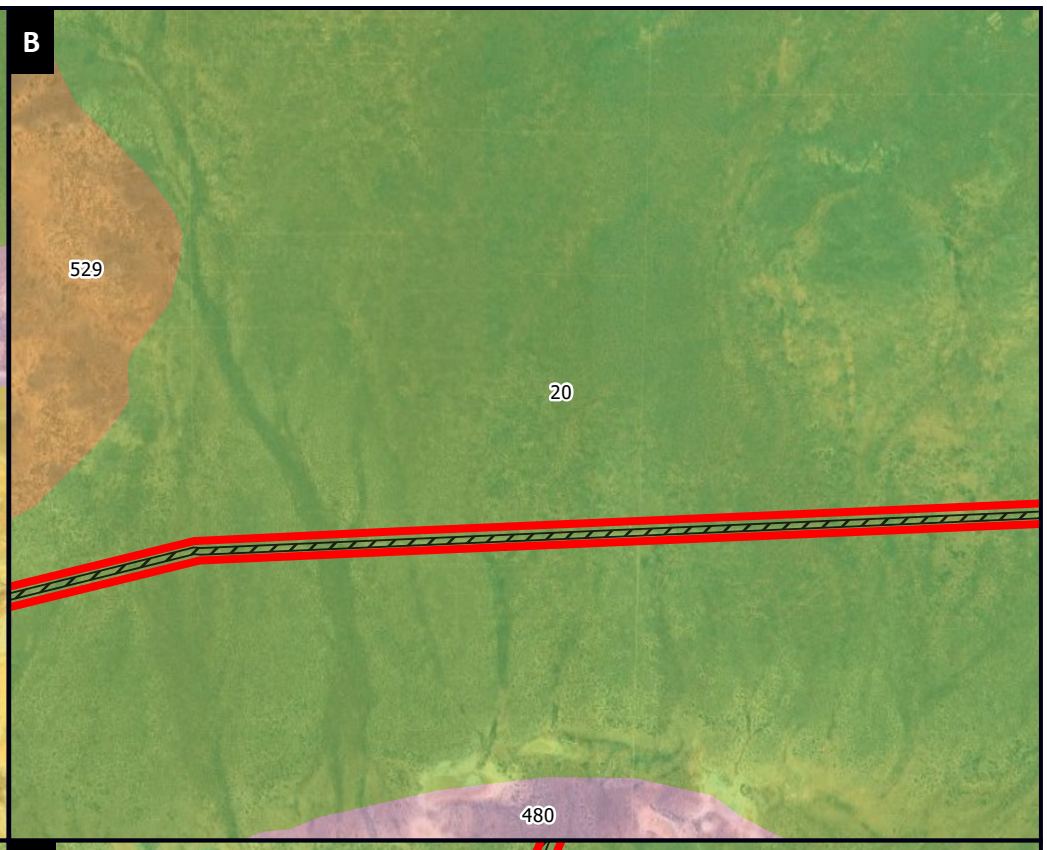

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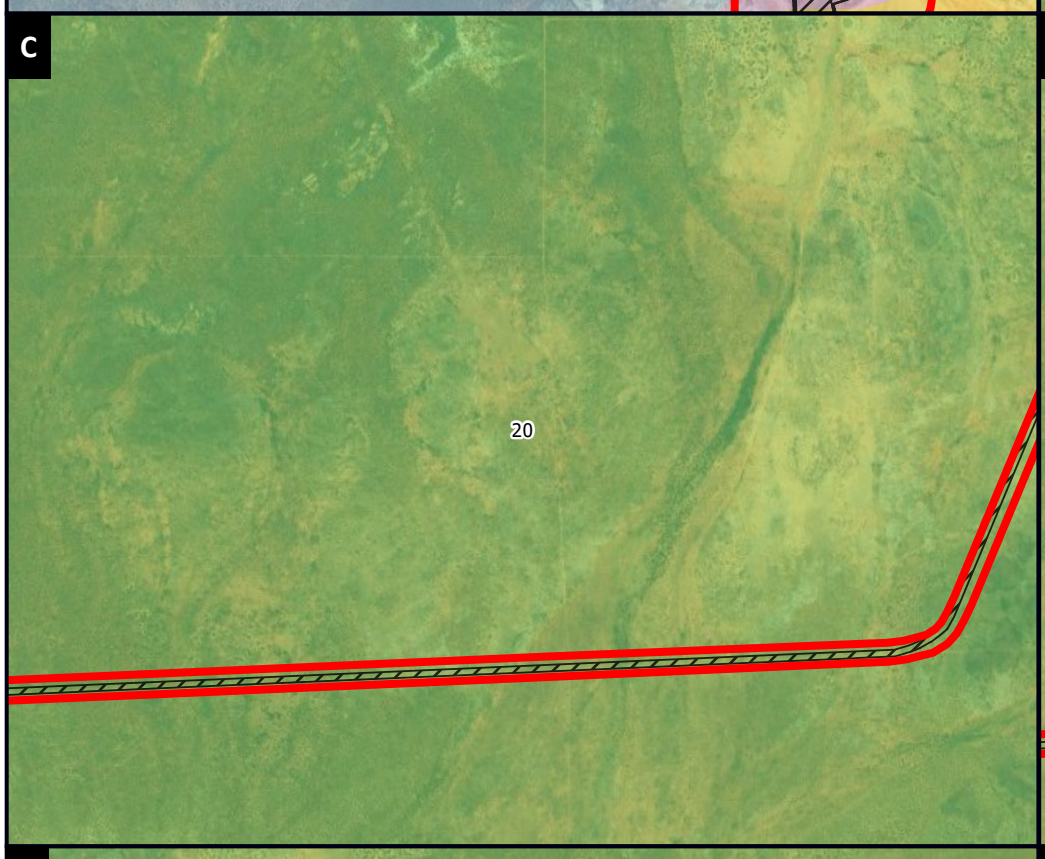

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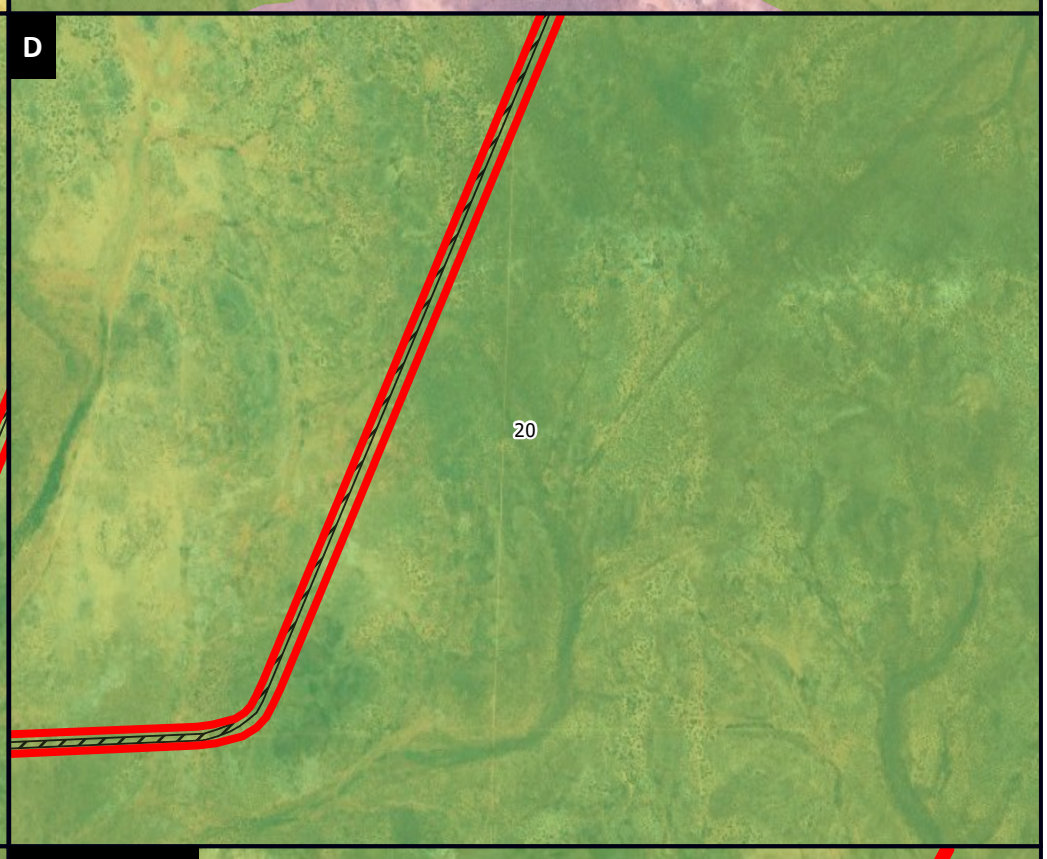

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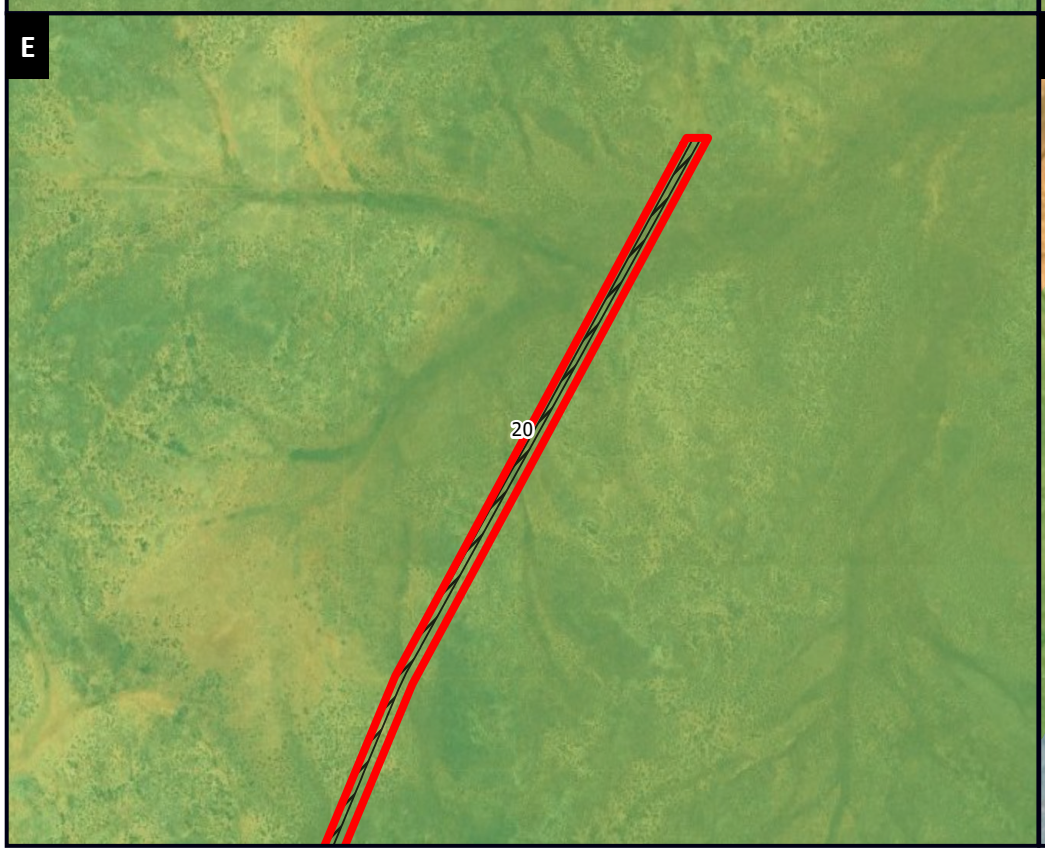
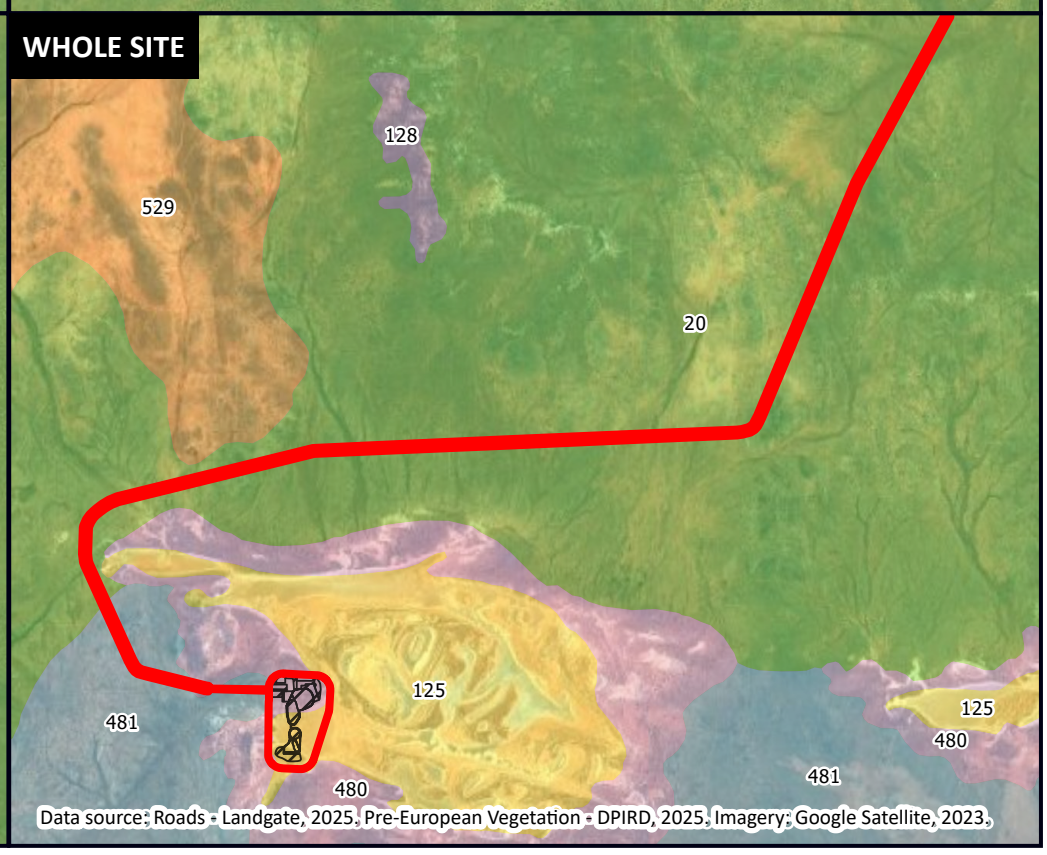


WHOLE SITE



Data source: Roads - Landgate, 2025. Pre-European Vegetation - DPIRD, 2025. Imagery: Google Satellite, 2023.

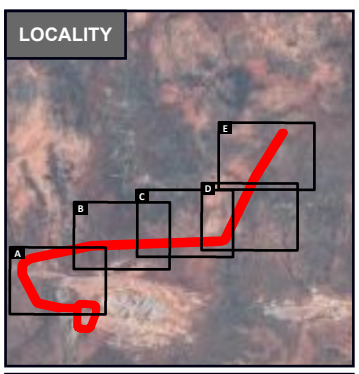
LEGEND

- Activity Envelope
- Site Layout

Pre-European Vegetation

- 20: Low woodland, open low woodland or sparse woodland
- 125: Salt lake, lagoon, clay pan
- 529: Saltbush and/or bluebush with scattered low trees
- 480: Saltbush and/or bluebush with scattered low trees
- 481: Woodland / Shrub (mallee) steppe
- 128: Rock

LOCALITY



km
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PRE-EUROPEAN VEGETATION (HAUL RD)

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

Scale @ A3: 1:80,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	L Carlsson
Project:	TE24094
Revision:	B
Date:	25/02/2026

Figure 5-3B

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5.8.1 Vegetation Types

A total of 22 vegetation types were identified within the Activity Envelope (Botanica,2025). These vegetation types were identified within three landform types and comprised of six major vegetation groups. Ninety-six flora taxa, representing 45 genera was identified within the Project tenements. Nine annual species were present. Two introduced flora was observed within the service corridor (Botanica, 2025). Based on the vegetation condition rating scale specified in the EPA Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment December 2016 (EPA, 2016f), vegetation condition was rated as 'completely degraded' to 'very good'. Disturbances in the area were mostly a result of mineral exploration and grazing.

5.8.2 Conservation Significant Flora and Vegetation

The combined botanical surveys (Botanica, 2025 and Botanica, 2025a) recorded the following in reference to conservation listed flora and vegetation:

- No Threatened Flora or Threatened Ecological Communities (TECs);
- No Priority Ecological Communities (PECs);
- One Priority 1 (P1) species (*Calandrinia quartzitica*) was identified in the mine tenement M28/388. Approximately 54 individual plants. One population of approximately 12 plants was recorded inside the Activity Envelope. The remaining plants were located outside the Activity Envelope. All will be avoided; and
- One Priority 3 (P3) species (*Eremophila arachnoides* subsp. *tenera*) was identified in the service corridor (tenement L28/103), 64 individual plants. All will be avoided.

5.9 Terrestrial Fauna

Nine fauna habitats area mapped within the Activity Envelope. The lake and its immediate surrounds are the most dominant fauna habitat. The mining tenement has been extensively explored, with evidence of historical drill holes and tracks in the vicinity. Evidence of pastoral activities was present and there were likely to be rabbits, cats, and wild dogs (Terrestrial Ecosystem,2025 and 2025a).

The fauna habitats are likely to support only a few vertebrate fauna. All habitats within the Activity Envelope are also present in adjacent areas and the region. The lakes have potential to support migratory species in different seasons. The Project will impact the western part of Lake Roe by removing approximately 800m of riparian zone. Given the substantial area of Lake Roe, removing this area is not seen as a significant impact. There is plenty of other undisturbed lake foraging areas available to migratory shorebirds.

Clearing native vegetation is likely to result in the loss of small vertebrate fauna on-site that cannot move away during the clearing process, however, this loss is not expected to be significant when viewed in a bioregional context. The few larger animals, such as kangaroos, large goannas, and snakes, and most birds will move into adjacent areas once vegetation clearing commences so potential impacts will be low (Terrestrial Ecosystems,2025 and 2025a).

5.10 Social Surrounding Environments

5.10.1 Aboriginal Heritage

A review of the Aboriginal Cultural Heritage Information System (AHIS) did not identify any Aboriginal heritages sites as occurring within the Activity Envelope (Department of Planning, Lands and Heritage,2025). The Project area lies within the Kakarra Native Title area.

A total of three Aboriginal Cultural Heritage surveys has been undertaken over the Activity Envelope by the Kakarra group:

- The first survey, report dated September 2023, covered a central strip of the mining tenement (Appendix Q);
- The second survey, report dated February 2024, covered the expanded proposed mine layout area on the mining tenement (Appendix P); and
- The third survey, report dated September 2025, covered some minor infill areas on the mining tenement and the service corridor (Appendix O).

No Aboriginal heritage sites were recorded within the Activity Envelope.

In the 2023 survey, participants identified a low line of small outcrops (approximately 350m – 450m west of the Activity Envelope) that is associated with the mythical “Dingo Dreaming”. These sites will be avoided. For completeness, these are recorded on site plans as an Exclusion Area.

In the 2025 survey, participants identified a low significance quartz artefact scatter of about 2m^2 in area at the margin of the Bombora Mine Extension Area 1, on the edge of the playa. The small assemblage contains flakes, flaked pieces, and chips, though containing no implements or utilised-retouched artefacts. This site is approximately 75m west of the Activity Envelope and will be avoided.

6 Stakeholder Engagement

6.1 Stakeholder Identification and Engagement Process

Consultation with stakeholders has been ongoing throughout the advanced exploration and baseline studies phases and has formed an integral part of the Project design. Feedback received from the stakeholders during this period indicates support for the Project.

6.2 Key Stakeholders

The principal stakeholders identified to date, their main interests and concerns, and the primary means of engagement or communication are summarised in Table 6-1 and discussed in the following sections. In addition to the primary and formal means of engagement, Ramelius may engage with stakeholders through special meetings or workshops, and other forms of correspondence. A copy of the Stakeholder Engagement Register is included as Appendix S.

Table 6-1: Project Key Stakeholders

Stakeholder	Primary Interest
State Government	
EPA	Regulates the management and protection of Western Australia's environment, Inland Waters, Flora, Fauna, Terrestrial Ecosystem, Marine etc.
DWER	Administers EP Act. Part IV (EP Act) Environmental Impact Assessments. Administers (RIWI Act) Provision of licenses to take water. Administers Part V (EP Act), Industry Regulation and Licensing Contaminated Sites Act 2003.
DPME	Administers (Mining Act) and Regulations.
DBCA	Administers the *Biodiversity Conservation Act 2016*
DPLH	Regulates the land use in, heritage and crown lands.
DOH	Environmental health compliance
PLB	Pastoral leases
Regional and Local Government	
City of Kalgoorlie Boulder	Use of local public roads and infrastructure.
Non-Government Organisations/Groups	
Traditional Owners	Heritage surveys have been completed, Ramelius has an existing relationship with the Traditional Owners and will continue to engage with relation to the Project in accordance with the Ramelius Heritage Management Plan and the Native Title Mining Agreement.

Stakeholder	Primary Interest
Pastoral Leaseholders	Ramelius has an existing relationship with the pastoral leaseholders and will continue to engage with relation to the Project in accordance with the Agreement. Typical areas of interest include access to conduct baseline surveys, details relating to the Project scale and life of mine, water usage, employment and service provider opportunities, agreed post-mining land uses.
Neighbouring /Surrounding Landowners	Details relating to the Project scale and life of mine, water usage, employment and service provider opportunities, haulage routes and timing and frequency of use of public roads.
Community/ Regional Service Providers	Fire breaks, provision of emergency services Use of public roads employment and service provider opportunities

6.3 Stakeholder Consultation Outcomes

Ramelius aims to build strong stakeholder, social and community support for the Project and to create and maintain a positive foundation, thereby assisting with approvals, land access, construction, and Project operations.

This is achieved through implementation of stakeholder communication and consultation strategies which ensure that stakeholders are engaged and informed about Ramelius and the Project.

To date, engagement discussions have related to:

- Technical and commercial viability;
- Timeline and status;
- Metrics and logistics;
- Permitting and approvals;
- Local benefits with respect to local business and employment opportunities; and
- Environmental impacts and sustainability objectives.

6.3.1 Pastoral Leaseholders

The Project tenure overlays the Yindi pastoral lease. Ramelius are in regular communications with pastoral leaseholders.

Ramelius will continue to work cooperatively with surrounding landholders and the community and will consult with them on key matters throughout the life of the Project and at key milestones of the Project.

Discussions with Yindi Pastoral station have included:

- Commercial Agreement, land access, shared resources, engagement for contractor works; stock management;

- Mine Closure – rehabilitation, post-mining land use, fencing;
- Project Overview – key aspects and Project timelines;
- Fresh water supplies – opportunities to provide water;

6.3.2 Local Government Authorities

Engagement and consultation between Ramelius and Local Government Authorities (LGA) to-date has broadly involved:

- Use of public roads;
- Project overview, key milestones and timelines; and
- Employment Opportunities for community and local goods and service providers.

6.3.3 DMPE

Engagement and consultation between Ramelius and DMPE to-date has broadly involved:

- Consultation to provide and seek feedback on the proposed Project, provide an overview of key milestones and timelines, approval pathways;
- Program of works for exploration activities; and
- Granting of tenure.

6.3.4 Department of Water and Environmental Regulation - EPA

Engagement and consultation between Ramelius and the EPA to-date has broadly involved:

- Consultation to provide and seek feedback on the proposed Project, provide an overview of key milestones and timelines, approval pathways.

6.3.5 Main Roads WA

Engagement and consultation between the company and MRWA to-date has broadly involved:

- Use of public roads.

6.4 Stakeholder Consultation Strategy

Table 6-2 summarises proposed ongoing consultation and how will be conducted including the timing, method, and frequency.

Table 6-2: Stakeholder Engagement Strategy

Stakeholder	Key Points	Strategy	Method	Frequency
DPLH	Responsible management of Heritage Sites	Submission of heritage surveys	Correspondence	As required
DWER	Responsible for environmental permitting and licensing of prescribed premises and water entitlement.	Secure relevant licences and permits relating to prescribed premises and water abstraction.	Licence & Permit applications	As required
		Implement monitoring program to meet compliance obligations Conduct audits and inspects to meet compliance obligations.	Compliance Reporting	Annually
		Ongoing consultation throughout operation and closure of Project.	Phone calls and email correspondence	As required
DMPE	Responsible for environmental approvals in accordance with *Work Health and Safety (Mines) Act 2022* *Mining Act 1978* *Dangerous Goods Safety Act 2004* *Mine Rehabilitation Fund Act 2013* Tenement grant	Scoping meeting to introduce Project.	Licence & Permit applications	As required
		Submission of MDCP, Native Vegetation Clearing Permit Mine Closure Plan	MCP Revisions	Triennial
		Implementation of ongoing monitoring to meeting compliance obligations.	Compliance Reporting,	Annual
		Conduct audits and inspections to meet compliance obligations.	Phone calls and email correspondence	As required
DOH	Permit to install and operate a sewage facility.	Implementation of ongoing monitoring to meeting compliance obligations. Conduct audits and inspections to meet compliance obligations.	Compliance Reporting,	Annually
		Ongoing consultation throughout operation and closure of Project.	Phone calls and email correspondence	As required

Stakeholder	Key Points	Strategy	Method	Frequency
DFES	Provision of emergency services, issue of alerts for fire bans and bushfires	Respond to requirements of DFES and compliance with alerts and warnings.	Monitor DFES alerts and warnings.	As required
DBCA	Manages DBCA lands and administers the *Biodiversity Conservation Act 2016*	Project is not located on DBCA managed lands. No engagement is expected.	Provide data or information, Meetings Phone calls and email correspondence	As required
PLB & Pastoral leaseholder	Manages pastoral leases	Project is located on Yindi pastoral lease. Access agreement with pastoral leaseholder.	Site visits, provide data or information,	As required
		PLB must approve any agreed outcome for infrastructure retention with the pastoral leaseholder.	Meetings Phone calls and email correspondence	As required
City of Kalgoorlie Boulder	Permit to use Shire Roads and resources. Registration of sewage facilities. Opportunities for local community and businesses. Community interest in operating and closure	Consultation to discuss use of public roads and impacts/opportunities to local community.	Meetings Phone calls and email correspondence	As required
		Discuss opportunities for local business.	Meetings Phone calls and email correspondence	As required
		Discuss life of Project, closure Outcomes and legacy landscape.	Meetings Phone calls and email correspondence	As required
Traditional Owners	Conduct heritage surveys, management of recorded Heritage Sites	Regular consultation regarding Native Title and Heritage.	Presentations, meetings	Quarterly
			Site Visits & Surveys	As required
			Phone calls and email correspondence	As required
Community & neighbour property owners	Details relating to the Project scale and life of mine, water usage, service provider	Keep wider community stakeholders informed of the Project	Provide information.	As required

Stakeholder	Key Points	Strategy	Method	Frequency
	opportunities, use of public roads		Phone calls and email correspondence	
Interest Groups	Interest in baseline surveys and significance of data	No interest groups have been identified to date. Consultation to discuss life of Project and post-closure landscape.	Provide information. Phone calls and email correspondence	As required

7 Environmental Principles and Factors

7.1 Environmental Principles

Section 4A of the EP Act outlines the EP Act's objective to protect the environment of the State, guided by a specific set of five principles. The EPA considers these principles as the primary basis for exercising its authority when evaluating and reporting on Projects under the EP Act.

These five principles are outlined below, as well as how they have been applied to the Project.

7.1.1 The Precautionary Principle

The precautionary principle states that:

> "Where there are threats of serious or irreversible damage lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, decisions should be guided by:
>
> a) careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and
>
> b) an assessment of the risk-weighted consequences of various options".

Ramelius has undertaken extensive baseline studies across the Project to understand risks to Environmental Factors. Baseline studies extend beyond the Project area and have informed the Activity Envelope boundary and site layout. This ensures that threats of environmental harm are not overlooked.

These studies have informed the design of the Project, with modifications made to avoid and minimise the nature and extent of impacts. All studies have been conducted in alignment with the EPA's Environmental Factor Guidelines, technical guidance documents, and best practice standards to ensure accurate data collection for predicting the Project's impact on environmental and social values. Future studies will also align with these requirements.

Ramelius has followed the mitigation hierarchy—avoid, minimise, and mitigate—to reduce environmental, social, and cultural heritage impacts to as low as reasonably practicable.

Ramelius has also sought to identify and fill any knowledge gaps and will continue to do so throughout the life of the Project.

7.1.2 The Principle of Intergenerational Equity

The principle of intergenerational equity states that:

> "The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations."

The Project has been designed to meet the EPA's objectives for the identified Environmental Factors, incorporating mitigation measures to minimise residual environmental impacts. Particular emphasis has been placed on preserving biodiversity, conserving natural resources and reducing greenhouse gas emissions.

Avoiding discharge to Lake Roe protects key environmental values by preserving biodiversity of aquatic ecology.

The decision to utilise shared resources (aerodrome, accommodation village, processing facility) has realised the opportunity to reduce greenhouse gas emissions and consolidated the Project's Disturbance Footprint.

Rehabilitation will be undertaken in accordance with the mine closure Outcomes to minimise the loss of productivity of land.

7.1.3 The Principle of Conservation of Biological Diversity and Ecological Integrity

The principle of the conservation of biological diversity and ecological integrity states that:

> "Conservation of biological diversity and ecological integrity should be a fundamental consideration."

Ramelius has evaluated the relevant Environmental Factors and redefined the Project design to avoid or minimise impacts to the terrestrial environment, as well as potential impacts to the Lake Roe aquatic ecology.

Baseline surveys have informed the site layout and enabled Ramelius to avoid impacting areas higher quality vegetation condition preserving habitats of native fauna. Demarcating an exclusion zone will protect P1 species identified within the Activity Envelope and maintain biological diversity.

The total Disturbance Footprint of 557.7ha is considered modest in the context of mining operations in WA.

Ramelius is determined to minimise impacts to Lake Roe as evidenced by the decision to utilise evaporation ponds as an alternative to discharging dewatering volumes to the salt lake. Although not the most economical outcome, it speaks to the company's key principle of avoiding impact to the surrounding environment.

Ramelius will continue to evaluate opportunities to minimise impact to the environment.

7.1.4 Principles Relating to Improved Valuation, Pricing, and Incentive Mechanisms

Principles relating to improved valuation, pricing and incentive mechanisms include:

a) Environmental Factors should be included in the valuation of assets and services;

b) The polluter pays principle – those who generate pollution and waste should bear the cost of containment, avoidance or abatement;

c) The users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any wastes; and

d) Environmental goals, having been established, should be pursued in the most cost-effective way, by establishing incentive structures, including market mechanisms, which enable that best placed to maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.

Resources are allocated in pursuit of a continuous improvement approach to managing impacts to the environment at each phase of the Project life cycle. Ramelius recognises the importance of improving valuation, pricing, and incentive mechanisms and will strive to apply these principles. Ramelius is positioned to meet costs associated with monitoring and mitigation of known risks. Ramelius is committed to achieving its sustainability goals and this information is presented annually in the company's Sustainability Report. In accordance with Australian accounting standards, Ramelius will hold a provision for the costs associated with mine closure. This information will be presented in the company's annual report.

7.1.5 The Principle of Waste Minimisation

The principle of waste minimisation states that:

> "All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment."

Details of waste management practices and volumes of waste types are reported annually in accordance with prescribed premises licences, in the company's sustainability report and National Pollutant Inventory.

7.2 EPA Environmental Factors

The EPA identifies 14 Environmental Factors, organised into five themes: Sea, Land, Water, Air and People which are used as an organising principle for EIA (EPA, 2023). Each Environmental Factor has a specified environmental objective, against which the significance and acceptability of a Project are assessed.

An evaluation of Environmental Factors has been undertaken to identify those applicable to this Project. Consideration has been given to all available information at the time of preparing this document, including baseline surveys and technical studies, stakeholder engagement, Project schedule, availability of resources, legislative framework, and the regional environmental and social context. Table 7-1 summarises the EPA factors as they apply to the Project.

Table 7-1: EPA Environmental Factors Consideration

Themes	Factor	Objectives	Consideration
Land	Flora and Vegetation	To protect Flora and Vegetation so that biological diversity and ecological integrity are maintained.	The Project involves the clearing of 557.7ha of native vegetation. There are no impacts to conservation listed biodiversity factors within the Activity Envelope. This factor can be adequately managed through Native Vegetation Clearing Permit Regulations (administered by DMPE) **Key Environmental Factor: Refer to Section 8**
	Landforms	To maintain the variety and integrity of distinctive physical landforms so that environmental values are protected.	The impact of the Project on landforms is not considered significant. The Guidelines refer to BIF ranges, mesas, dunes and dune fields and cave systems as examples of significant landforms. The Project contains none of these features. The Project landscape is gently undulating, with no distinctive landform features. The EPA objectives for the factor will be met. **Not a key factor: Refer to Section 11**
	Subterranean Fauna	To protect subterranean fauna so that biological diversity and ecological integrity are maintained.	Baseline surveys determined there are no subterranean fauna habitats within the Activity Envelope. No subterranean fauna species were recorded. Groundwater quality is hypersaline, exceeding 200,000mg/L TDS.

Themes	Factor	Objectives	Consideration
			Not a key factor: Refer to Section 11.
	Terrestrial Environmental Quality	To maintain the quality of land and soils so that environmental values are protected.	Topsoil and waste rock geochemical and physical properties are well understood and have informed WRL designs that minimise impact to the surrounding environment. This factor can be adequately managed through a MDCP assessment administered by DMPE. **Relevant, but not a key factor: Refer to Section 11.**
	Terrestrial Fauna	To protect terrestrial fauna so that biological diversity and ecological integrity are maintained	The Project involves the clearing of fauna habitat. No adverse impact to high conservation biodiversity factors – (defined as threatened fauna). This factor can be adequately managed through Native Vegetation Clearing Permit Regulations (administered by DMPE) **Key Environmental Factor: Refer to Section 9.**
Water	Inland waters	To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.	The Project will alter groundwater levels during operation although these are expected to recover post-mining. Groundwater is hypersaline and there are no other beneficial users or ground dependent ecosystems. Water management structures are designed to divert surface water around the Project and return it to the natural flow to the downstream receiving environment. Redefining the site layout by constructing evaporation ponds will result in containment of all dewatering with no discharge to Lake Roe.

Themes	Factor	Objectives	Consideration
			Impacts can be adequately managed through a Works Approval application and operating licence conditions administered by DWER and an MDCP and MCP administered by DMPE. **Key Environmental Factor: Refer to Section 10.**
Air	Air Quality	To maintain air quality and minimise emissions so that environmental values are protected.	Considering the remote location and relatively small scale, the Project is unlikely to have adverse air quality impacts. Potential impacts can be managed by internal procedures and management plans to meet the EPA objective. **Relevant, but not a key factor: Refer to Section 11.**
	Greenhouse Gas Emissions	To reduce net greenhouse gas emissions in order to minimise the risk of environmental harm associated with climate change	Greenhouse gas emissions will be emitted from vehicles during construction and ongoing operations and in relation to power generation. The emissions estimated for the Project are considered to be under Scope 1 threshold, Scope 2 emissions are not anticipated from the Project. Ramelius has measures in place to manage this factor. **Relevant, but not a key factor: Refer to Section 11.**
People	Social surroundings	To protect social surroundings from significant harm	Ramelius endeavours to avoid impacts to the social surrounds of the Project. No Aboriginal or non-Aboriginal heritage sites are recorded in the DPLH database. Surveys undertaken did not record any Aboriginal heritage sites within the Activity Envelope. The Project layout has been designed to avoid Lake Roe.

Themes	Factor	Objectives	Consideration
			There may be localised noise and dust temporarily produced during construction of the Project. Potential impacts can be managed by internal procedures and management plans to meet the EPA objective. **Relevant, but not key factor: Refer to Section 11.**
	Human Health	To protect human health from significant harm.	There are no harmful emissions or discharges associated with the Project that present a risk to human health. **Not relevant**
Sea	Benthic Communities and Habitats	To protect benthic communities and habitats so that biological diversity and ecological integrity are maintained.	The Project is not located proximal to coastal or marine environments. **Not relevant**
	Coastal Processes	To maintain the geophysical processes that shape coastal morphology so that the environmental values of the coast are protected.	
	Marine Fauna	To protect marine fauna so that biological diversity and ecological integrity are maintained.	
	Marine Environmental Quality	To maintain the quality of water, sediment and biota so that environmental values are protected.	

7.2.1 Key Environmental Factors

From Table 7-1 Ramelius has identified the following as key Environmental Factors relevant to the Project:

- Flora and Vegetation;
- Terrestrial Fauna; and
- Inland Waters.

This view is based on the EPA's approach to the determination of whether a potential impact may be significant (EPA, 2023). This document states that, when considering significant impact or effect, the EPA may have regard to various matters, including the following:

a) The object and principles of the Act;

b) Values, sensitivity and quality of the environment which is likely to be impacted;

c) All stages and components of the Project (such as any infrastructure required for the Project to be practicably implemented, or a Project life cycle);

d) Extent (intensity, duration, magnitude, and geographic footprint) of the likely impacts;

e) Resilience of the environment to cope with the impacts or change (including considering pressures such as climate change);

f) Consequence of the application of the mitigation hierarchy to the Project;

g) Consequence of the likely impacts (or change), including off-site impacts (such as impacts on a wetland from chemicals discharged into upstream river systems) and indirect impacts (such as reduced fish harvest due to decreased water quality);

h) Likely environmental Outcomes, and whether these are consistent with the EPA Environmental Factor objectives;

i) Cumulative effects, taking into account cumulative environmental impacts – the successive, incremental and interactive impacts on the environment of a Project with one or more past, present and reasonably foreseeable future activities;

j) Holistic impacts – connections and interactions between impacts, and the overall impact of the Project on the environment as a whole;

k) Level of confidence in the prediction of residual impacts and the success of proposed mitigation (see section 8) for further information on the mitigation hierarchy); and

l) Public interest about the likely effect of the Project or scheme, if implemented, on the environment, and relevant public information.

Sections 8 to 10 provide a detailed assessment of the potential impacts of the Project, proposed mitigation measures and predicted outcomes. The assessment of each key factor is presented in the following format:

1. Statement of EPA objective;
2. Discussion of relevant policy and guidance, and summary of how this guidance has been addressed;
3. Description of the receiving environment relevant to the factor based on studies and investigations completed to date;
4. Identification of preliminary potential direct, indirect and cumulative impacts on the environmental values for the identified factor;
5. Preliminary application of the mitigation hierarchy (avoid, minimise);
6. Assessment and significance of residual impacts; and

7. Likely outcome.

Other, (relevant but not key) Factors are addressed in Section 11.

8 Flora and Vegetation

8.1 EPA Environmental Factors and Objectives

The EPA's objective for the Flora and Vegetation factor is "*To protect flora and vegetation so that biological diversity and ecological integrity are maintained*", (EPA 2016)

8.2 Relevant Policy and Guidance

The following EPA Policies and Guidelines are considered relevant to the Inland Waters Environmental Factor:

- Environmental Factor Guideline – Flora and Vegetation (EPA,2016);
- Statement of environmental principles, factors, objectives and aims of EIA (EPA,2023); and
- Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment (EPA,2016f).

8.3 Receiving Environment

8.3.1 Flora and Vegetation Surveys

Several flora and vegetations surveys have been conducted and are summarised in Table 8-1.

Table 8-1: Summary of Flora and Vegetation Surveys

Reference	Summary
Lake Roe Project Detailed Flora Survey (Botanica Consulting (Botanica) 2025) (Appendix G)	Botanica conducted a single-phase detailed flora and vegetation survey during March and April 2025. Eight vegetation types ranging from Degraded to Very Good condition were recorded. Ninety-six flora taxa including one conservation-listed species and two potentially significant species were recorded. A total of Fifty-four individuals of *Calandrinia quartzitica* (listed as a Priority 1 species in Western Australia) were recorded. Two species of *Tecticornia* could not be identified to species level; one had insufficient diagnostic material, and the other is an undescribed taxon allied to *Tecticornia* aff. *undulata*. The survey was conducted during March/April 2025 which is outside the optimum survey season (September to November for the Coolgardie region) according to the Flora Technical Guidance (EPA 2016f). However, this is justified as the survey was undertaken in addition to a two-phase survey previously conducted during October 2018 and October 2019. The survey was undertaken following an above average rainfall and considers the Project's proximity to the Murchison region where the

Reference	Summary
	optimum survey season is March to June this survey strengthened the Project's flora and vegetation data set.
Rebecca to Roe Haul Road Detailed Flora and Basic Fauna Survey (Botanica, 2025a) (Appendix F)	Botanica (2025a) conducted a single-phase detailed flora and vegetation survey of the service corridor during March 2025. Twenty-one vegetation types ranging from Completely Degraded to Very Good vegetation condition were recorded. The majority of the survey area was found to be in Very Good condition. A total of 113 flora taxa including two introduced species and one conservation-listed species were recorded. Sixty-four individuals of *Eremophila arachnoides* subsp. *tenera* (listed as a Priority 3 species in Western Australia) were recorded from the clay loam plain landform. The fauna survey extended beyond the Activity Envelope.
Lake Roe Gold Project: Detailed Flora and Vegetation Survey (Stantec, 2020a)	Stantec conducted a two-phase detailed flora and vegetation survey over tenement M28/388. Field surveys were conducted during October 2018 and October 2019. Twenty-seven vegetation types were recorded ranging from Completely Degraded to Excellent in condition. No vegetation types are of conservation significance. Six have a restricted extent within the survey area. A total of 230 flora taxa including seven weeds of no particular significance and one conservation-listed species were recorded. Ten individuals of *Eremophila arachnoides* subsp. *tenera* (then listed as a Priority 1 species in Western Australia, now a Priority 3) were recorded from a single population outside the current Activity Envelope. *Arthropodium* sp. Goldfields was recorded from a quadrat outside the current Activity Envelope representing a range extension of this species. Three taxa were collected that did not correspond to any collections at the WA Herbarium but had an affinity to known collections as follows *Acacia* aff. *mulganeura*, *Eremophila* aff. *miniata* and E. aff *serrulata*. The survey area is located within the Great Western Woodlands a unique ecosystem of international importance but not State or Commonwealth conservation listed.

8.3.2 Environmental Values

8.3.2.1 *Pre-European Vegetation*

The Project intersects four pre-European vegetation associations according to DPIRD's (2019) mapping, summarized in Table 8-2 and displayed on Figure 5-3. All four units have over 99.5% of their pre-European extent remaining in Western Australia.

8.3.3 Vegetation Types

The flora and vegetation surveys (Botanica, 2025, 2025a) identified 22 native vegetation types associated within 10 landforms (Table 8-2 and Figure 8-1). The most dominant vegetation structure were Woodlands mostly dominated by Eucalypts, *Casuarina or Acacia.*

Table 8-2:Vegetation Types of the Activity Envelope

Vegetation Code	Vegetation association description	Extents (ha)	
		Represented within the Activity Envelope	Within the Disturbance Footprint
CLP-AFW1	Acacia Forest and Woodland Low Acacia acuminata open forest over mid sparse shrubland of *Dodonaea lobulata* over low sparse shrubland of *Ptilotus obovatus* on clay loam plain.	31.25 ha 1.98 %	9.06 ha 1.62 %
CLP-AOW1	Acacia Open Woodlands Low *Acacia aptaneura* and/or A. *caesaneura* open forest over mid open shrubland of Senna *artemisioides* subsp. *filifolia* over low open Chenopod shrubland of *Maireana sedifolia* on clay loam plain.	60.66 ha 3.84 %	21.46 ha 3.85 %
CLP-CFW1	Casuarina Woodlands Casuarina pauper mid open forest over *Cratystylis subspinescens*, *Senna artemisioides* subsp. *filifolia* and *Acacia hemiteles* mid open shrubland over *Maireana sedifolia* low open Chenopod Shrubland on clay loam plain.	91.86 ha 5.82 %	32.31 ha 5.79 %
CLP-COW1	Casuarina Woodlands Casuarina pauper mid open woodland over *Senna artemisioides* subsp. *filifolia* and *Eremophila scoparia* mid open shrubland over *Maireana sedifolia* low open Chenopod shrubland on clay loam plain.	103.89 ha 6.58 %	36.62 ha 6.57 %
CLP-CW1	Casuarina Woodlands Casuarina pauper mid open forest over Scaevola *spinescens, Senna artemisioides* subsp. *filifolia* and *Acacia hemiteles* mid open shrubland over *Ptilotus obovatus* low open shrubland on clay loam plain.	11.42 ha 0.72 %	9.85 ha 1.77 %

Vegetation Code	Vegetation association description	Extents (ha)	
		Represented within the Activity Envelope	Within the Disturbance Footprint
CLP-EW1	Eucalypts Woodlands *Eucalyptus salmonophloia* mid woodland over *Senna artemisioides* subsp. *filifolia* and *Eremophila scoparia* mid shrubland over *Scaevola spinescens* and *Maireana sedifolia* low sparse shrubland on clay loam plain.	229.43 ha 14.52 %	78.65 ha 14.10 %
CLP-EW2	Eucalypts Woodlands *Eucalyptus salubris* low woodland over Eremophila scoparia and *Exocarpos aphyllus* open shrubland over *Maireana sedifolia* low open shrubland on clay loam plain.	25.43 ha 1.61 %	13.03 h 2.34 %
CLP-EW3	Eucalypts Woodlands *Eucalyptus ravida* low woodland over *Eremophila dempsteri* and Senna *artemisioides* subsp. *filifolia* open shrubland over *Atriplex vesicaria* and *Ptilotus obovatus* low open shrubland on clay loam plain.	5.29 ha 0.33 %	1.91 ha 0.34 %
CLP-EW4	Eucalypts Woodlands *Eucalyptus oleosa* low woodland over *Atriplex nummularia* and *Senna artemisioides* subsp. *filifolia* open shrubland over *Maireana sedifolia* and *Ptilotus obovatus* low open shrubland on clay loam plain.	167.50 ha 10.60 %	58.76 ha 10.54 %
CLP-MW1_HaulRoad	Mallee Woodlands *Eucalyptus concinna* mid open Mallee Forest over Eremophila scoparia, Senna *artemisioides* subsp. *filifolia* and *Acacia hemiteles* mid shrubland over *Triodia scariosa low* hummock grassland on clay loam plain.	73.72 ha 4.67 %	31.16 ha 5.59 %
CLP_MW1_Mine	Mallee Woodlands *Eucalyptus oleosa* mid open Mallee Forest over *Cratystylis conocephala* mid open shrubland over *Olearia muelleri* low sparse shrubland on clay loam plain.		

Vegetation Code	Vegetation association description	Extents (ha)	
		Represented within the Activity Envelope	Within the Disturbance Footprint
DD-AFW1	Acacia Forest and Woodland Low *Acacia acuminata* open forest over mid sparse shrubland of *Dodonaea lobulata* over low sparse shrubland of *Ptilotus obovatus* in drainage depression.	10.80 ha 0.68 %	3.46 ha 0.62 %
DD-COW1	Casuarina Woodlands *Casuarina pauper* mid open woodland over *Cratystylis subspinescens* mid open shrubland over *Maireana sedifolia* low open Chenopod shrubland in drainage depression.	28.85 ha 1.83 %	10.25 ha 1.84 %
DD-EW1	Eucalypts Woodlands *Eucalyptus salmonophloia* mid woodland over *Senna artemisioides* subsp. *filifolia* and *Eremophila scoparia* mid shrubland over *Scaevola spinescens* and *Maireana sedifolia* low sparse shrubland in drainage depression.	71.14 ha 4.50 %	24.37 ha 4.37 %
HS-CW1	Casuarina Woodlands Casuarina pauper low woodland over *Dodonaea lobulata*, *Senna artemisioides* subsp. *filifolia* and *Scaevola spinescens* shrubland over *Maireana sedifolia* and *Ptilotus obovatus* low open shrubland on hillslope.	7.28 ha 0.46 %	3.02 ha 0.54 %
OD-CS1	Chenopod Shrublands Low Chenopod shrubland of mixed *Tecticornia* spp. over *Maireana* spp. and *Atriplex* spp. low sparse open Chenopod shrubland in open depression.	209.18 ha 13.24 %	86.87 ha 15.58 %
RS-EW2	Eucalypts Woodland *Eucalyptus salubris* low woodland over *Eremophila glabra* sparse shrubland over *Atriplex vesicaria* low open Chenopod shrubland on rocky slope.	9.25 ha 0.59 %	3.19 ha 0.57 %
SCLP-EW4	Eucalypts Woodlands *Eucalyptus oleosa* low woodland over *Cratystylis microphylla* open shrubland over *Triodia scariosa* hummock grassland on sandy clay loam plain.	70.59 ha 4.47 %	53.56 ha 9.60 %

Vegetation Code	Vegetation association description	Extents (ha)	
		Represented within the Activity Envelope	Within the Disturbance Footprint
SD-AW1	Acacia Forest and Woodland *Acacia ramulosa* and/or *A. caesaneura* low woodland over *Cratystylis microphylla* mid open shrubland over *Rhagodia eremaea* and *Ptilotus obovatus* low sparse shrubland on sand dune.	15.35 ha 0.97 %	7.19 ha 1.29 %
SD-Callitris	Callitris Woodlands *Callitris preissii* low woodland over *Dodonaea viscosa* mid open shrubland over *Triodia scariosa* low hummock grassland on sand dune.	8.13 ha 0.51 %	3.43 ha 0.61 %
SD-CW1	Casuarina Woodlands Casuarina pauper low woodland over *Acacia kalgoorliensis* mid open shrubland over *Cratystylis microphylla* low open shrubland on sand dune.	0.66 ha 0.04 %	-
SD-MW2	Mallee Woodlands *Eucalyptus horistes* open Mallee Forest over *Cratystylis microphylla* and *Eremophila scoparia* open mid shrubland over *Triodia scariosa* low open hummock grassland on sand dune.	33.67 ha 2.13 %	10.79 ha 1.94 %
SLP-MW1	Mallee Woodlands *Eucalyptus concinna* open Mallee Forest over *Exocarpos aphyllus* open mid shrubland over *Triodia scariosa* low open hummock grassland on sand-loam plain.	50.18 ha 3.18 %	17.52 ha 3.14 %
	Cleared	233.52 ha 14.78 %	41.21 ha 7.39 %
	Not surveyed	30.63 ha 1.94 %	0%
Total (rounded)		**1,543 ha**	**557.7 ha**

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458000 459000 460000

6603000 6602000 6601000 6600000

CLP-CW1 CLP-CW1 CLP-CW1 CLP-MW1 SCLP-EW4 CLP-CW1 Cleared CLP-CW1 CLP-CW1 SCLP-EW4 SCLP-EW4 CLP-EW2 SCLP-EW4 SCLP-EW4 OD-CS1 SCLP-EW4 SCLP-EW4 Cleared SCLP-EW4 SD-MW2 SD-MW2 SD-MW2 Cleared SD-MW2 SD-MW2 Cleared SD-Callitris SD-AW1 SD-MW2 SD-Callitris SD-Callitris SD-AW1 OD-CS1 SD-Callitris SD-Callitris Cleared SD-MW2 SD-CW1

Data source: Roads - Landgate, 2025. Imagery: Google Satellite, 2023

LEGEND

- Activity Envelope
- **Vegetation Types**
- CLP-AFW1
- CLP-AOW1
- CLP-CFW1
- CLP-COW1
- CLP-CW1
- CLP-EW1
- CLP-EW2
- CLP-EW3
- CLP-EW4
- CLP-MW1
- CLP-MW2
- DD-AFW1
- DD-CFW1
- DD-COW1
- DD-EOW1
- DD-EW1
- HS-CW1
- HS-EOW1
- OD-CS1
- RH-AFW1
- RP-MW1
- RS-EW2
- SCLP-EW4
- SD-AW1
- SD-Callitris
- SD-CW1
- SD-MW2
- SLP-MW1
- Cleared

LOCALITY

VEGETATION TYPES (MAIN MINE SITE)

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

0 100 200 300 400 m

Scale @ A3: 1:12,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	L Carlsson
Project:	TE24094
Revision:	A
Date:	11/02/2026

Figure 8-1A

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A

B

C

D

E

WHOLE SITE

Data source: Roads - Landgate, 2025. Imagery: Google Satellite, 2023.

LEGEND

- Activity Envelope

Vegetation Types

- CLP-AFW1
- CLP-AOW1
- CLP-CFW1
- CLP-COW1
- CLP-CW1
- CLP-EW1
- CLP-EW2
- CLP-EW3
- CLP-EW4
- CLP-MW1
- CLP-MW2
- DD-AFW1
- DD-CFW1
- DD-COW1
- DD-EOW1
- DD-EW1
- HS-CW1
- HS-EOW1
- OD-CS1
- RH-AFW1
- RP-MW1
- RS-EW2
- SCLP-EW4
- SD-AW1
- SD-Callitris
- SD-CW1
- SD-MW2
- SLP-MW1
- Cleared

LOCALITY

km 0 10 20 30 40

VEGETATION TYPES (HAUL RD)

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

Scale @ A3: 1:80,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	L Carlsson
Project:	TE24094
Revision:	B
Date:	11/02/2026

Figure 8-1B

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8.3.4 Vegetation Condition

The vegetation condition ranges from “Very Good” to “Completely Degraded” using the scale obtained from EPA (2016a), with the main contributors to vegetation condition decline being cattle grazing and disturbance associated with previous exploration activity (Botanica, 2025, 2025a). The vegetation condition is summarised in Table 8-3 and displayed on Figure 8-2.

Table 8-3: Vegetation Condition

Vegetation Condition	Extents	
	In the Activity Envelope	In the Disturbance Footprint
Very Good	1015.48 ha 64.28 %	338.21 ha 60.65 %
Good	237.39 ha 15.03 %	137.68 ha 24.69 %
Degraded	76.67 ha 4.85 %	48.17 ha 8.64 %
Completely Degraded	67.71 ha 4.29 %	30.26 ha 5.43 %
Cleared	151.88 ha 9.61 %	3.32 ha 0.60 %
Not surveyed	30.56 ha 1.93 %	-
Total (rounded)	**1,543 ha**	**557.7 ha**

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458000 459000 460000

6603000 6602000 6601000 6600000

Data source: Roads - Landgate, 2025. Imagery: Google Satellite, 2023

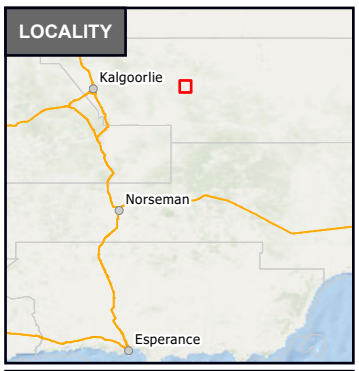
LEGEND

- Activity Envelope

Vegetation Condition

- Very Good
- Good
- Degraded
- Completely degraded
- Cleared Areas

LOCALITY



VEGETATION CONDITION (MAIN MINE SITE)

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

0 100 200 300 400 m

Scale @ A3: 1:12,000 Coordinate System: GDA2020 MGA Zone 51

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Figure 8-2A

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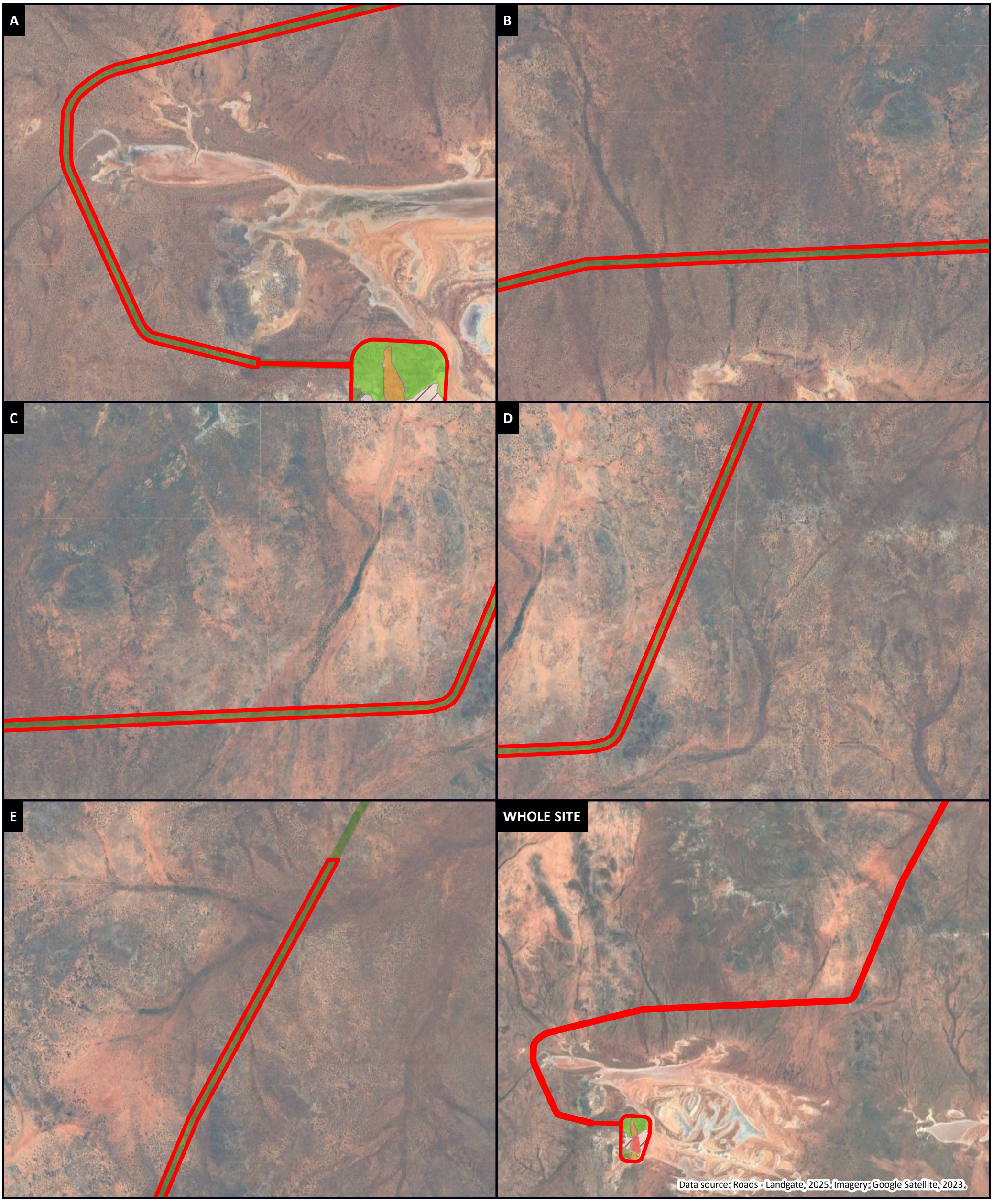


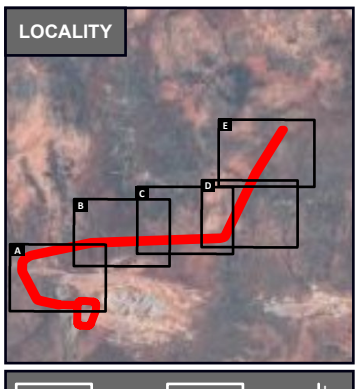
LEGEND

- Activity Envelope

Vegetation Condition

- Very Good
- Good
- Degraded
- Completely degraded
- Cleared Areas

LOCALITY



km
0 10 20 30 40

VEGETATION CONDITION (HAUL RD)

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

Scale @ A3: 1:80,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	L Carlsson
Project:	TE24094
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Figure 8-2B

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8.3.5 Significant Vegetation

None of the vegetation types recorded are representative of Commonwealth EPBC Act or State BC Act Threatened Ecological Communities, nor State listed Priority Ecological Communities. None of the vegetation types are considered to be significant as described by the Technical Guidance (EPA 2016f).

The Project is situated within the Great Western Woodlands (GWW). While the GWW is recognised as the largest intact Eucalypt woodland in southern Australia of high biodiversity and cultural value, it does not have any formal level of protection.

8.3.6 Flora Assemblage

The combined flora and vegetation surveys (Botanica, 2025, 2025a) recorded a total of 155 vascular flora taxa. The most dominant genera were *Eremophila* with 20 taxa and *Acacia* and *Maireana* with 14 taxa each. All recorded taxa are known from the wider region.

8.3.6.1 *Conservation Significant Flora*

Two conservation-listed species *Calandrinia quartzitica* (P1) and *Eremophila arachnoides* subsp. *tenera* (P3) were recorded during the surveys (Botanica, 2025, 2025a).

- The *Calandrinia quartzitica* (P1) was recorded in the mine tenement Activity Envelope; and
- The *Eremophila arachnoides* subsp. *tenera* (P3) was recorded in the Service Corridor tenement.

The locations of recorded conservation-listed species are displayed on Figure 8-3 and characteristics detailed in Table 8-4.

Table 8-4: Recorded Conservation-listed Flora Species

Feature	Calandrinia quartzitica	Eremophila arachnoides subsp. tenera
Conservation Status	Priority 1	Priority 3

Feature	Calandrinia quartzitica	Eremophila arachnoides subsp. tenera
Description	 Succulent climbing herb to 0.3 m, usually tangled amongst other species (Western Australian Herbarium (WAH) (1998-2025), 2025).	 A broom like shrub up to 3m tall. Branches are tubercules, often elongated and coalescing. Flowers are blue-purple in colour (WAH (1998-2025), 2025).
Known Distribution and Ecology	*Calandrinia quartzitica* is known from the Coolgardie and Murchison IBRA regions. From Waigen Lakes near Leonora to east of Lake Yindarlgooda east of Kalgoorlie which approximates a 250 km north-south distribution. The preferred habitat is described as sand with quartzitic lag gravel often associated with Samphire flats (WAH (1998-2025), 2025).	*Eremophila arachnoides* subsp. *tenera* has been recorded from Western Australia and South Australia. In Western Australia it is known from the Murchison and Coolgardie IBRA regions. From north of De La Poer Nature Reserve to north of Lake Lefroy which approximates a 440 km north-south distribution More records of this species exist outside of the current Activity Envelope as found during other flora and vegetation surveys.
Distribution and Abundance within the Activity Envelope	Within the Mine area *Calandrinia quartzitica* was recorded from a location/population (12 individuals) within the OD-CS1 vegetation type. Another population was identified from outside the Activity Envelope (approximately 40 individuals).	Within the Service Corridor area *Eremophila arachnoides* subsp. *tenera* was recorded from two populations and a third one was identified just outside the Activity Envelope. *Eremophila arachnoides* subsp. *tenera* has been recorded from the following vegetation types: CLP-COW1; CLP-CFW1; and CLP-AOW1.

8.3.6.2 *Other Significant Taxa*

Two collections of *Tecticornia* were made from the mine Activity Envelope (Figure 8-3) which cannot be attributed to any known taxa at the moment (Botanica, 2025a). *Tecticornia* sp. Roe 1 was a sterile specimen and *Tecticornia* sp. Roe 2 was most allied with *Tecticornia* aff. *undulata* (ibid). Both are outside the Disturbance Footprint.

Santalum spicatum (Sandalwood) was recorded from within the service corridor. Whilst not currently formally protected, it is a species of interest which occurs within the Activity Envelope.

8.3.6.3 *Introduced Species*

No introduced species were recorded within the mine Disturbance Footprint (Botanica, 2025). Two introduced species, detailed in Table 8-5, were recorded along existing disturbance areas within the Service Corridor (Botanica, 2025a)

Table 8-5: Introduced Species Recorded

Scientific Name	Common Name	WoNS	Declared Weeds	Ecological Impact	Invasiveness
*Centaurea melitensis	Maltese Cockspur	No	Permitted – s11	High	Rapid
*Salvia verbenaca	Wild Sage	No	Permitted – S11	Unknown	Unknown

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456000 464000 472000 480000

6632000 6624000 6616000 6608000 6600000

A B C D E F G H

Haul Road

Data source: Roads - Landgate, 2025; Imagery: Google Satellite, 2023

LEGEND

- Activity Envelope
- Site Layout

Conservation Significant Flora (Botanica, 2025)

- 1 Calandrinia quartzitica (P1)
- 3 Eremophila arachnoides subsp. tenera (P3)

Western Australian Roads

- Minor Road
- Other

LOCALITY

Kalgoorlie Norseman Esperance

0 100 200 300 400 km

CONSERVATION SIGNIFICANT FLORA

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

0 1 2 3 4 km

Scale @ A3: 1:120,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
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Figure 8-3

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8.4 Potential Environmental Impacts

Ramelius has considered Project activities that have the potential to impact Flora and Vegetation in accordance with the EPA's Environmental Factor Guideline (EPA 2016f) and considers that those relevant to the Project are:

- Loss of vegetation from clearing (direct);
- Fragmentation of native vegetation (direct); and
- Changes to vegetation from altered dust, fire, salt migration and weeds (indirect).

8.4.1 Loss of Vegetation from Clearing

The Project will result in clearing of up to 557.7 ha of native vegetation. However, none of the vegetation types are considered significant or are representative of known threatened or priority ecological communities. No conservation-listed flora individuals will be impacted by vegetation clearing.

8.4.2 Fragmentation of Native Vegetation

Clearing of native vegetation may result in fragmentation of vegetation types at a local scale which may reduce the condition of vegetation especially along linear infrastructure.

The Project has a relatively small footprint within a region where over 99.5% of the pre-European extent remains. Therefore, the risk of creating significant fragmentation is considered low.

8.4.3 Changes to Vegetation from Dust, Fire, Salt Migration and Weeds

8.4.3.1 *Dust*

Localised airborne dust will potentially impact vegetation health in high deposition zones. This is likely to be cyclical and have only a minor impact as periods of rainfall will wash dust from vegetation foliage.

8.4.3.2 *Fire*

The potential to alter the frequency or intensity of fire is considered low. There are no "hot works" conducted outside of designated work areas and the traffic management plan ensures that no vehicles drive off designated roads.

8.4.3.3 *Salt Migration*

Salt will accumulate in surface soils on disturbed areas from hypersaline water used for dust suppression. During heavy rainfall events, surface flow may mobilise this salt and transport it

into adjacent vegetated areas. Over time, this may lead to reduced health of vegetation in these areas however this is unlikely as dust suppression will be applied using dribble bars to avoid overspray into adjacent vegetation, any run off will be captured by drains along roads and windrows constructed at the perimeter of laydown and hardstand areas.

8.4.3.4 *Weeds*

Current weed abundance and diversity is low. The Project will manage the introduction or spread of weeds by adopting a weed management plan and vehicle hygiene procedure.

8.5 Mitigation of Impacts on Flora and Vegetation

Ramelius has considered mitigation measures following the avoid, minimise and rehabilitate hierarchy and will continue to do so throughout each phase of the Project to protect flora and vegetation values.

Mitigation measures applied to meet the EPA objectives in relation to Flora and Vegetation are summarised Table 8-6.

Table 8-6: Predicted Impacts and Mitigation Strategies for Flora and Vegetation

Predicted Impact from the Project	Mitigation Hierarchy	Mitigation
Clearing of Native Vegetation	Avoid	• No Threatened flora, TECs, PECs, ESA's have been identified. • Design of the site layout has avoided higher condition vegetation where possible. • Clearing will be kept to the minimum required to develop the Project. • site layout is design to avoid disturbance to priority flora species and riparian vegetation. • Exclusion zone and fencing placed around the P1 population of *Calandrinia quartzitica* to avoid direct disturbance to these plants. • Service Corridor will avoid all locations of P3 plants.
	Avoid/Minimise	• Ramelius has an internal Ground Disturbance Permit (GDP) system that will be implemented prior to the commencement of any ground disturbance work. • Topsoil recovery and stockpiling will follow best practice methodology to allow for later use in rehabilitation.
	Minimise	• Ground disturbance will follow conditions outlined in any Environmental Approvals and Ramelius internal requirements including (but not limited to): o All areas subject to disturbance are located within the Activity Envelope;

Predicted Impact from the Project	Mitigation Hierarchy	Mitigation
		o Clearing will be undertaken in accordance with permit conditions; o Vegetation clearing will follow best practice including; progressive clearing to avoid soil erosion, excessive dust generation and weed introduction and spread; o Topsoil stripping will not be undertaken during high wind conditions; o Monitor vegetation health; and o Dust suppression during all stages of the Project.
	Rehabilitate	• A MCP will be developed by Ramelius and updated as required; • Rehabilitation activities will be undertaken progressively as opportunities arise; and • At completion, all disturbances will be rehabilitated to safe, stable and non-polluting landforms in accordance with the MCP.
Introduction / spread of weeds	Avoid/Minimise	• A weed monitoring and management plan will be developed and management measures implemented; and • Vehicle hygiene procedures will be adopted.
Other potential impacts:	Avoid/Minimise	• Drainage from roads, hardstand and other disturbed areas will be contained by sumps to control sediment migration saline water migration; • The capacity of sumps will be designed to contain all water for rain events up to 50% AEP (1:2 yrs); and • Hot work activities are conducted within designated work areas in accordance with the hot work procedure. The presence of large capacity water trucks on site also provides a ready firefighting capability. Mitigation measures include: o Hot work permit system; o Fire emergency and response plan; and o Develop and maintain firebreaks where required.

Ramelius commits to the following:

- Avoid disturbance to conservation listed flora taxa ;
- Total vegetation clearing of no more than 557.7 ha for the Project; and
- Implement flora monitoring and management plans.

8.6 Assessment of Residual Impacts

Development of the Project is likely to have the following residual impacts on Flora and Vegetation as defined in the EPA's Factor Guideline (EPA, 2016f) and outlined in Table 8-7.

Table 8-7: Flora and Vegetation – Residual Impacts

Aspect		Relevant to the Project?	Comment
Flora	Threatened or Priority species.	Yes	Two Priority listed species were recorded. Populations of both species are recorded outside the Activity Envelope and across the wider region. Disturbance to all individuals of both species will be avoided. **Outcome** No residual impact to this aspect.
	Locally endemic or associated with a restricted habitat type (e.g. surface water or GDE).	No	No such species were recorded during the flora and vegetation surveys.
	New species or anomalous feature that indicate a potential new species.	Yes	Two species of *Tecticornia* were recorded which cannot be directly related to any currently known taxa. The populations are located outside the Disturbance Footprint and will be avoided. **Outcome** No residual impact to this aspect.
	Representative of the range of a species (particularly, at the extremes of range, recently discovered range extensions, or isolated outlier of the main range).	No	No individuals representing range extension of a species were recorded during the field surveys.
	Unusual species, including restricted subspecies, varieties or naturally occurring hybrids.	No	No such species were recorded during the flora and vegetation surveys.

Aspect		Relevant to the Project?	Comment
	Relictual status, being representative of taxonomic groups that no longer occur widely in the broader landscape.	No	No such species were recorded during the flora and vegetation surveys.
Vegetation	Identified as a Threatened or Priority Ecological Community.	No	No TECs or PECs have been recorded or are considered likely to occur.
	Restricted Distribution.	No	No locally significant vegetation types were recorded during the flora and vegetation surveys.
	Degree of historical impact from threatening processes.	No	The Project is located across four pre-European vegetation which all retain more than 99% of their original extent in the local area.
	Role as a refuge.	No	No such role of any vegetation types is known.
	Providing an important function required to maintain ecological integrity of a significant ecosystem.	No	No such role of any vegetation types is known.

8.7 Environmental Outcomes

Outcomes of the development of the Project are predicted to align with the EPA objective for Flora and Vegetation which is "to protect flora and vegetation so that biological diversity and ecological integrity are maintained" (EPA, 2016). The following Outcomes are predicted:

- No loss of significant vegetation or Threatened/Priority flora species; and
- A total clearing of 557.7 ha of vegetation within the Activity Envelope.

Through implementation of monitoring and management measures as outlined above Ramelius considers there will be no residual impacts on the Flora and Vegetation Factor.

9 Terrestrial Fauna

9.1 EPA Environmental Factors and Objectives

The relevant EPA objective for Terrestrial Fauna is "*To protect terrestrial fauna so that biological diversity and ecological integrity are maintained' (*EPA 2016e*).*

9.2 Relevant Policy and Guidelines

The following EPA policies and guidelines are considered relevant to the Terrestrial Fauna Environmental Factor:

- Environmental Factor Guideline — Terrestrial Fauna (EPA, 2016e);
- Technical Guidance — Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020) (herein after referred to as the Fauna Technical Guidance); and
- Technical Guidance – Sampling of short-range endemic invertebrate fauna (EPA, 2016g).

9.3 Receiving Environment

9.3.1 Terrestrial Fauna Studies

Several Fauna surveys have been conducted over a number of years and are listed below:

- Basic Vertebrate Fauna Survey, Lake Roe Gold Project (Terrestrial Ecosystems, 2025) (Appendix L);
- Basic Vertebrate Fauna Survey Rebecca to Lake Roe Haul Road (Terrestrial Ecosystems, 2025a) (Appendix K);
- Lake Roe Project: Short Range Endemic (SRE) Invertebrate Survey and Assessment (Bennelongia Environmental Consultants (Bennelongia), 2025) (Appendix H);
- Lake Roe Gold Project: Fauna Survey (Stantec, 2020b);
- Lake Roe Gold Project: Subterranean Fauna Level 1 Assessment (Stantec, 2019) (Appendix J);
- Preliminary Risk and Discharge Assessment for Lake Roe (Stantec, 2025) (Appendix E);
- Short Range Endemic Habitat mapping for the Roe and Rebecca Gold Project Haul Road (Bennelongia, 2025a) (Appendix I);
- Roe Gold Project Consolidated Aquatic Ecology Study of Lake Roe, Peripheral Wetlands and Regional Lakes (Stantec, 2026) (Appendix R); and

- Lake Roe Gold Project: Baseline Aquatic Ecology Study (Stantec, 2020d) (Appendix N).

9.3.2 Fauna Habitat

The fauna habitat types were first described by Stantec (2020b). Subsequent surveys built on them. Nine fauna habitat types are known from the Activity Envelope and are described in Table 9-1 and displayed on Figure 9-1.

Table 9-1: Fauna Habitats

Fauna Habita	Description	Extents	
		In the Activity Envelope	In the Disturbance Footprint
Chenopod shrubland	Characterised by an upper storey dominated by a low cover of sheoak. This was over a low to sparse cover dominated by Mariana sp. and *Cratystylis microphylla*, however also comprised Senna sp. and Eremophila sp. The habitat transitioned into Eucalyptus mallee over spinifex in some areas, with a sparse lower cover of Triodia sp.	175.13 ha 11.09 %	86.38 ha 15.49 %
Eucalypt woodland	The Eucalypt woodland was characterised by an upper storey of large, long unburnt Eucalypt trees over a lower story of chenopods. The upper story provided an abundance of woody debris, medium to large hollows, peeling bark and leaf litter. Woody debris tended to comprise large tree limbs and contained termites, providing an abundance of hollow logs and crevices. The upper storey ranged from moderate to low cover and was over a moderate to high cover of chenopods, (such as A*triplex* and *Maireana* spp.), Senna spp. and Eremophila spp. Habitats tended to have a high cover of cryptogams over a clayey or loamy sand with moderate burrowing suitability. Substrates tended to contain quartzite fragments (20 – 60mm). Habitats were largely on plains, however included hills (bottom right) which contained areas of higher dark coarse fragment cover.	528.90 ha 33.48 %	182.02 ha 32.64 %
Eucalypt over spinifex	This habitat was typically elevated in the landscape on low rises with gravelly substrates. Vegetation comprised a low woodland of either *Eucalyptus concinn*a or E. *griffithsii* over a spare midstory of Acacia sp over a Triodia hummock grassland.	114. 58 ha 7.25 %	62.69 ha 11.24 %

Fauna Habita	Description	Extents	
		In the Activity Envelope	In the Disturbance Footprint
Sheoak woodland over Chenopod shrubland	Characterised by an upper storey dominated by a low cover of sheoak. This was over a low to sparse cover dominated by *Mariana* sp. and *Cratystylis microphylla*, however also comprised Senna sp. and Eremophila sp. (upper right). The habitat transitioned into Eucalyptus mallee over spinifex in some areas, with a sparse lower cover of Triodia sp. (lower right). This habitat contained a moderate level of leaf litter, moderate to common amount woody debris and no hollows. Topsoil ranged from compact with moderate burrowing suitability to sandy with high burrowing suitability.	286.51 ha 18.14 %	96.38 ha 17. 28 %
Mixed shrubs	Low shrublands contained isolated clumps of trees such as Acacia no upper storey. This tended to be over a sparse shrub midstory including Eremophila sp. and *Dodonaea* sp.) and a moderate to a high cover of low Chenopod shrubs, dominated by Atriplex sp., *Maireana* sp. and *Tecticornia* sp. small areas contained a dense Senna sp. mid-storey over a sparse lower storey of chenopods (pictured top right). This habitat tended to occur on the low flat areas and was often saline influenced.	20.12 ha 1.27 %	6.58 ha 1.18 %
Salt Lake	These areas contained no vegetation and were characterised by medium to heavy compact clays with no burrowing suitability. Sites ranged from having minimal disturbance from exploration tracks to large expanses of heavily degraded areas impacted by exploration drilling and tracks (right).	221.38 ha 14.01 %	7.71 ha 1.38 %
Ephemeral creeklines	These areas consist of dense *Acacia ramulosa* dense mid-storey over mixed sparse shrubs in drainage depressions.	8.15 ha 0.52 %	2.92 ha 0.52 %
Mulga over mixed shrubs	These areas consist of mixed Acacia / Casuarina overstorey over a mixed mid/low sparse shrubland layer often in association with clay loam plains.	117.44 ha 7.43 %	37.78 ha 6.77 %
Mulga drainage	These are consists of Casuarina overstorey over mixed woody shrubs and Chenopods understorey in drainage depression.	4.85 ha 0.31 %	1.59 ha 0.28 %

Fauna Habita	Description	Extents	
		In the Activity Envelope	In the Disturbance Footprint
Unsurveyed	These areas have not been subject to any surveys.	5.34 ha 0.34 %	-
Disturbed areas	Completely degraded to degraded areas.	97.28 ha 6.16 %	73.67 ha 13.21 %
Total (rounded)		**1,580 ha**	**557.7 ha**

All broad fauna habitat types recorded from within the Activity Envelope are also present in the wider region.

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458000 459000 460000

6603000 6602000 6601000 6600000

Disturbance
Eucalypt woodland over spinifex
Chenopods
Salt lake
Eucalypt woodland over spinifex
Disturbance
Eucalypt woodland
Sheoak over chenopod shrubland
Chenopods
Eucalypt woodland
Chenopods
Salt lake
Mixed shrubs
Salt lake
Eucalypt woodland over spinifex
Chenopods
Sheoak over chenopod shrubland
Eucalypt woodland over spinifex
Chenopods
Eucalypt woodland
Salt lake
Eucalypt woodland over spinifex
Chenopods
Disturbance
Salt lake
Disturbance
Eucalypt woodland over spinifex
Chenopods
Chenopods
Salt lake
Disturbance

Data source: Roads - Landgate, 2025. Imagery: Google Satellite, 2023

LEGEND

- Activity Envelope

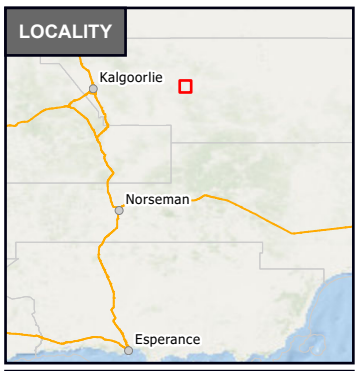
Fauna Habitat

- Chenopods
- Eucalypt woodland
- Eucalypt woodland over spinifex
- Mixed shrubs
- Mulga in drainage
- Mulga over mixed shrubs
- Salt lake
- Ephemeral creekline
- Sheoak over chenopod shrubland
- Stoney area
- Disturbance

Western Australian Roads

- Minor Road
- Other

LOCALITY



FAUNA HABITAT (MAIN MINE SITE)

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

0 100 200 300 400 m

Scale @ A3: 1:12,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	V Mugabe
Project:	TE24094
Revision:	A
Date:	11/02/2026

Figure 9-1A

talis consultants

Document Path: T:\SECTIONS\Environment\Projects\TE2024\TE24094 - Roe EPA Referral\GIS\Maps\TE24094 - Roe EPA Referral\TE24094 - Roe EPA Referral.aprx

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A

B

C

D

E

WHOLE SITE

Data source: Roads - Landgate, 2025. Imagery: Google Satellite, 2023.

LEGEND

- Activity Envelope

Fauna Habitat

- Chenopods
- Eucalypt woodland
- Eucalypt woodland over spinifex
- Mixed shrubs
- Mulga in drainage
- Mulga over mixed shrubs
- Salt lake
- Ephemeral creekline
- Sheoak over chenopod shrubland
- Stoney area
- Disturbance

LOCALITY

km
0 10 20 30 40

FAUNA HABITAT (HAUL RD)

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

Scale @ A3: 1:80,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	L Carlsson
Project:	TE24094
Revision:	B
Date:	11/02/2026

Figure 9-1B

talis consultants

Document Path: T:\SECTIONS\Environment\Projects\TE2024\TE24094 - Roe EPA Referral\GIS\Maps\TE24094 - Roe EPA Referral\TE24094 - Roe EPA Referral.aprx

9.3.3 Local Fauna Assemblage

9.3.3.1 *Terrestrial Vertebrate Fauna Assemblage*

Based on review of database searches and close by survey results 279 vertebrate fauna species have the potential to occur in the Project area (Terrestrial Ecosystems, 2025), consisting of:

- 128 birds;
- 6 amphibians;
- 41 mammals; and
- 104 reptiles.

Stantec (2020b) recorded a total of 84 terrestrial vertebrate species from the area; six mammals, 55 birds and 16 reptiles including introduced mammals and migratory wetland species.

Terrestrial Ecosystems (2025 and 2025a) recorded no conservation listed species within the mine or service corridor Activity Envelope.

9.3.3.2 *Short Range Endemic (SRE) Invertebrates*

The SRE communities were assessed by Stantec (2020c) and Bennelongia (2025 and 2025a). Bennelongia described 13 habitat types with the *drainage areas with shrublands* habitat type having the highest potential for SRE taxa to occur.

No confirmed SRE taxa were recorded during the field surveys (Bennelongia, 2025a). Three likely potential SRE taxa were recorded from the proposed Activity Envelope.

It is unlikely the Project will adversely affect SREs as no restricted habitat types were recorded. All habitat types are widely represented in the region.

9.3.3.3 *Aquatic Invertebrates*

Stantec initially investigated the aquatic values of Lake Roe in 2019 (Stantec, 2020a) and followed up with another consolidation survey of Lake Roe and surrounding lakes in 2025 (Stantec, 2026). Lake Roe is alkaline and salinity ranges from hypo- to meso-saline, the saline areas are likely to support a diverse and productive biotic assemblage during flooding events (Stantec, 2020a and 2026). Twenty-eight taxa were recorded during the surveys, 14 from Lake Roe and another 14 from peripheral wetlands, surrounding waterbodies and Lake Yindarlgooda (Stantec, 2026). Four Ostracod taxa represent potentially new or undescribed taxa were recorded; however they are not restricted to Lake Roe. The invertebrate assemblage is influenced by water quality and habitat heterogeneity (Stantec, 2025 and Stantec 2026).

There will be no discharge to Lake Roe therefore avoiding any impact to the aquatic invertebrate community.

Introduced Species

Five introduced species rabbits (*Oryctolagus cuniculus*), cats (*Felis catus*), dogs (*Canis* sp.), camels (*Camelus dromedarius*) and cattle (*Bos taurus*) have been recorded from the Project area or are considered likely to occur. Cattle are present as the Project is located on an active cattle grazing pastoral lease.

Ramelius is committed to managing introduced species in consultation with the pastoralist.

Conservation Significant Species

During the desktop assessment three threatened species, one migratory species and one DBCA propriety species were considered to potential occur within the area (Terrestrial Ecosystems, 2025 and 2025a).

No conservation listed species were recorded.

The Southern Whiteface (*Aphelocephala leucopsis*, listed as VU under the EPBC Act and BC Act) has been recorded from nearby. The Southern Whiteface is a small bird found throughout arid and semi-arid Australia in a variety of habitats. If vegetation clearing occurs within the Southern Whiteface breeding season (July-October) a pre-clearance targeted survey by a suitable qualified zoologist will be undertaken. If active nests are identified a 100m exclusion zone will be established and clearing will resume once breeding is finished. This will avoid adverse impact on this species if they are identified within the Disturbance Footprint.

Malleefowl (*Leipoa ocellata)*, listed as VU under the EPBC Act and BC Act) has been recorded from the general area, however not from within the Activity Envelope.

Conservation-listed migratory wetland species may use the salt lake in years of inundation, however extensive lake and claypan systems exist in the wider region and therefore impact to preferred habitats of these species from the Project is considered negligible in a locality and regional context.

9.4 Potential Environmental Impacts

Potential direct impacts on terrestrial fauna as a result of development of the Project include:

- Reduction and/or fragmentation of fauna habitat (breeding, foraging and/or dispersal) through the clearing of native vegetation. A maximum of 557.7 ha of native vegetation will be cleared for the Project; and
- Fauna mortality (loss of individuals, unlikely to be of conservation significance) associated with vegetation clearing, construction and operation of the Project.

Potential indirect impacts on terrestrial fauna as a result of the Project include:

- Habitat degradation through edge effects on adjacent fauna habitats;
- Increase in the abundance and/or diversity of introduced predators, increasing predation rates on native species and/or increasing competition for resources; and
- Altered fire regimes, light, dust, salt migration, noise and vibration levels from the Project may lead to higher stress and alteration of natural behaviour in native species and adjacent habitat degradation.

9.5 Mitigation

Ramelius proposes the mitigation measures outlined in Table 9-2.

Table 9-2: Predicted Impacts and Mitigation Measures for Terrestrial Fauna

Predicted Impacts form the Project	Mitigation Hierarchy	Mitigation
Loss and fragmentation of fauna habitat	Avoid	• No threatened fauna species have been recorded; • Ramelius has avoided vegetation of highest condition rating ('Very Good') and therefore fauna habitats of high quality where possible; • Ground disturbance/clearing will be kept to the minimum required to develop the Project; and • No dewatering discharge to Lake Roe will occur to protect aquatic values of the area.
	Avoid/minimise	• Ramelius will adopt a Vertebrate Fauna Management Plan for the Project that will be communicated to all personnel as part of the induction process; • Ramelius has an internal Ground Disturbance Permit (GDP) system that will be implemented prior to the commencement of any ground disturbance work; • If vegetation clearing occurs within the Southern Whiteface breeding season (July-October) a pre-clearance targeted survey by a suitable qualified zoologist will be undertaken. If active nests are identified a 100m exclusion zone will be established and clearing will resume once breeding is finished; and

Predicted Impacts form the Project	Mitigation Hierarchy	Mitigation
		• Ground disturbance will follow conditions outlined in any Environmental Approvals and Ramelius internal requirements including (but not limited to): ○ All areas subject to disturbance are located within the approved Activity Envelope; ○ Clearing will not exceed approved clearing limits; ○ Vegetation clearing will follow best practice including; unidirectional, progressive clearing to allow fauna to escape, avoid soil erosion, excessive dust generation and weed introduction/spread; ○ Ongoing dust suppression during all stages of the Project; and ○ Access restrictions and speed limits to avoid unnecessary damage to fauna habitat.
	Rehabilitate	• Rehabilitation activities will be undertaken progressively.
Other potential impacts	Avoid/minimise	• Minimise indirect impacts to fauna individuals and habitat quality through feral animal control, fire preparedness, noise, dust and waste management.

Ramelius commits to the following:

- Total clearing to not exceed 557.7 ha of native vegetation; and
- Implementation of the Vertebrate Fauna Management Plan.

9.6 Assessment and Significance of Residual Impacts

The Project is unlikely to have an impact on environmental values for terrestrial fauna as define in the EPA's Factor Guideline for Terrestrial Fauna (EPA, 2016d) and as summarised in Table 9-3.

Table 9-3: Terrestrial Fauna – Residual Impacts

Environmental Value	Relevant to Project	Comment
Threatened or priority species	No	No conservation listed species under the EPBC or BC Act have been recorded.
Species with a restricted distribution	No	No such species were recorded during any of the surveys or are considered likely to occur.
Degree of historical impact from threatening process	No	Terrestrial ecosystems in the wider region have had little impact and are considered relatively intact. Avoiding impact to Lake Roe and associated claypans upholds the protection of this environmental value.
Providing an important function required to maintain the ecological integrity of a significant ecosystem	No	No known examples.

9.7 Environmental Outcome

The Environmental Outcomes for terrestrial fauna are predicted to align with the EPA objectives for Terrestrial Fauna to "To protect terrestrial fauna so that biological diversity and ecological integrity are maintained" (Environmental Protection Authority, 2016d). The following Outcomes are predicted:

- A total clearing of no more than 557.7 ha within the Activity Envelope.

Through implementation of monitoring and management measures as outlined above Ramelius considers there will be no residual impacts on the Terrestrial Fauna Factor.

10 Inland Waters

10.1 EPA Environmental Factors and objectives

The EPA's objective for the Inland Waters factor is "to maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected" (EPA,2018).

10.2 Relevant policy and guidance

The following EPA Policies and guidelines are considered relevant to the Inland Waters Environmental Factor:

- Environmental Factor Guideline – Inland Waters (EPA,2018a); and
- Statement of Environmental Principles, Factors, Objectives and Aims of EIA – (EPA,2023).

10.3 Receiving Environment

10.3.1 Hydrology

10.3.1.1 *Hydrology Studies*

The following hydrology studies have been completed:

- Bombora Project, Lake Roe Flood Depth Assessment, Prepared for Ramelius Resources, (AQ2,2025) (Appendix B);
- Roe/Rebecca Haul Road- Surface Water Environmental Assessment. Prepared for Ramelius Resources (AQ2, 2025a) (Appendix C);
- Lake Roe Hydraulic Behaviour Desk Study, Prepared for Ramelius Resources, (AQ2,2024) (Appendix D); and
- Hydro-meteorological and surface water management study, Lake Roe Project pre-feasibility study. Prepared for Breaker Resources, (GRM,219).

10.3.1.2 *Landforms and drainage*

The Project is located within the catchment area of Lake Roe on its western side. The area colloquially referred to as Lake Roe is a complex of interconnected smaller lake sub-areas which span approximately 90 km in length (west to east) (AQ2,2025a). The sub-areas are situated within a broader paleo-drainage system that historically flowed from northwest to southeast. The elevation gradient of the paleo-drainage system has reduced with time and

the climate dried, the system has become a number of salt lakes which become terminal drainage points under most runoff events (AQ2,2025a).

The Project is within an arid zone characterised by large dryland creek systems and highly variable hydrological conditions, which range from prolonged droughts to episodic flood events. These extremes influence the region's physical, chemical, and biological characteristics. There are no natural permanent watercourses or wetlands (AQ2,2025a). All drainage lines are small and intermittent, flowing only after major rainfall events. Drainage is internal, terminating in salt lakes and clay pans and surface drainage is only significant immediately following rainfall events. Local flooding may occur, especially following cyclonic thunderstorms (AQ2,2025a).

10.3.1.3 *Lake Roe Hydraulic Behaviour*

A hydraulic behaviour study was completed to assess the behaviour of basins (also called 'pans' in the report) within the vicinity of the Project (AQ2, 2024). Climate data including rainfall, evaporation and temperature was assessed to aid in characterising Lake Roe's hydrological behaviour. The data collected from nearby climate stations can be summarised as follows:

- Long-term average annual rainfall of 260.7 mm;
- Annual average Class A pan evaporation rate of 2,420 mm and an annual average Morton's shallow lake evaporation rate of 1,560 mm;
- Long-term average maximum temperature of 26 °C; and
- Monthly average rainfall, Class A pan evaporation, Morton's shallow lake evaporation, maximum and minimum temperature (AQ2,2024).

Lake Roe consists of a series of pans that appear to be separated by high points, some of which appear to be sand dunes. Each of the small salt pans have a local low point where water may pool (AQ2,2024). The main catchment reporting to the lake comes from the western side of the lake, with other, smaller catchments reporting to the lake around the lake perimeter. Following large enough inflow events, the individual salt pans may become hydraulically connected.

The study also included characterising ponding within Lake Roe with respect to frequency and duration of inundation and estimate potential seepage rates from the lake to the underlying groundwater during ponding events. The inundation observations for Lake Roe and surroundings concluded that:

- Catchment runoff responses causing at least some inundation in Lake Roe were generally observed when rainfall exceeded approximately 25 mm;

- In small inundation events, where widespread flooding across the full lake is not prevalent, some water levels were estimated for the purpose of the study;
- Visible widespread inundation across constituent salt pans was typically observed when a rainfall event occurred over multiple days, with total rainfall over the event exceeding 50 mm;
- The water level can vary between constituent salt pans; however, when widespread inundation is observed, the timing of the inundation is generally consistent across the lake;
- The largest rainfall events within the observation period, correlated with observations of large inundation events; and
- Inundation responses in Lake Roe were generally observed 1 to 3 days after initial rainfall was recorded.

A seepage assessment was completed as part of the ponding behaviour study (AQ2,2024). Inundation events were used to assess potential seepage from the lake to the subsurface. The water level recession observed from satellite aerial imagery within Lake Roe is assumed to be driven by evaporation and (potentially) seepage into or from the subsurface (AQ2,2024). It was concluded that groundwater does not contribute to inflow into the Lake Roe, and surface water recession/periodic standing water within the claypan(s) is solely accounted for by evaporative losses and seepage (AQ2,2024).

Ponding in the lake is attributed to infrequent surface water runoff or flooding events rather than surface expression of groundwater. It is possible for groundwater levels to rise close to the surface in low lying areas during and following extreme rainfall events due to higher-than-normal recharge, however at such times, flow within the local lakes and creeks would be dominated by surface water runoff, with a minimal contribution from the groundwater (AQ2,2025b).

10.3.1.4 *Flood Modelling*

To reduce the risk of flooding to the pits from runoff within the Project, a flood protection levee is proposed around the perimeter of the open pits. An assessment was undertaken to provide an estimate of the height of flood protection levees required for a 1% AEP recurrence interval (, AQ2,2025).

The flood response was simulated by creating a 2D flood model, which was developed to predict inundation extents resulting from the 20%, 1% AEP and Probable Maximum Precipitation (PMP) rainfall events (AQ2,2025).

Key outcomes from the 1% AEP flood modelling results are as follows:

- Runoff volumes from this event were large enough for most of the lake sub-areas to become hydraulically connected. As such, over time, the water surface elevation across the majority of the lake area becomes the same;
- The intermediate high points between lake sub-areas need to be overtopped before water can be transferred through the lake system. The runoff from the larger catchments fills the lake sub-areas which they immediately report before runoff spills over and reports to central parts of the lake. In smaller, more frequent runoff events than those simulated, there may be insufficient runoff for inundation to spill to the central lake sub-areas;
- The predicted flood elevation from the 1% AEP 72-hour rainfall event is 314.5 mRL across the major lake sub-areas; and
- Inundation level from the 1% AEP 72-hour rainfall event is below the elevation required for Lake Roe water to overtop to the east, and therefore all runoff is contained within the Lake Roe footprint.

The predicted maximum flood depth resulting from a 1% AEP rainfall event is presented in Figure 10-1.

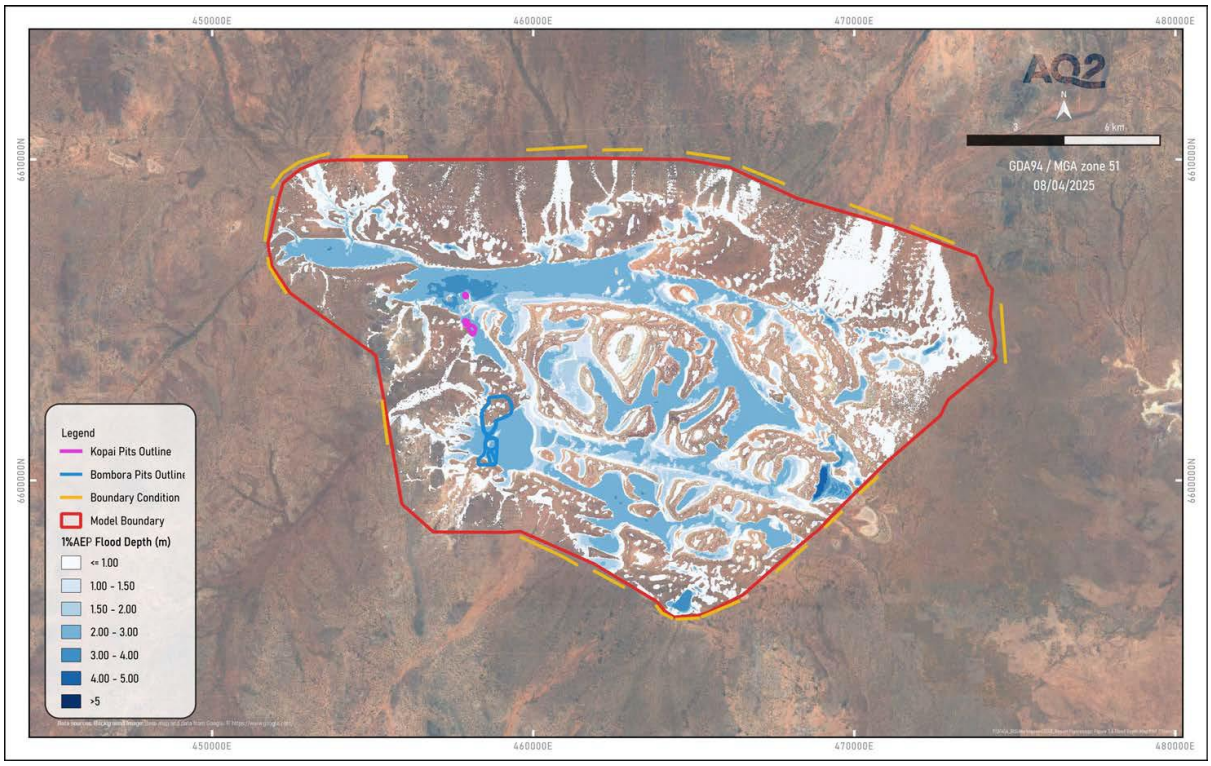

Figure 10-1: Maximum Flood Depth Map (1% AEP Rainfall)

Overall, the assessment was completed to provide estimates of the height of flood protection levee required for different flood recurrence intervals (AQ2,2025). It also defined the flood depths from various rain events to establish the size of the bund walls needed to keep water out of the Project pits as seen in Figure 10-2 to Figure 10-4. A 1m freeboard was

added as a factor of safety. Considering a low tolerance to risk and the probability of different rainfall events over the Project life span, the 1% AEP flood depth was used as the basis for sizing flood levee protection around the pits. The 1% AEP flood depth within the lake is predicted to be in the order of 315.1 mRL.

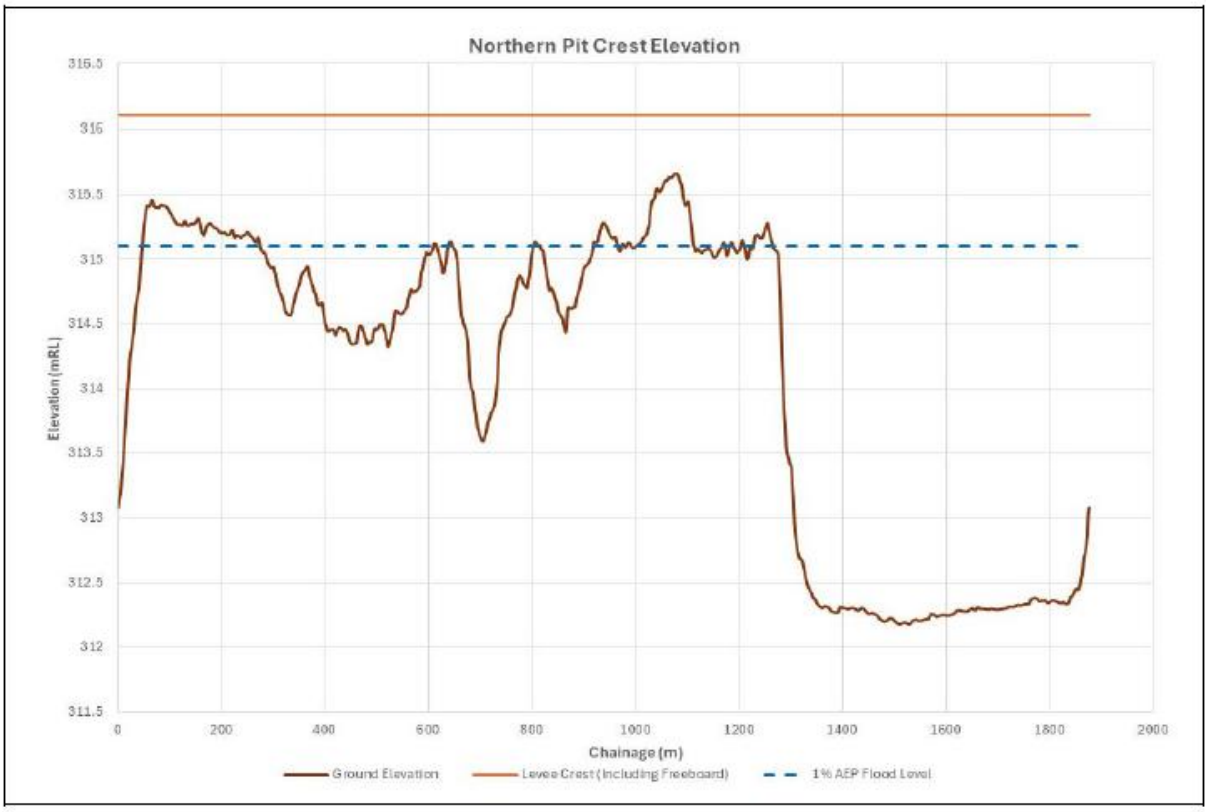

Figure 10-2: Northern Pit- Flood Levee Crest

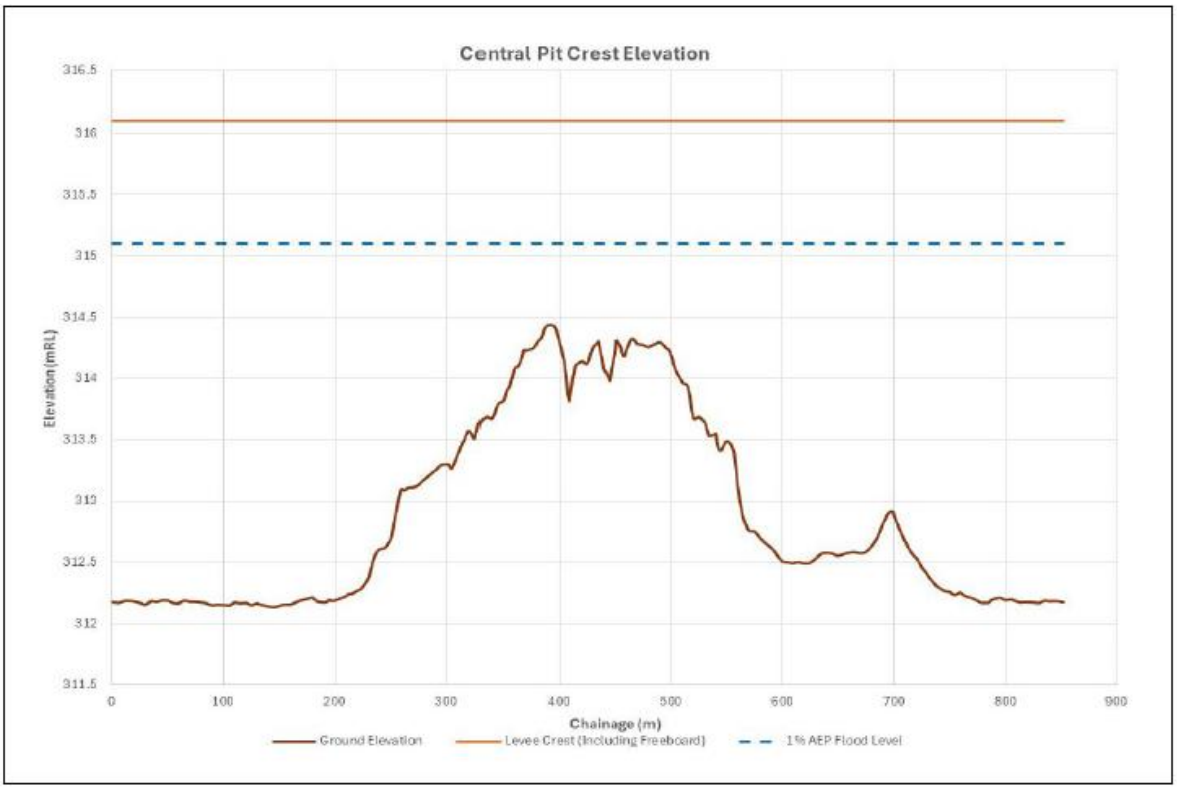

Figure 10-3: Central Pit-Flood Levee Crest

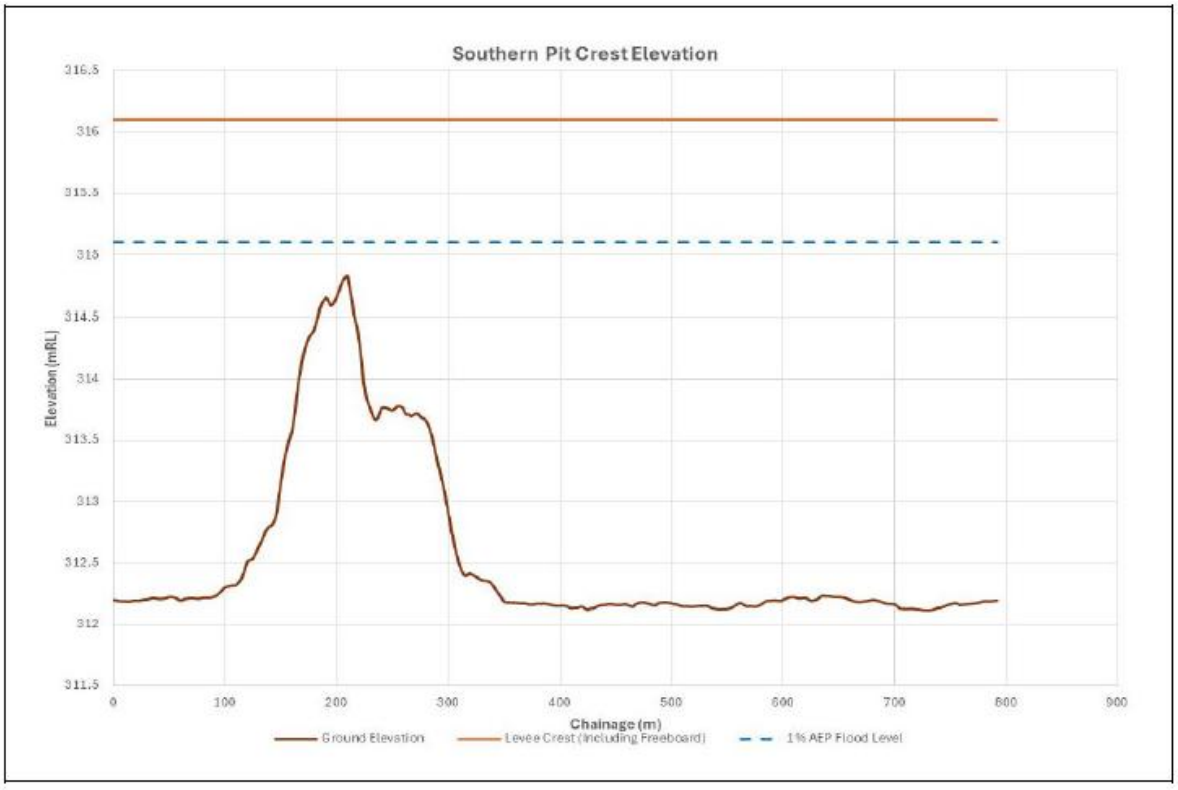

Figure 10-4: Southern Pit-Flood Levee Crest

10.3.1.5 *Service Corridor Surface Water Management*

The service corridor commences at the western side of Lake Roe and then runs parallel with the northern side of the lake before turning northwest. Surface water catchment areas draining towards the service corridor are shown in Figure 10-5.

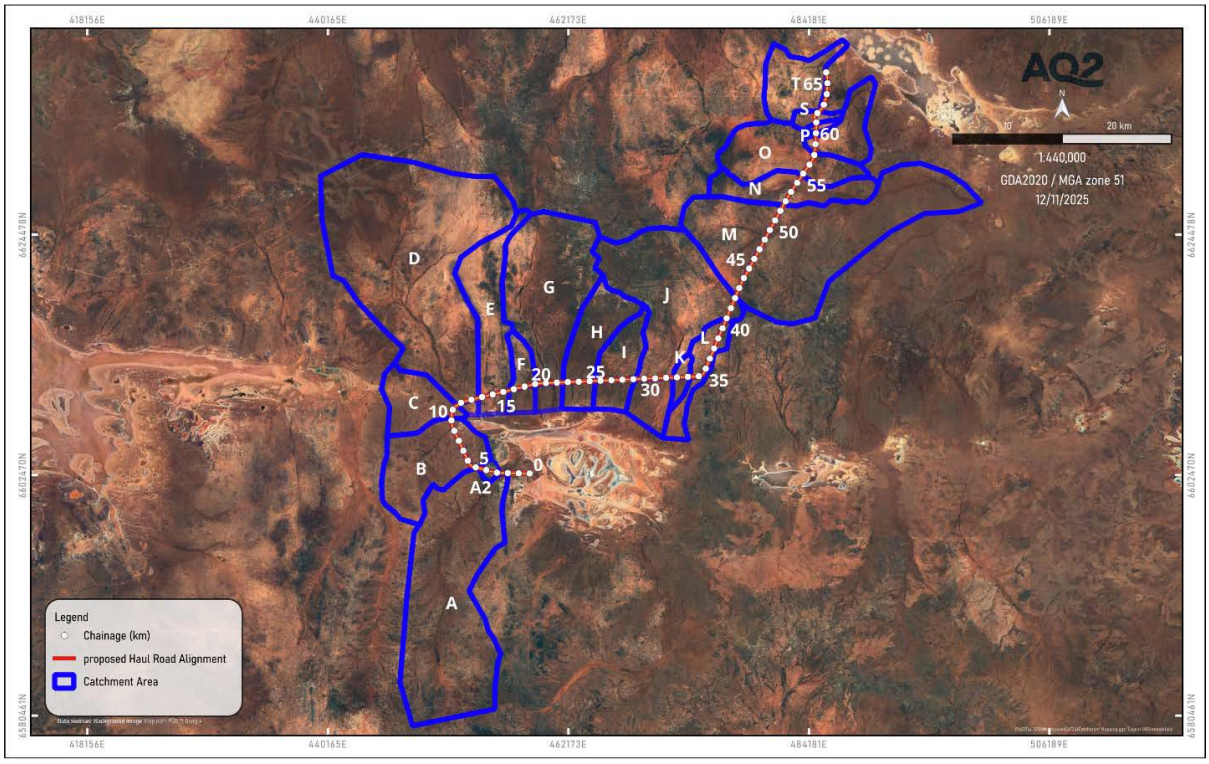

Figure 10-5: Service Corridor Alignment Catchments Extent

Hydrology modelling was completed for four catchments (A, D, G and J) to estimate flow hydrographs and peak flows at the road crossing locations (AQ2,2025a). The model was run for the 50%, 20%, 10% and 1% AEP with ensemble rainfall simulations for storm durations from 12 hours up to 196 hours (AQ2,2025a).

The peak flow values predicted from the model used for the modelled catchments are summarised in Table 10-1.

Table 10-1: Catchments Peak Flows Results

AEP %	1%	10%	20%	50%
Catchment A				
Critical Duration (Hours)	24	24	36	24
Peak flow (m3 /s)	315	92	35	<1
Catchment D				
Critical Duration (Hours)	24	24	36	24

AEP %	1%	10%	20%	50%
Peak flow (m3 /s)	338	136	56	<1
Catchment G				
Critical Duration (Hours)	12	12	12	24
Peak flow (m3 /s)	249	79	40	<1
Catchment J				
Critical Duration (Hours)	12	12	12	24
Peak flow (m3 /s)	249	92	49	<1

Catchment A has a defined channel which would act as the preferential low-flow drainage path. This natural channel would result in runoff from Catchment A reporting to Lake Roe without crossing the service corridor alignment in low flow events. Flow rates from Catchment A which would impact the road would be for the 1% AEP flow hydrograph and less than 5% of the peak flow rate.

The main impact from the construction of linear infrastructure across drainage paths is the concentration of runoff at culvert discharge locations, particularly where the runoff is characterised as sheet flow (AQ2,2025a). This can potentially lead to:

- Creation of runoff shadow areas downstream of the infrastructure where the widespread sheet flow zone is concentrated by the culvert installations; and
- Concentration of runoff from sheet flow environments at discharge points from culverts, causing higher stream velocities and the potential for erosion downstream of the culvert discharge point.

These impacts can be managed to reduce the overall environmental impact as follows:

- Installation of multiple smaller culverts at frequent intervals along the alignment;
- Appropriately designed floodway's which minimise the concentration of sheet flow; and
- Mechanisms to spread flow downstream of culverts to return culvert discharge back to sheet flow behaviour (AQ2,2025).

Ramelius has taken the outcomes of this assessment in designing the road to minimise impacts to the environment.

10.3.2 Hydrogeology

Hydrogeology Studies

The hydrogeology studies completed to support the Project includes:

- Roe Gold Project Bombora Hydrogeological Dewatering Assessment. Prepared for Ramelius Resources, (AQ2,2025b) (Appendix A).

10.3.2.1 *Mine Dewatering*

A detailed hydrogeological investigation was undertaken as part of a Definitive Feasibility Study (DFS) level study to improve the hydrogeological understanding of the Bombora Activity Envelope (AQ2,2025 b). The key objectives of the investigation were to:

- Confirm the presence/absence and distribution of the zones of enhanced permeability within potential water bearing structural features in the GRM model;
- Collect hydrological information;
- Understand fracture distribution and permeability versus depth across the site;
- Install test production/dewatering bores to allow hydraulic testing of the aquifer to confirm local aquifer parameters and to more accurately determine dewatering pumping rates required during mining of the open pits and underground; and
- Establish a groundwater monitoring network in the mining area to provide pre-mining baseline, as well as life of mine groundwater monitoring (Figure 2-1).

A total of 17 monitoring bores and 2 test production bores were drilled, with bore depth ranged from 50m to 200m (AQ2,2025b). The bore depth selection considered the depth of mining operation in the respective areas, with the intention of having the bores penetrate to the base of the open pits. The investigation bores encountered a 5m transported layer comprised of gravel, sand, silt and clay, overlying an in-situ weathered profile of saprolite and saprock overlying fresh bedrock. Water strikes were recorded during drilling, with water strikes encountered at variable depth, within the weathered bedrock (saprock) and fresh fractured zone it was encountered up to approximately 55m depth (AQ2, 2025b). Using the testing and drilling data, a conceptual hydrogeological model was formulated.

Dewatering requirements for the Project have been developed using analytical groundwater flow model, based on the conceptual pit dewatering model and prevailing water level and aquifer conditions (AQ2,2025b). The proposed mine is approximately 2.5 km long and consists of three open-cut pits, together with an underground mine over a total period of 9 years. Mining of all open pits will be completed prior to the commencement of the underground mining operation. The proposed underground mine will be accessed from three portals located in the BOM 1800 pit and the underground workings will extend some 750m north of the BOM 1800 pit and beneath the BOM 1100 and BOM 700 pits.

An analytical modelling approach was adopted to simulate groundwater inflows and provide estimates of pit dewatering requirements. The approach used groundwater inflow to the pit from aquifers surrounding the pit over set time periods (AQ2,2025b). The pit inflow dewatering rates over the open pit mining period (Year 1 to Year 3 of the Project) are as follows:

- Total groundwater inflows to the pits of between 3 L/s (260kL/d) to 24 L/s (2,100 kL/d), averaging about 17 L/s (1,500 kL/d);
- Groundwater inflows to the pits will possibly be as high as:
  - up to 19 L/s at the end of mining BOM 1800 Pit (Year 2);
  - up to 7 L/s at the end of mining BOM 1100 Pit (Year 3); and
  - up to 4 L/s at the end of mining BOM 700 Pit (Q1 Year 3).

Based on dust suppression requirements at other Ramelius mines, water needs for dust suppression around active mine work areas and the service corridor road is estimated at the equivalent of 15L/s (1,300kL/d). Table 10-2 summarises the total inflows from open pit and underground mine workings for the duration of the Project. It confirms:

- Dewatering requirements will steadily increase as surface area from open pit and underground works develop;
- Site usage is likely to use all mine dewatering water for the first year;
- The peak dewatering rate of 30-32L/s is only achieved in the back half of the mine life;
- Even this peak rate is significantly lower than the estimated 50-60L/s reported in the 2019 GRM study.

Table 10-2 includes a column that shows the quantity of surplus dewatering water above site usage that will require disposal.

Table 10-2: Predicted total groundwater inflows to Pits and Underground

Year of mining	Bombora 1800 Pit	Bombora 1100 Pit	Bombora 700 Pit	Bombora Underground	Total Inflow (All pits and Underground)	Surplus for Disposal
	Total (L/s)	Total (L/s)	Total (L/s)	Total (L/s)	Total (L/s)	Total (L/s)
1	0.0	0	0	0	0	0
	2.9	0	0	0	3	0
	11.2	0	0	0	11	0
	15.1	0	0	0	15	0
2	17.5	0	0	0	17	2

Year of mining	Bombora 1800 Pit	Bombora 1100 Pit	Bombora 700 Pit	Bombora Underground	Total Inflow (All pits and Underground)	Surplus for Disposal
	Total (L/s)	Total (L/s)	Total (L/s)	Total (L/s)	Total (L/s)	Total (L/s)
	16.2	0	0	0	16	1
	18.6	0	0	0	19	4
	18.0	0	0	0	18	3
3	17.1	0	3.9	0	21	6
	16.6	3.6	0	0	20	5
	16.2	7.3	0	0	24	9
	15.9	6.3	0	0	22	7
4	14.3	3.9	0	5.1	23	8
5	13.8	3.6	0	11.2	29	14
6	13.3	3.4	3.2	12.1	32	17
7	13.0	3.3	3.0	12.4	32	17
8	12.7	3.2	2.8	10.8	30	15
9	12.4	3.2	2.7	8.2	27	13

Total inflows to the underground mine workings are in order of 5 to 12.5L/s, however for each separate underground area (pit), groundwater inflows are predicted to be between 1.5 L/s and 7 L/s. The BOM 1800 and BOM 1100 Pits will have to be kept dry to allow underground mining, so the pits will be dewatered over the life of mine. BOM 700 Pit will be dewatered until it is backfilled and integrated into the WRL. Underground dewatering will be completed through a series of sumps at increasing depths as the mine progresses.

The extent of the cone of depression in the groundwater level due to dewatering depends on the depth of mining and the duration of pumping. Regional drawdowns will be constrained by the low permeability of the bedrock away from the immediate area. The maximum theoretical extent of the drawdowns is likely to be constrained to within 4 km of the mine (AQ2,2025b).

The drawdown impact predicted for the Project after the proposed mine of life is shown in Figure 10-6. Given that no vegetation or fauna species can utilise groundwater due to its high salinity, the reduction of groundwater levels will not have a significant impact to the local and regional environment.

10.3.2.2 *Dewatering Discharge*

An options analysis of the surrounding environment was completed to determine where dewatering could be discharged to Lake Roe (Section 3). The pond characterisation work within the lake (AQ2,2024) examined potential pans suited to receive water from dewatering, based on frequency and duration of rainfall inundation and estimate potential seepage rates.

The analysis looked not just at a range of possible discharge rates (quantity) to various pans but also the accumulative salt load that would be deposited in those locations over the 9-year life of the Project (quality). While a number of pans were identified that could accommodate the discharge quantity, the resultant salt load could be remobilised and transported to fringing vegetation around the pan in subsequent large rainfall (flood) events. These rainfall events are beyond the control of Ramelius to manage.

While the level of impact of these flood events is almost impossible to quantify, the likelihood of it negatively impacting some or all flora species in the inundation zone was considered high. Using the precautionary principle, Ramelius decided to avoid the possibility entirely by not discharging any dewatering to the lake and as an alternative all surplus mine water will report to HDPE lined land-based evaporation ponds. Dried salt will be scraped up and disposed in the base of a pit voids or encapsulated in a WRL.

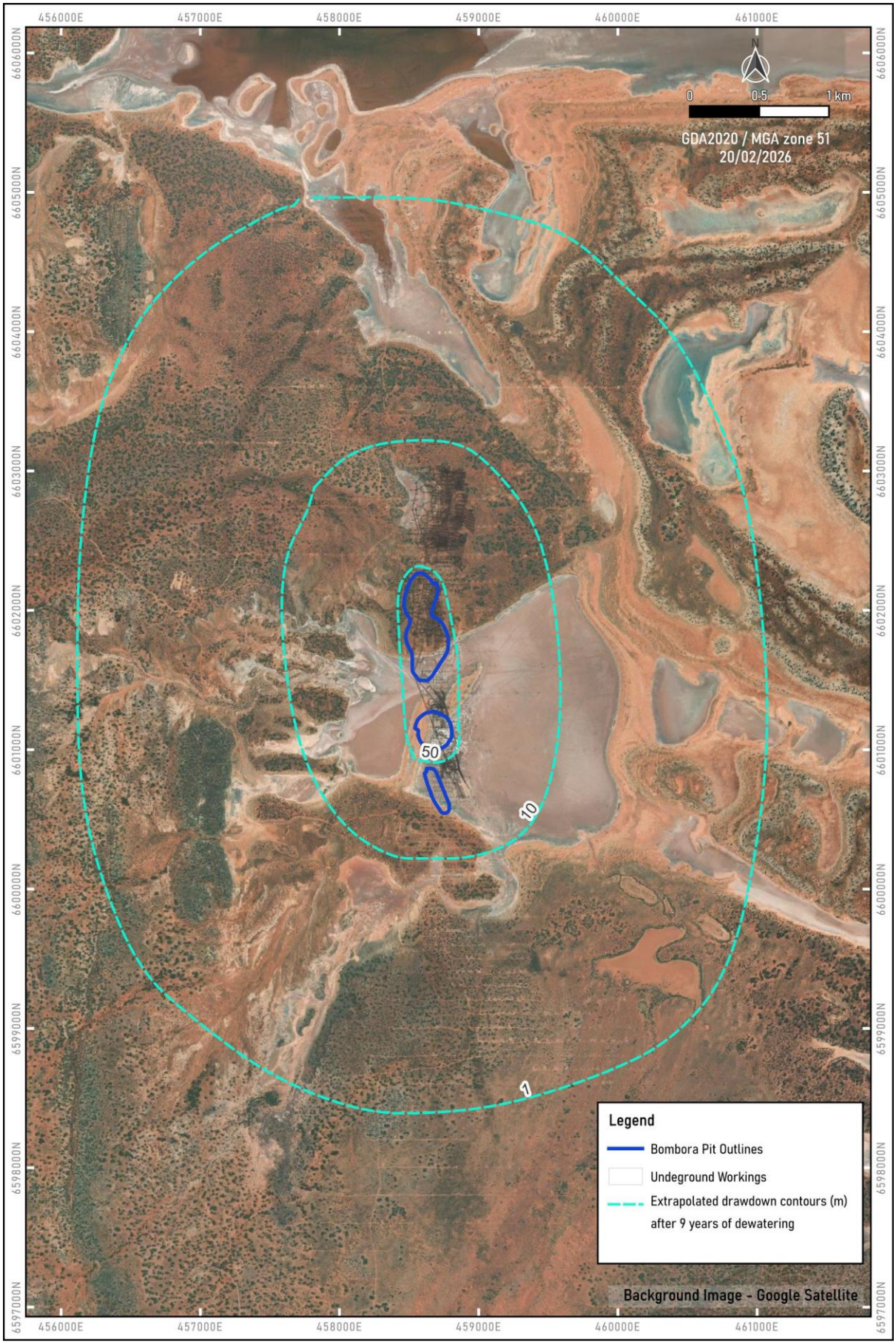

Figure 10-6: Predicted Long Term Cumulative Drawdowns Over Life of Project Dewatering

10.3.2.3 *Groundwater Dependent Ecosystems*

Groundwater Dependent Ecosystems (GDE) includes biological assemblages of species such as wetlands or woodlands that use groundwater either opportunistically or as their primary water source. Botanica (2025) define a GDE as 'any vegetation community that derives part of its water budget from groundwater and must be assumed to have some degree of groundwater dependency'. The BoM Atlas of Groundwater Dependent Ecosystems database (BoM, 2025b), shows there are no known or potential aquatic GDEs in the area surveyed for the Project (Botanica, 2025). Figure 10-7 shows potential terrestrial GDE mapped over the Activity Envelope. These are described in Table 10-3.

The vegetation present in the vicinity (10 km radius) of the Project area is likely to source water from soil moisture in the unsaturated zone above the water table and is likely to rely on sporadic rainfall and overland water flow events, with no association with groundwater (i.e. phreatophyte vegetation).

The groundwater is hypersaline (more than 140,000 mg/L Total Dissolved Solids TDS) and does not support any groundwater dependent ecosystems. (AQ2,2025b).

Table 10-3: Potential Terrestrial Groundwater Dependent Ecosystems (Botanica, 2025)

Geomorphology	Ecosystem Description	Potential terrestrial GDE
Undulating plains with some sandplains, ferruginous breakaways; ridges of metamorphic rocks and granitic hills and rises; calcretes, large Salt lakes and dunes along valleys.	Bare areas, salt lakes.	High
	Mosaic: Medium woodland; salmon gum & red mallee / Hummock grasslands, mallee steppe; red mallee over spinifex (*Triodia scariosa*).	Moderate

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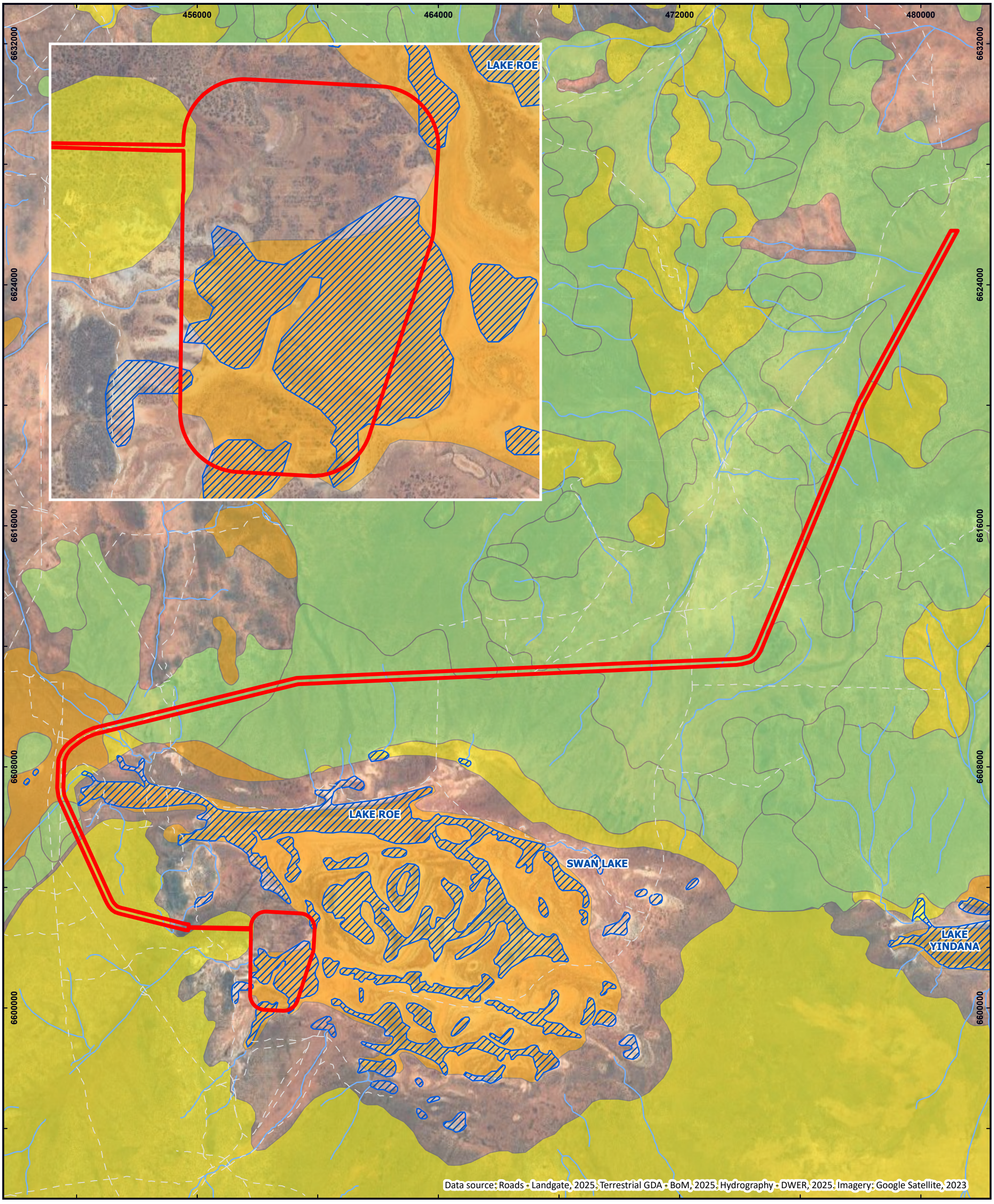


LEGEND

- Activity Envelope

Hydrography

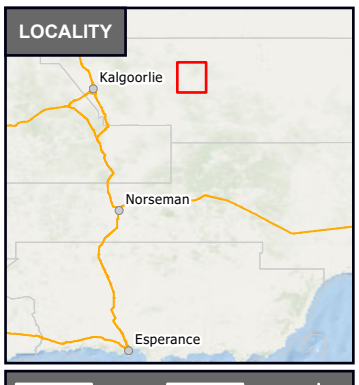
- Surface Waterbody
- Watercourse

Western Australian Roads

- Minor Road
- Other

Terrestrial GDE

- High potential
- Moderate potential
- Low potential



GROUNDWATER DEPENDENT VEGETATION

Roe Gold Project

S38 Referral Supporting Document

Ramelius Resources

N

0 1 2 3 4 km

Scale @ A3: 1:120,000 Coordinate System: GDA2020 MGA Zone 51

Prepared:	E Jackson
Reviewed:	V Mugabe
Project:	TE24094
Revision:	A
Date:	25/02/2026

Figure 10-7

talis consultants

10.3.2.4 *Other Groundwater Users*

Other groundwater users have been assessed via the DWER Water Register Database of licensed registered users. According to this database there are currently no other groundwater users within a 10 km radius of the Project (AQ2,2025b). There are licensed groundwater users that abstract water from the fractured rock aquifer system. The nearest fractured rock aquifer user is located approximately 14 km to the south. Figure 10-6 shows the maximum extent of groundwater drawdown (<1m) after 9 years of dewatering extends approximately 3 km from the mine voids. There are no other groundwater users within this zone.

Figure 10-8 shows the closest registered bores, located approximately 10 km to the northwest of Bombora. These bores source water from a separate shallow aquifer to supply water for stock that is unrelated to the fractured rock aquifer system at Bombora. (AQ2,2025b).

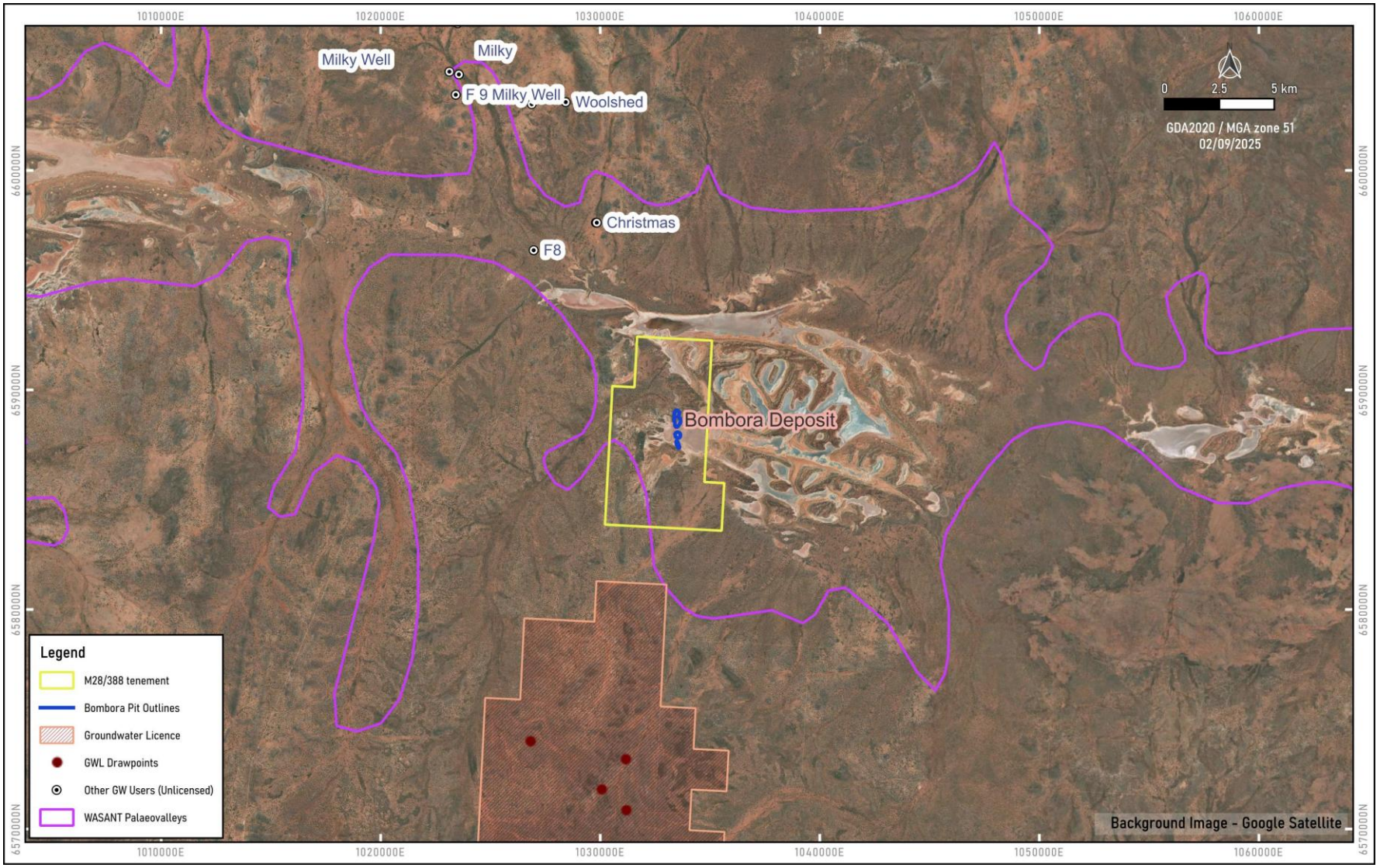


Figure 10-8: Nearest Other Groundwater Users

10.4 Potential Environmental Impacts

An assessment has been completed to identify potential impacts the Project is likely to have on the environment. The following impacts have been identified and are addressed in Table 10-4:

- disposal of mine dewater to surface water systems, where this may significantly alter the hydrology of the streams, with consequent impacts to aquatic or riparian ecosystems;
- diversion of surface water systems;
- discharge of contaminants to storage or evaporative ponds, where there is potential for overflow or leakage;
- saline water used to suppress dust in mine areas and service corridor will accumulate salt load over time on these areas. Water runoff in a rainfall event will transport salt load into surrounding environment;
- the creation of pit lakes after the completion of mining; and
- any activity which alters the land surface or dewaters aquifers and creates acid mine drainage (AMD).

10.5 Mitigation of Impacts on Inland Waters

Mitigation measures for the Inland Waters factor follow the Avoid, Minimise and Rehabilitate hierarchy. Mitigation measures proposed for the Project are presented in Table 10-4

Table 10-4: Predicted Impacts, Mitigation Strategies and Outcomes

Predicted Impact for the Project	Mitigation Hierarchy	Mitigations Strategy	Outcomes
Disposal of mine dewater to surface water systems, where this may significantly alter the hydrology of the streams, with consequent impacts to aquatic or riparian ecosystems.	Avoid	• Ramelius will avoid discharging dewatering to Lake Roe by; • Consuming dewatering for dust suppression on disturbed areas; and • Discharge surplus water to terrestrial lined evaporation ponds.	No mine dewatering discharge to the local surface water system (Lake Roe). No alteration of hydrology or impact to aquatic /riparian ecosystem.
	Minimise	• Dewatering will be minimised to the extent required to allow dry mining; and • Dewatering will be managed by DWER abstraction and discharge licences.	
	Rehabilitate	• At mine closure, minor diversion drains will be removed and pre-mining surface water flow paths reinstated; • Causeway between BOM 1800 pit and BOM 700/1100 pits will be removed and levels reinstated to current playa; and • Flood levee bunds around open pits will remain in perpetuity to eliminate altered hydrology pathways into the pit voids.	
Diversion of surface water systems	Avoid	• The Bombora 1800 WRL boundary is located approximately 50m from the shoreline; • Flood levees designed to 5m high around the open pits. This provides a wall height equivalent to the 1% AEP plus a 1m freeboard level; and • Causeway design between BOM 1800 pit and BOM 700/1100 pits will include culverts so surface water entering through catchment A (Figure 10-5) can pass into Lake Roe pans, avoiding damming or diverting surface water flow.	No change to the hydrological regime.

Predicted Impact for the Project	Mitigation Hierarchy	Mitigations Strategy	Outcomes
	Minimise	• Localised bunds and drains will be constructed to divert natural flow paths around mine infrastructure and return it to natural flow paths downstream and into Lake Roe.	
	Rehabilitate	• At mine closure, minor diversion drains will be removed and pre-mining surface water flow paths reinstated; • Causeway between BOM 1800 pit and BOM 700/1100 pits will be removed and levels reinstated to current playa; and • Flood levee bunds around open pits will remain in perpetuity to eliminate altered hydrology pathways into the pit voids.	
Discharge of waste to storage or evaporative basins, where there is potential for overflow or leakage.	Avoid	• To avoid discharging water into Lake Roe, evaporation ponds will be used for holding and evaporating surplus dewater discharge.	Dewatering discharge into evaporation ponds will not result in overflowing. Extent of seepage from evaporation ponds will be within a managed buffer zone. No impact to native vegetation outside defined buffer.
	Minimise	**Sediment ponds** • Mine dewatering water will be pumped to a series of sediment ponds to reduce TSS before use in dust suppression. Any surplus above site needs will be transferred to evaporation ponds. Due to the need to excavate settlement sediment, the first sediment pond will be unlined. Subsequent pond(s) will be HDPE lined to eliminate seepage; • Pond #1 will have a spillway overflow into pond #2, avoiding the risk of uncontrolled spillage/overflow; and • Final sediment pond will be fitted with standpipe for filling water trucks and high-level float switch to activate pump to transfer water to the active evaporation pond. **Evaporation ponds** • Surplus dewatering water will be discharged into evaporation ponds to avoid discharging water into the natural environment;	

Predicted Impact for the Project	Mitigation Hierarchy	Mitigations Strategy	Outcomes
		• Evaporation ponds will be HDPE lined to eliminate seepage; • To avoid overflow, the pond will be monitored daily during discharge; • Monitoring bores will be installed to detect leakage. Recovery trenches will be installed in the event leakage is detected beyond the immediate footprint of the pond; and • The evaporation pond will only be filled and maintained according to the design standards and DWER Licence conditions **Detention basins (sumps)** • Constructed at low points to collect rainfall off disturbed areas and contain sediment and salt load for low duration events. Dilution of overflow during high duration events is expected to have minimal effect on adjacent vegetation; and • Monitor vegetation health adjacent to mine and road drainage infrastructure. Implement mitigation measures on indirect impact areas.	
	Rehabilitate	• At mine closure, ponds will be excavated, underlying soil tested and salt contaminated soil removed to the WRL, walls reshaped and site rehabilitated in accordance with the Mine Closure Plan; and • Rehabilitate any indirect salt impact areas at mine closure.	
The creation of pit lakes after the completion of mining.	Avoid	• Due to the nature of the Project, this aspect cannot be avoided; and • Pit lakes will be groundwater sinks, so no impact to the wider environment beyond the immediate pit confines.	No impact from pit lakes to sensitive receptors.
	Minimise	• One pit will be backfilled to reduce the footprint of pits lakes.	

Predicted Impact for the Project	Mitigation Hierarchy	Mitigations Strategy	Outcomes
	Rehabilitate	• A MCP will be developed to manage the features of the Project at completion and post mining.	
Any activity which alters the land surface or dewaters aquifers and creates acid and metalliferous (AMD) drainage. Activities likely to alter land surface within the Project includes erosion and surface runoff.	Avoid	• Only areas identified on site plans will be cleared; and • Baseline studies have confirmed no/negligible risk of AMD.	No AMD or risk of major sediment export from Project activities.
	Minimise	• Disturbance of the site will be limited to the approved area; • Topsoil stockpiles will be located away from drainage channels; • WRL's will have toe bunds constructed to contain sediment; • Flood bunds will contain surface water inside the bunded area; and • A Water Management Plan will be implemented to manage hydrological issues on site.	
	Rehabilitate	The Project MCP will include rehabilitation strategies for any surface land alteration caused by development of the Project.	

10.6 Assessment Of Residual Impacts

Although the Project is located on the margins of Lake Roe, the impacts to Inland waters can be considered negligible and can be managed by other regulating agencies. The EPA objective "to maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected" will be met.

Table 10-5 shows an assessment of the Project against the EPA Inland waters factors (EPA ,2018a).

Table 10-5: Inland Waters Residual Impacts

Aspect	Relevant to Project	Comments
Disposal of mine dewater to surface water systems, where this may significantly alter the hydrology of the streams, with consequent impacts to aquatic or riparian ecosystems	No	No discharge of mine water to the local surface water system (Lake Roe). No alteration of hydrology and impact to aquatic /riparian ecosystem from the Project.
Diversion of surface water systems	No	Localised bunds and drains will be constructed to divert natural flow paths around mine infrastructure and return it to natural flow paths downstream and into Lake Roe. These will be rehabilitated at the end of the Project.
Discharge of waste to storage or evaporative basins, where there is potential for overflow or leakage	No	The evaporation ponds will only be filled to agreed capacities and maintained according to the design standards and DWER Works Approval and Licence conditions. Evaporation ponds will be HDPE lined.
The creation of pit lakes after the completion of mining.	Yes	Due to the nature of the Project, this aspect cannot be avoided, two pits will be left at the end of the mining cycle. However, Ramelius will ensure that the Project leaves minimal impact to the environment at completion.
Any activity which alters the land surface or dewaters aquifers and creates AMD. Activities likely to alter land surface within the Project includes erosion and surface runoff.	No	Alteration of land surface will be temporary, due to the establishment of mine features, these will be rehabilitated at the end of the Project. No risk of AMD from the Project

10.7 Environmental Outcomes

Outcomes from development of the Project are predicted to align with the EPA objective for Inland Waters which is "to maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected" (EPA, 2018a). The following Outcomes are predicted:

- No dewatering discharge to Lake Roe, avoiding any impact to this receiving environment and maintaining existing hydrological and biological regimes;
- No change to groundwater quality that could impact receptor environmental values; and
- No change to hydrological regime (surface water quantity) that could impact receptor environmental values.

Through implementation of monitoring and management measures as outlined above Ramelius considers there will be no residual impacts on the Inland Waters factor.

11 Other Environmental Factors

During assessment of Projects the EPA also considers other (not key) Environmental Factors or matters relevant to a Project. These other Factors are usually not significant enough to warrant individual assessment by the EPA, or they can be regulated through other regulatory processes and agencies to meet the EPA's objectives.

Table 11-1 outlines the Factors objectives, receiving environment, potential environmental impacts, proposed mitigation/management measures and environmental Outcomes of "other'" Environmental Factors for the Project. Where relevant supporting information has been included as appendices. The other Environmental Factors considered for the Project include:

- Subterranean Fauna;
- Terrestrial Environmental Quality;
- Greenhouse Gas Emissions;
- Air Quality; and
- Social surroundings.

Due to the location of the Project and the surrounding environment, the Environmental Factors "Sea", "Landforms" and "Human Health" have been considered not relevant to the Project, and no assessment has been completed for these Factors.

Table 11-1: Other Environmental Factors

Other Environmental Factor	Receiving Environment	Significance to Project	Management by Other Decision-Making Authorities (DMAs) Statutory and Environmental Management Controls for the Project
Subterranean Fauna	The objective of the factor Subterranean Fauna is: "To protect subterranean fauna so that biological diversity and ecological integrity are maintained'' (EPA,2016a). **Receiving Environment** A level 1 subterranean fauna assessment was completed to assess if the Project could potentially have direct or indirect impacts on subterranean fauna through removal of habitat from mining excavation and groundwater drawdown from the dewatering required to access the resource (Stantec, 2019) (Appendix J). Database searches indicated that there were no TEC or PEC subterranean communities identified within the vicinity of the Project. There were also no listed conservation significant stygofauna or troglofauna records or threatened subterranean fauna taxa found during the database searches (Stantec,2019). The subterranean fauna assessment concluded that the likelihood of stygofauna occurring in salt lake environments is generally nil to low. This is primarily attributed to a lack of vugs and voids in the saturated strata and hypersaline, often acidic groundwater conditions in the vicinity of the playas (Stantec, 2019). Troglofauna assessment from databases searches and literature review suggest the likelihood of troglofauna, particularly in playa environments, is low. This is attributed to shallow water table, which does not support troglofauna habitation and also the lack of vugs and voids (Stantec, 2019). The habitat assessment indicates that the hydrogeological units present does not support stygofauna. Within the Lake Roe playa area, the shallow water table mostly coincides with Cainozoic transported sediments in the form of lake deposits (Stantec,2019). Unconsolidated lake clays represent the dominant unit, typically ranging between 1.5-10m in thickness and exceeding 40m in some area. The absence of interconnected pore spaces exhibits an unsuitable structural environment for stygofauna. This lack of structure and resultant low permeability is also reflected in the underlying residual clays which are common in the Activity Envelope (Stantec,2019). Groundwater is hypersaline, which is a significant limiting factor to stygofauna habitation within hydrogeological units in the vicinity of the Project (Stantec,2019). In the absence of adjoining freshwater systems, the hypersaline groundwaters of the Lake Roe aquifers are expected to impede stygofauna living in them. Troglofauna habitat was also assessed, the shallow water table within the playa, riparian and low-lying terrestrial areas equates to an unsaturated zone of less than 1m in some	The Project will have no impacts on subterranean fauna; hence this factor has been deemed "other factor".	No subterranean fauna was identified, but approvals still regulate impacts to ground and surface water, including: • Mining Act Approvals- MDCP; • EP Act -Part V approvals; and • RIWI Act- Licence to take water. The operation of the Project will adhere to all conditions from regulatory approvals.

Other Environmental Factor	Receiving Environment	Significance to Project	Management by Other Decision-Making Authorities (DMAs) Statutory and Environmental Management Controls for the Project
	sections of the Activity Envelope. The probability of troglofauna occurring under these conditions is highly unlikely, the unsaturated strata exacerbated by seasonal fluctuations, creates an environment unsuitable for troglofauna (Stantec,2019). As with the low-lying playa and terrestrial areas, the clay sequence in elevated areas lacks the matrix of vugs and voids associated with favourable troglofauna habitat. The survey concluded that the Project area does not provide prospective habitat for subterranean fauna and does not support stygofauna or troglofauna values. No species of stygofauna or troglofauna collected from the 23 sites sampled during the subterranean fauna survey. **Potential Environmental Impacts** The potential environmental impacts associated with subterranean fauna include: • The removal of habitat due to the drawdown of groundwater, inundation, and water quality change; • Excavation of geologies known to support subterranean fauna; • Dewatering for below water table excavation; • Groundwater reinjection of waste or excess water; • Changed surface topography due to compaction or creation of hard surfaces resulting in altered groundwater flow paths; • Potential leaks or leaching including tailings and wastewater resulting in alterations to ground water chemistry and quality; and • Salinisation due to intrusion of saline water into freshwater aquifers and leaching from pit voids. **Proposed Mitigation and Management Measures** Considering the absence of subterranean species and habitat, no specific subterranean fauna management measures are required. **Environmental Outcome:** Based on the outcomes of baseline surveys, the Project will not have an impact on the subterranean fauna factor.		
Terrestrial Environmental Quality	The objective of the factor Terrestrial Environmental Quality is: *"To maintain the quality of land and soils so that environmental values are protected*" (EPA,2016c). **Receiving Environment**	Potential impacts not considered significant, therefore deemed an 'Other Factor'	Management of built infrastructure will be regulated under the Mining Act and Part V of the EP Act.

Other Environmental Factor	Receiving Environment	Significance to Project	Management by Other Decision-Making Authorities (DMAs) Statutory and Environmental Management Controls for the Project
	The Project is situated along the south-western margin of Lake Roe, which forms part of the Roe Palaeodrainage system. The system is characterised with salt lake playas along this drainage line which contain clay, silt, and sand, interbedded with evaporite minerals such as gypsum and halite (Landloch,2025). Regional geology influences the terrain at Lake Roe to be gently undulating plains interrupted in the west by low hills and ridges of Archaean greenstones and in the east by a host of Proterozoic basaltic granulite. The underlying strata are eroded and covered with tertiary sand and gravel soils, scattered exposures of bedrock, and plains of calcareous earths (Landloch,2025). The Project lies on the eastern limb of the Bombora Antiform, within differentiated mafic volcanic and intrusive rocks (primarily basalt and dolerite), bordered by mafic sediments to the east and west. The physical, chemical and geochemical characteristics of mine waste materials are as follows: ***Mine Waste Chemical Characteristics*** Mine waste sodicity varied from non-sodic for fresh rock material to highly sodic for transitional and oxide materials from the Dyke, Sill and transported Regolith. The cation exchange capacity (CEC) ranged from moderate to high; Organic carbon from most of the samples ranged from 0.6 to 1.9%. This range supports vegetation establishment and growth; No metals exceed the environmental investigation levels nor are they significantly enriched; and None of the samples tested for naturally occurring radioactive material showed elevated levels of NORMs. ***Waste material acid base accounting*** Early acid generation assessment of waste materials was carried out using a combination of net acid producing potential (NAPP), net acid generating (NAG), acid neutralising capacity (ANC), maximum potential acid (MPA) and sulfide sulfur (%S) content. The paste pH value for the samples ranged circumneutral to alkaline displaying no inherent acidity. Electric conductivity values ranged from 198 to 20,200 uS/cm, whilst sulfur content ranged from <0.01% to 0.80%. A total of 90% of the samples are classified as non-acid forming (NAF). A total of 4% of was classified as potential acid forming (PAF-LC), indicating a low potential for acid generation and 6% samples were classified as uncertain (UC) (Breaker Resources, 2022).		Design and construction of landforms will meet compliance with the Mining Act. Baseline assessment of geochemical and mineralogical to identify AMD and fibrous materials. Management of waste materials regulated under the Mining Act Development of a MDCP under the Mining Act, including management and rehabilitation of the Project.

Other Environmental Factor	Receiving Environment	Significance to Project	Management by Other Decision-Making Authorities (DMAs) Statutory and Environmental Management Controls for the Project
	Further characterisation completed by Landloch (2025) showed that, 94% of the sampled material recorded < 0.3% sulphur, and most of the sulphur is in the form of sulphate, a non-acid generating form of sulphur. The samples were classified as NAF (Landloch, 2025). One fresh quartz dolerite sample from the Bombora deposit, was classified as PAF based on the ANC being less than MPA. This sample resides at a depth interval of 182.5–184m and represents quartz dolerite occurring at the maximum planned depth of the Tura underground. All quartz dolerite samples originating from depths <182.5m for Tura underground and open pits returned a NAF classification. (Appendix M). ***Elemental enrichment (leachate)*** The mafic volcanic and intrusive rocks at Lake Roe, particularly basalt and dolerite, are natural sources of trace metals such as chromium, manganese, and nickel. These elements are commonly hosted within iron sulphides and mafic minerals, which undergo oxidation and leaching in the weathering profile (Landloch,2025). The concentration of aluminium in the majority of samples across various lithologies exceeded the guideline trigger values (Landloch, 2025). The risk of elevated aluminium level in leachates was assessed in relation to pH ranges and bioavailability. Adverse effects on the receiving environment due to elevated aluminium levels primarily exists when the pH is below 5 (Appendix M, Landloch, 2025). However, in environments where the pH ranges from ~5.5 up to 8.5, aluminium is predominantly in the non-soluble forms of $Al(OH)_3$ and $Al(OH)_{4-}$, and it does not pose a significant toxicity issue. The salinity of leachate is consistent with the salinity generated on short-term contact with water and provides further evidence to suggest the salinity of the waste materials will remain below 4 (deci Siemens per metre) dS/m. Given the salinity levels (ranging between 5.5 to 7.8 dS/m) in the vicinity, the Project will not have an impact on groundwater. ***Surface Soils*** Two land systems are mapped within the Activity Envelope, consisting of: • Carnegie System: Salt lakes with fringing saline alluvial plains, kopi dunes and sandy banks, supporting halophytic shrublands and Acacia tall shrublands (30.4 % in surveyed area); • Mx43: Gently undulating valley plains and pediments; some outcrop of basic rock (69.6 % in the surveyed area). The Activity Envelope is characterised by soils that are unstable and contain one or more chemical characteristics that restrict plant growth (e.g. high sodicity, salinity) (Breaker		

Other Environmental Factor	Receiving Environment	Significance to Project	Management by Other Decision-Making Authorities (DMAs) Statutory and Environmental Management Controls for the Project
	Resources, 2022). Local flora species have adapted to these specific conditions and while these soils are un-disturbed, they pose no environmental risk or concern. A total of seven soil management units (SMUs)were identified. The soil characteristics can be summarised as follows: **Physical characteristics**: there were substantial difference in the physical characteristics of the soils (texture, stability, soil strength and water retention). Soils identified as Woodland topsoil and subsoil, Mallee sand top and subsoil, Gypsum dune top and subsoil are non-hard setting and will not disperse. Shrubland drain and Samphire clay soils are hard setting and dispersive; **Chemical characteristics**: salinity status as follows: Non saline: Woodland topsoil, Sheoak sands top and subsoils and Mallee sands top and subsoils Slightly saline: Woodland subsoil and Shrubland drain topsoils Moderately saline: Woodland clay top and subsoils. Highly saline: Gypsum top and subsoil Very saline: Samphire clay topsoil Extremely saline: Samphire clay subsoils The results show that some topsoils are likely to be unsuitable for rehabilitation purposes due to their structural instability and salinity. The non saline and slightly saline soils will be stripped and stockpiled separately from the more saline soils. Soils have naturally elevated levels of a number of elements, including soluble metals that can be of potential environmental concern. All the soil management units (SMUs) have high concentrations of metals in water leachates from the samples, with concentrations of one or more elements above environmental trigger values (Breaker Resources,2022). This is however consistent of the Project surrounding areas and adjacent lake sediments. **Potential Environmental Impacts** The Project could potentially result in the following impacts to Terrestrial Environmental Quality: • Loss of soil quality and structure due to clearing and excavation, construction of infrastructure and compaction, stockpiling topsoil and growth media for rehabilitation and closure;		

Other Environmental Factor	Receiving Environment	Significance to Project	Management by Other Decision-Making Authorities (DMAs) Statutory and Environmental Management Controls for the Project
	• Alteration of natural landforms leading to potential geochemical and erosional instability; • Localised contamination of soils from hydrocarbon or chemical spills; • Properties of some soils, such as high salinity, may constrain rehabilitation outcomes; • Physical instability of some soils will create erosion risk if placed on sloping areas; • Presence of soluble metals in soils may impact the lake systems; and • Potential for erosion may lead to sediment transport to the lake playa. **Proposed Mitigation and Management Measures** Ramelius will implement the following: • Ensure all landforms are geotechnically stable and constructed in accordance with approved designs; • Prepare and implement a Waste Management Strategy compatible with the mine waste landform designs and waste material generated on site; • Recover and stockpile topsoil suitable for rehabilitation of cleared areas and landforms; • Erosion and sedimentation controls to be implemented to minimise the risk of impacts resulting from surface water flows; and • Rehabilitation of cleared areas and landforms to restore soil and landform values, with monitoring of the rehabilitation works to verify rehabilitation success. **Environmental Outcomes** Based on the proposed management measures for the land and soil values, the EPA objective for Terrestrial Environment will be met.		

Greenhouse Gas Emissions	The environmental objective of the Greenhouse Gas Emissions factor is: "*To minimise the risk of environmental harm associated with climate change by reducing greenhouse gas emissions as far as practicable"* (EPA,2019). **Receiving Environment** An assessment GHG was made to determine if Project activities fall under the scopes defined by EPA. The scopes include: • Scope 1: GHG emissions are those released to the atmosphere as a direct result of an activity, or a series of activities, which are part of a Project; • Scope 2: GHG emissions are those from the independent consumption of an energy product by the Project. • Scope 3: emissions are indirect GHG emissions other than scope 2 emissions that are generated in the wider community. The emissions for the Project were considered for the following key infrastructure and activities: • Open mining pits; • Underground mining operations; • Transportation of material for processing (vehicle movement); • Diesel consumption by the mining fleet, mobile equipment, and other vehicles; • Diesel or gas consumption by generators producing power for the Project activities; and • Land clearing and associated activities. The Project will only have Scope 1 GHG emissions. The emissions were identified to be generated from the following activities: Power generation for the Project will come from generators, using diesel or gas for fuel hence no Scope 2 emissions are anticipated from the Project. At the time of preparing this report Scope 3 emissions cannot be predicted, Ramelius understands the consequences of GHG and will implement policies to manage potential impacts. The Project will operate as a satellite mining Project only. The assessment of Scope 1 emissions identified that there will not be an exceedance of the 100,000 tonnes CO2-e per year throughout the life of the Project. **Potential Environmental Impacts** Any increase in GHG emissions will contribute to the broader impacts of climate change. These impacts include exacerbation of extreme climate events including floods, bushfires, droughts and heatwaves, as well as an increase in ocean temperatures resulting in more frequent tropical cyclones. These events will have cascading effects on resource supply chains and may also increase impacts on local ecosystems and communities. **Proposed Mitigation and Management Measures**	The Project is not expected to have the potential to significantly alter local Air Quality and is therefore deemed "other factor"	Ramelius will manage the Project under the Commonwealth's Safeguard Mechanism as established under the *National Greenhouse and Energy Reporting Act, 2007* and the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule, 2015* (the Safeguard Rules).

Other Environmental Factor	Receiving Environment	Significance to Project	Management by Other Decision-Making Authorities (DMAs) Statutory and Environmental Management Controls for the Project
	Ramelius will measure, manage, and reduce greenhouse gas emissions across the Project in line with applicable regulatory requirements, industry best practices, and corporate sustainability goals. **Environmental Outcomes** GHG emissions are not expected to exceed 100,000 tonnes C02 per year of operation. The Project is not anticipated to have emissions that will significantly alter the existing environment. The expected emissions will be managed by internal Environmental Management Plans. Ramelius will consider mitigation and management measures to ensure that the EPA's Greenhouse Gas Emissions factor objective is met.		
Air Quality	The environmental objective of the Air Quality factor is: *"To maintain air quality and minimise emissions so that environmental values are protected"* (EPA, 2020). The primary land uses within the subregion comprise of Unallocated Crown Land (UCL) and Crown reserves as well as native grazing pastures (37.8%) and freehold land (7.15%) (Cowan, 2001). The Project is located on the Yindi pastoral lease. The Project is remotely located, with the nearest (unoccupied) township of Kurnalpi located approximately 65 km north-west. The existing air emissions are those associated with remote arid environments used for pastoralism. The primary sources of dust emissions are from wind erosion. Due to the absence of residential sensitive receptors around the Project, no baseline studies on air quality have been completed to date. The proposed Project will result in air emissions of dust through: • Clearing of native vegetation; • Wind erosion over cleared land areas, earthworks, drilling and blasting, • Handling and disposal of ore and waste rock; and • Movement of vehicles. Air emissions of dust may have potential to affect adjacent environmental values through depositing dust. **Potential Environmental Impacts** The impacts listed below are likely to result in a situation where sensitive receptors are close to the polluting source of the. Considering the remoteness of the Project, these impacts are considered to be negligible.	Potential impacts not considered significant, therefore deemed 'Other Factor'.	Standard dust suppression measures proposed to be implemented are subject to approval and the associated conditions of a Works Approval/Licence issued under Part V of the EP Act. Air quality throughout the life of the Project can be monitored and reported through Part V EP Act Environmental Licence conditions. Approvals under the Mining Act will also consider air quality impacts (MDCP).

Other Environmental Factor	Receiving Environment	Significance to Project	Management by Other Decision-Making Authorities (DMAs) Statutory and Environmental Management Controls for the Project
	• Dust may have physical effects on plants, although this is likely to be restricted to immediate peripheral vegetation; • Mining activities (blasting and haulage) lead to short episodes of elevated ambient dust; and • Visual effects on local and social amenity may occur sporadically from increased dust generation. **Proposed Mitigation and Management Measures** Air quality impacts resulting from the Project will be minimised through: • Regular use of water for dust suppression on disturbed mine areas and the road to reduce dust emissions. • Limit the height of WRLs potentially susceptible to dust generation by wind; • Adopt suitable operational protocols, including speed limits on unsealed roads; • Minimise vegetation clearing via an internal permitting process; and • Progressive and post mining rehabilitation to reduce long term potential impacts from dust emissions. **Environmental Outcomes** Precautionary mitigation and management measure will be in place to minimise potential impacts to air quality. The Project is not expected to significantly alter local air quality, and this factor is therefore not considered a key Environmental Factor.		
Social surroundings *Aboriginal and Cultural Heritage*	The objective of the factor Social Surroundings is: *"To protect social surroundings from significant harm" (*EPA,2023a). **Receiving Environment** A review of the Aboriginal Cultural Heritage Information System (AHIS) did not identify any aboriginal heritages sites occurring within the Activity Envelope (Department of Planning, Lands and Heritage, 2025). The Project lies within the Kakarra Native title area. A number of Aboriginal Cultural Heritage surveys have been completed. The surveys concluded that no heritage sites were present within the Activity Envelope. A small quartz assemblage (flakes and chips) was identified approximately 75 metres from the Disturbance Footprint. The TO's recommended a 3m radial buffer be placed around the site, or if unable to avoid, arrange relocation of this material as agreed with the Kakarra consultants. **Potential Environmental Impacts**	No heritage sites have been identified within the Activity Envelope. Those in the vicinity will be avoided.	The Project will comply with the provisions of the Aboriginal Heritage Act through the Department of Planning, Lands and Heritage (DPLH).

Other Environmental Factor	Receiving Environment	Significance to Project	Management by Other Decision-Making Authorities (DMAs) Statutory and Environmental Management Controls for the Project
	The listed impacts could potentially occur if any Aboriginal heritage values are encountered during the life of the Project: • Potential unauthorised access to heritage places by Project/operational staff • Disturbance and/or loss of heritage places; • Alteration of cultural values and heritage sites; • Loss and/or restriction of access to hunting grounds; • Loss of culturally significant flora and fauna species; and • Alteration of land values due to mining activities, including but not limited to, vibration and blasting, changed surface water regimes and sedimentation and dust deposition. **Proposed Mitigation Measures** To avoid an impact on Aboriginal Heritage values, Ramelius will: • Undertake baseline surveys. No significant sites have been recorded; • Have regular engagement with traditional owners; • Heritage sites identified near the Project will be avoided. Sites will be demarcated with buffers, identified as no go areas for Project personnel and protective fences erected if required. • Cultural awareness training of Project personnel; • Adhere to internal ground disturbance procedures. **Environmental Outcomes** Through implementation of monitoring and management measures as outlined above Ramelius considers there will be no residual impacts on the social surroundings factor.		

12 Matters of National Environmental Significance

The Commonwealth Environment Protection and Biodiversity Act 1999 (EPBC Act) provide a legal framework for the protection of Matters of National Environmental Significance (MNES). The EPBC Act requires that all actions that will or may have a significant impact on a MNES must be referred to the Minister for the Environment via the Department of Climate Change, Energy, the Environment and Water (DCCEEW). Protected matters under the EPBC Act include:

- World heritage areas;
- National heritage places;
- Wetlands of international importance (listed under the Ramsar Convention);
- Listed threatened species and ecological communities;
- Listed migratory species (protected under international agreements);
- Commonwealth marine areas;
- Great Barrier Reef Marine Park;
- Nuclear actions (including uranium mines); and
- Water resources (that relate to unconventional gas development and large coal mining development).

In addition, the EPBC Act also protects the environment when actions are taken:

- On Commonwealth land or impact upon Commonwealth land;
- By an Australian Government agency anywhere in the world; and
- That impact Commonwealth heritage places overseas.

Projects require an EPBC referral if the Project is likely to have an impact on any of MNES factors. Surveys completed for the Project including flora, vegetation, fauna, surface water and ground water to identify potential impacts to the EPA Act factors have also been used to assess the impacts the Project is likely to have on the EBPC matters. The following summarises the outcomes of baseline studies regarding MNES:

- The results of the literature review, combined search of the Flora of Conservation Significance databases, Dandjoo search and Protected Matters Search, indicated that no Threatened Flora or Priority Flora species have previously been recorded within the Project area (Botanica,2025).
- No Threatened Ecological Communities (TEC) listed under the EPBC Act, are known to occur within 40 km of the survey area (Botanica, 2025).

- There are no Ramsar wetlands of international importance or sites listed in the Directory of Important (DIWA) (i.e., wetlands of national importance) within 40 km of the survey area.
- No flora or vegetation of conservation significance under the EPBC Act or restricted vegetation, highly disturbed vegetation, vegetation providing important refuge or significant ecological function was identified (Botanica, 2025).
- Three threatened species of fauna and one migratory/marine species of birds identified under the EPBC Act potentially occur in the Project area, the species Common Sandpipe, Common Greenshank and Sharp tailed Sandpiper are migratory species (Terrestrial Ecosystem, 2025). The likelihood of occurrence concluded that, given the salt lake in the immediate vicinity and much larger adjoining Salt Lake immediately to east, if these species are present and they were disturbed, they would easily move to another section of the lake. These shorebirds will typically forage in areas of the densest macroinvertebrates.
- Considering the Project environment and surroundings, the impacts associated with vegetation clearing and mining activity are unlikely to be significant (Terrestrial Ecosystems, 2025).
- Surveys completed for the Service Corridor showed no TEC or PEC, restricted vegetation, highly disturbed vegetation, vegetation providing important refuge or significant ecological function was identified within the surveyed areas;
- The Southern Whiteface was observed in the survey (Terrestrial Ecosystem, 2025). The bird will readily move if disturbed into suitable adjacent habitat, so localised vegetation clearing would not significantly impact this species.

Considering the results from the surveys carried out to support the Project and the proposed disturbance/infrastructure associated with the Project, no MNES will be impacted by the Project, therefore a referral under the EPBC Act is not required.

13 Environmental Offsets

13.1 EPA Objective

The EPA's environmental objective for Projects that may require Environmental Offsets is "To counterbalance any significant residual environmental impacts and/or uncertainty through the application of offsets" (EPA, 2014).

13.2 Relevant Policy and Guidance

The polices and guidelines considered to determine the relevance of offsets to the Project include:

- Public Advice, Considering Environmental offsets at a regional scale, EPA, (2024);
- Western Australia Environmental Offsets Policy, EPA (2011);
- Western Australia Environmental Offsets Guidelines, EPA (2014);
- Environmental Protection Bulletin Number 1: Environmental Offsets, EPA (2014); and
- Environmental Protection and Biodiversity Conservation Act 1999, Environmental Offsets Policy, Department of Sustainability, Environment, Water, Population and Communities (20212).

13.3 Consideration of Offsets

The EPA Environmental Offsets Guidelines outlines that environmental offsets will only be considered after strategies to avoid and mitigate significant environmental impacts have been applied. Environmental Offsets are to address significant environmental impacts that remain after avoidance, mitigation and rehabilitation measures have been implemented for the Project (EPA,2014).

Environmental offsets are not required for all Projects and in all circumstances, the applicability of offsets is determined on a Project-by-Project basis (EPA, 2014). Significant residual impacts include those that affect rare and endangered plants and animals, areas within the formal conservation reserve system, important environmental systems and species that are protected under international agreements and areas that are already defined as being critically impacted in a cumulative context. None of the abovementioned factors are present for the Project.

The residual impact significance model was used to determine if offsets are required for the Project. Table 13-1 shows that residual impacts of the Project do not trigger the need for offsets.

Table 13-1: Preliminary offset triggers -Residual Impact Significance Model

Part IV Environmental Factors	Vegetation and Flora						
				Terrestrial Fauna			Inland Waters
	Rare flora	Threatened ecological communities	Remnant vegetation	Conservation areas	High biological diversity	Habitat for fauna	Wetlands & waterways
Residual impact that is environmentally unacceptable or cannot be offset	None	None	None	None	None	None	None
Significant residual impacts that will require an offset – **All significant residual impacts to species and ecosystems protected by statute or where the cumulative impact is already at a critical level**	*None*	None	None	None	None	None	None
Significant residual impacts that may require an offset – **Any significant residual impact to potentially threatened species and ecosystems, areas of high environmental value or where the cumulative impact may reach critical levels if not managed**	None	None	None	None	None	None	None
Residual impacts that are not significant	Two conservation-listed species *Calandrinia quartzitica* (P1) and *Eremophila arachnoides* subsp. *tenera* (P3) were recorded during the surveys. All individuals of both P1 and P3 species will be avoided. Two collections of *Tecticornia* were made from the mine tenement which could not be attributed to any known taxa, these will be avoided by the Project layout and no impact is anticipated. No loss of rare flora is expected from the Project.	No Threatened Ecological Communities and Priority Ecological Communities were identified within the surveyed areas for the Mine site and Service Corridor. The Project will have no impacts on TECs and PECs.	Vegetation associations mapped within the Activity Envelope have over 99.5% of their pre-European extent remaining within Western Australia. No vegetation can be considered as remnant vegetation.	The nearest conservation reserve is located approximately 10 km to the south and will not be impacted.	The Activity Envelope does not contain high biodiversity. Flora, vegetation, fauna and habitat are well represented in the region. There are no unique high biological attributes in the Project	The fauna habitat (557.7 ha) to be cleared does not support any conservation significant species. The habitat is considered well represented in the region and the residual impact from the Project is insignificant.	No wetlands of conservation significance have been identified. The Project will have a negligible impact to the surrounding salt lakes.

14 Holistic Impact Assessment

A holistic impact assessment considers the connections and interactions between impact pathways, and the overall impact of the Project on the environment as a whole.

This referral provides a detailed assessment of the potential environmental impacts associated with the Project and the management strategies for each Environmental Factor. This section provides information regarding the key themes Land and Water and how these connect and interact between the Environmental Factors identified for the Project.

There are several interconnected factors that may affect the holistic impacts of the Project, including:

- Flora and Vegetation;
- Terrestrial Fauna; and
- Inland Waters.

The Project has been located and designed to create the minimum impacts on all Environmental Factors possible. Each mitigation measure, while predominantly implemented for a specific purpose, will then act to minimise impacts of the Project as a whole. Importantly, several iterations of Project design were considered in an effort to reduce impacts to the environment.

The mitigation hierarchy plays a key role in enable sound mitigation strategies across all Environmental Factors, with avoidance of impacts being the preferred option. Where this is not possible, measures to minimise indirect impacts will be implemented, and rehabilitation plans will be developed so that the land is returned to the agreed post mining land use as soon as practicable.

The EPA emphasises a comprehensive approach to impact assessment, ensuring that all Environmental Factors are considered holistically. Implementing the EPA guidance ensures that Projects do not consider these elements in isolation but rather assess their interdependencies and cumulative effects.

Ramelius acknowledges the relationships between emission pathways and Environmental Factors and that those relationships may require consideration and management to achieve good environmental outcomes. The Project has been thoroughly assessed for important environmental values that relate to multiple factors, as demonstrated in Figure 14-1. Table 14-1 provides a summary of the connections and interactions between the key Environmental Factors (grouped by the relevant EPA theme) and proposed mitigation that reflect the connections and interactions (shared with mitigation proposed for individual Environmental Factors).

The connections and interactions between Environmental Factors have been identified and the mitigation proposed in this ERD and supporting management plans is considered sufficient to meet the principles contained in the EP Act and the EPA's objectives for individual factors, as set out in Sections 8 to 14 respectively. The residual impacts for this Project are considered negligible and can be managed without need to offset the impacts as detailed in section 13.

Table 14-1: Holistic Impacts of the Project

Linked Environmental Factors	Summary of impacts
Flora, Vegetation and Terrestrial Fauna	Fauna habitat is often heavily reliant on the type and quality of vegetation within a certain area, as the vegetation provides important food sources and shelter for significant species. The Activity Envelope does not contain any conservation significant vegetation communities or fauna habitat. Impact to habitat of very good condition will be minimised as a way of preserving habitat for fauna species. Vegetation clearing will be conducted during seasons that do not interfere with the movement/ migration of fauna species to the region.
Flora, Vegetation and Inland waters	Impacts to Flora and Vegetation and Inland Waters can be connected in a number of ways. Certain types of vegetation can be reliant on surface water and/or groundwater flows. Surveys completed showed that there is no groundwater dependent vegetation. The vegetation within and surrounding the Project has adapted to the local environmental conditions. Development of the Project will not significantly alter these conditions hence minimal impacts are anticipated.
Inland waters and Terrestrial Fauna	No conservation significant fauna was identified. The pans and lakes surrounding the Project host birds, mammals and reptiles common to the region. The Project will have a minimal impact on Inland Waters. The surrounding environment will continue to support fauna species. No significant impact to the aquatic invertebrate community is anticipated. Conservation-listed migratory wetland species may use the salt lakes in years of inundation, however extensive lake and claypan systems exist beyond the Project area therefore impact on these species is considered negligible in a local and regional context.

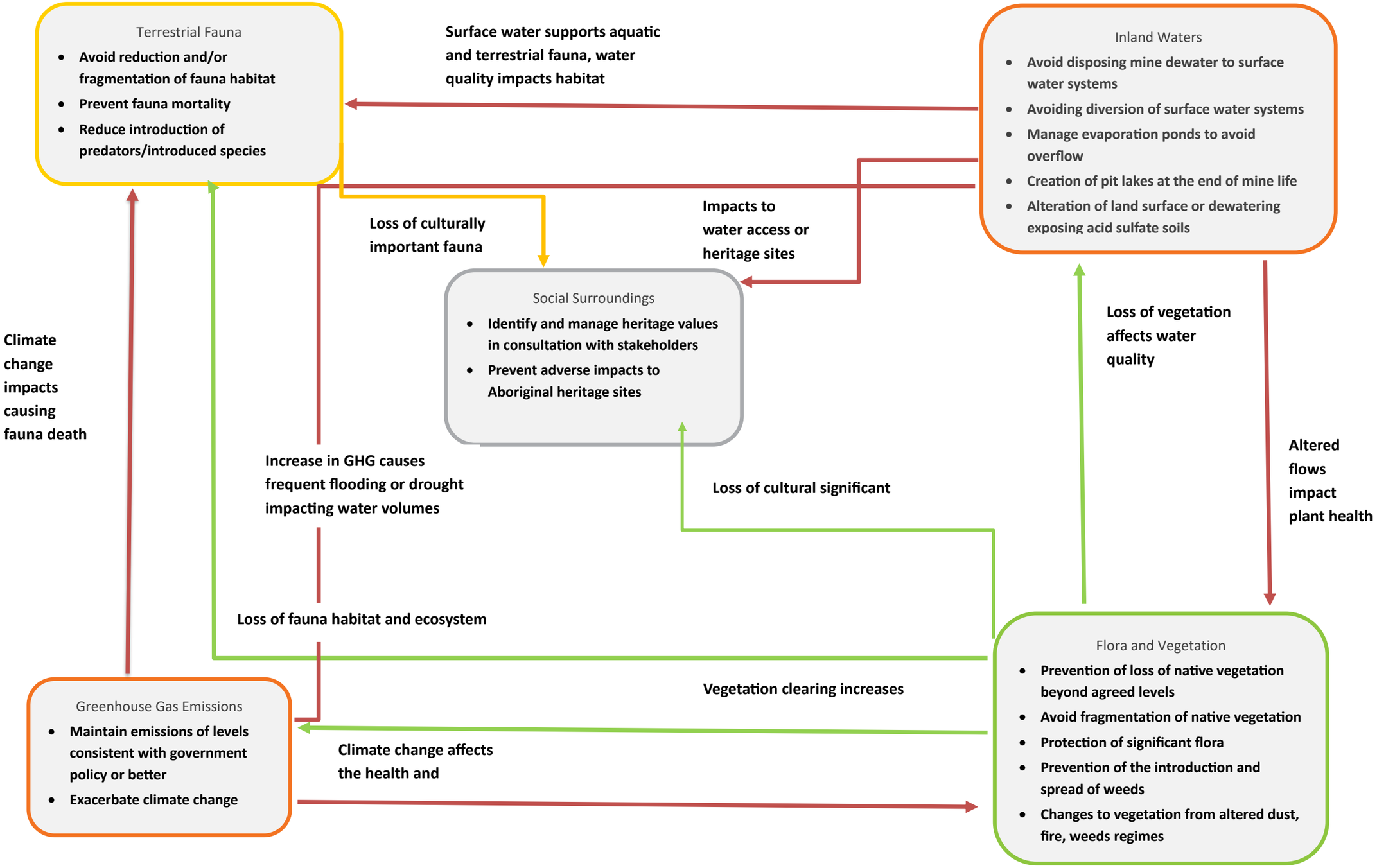


Figure 14-1: Holistic view of inter-relationships between Environmental Factors and value

15 Cumulative Environmental Impact Assessment

While Ramelius has focussed on the local environment and impacts from the Project itself, it also recognises that in determining the significance of a Project, consideration of impacts at a regional scale also needs to occur.

This inherently requires consideration of both the direct and indirect impacts that may occur across both time and/or space from the Project as well as other land-uses in the locality. As the EPA notes, in isolation, a Project may not be considered to have a significant impact, however, when considered along with other Projects, activities and threats in the region, the cumulative impacts may be significant (EPA, 2021).

In this regard, cumulative environmental impacts are the successive, incremental and interactive impacts on the environment of a Project with one or more past, present and reasonably foreseeable future activities.

The EPA defines reasonably foreseeable future activities as:

- Third party (or proponent) activities which are already approved, are in a government approvals process, or are otherwise reasonably likely to proceed;
- For Projects assessed at the level of environmental review – at the time an Environmental Review Document (ERD) for a Project is accepted;
- Or Projects assessed at the level of assessment on referral information – at the time the final referral or required information is accepted; and
- Existing activities that are reasonably expected to be ongoing.

In terms of proximity to the Project, no active Project was identified within a 50 km radius. Projects that could potentially be considered from a cumulative perspective are the Ramelius owned Rebecca Gold Project and Alchemy Resources' Rebecca Copper Project.

15.1 Flora and Fauna

The Project lies within the Coolgardie and Muchison region according to the IBRA mapping. A total of four pre-European vegetation types is intersected by the Project, all of which are above 99% extent remaining in Western Australia. The proposed clearing is approximately 557.7 ha. This clearing is not anticipated to reduce the extent remaining of pre-European vegetation within the region.

No conservation significant flora species will be cleared for the Project. The service corridor has been aligned inside the wider tenement area to avoid all the 64 individuals of *Eremophila arachnoides* subsp. *tenera* (P3) plants.

The one population of *Calandrinia quartzitica* (P1) has been identified and placed in an Exclusion Area. It will be fenced prior to ground disturbance works commencing.

The Project does not include the clearing of Threatened Ecological Communities or Priority Ecological Communities.

Indirect impacts on flora and vegetation are likely to be cumulative, however the scale of indirect impacts is not expected to be significant given management strategies employed by Ramelius. Indirect impacts include impacts from the potential spread of weeds, dust generation, and salt migration. Ramelius is not aware of any additional Projects in the vicinity likely to be referred in the future. As such, cumulative impacts relating to flora and vegetation within the Project and surrounds are not considered to be significant.

15.2 Terrestrial Fauna

Considering the minimal number of Projects currently active in the region, the impacts on terrestrial fauna both in terms of habitat and fauna population can be considered low. The region still has vast areas of uncleared land which allows fauna to relocate if required to avoid any impacts of the Project.

However, the indirect impacts of the Project and other future Projects might cause a partial loss of habitat until rehabilitation is completed. The Project and other mining activities may create localised fragmentation, obstructing certain pathways for native fauna ground movements.

No conservation significant fauna is anticipated to be impacted by the Project and other mining activities. Mitigation and management measures in place will reduce the impacts and overall have an insignificant cumulative impact.

15.3 Inland waters

Cumulative impacts to the Inland Waters factor may be projected by looking at the proximity of other users and similar operations surrounding the Project. The identified direct and indirect impacts of the Project can be managed to have an insignificant impact on the environment.

Surveys completed for the Project did not identify any groundwater dependent vegetation. There is potential of these to exist in the vicinity but considering the hypersaline nature of local groundwater this is unlikely and therefore, cumulative impact is low. The impacts on surface water within the catchment are considered negligible. Neighbouring mining activities are in a different catchment area to the Project.

Other groundwater user assessed though the DWER Water Register Database of registers users are located approximately 14 km to the south of the Project area. The closest

registered bores to the Project are located around 10 km northwest, these are privately owned and has not been confirmed if they are functional. The water requirement for the Project will have a small impact to the existing volumes being currently abstracted.

16 Conclusion

The Project occurs in a region where at least 99.5% of the pre-European vegetation remains. No TEC's, PEC's, ESA's or conservation estate will be impacted by the Project. All fauna habitat types are well represented in the locality.

The Project is located on the western margins of Lake Roe. Lake Roe is not classified as a RAMSAR wetland or Wetland of National Importance. It is not listed in any conservation reservation and is not considered an Environmentally Sensitive Area (ESA). It is not a DIWA wetland and is listed as a 'Non-perennial Lake' in the Surface Hydrology (Regional) data set (Geoscience Australia, 2015).

Groundwater is naturally hypersaline, with values >200,000 mg/L Total Dissolved Solids (TDS). This water quality has no other beneficial uses.

Ramelius is of the view that the few potential risks and environmental issues identified can be managed by controls including;

- **Avoiding** specific high environmental value aspects. All flora Priority 1 and Priority 3 taxa identified will be avoided.
- **Avoiding** discharge of mine dewatering water to the environment by containment in HDPE lined evaporation ponds. This avoids all impact to Lake Roe's aquatic ecology and hydrological regime.
- **Reducing** native vegetation clearing by sharing infrastructure with the neighbouring Rebecca mine site, avoiding the need to duplicate this infrastructure. Internal clearing procedures will also ensure clearing is kept to the minimum necessary.
- **Rehabilitating** disturbed areas.

The Project has been developed to minimise impacts on all Environmental Factors possible. Each mitigation measure while predominantly implemented for a specific purpose, will then act to minimise impacts of the Project as a whole. Table 16-1 addresses the key Environmental Factors of concern, their mitigation and residual impact.

Table 16-1: Key Environmental Factors of Concern, Mitigation and Residual Impact.

Environmental Factor	Receiving Environment Impacts	Mitigation	Outcome/ Residual Impact
Flora and Vegetation	The potential environmental impacts identified for flora and vegetation include: • Loss of up to 557.7 ha of native vegetation. None of the vegetation was considered significant or are representative of any know threatened or priority ecological communities; • Vegetation clearing will result in the fragmentation of vegetation at a local scale and also reduce the condition of the vegetation; • Changes to vegetation indirectly: o Deposition of dust can lead to potential decrease of vegetation health or vegetation decline in adjacent areas. o Possible change of fire frequency /intensity which will result in decline in vegetation cover and/health, altered vegetation composition as plant fail to recover and introduction weeds. • Introduction of new weed taxa into the area and spreading weeds into previously weed free areas	To reduce the impact of the Project on the flora and vegetation Ramelius has considered the following mitigation and management measures: • Avoiding the clearing of vegetation of highest condition where possible; • Clearing will be kept to the minimum required for the development of the Project; • Implement a Ground Disturbance Permit (GDP) system prior to the commencement of any ground disturbance work; • Implement a weed monitoring and management plan including contingency measures for weed management; and • Develop fire prevention and management actions.	The flora and vegetation within the Activity Envelope are common in the region, and the vegetation representation is above 99 % within the State. No loss of significant vegetation is anticipated from the Project. Impacts of the Project are localised and can be considered insignificant at both a State and local level.
Terrestrial Fauna	The potential direct and indirect impacts on terrestrial fauna because of the development of the Project include: • Reduction and/or fragmentation of fauna habitat (breeding, foraging and/or dispersal) through the clearing of native vegetation. • Fauna mortality associated with vegetation clearing, construction and operation of the Project; • Habitat degradation through edge effects on adjacent fauna habitats; • Increase in the abundance and/or diversity of introduced predators, increasing predation rates on native species and/or increasing competition for resources; • Alteration of natural behaviour in native species and adjacent habitat degradation.	Mitigation and management measures to be implemented to reduce the impact of the Project include: • The site layout avoids vegetation of highest condition rating where possible and therefore fauna habitats of high quality; • No discharge to Lake Roe or other nearby claypans will occur to protect aquatic values of the area; • Raise fauna awareness with staff and contractors through the site induction process including rules on how to (not to) interact with native species i.e. no feeding of fauna. • Develop, implement and update a Vertebrate Fauna Management Plan for the Project; • Ramelius will implement its existing Ground Disturbance Permit (GDP) system prior to the commencement of any ground disturbance work; • Minimise secondary impacts to fauna individuals and habitat quality through annual feral animal control, fire preparedness, noise, dust and waste management. • Rehabilitation activities will be undertaken progressively over the LoM as soon as possible.	The Project will result in the clearing of no more than 557.7 ha of fauna habitat; this will have an impact on the local environment. Due to the abundance of habitat in the region, the residual impact is considered insignificant. The management measures to be established for the Project the residual impact to the fauna assemblage is reduced to a low level. No significant residual impact.

Environmental Factor	Receiving Environment Impacts	Mitigation	Outcome/ Residual Impact
Inland Waters	The following impacts have been identified for the Project: • Disposal of mine dewater to surface water systems, where this may significantly alter the hydrology of a saline lake, with consequent impacts to aquatic or riparian ecosystems; • Diversion of surface water systems; • Discharge of waste to storage or evaporative basins, where there is potential for overflow or leakage; • Dewatering discharges where the water quality (temperature, heavy metals, carbonates) is a concern; • Creation of pit lakes after the completion of mining; and • Activities which alter the land surface or dewater aquifers and creates AMD.	The Project has been designed to have minimal impacts on Inland Waters and where practicable the layout has avoided important features. Ramelius will include the following measures to ensure the impacts of the Project are acceptable: • Dewatering water will be used for dust suppression. Surplus water will be discharged to HDPE lined on-land evaporation ponds. • Dewatering will be minimised to the extent required to allow dry mining. • Localised bunds and drains will be to divert natural flow paths around mine infrastructure and return it to natural flow paths downstream and into Lake Roe. • Surplus dewatering water will be discharged into evaporation ponds to avoid releasing water into the natural environment. • One pit will be back filled using mine waste to reduce the footprint of pits lakes. A Water Management Plan will be implemented to manage hydrological issues on site, and the Project MDCP will include rehabilitation strategies for any surface land alteration caused by the development of the Project.	The Project is located in an isolated area, impacts on Inland Waters are localised and can be managed by internal procedures and other regulating authorities. The Project will not have a residual impact at State level.

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APPENDIX A : Roe Gold Project Bombora Hydrogeological Dewatering Assessment

APPENDIX B : Bombora Project Lake Roe Flood Depth Assessment

APPENDIX C : Haul Road- Surface Water Environmental Assessment

APPENDIX D : Lake Roe Hydraulic Behaviour Desk Study

APPENDIX E : Preliminary Risk and Discharge Assessment for Lake Roe

APPENDIX F : Haul Road Detailed Flora and Basic Fauna Survey

APPENDIX G : Lake Roe Project Detailed Flora Survey

APPENDIX H : Lake Roe Project Short Range Endemic (SRE) Invertebrate Survey and Assessment

APPENDIX I : Short Range Endemic Habitat Mapping for the Roe Gold Project Haul Road

APPENDIX J : Lake Roe Gold Project Subterranean Fauna Level 1 Assessment

APPENDIX K : Basic Vertebrate Fauna Survey Roe Haul Road

APPENDIX L : Basic Vertebrate Fauna Survey Lake Roe Gold Project

APPENDIX M : Lake Roe Project - Kopai Crescent and Bombora Waste Characterisation

APPENDIX N : Lake Roe Gold Project Baseline Aquatic Ecology Study

APPENDIX O : Aboriginal Cultural Heritage (ACH) Survey Report 2025 (Confidential

APPENDIX P : Aboriginal Cultural Heritage Survey 2024 (Confidential)

APPENDIX Q : Anthropological Heritage Survey (Confidential)

APPENDIX R : Roe Gold Project, Consolidated Aquatic Ecology Study of Lake Roe, Peripheral Wetlands and Regional Lakes

APPENDIX S : Stakeholder Engagement Register

Stakeholder	Date	Topics and issues raised	Ramelius response and outcomes
Traditional Owners	1/06/2023	CHMP	Executed CHMP
Pastoral Station	2/06/2023	Access Deed	Executed Agreement
Community Group	3/06/2023	Consultation regarding public access	Community forum to present conceptual Project overview
Community Group	4/06/2023	Job opportunities for Goldfields residents	Provided information relating to RMS careers pathways
Kakarra Part B	12/08/2023	Bombora Heritage Reconnaissance	Verbals re ok for proposed drilling and future open pit mining areas, and identification of potential heritage outcrop sites to the west of the mineralised zone closer to western margin of lake.
Yindi Downs	9/11/2023	Discussion on Pastoral access agreement	RMS seeking feedback on agreement template
Kakarra Part B	23/07/2024	NT & Heritage meeting discussing Project requirements. NT concerns/issues/desires	Continued engagement between RMS and KAC to advance NT Agreement
Yindi Station	2/07/2024	Provide update on Project, also discussion of haul route options from Roe	Ongoing discussion on the optimum haul route

Stakeholder	Date	Topics and issues raised	Ramelius response and outcomes
Nyalpa Pirniku	5/08/2024	Provide overview of RMS Project, heritage survey requirements at Kirgella	Established positive working relationship with Nyalpa Pirniku
DWER EPA Services (EPAS)	30/01/2025	Pre-referral meeting to introduce the Project, discuss key factors, predicted impacts and Project management measures	Ramelius will submit the referral with all required surveys completed as per EPA suggestion.
Kakarra Part B	21/01/2025	Discussion regarding the Project.	Introduction for Peter Ganza. Discussion about improved comms (preferred monthly with RMS to advice dates, etc.) and ability to look at the miscellaneous applications as will benefit the Project prior to submission of Mining Project.
Kakarra Part B	19/03/2025	Catch up to discuss submission of revised NTMA. Also, general update of works.	General update of Project. No advice on NTMA position.
Yindi Downs	20/03/2025	Opportunity for Peter Ganza to meet Julian Jones. Provide an update of the Project and discuss progress of Access Agreement (currently with Yindi's lawyers - Midwest Legal).	Introduction and open discussion regarding potential works on the Project as Julian Jones assist with grading and exploration site access and prep.
Kakarra Part B	5/03/2025	Provided Travis Tucker with James Yewer's (Merkanooka Haulage) contact details as part of an introduction for future works.	Provision of James Yewers' contact details.
Kakarra Aboriginal Association	6/05/2025	Discussions on Native Title compensation Agreement	Discussions ongoing.

Stakeholder	Date	Topics and issues raised	Ramelius response and outcomes
Yindi Down	13/05/2025	Discussion with Julian Jones on Yindi Downs access agreement, and slow response from their lawyers.	J Jones was asked whether the review of the land access agreement (currently with their lawyers) could be expedited.
KAC	27/05/2025	Meeting with the KAC group to discuss NTMA Project	KAC discussed a number of points but no agreement reached. Discussion focused on claim wide agreement and process to add tenements (process flow chart provided by A O'D), execution payment amount (KAC - too low), annual administration fee payments (KAC - to continue post commencement of production), flat rate royalty (KAC - too low), direct award contracts (KAC requested examples) and scholarship (KAC - potential to roll over unused amounts)
Yindi Down	17/06/2025	Discussion of new aerodrome and camp location and progress of the Access Agreement.	"Agreed to meet on site or Kalgoorlie to discuss further. Shared a GoogleEarth layer depicting locations for aerodrome, camp and required haul road realignment. Access Agreement is with the Jones' now and being reviewed. Should see a return soon."
KAC B	02/08/2025	"Phone call: Had a call with Travis. He is preparing a 'package' for Ramelius outlining business opportunities for the group	"Travis to provide business opportunity package details.

Stakeholder	Date	Topics and issues raised	Ramelius response and outcomes
		with respect to upcoming works, eg electrical works, lv maintenance, road haulage etc. said we have an internal discussion happening soon and would be good to have this before. He wants to catch Tim to discuss opportunities at MMG - he has been in talks with Big Yellow regarding lv maintenance. Also mentioned Spartan haulage. Mentioned St Ives example where they were able to get first go at a package of work where they had showed capability and cost competitiveness. Also brought up any Land Cruisers being replaced. "	Passed on details of discussion to Ramelius personnel"
KAC B	12/09/2025	"Phone call between Travis Tucker and Peter Ganza. Discussion about Employment, Training and Contracting (ETC) plan that the group presented. Informed Travis that we have returned the document with suggested changes and open for discussion (since found out we haven't as want to get the document physically in front of Fabian and the group). Enquired about the NTMA and expressed concern that the Project cannot proceed without the tenure currently pending as we wish to submit MDCP to DMPE to keep moving Project forward. Travis has said no	Travis to check with Fabian for ETC return and ask about where NTMA is at.

Stakeholder	Date	Topics and issues raised	Ramelius response and outcomes
		news on the NTMA - more concerned with the Contracting and opportunities side of the ETC plan. Travis is still concerned that we are not taking the business opportunities for KAC B seriously. Commented that RMS is looking at positions within our activities are not considered beneficial to the group - it is a cheap way of filling positions. Reiterated that we have provided potential business partners for him to discuss potential partnering (capability building potentially for the group). Told Travis that we have heard nothing back from Fabian re NTMA and royalty. This NTMA discussion put on hold until ETC plan was received and reviewed. But still no response. Indicated that we are trying to separate the NTMA and ETC so that we can progress in parallel so as to keep the tenure granting moving and hence the Project."	
KAC B	25/09/2025	Discussion regarding NTMA and Employee, Training and Contracting Plan	"RMS have returned the ETC Plan to the group for review. Discussions were very frank and focusing on the point that RMS are very willing to work with the group to finalise a workable plan for both parties.

Stakeholder	Date	Topics and issues raised	Ramelius response and outcomes
			Discussion regarding the NTMA highlighted that we are close and that 0.9% is a number that the group would seriously consider. Not openly stated but a quick follow up with another company confirmed that other mining companies are paying 0.9% royalty rate. The group is having their AGM in two weeks where there will be three new board members welcomed. They did not state who were stepping down. Overall, a good meeting.
Kakarra Part B	13/11/2025	Negotiations in respect of entering into native title mining agreement	Ongoing negotiations
KAC Part B	9/07/2025	Negotiations in respect of entering into native title mining agreement	Ongoing negotiations
KAC Part B	14/08/2025	Negotiations in respect of entering into native title mining agreement	Ongoing negotiations
KAC Part B	16/09/2025	Negotiations in respect of entering into native title mining agreement, meetings in person	Ongoing negotiations

Stakeholder	Date	Topics and issues raised	Ramelius response and outcomes
KAC Part B	23/10/2025	Negotiations in respect of entering into native title mining agreement - meetings in person	Ongoing
KAC Part B	12/11/2025	Meeting in person - Negotiations in respect of entering into native title mining agreement	Ongoing
KAC Part B	3/12/2025	Meeting in person - execution of native title mining agreement	Entered into NTMA
KAC Part B	13/01/2026	Meeting to discuss next steps re passage of information	Establishment of internal communications pathways