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Progressive Rehabilitation and Closure Plan – Savannah Goldfields Ltd

Title of the Project: Agate Creek Project

Tenure Number: ML 100030

EA Number: P-EA-100326888

EA Holder Name: Savannah Goldfields Ltd

EA Holder Contact Details: Level 21, Matisse Tower, 110 Mary Street, Brisbane QLD 4000

Document ID Number: SVG001 PRCP

Version Number: 6.4

Date of Submission: November 2025

Document Control Sheet

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Project:	SVG001 PRCP	**Issue Date:**	14 November 2025
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Acronyms and Abbreviations

AEP	Annual Exceedance Probability
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment and Conservation Council
AQP	Appropriately Qualified Person
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
AS	Australian Standard
BoM	Bureau of Meteorology
DETSI	Department of the Environment, Tourism, Science and Innovation
EA	Environmental Authority
EC	Electrical Conductivity
EP Act	*Environmental Protection Act 1994*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESC	Erosion and Sediment Control
ESP	Exchangeable Sodium Percentage
ERA	Environmentally Relevant Activity
ESA	Environmentally Sensitive Area
EVNT	Endangered, Vulnerable, or Near Threatened
GDA	Geocentric Datum of Australia
GDE	Groundwater Dependent Ecosystem
LOD	Land Outcome Document
LOM	Life of Mine
µS/cm	Microsiemens per centimetre
MGA	Map Grid of Australia
mg/L	Milligrams per litre
ML	Mining Lease
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
NAF	Non-acid Forming
NC Act	*Nature Conservation Act 1992*
NUMA	Non-use Management Area
PAF	Potentially Acid Forming
PMAV	Property Map of Assessable Vegetation
PMLU	Post-mining Land Use
PRCP	Progressive Rehabilitation and Closure Plan
RE	Regional Ecosystem
REMP	Receiving Environment Monitoring Program
RM	Rehabilitation Milestone
ROM	Run-of-Mine
SLSA	Soils and Land Suitability Assessment
STP	Sewage Treatment Plant
SVG	Savannah Goldfields Limited
SWL	Standing Water Level
TKN	Total Kjeldahl Nitrogen
TN	Total Nitrogen
TOC	Total Organic Carbon
TP	Total Phosphorous

tpa	Tonnes per annum
TSF	Tailings Storage Facility
VM Act	*Vegetation Management Act 1999*
WEPP	Water Erosion Prediction Project
WRC	Waste Rock Characterisation
WRD	Waste Rock Dump
WTS	Wulguru Technical Services Pty Ltd

PART A – REHABILITATION PLANNING PART

1. Introduction

1.1 Background

Ardent Group Pty Ltd (Ardent Group) has been engaged by Savannah Goldfields Limited (SVG) (formerly named Laneway Resources Limited (Laneway)) to prepare a Progressive Rehabilitation and Closure Plan (PRCP) for the Agate Creek Gold Mine ("Agate Creek" or "the Project") in accordance with the requirements of the *Environmental Protection Act 1994* (EP Act). This PRCP relates to the rehabilitation and land management of Mining Lease (ML) ML 100030 and builds upon version 5 prepared by Wulguru Technical Services Pty Ltd.

To date, mining operations have occurred under Environmental Authority EPSL03068015 (EA), which provides approval for the standard conditions contained within the *Code of environmental compliance for Mining Lease Projects – Version 1.1*, issued to Laneway (dated 6 September 2021).

A site-specific EA application has been lodged by SVG for the expansion of operations at the Agate Creek Project to allow for ongoing mining activities up to 250,000 tonnes per annum (tpa) of gold ore.

The proposed site-specific EA has applied to authorise the carrying out the following environmentally relevant activities (ERA) under the *Environmental Protection Regulation 2019*:

- Schedule 3, 16: Mining gold ore;
- Ancillary 08 - Chemical Storage; 1 - Storing a total of 50t or more of chemicals of dangerous goods class 1 or class 2, division 2.3 under subsection (1)(a);
- Ancillary 33 - Crushing, milling, grinding or screening, Crushing, grinding, milling or screening more than 5000t of material in a year.

1.2 Purpose of PRCP

In accordance with the stated purpose outlined under Section 126B of the EP Act, the PRCP:

(a) specifies a plan for how and where environmentally relevant activities will be carried out on land in a way that maximises the progressive rehabilitation of the land to a stable condition; and
(b) provides for the condition to which the holder must rehabilitate the land before the authority may be surrendered.

This PRCP has been prepared to address the requirements of Sections 126C and 126D of the EP Act and has been prepared in accordance with the *Statutory Guideline Progressive Rehabilitation and Closure Plans (PRC Plans) (DESI 16 September 2024)*.

The PRCP comprises two parts:

Part A – Rehabilitation Planning Part, which includes the following:

- Provide a description of:
  - each resource tenure, including the area of each tenure, that applies to the PRCP.
  - the relevant activities to which the application relates.
  - the likely duration of the relevant activities.
- A description of how and where the mining activities will be carried out.

- Details of consultation undertaken in relation to the preparation of the PRCP and ongoing consultation in relation to any required rehabilitation required under the PRCP.
- Details of how the proposed Post-Mining Land Uses ('PMLUs') are consistent with community consultation and relevant plans for the land of the local government, the State and Commonwealth.
- Proposed methods and techniques for rehabilitating the land to a stable condition in a way that supports the rehabilitation milestones under the proposed PRCP Schedule.
- Identifies any risks of a stable condition for land not being achieved and specifies methods to manage or minimise the identified potential risks.

Part A is to justify and support the proposed PRCP Schedule.

Part B – PRCP Schedule (**Appendix 1**), which includes a proposed PRCP schedule that complies with section 126D of the EP Act and includes the following:

- Nomination of either a PMLU or Non-use Management Area (NUMA) for all land within the relevant resource tenures, including land uses for undisturbed land.
- Identification of when land becomes available for rehabilitation or improvement.
- Rehabilitation or management milestones to achieve the PMLU or NUMA outcomes.
- Milestone criteria that demonstrate when each milestone has been completed.
- Completion dates for each milestone to be achieved.
- Any conditions considered necessary or desirable.

The PRCP schedule becomes a legally binding and enforceable instrument with which the Project must comply.

1.3 Land Outcome Document for the PRCP

There is no applicable land outcome document as this PRCP application supports the application for a new site-specific EA.

2. Background Information

2.1 Location

The Agate Creek Project is located within ML 100030, approximately 40 km south of Forsayth, North Queensland, within Etheridge Shire Council. Access to the Project is via Rungulla Road (**Figure 1**).

2.1 Tenure to which PRCP Relates

Details of the ML, which is the subject of this PRCP, are outlined in **Table 1**. This PRCP applies to the entire area of this tenure.

Table 1 Mining Tenement Details

Specifications	Details
ML Number	100030
Tenement name	Agate Creek
Grant Date	7 February 2019
Expiry Date	28 February 2039
Area	689.3 ha
Minerals	Copper Ore Gold Lead Ore Silver Ore Zinc Ore

2.2 Property Description

The Project is located entirely within two parcels of underlying land (**Figure 2**). The real property description and current ownership is provided in **Table 2.**

Table 2 Real Property Description Underlying ML 100030

Specifications	Land Parcel 1	Land Parcel 2
Lot on Plan	Lot 2 on SP242983	Lot 7 on SP275179
Tenure type	Lands Lease	Reserve
Landholder	Simon Brosnan Terry David Alexander Terry	The State of Queensland (represented by Department of Environment and Science)
Local government area	Etheridge Shire Council	Etheridge Shire Council

750000

800000

7950000

7900000

"Mistletoe"

"Routh Holding"

"The Drum"

"Sirron"

"North Head"

"South Head"

"Robinhood"

"Beverly Hills"

"Old Robin Hood"

Georgetown

Forsayth

Mount Turner Road

Gulf Developmental Road

Forsayth Road

Gilbert River

Flat Creek Road

Black Rock Road

Cobb Road

ML 100030, Agate Creek

RUNGULLA NP

0 2 4 6 8 10

km

SAVANNAH GOLDFIELDS LIMITED

Agate Creek Project PRCP Report

N W E S

GDA2020, MGA Zone 54

ARDENT GROUP PTY LTD

Figure 1
Regional Location of Agate Creek Project

Agate Creek Project Mining Lease

Drawn By: Chris Schlebusch

Requested by: Jacob Arnold

Date: 10/07/2025

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Data sources:
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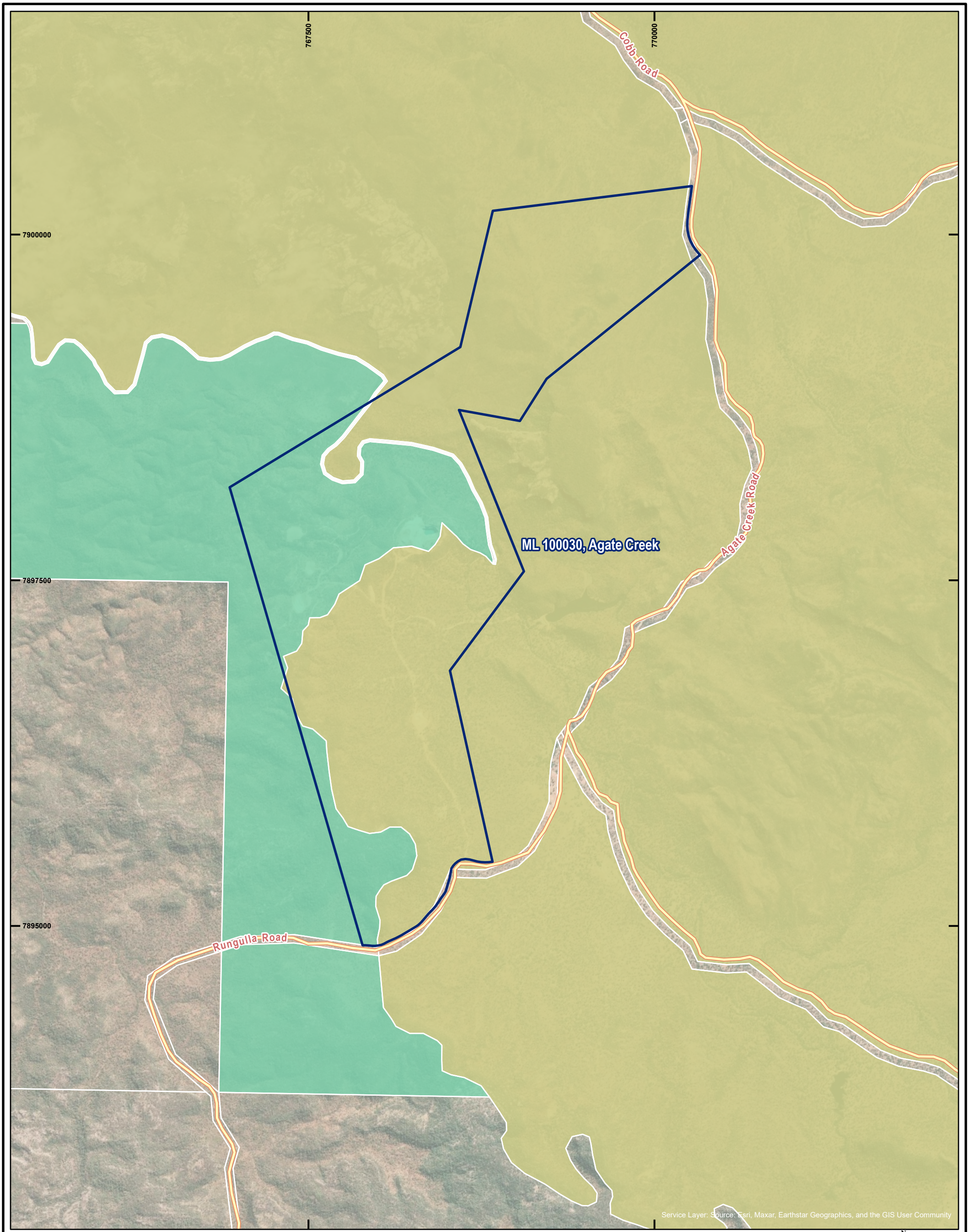
Cooktown

Cairns

Innisfail

Townsville

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km

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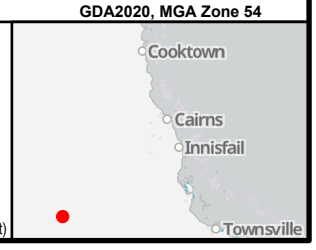
Agate Creek Project PRCP Report

N
W E
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GDA2020, MGA Zone 54

ARDENT GROUP PTY LTD

ML 100030
Property Description

- Agate Creek Project Mining Lease
- Parcel Boundary
- Local Road
- 2SP242983
- 7SP275179



Data sources:
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Figure 2

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Date: 10/11/2025

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2.3 Primary Mine Features/Infrastructure on Site

Agate Creek currently consists of the following infrastructure and mine features:

- Administration, Camp, Maintenance, Storage and Sewage Treatment Plant (STP) and Irrigation area;
- Run of Mine (ROM) Pad;
- Laydown area;
- Sherwood Open Cut Pit;
- Pit 3 (backfilled);
- Pit 1 and Pit 4;
- Sherwood waste rock dump (WRD), South West (SW) WRD and North West (NW) WRD;
- Low grade waste stockpile; and
- Haul roads and access tracks.

SVG are proposing to expand current operations across the Sherwood and Sherwood West resource areas under ML 100030, extracting up to 250,000 tpa of gold ore across four individual open cut pits. The Sherwood Pit and Sherwood WRD have been renamed as Pit 6 and the Pit 6 WRD respectively. The future operations will include the following:

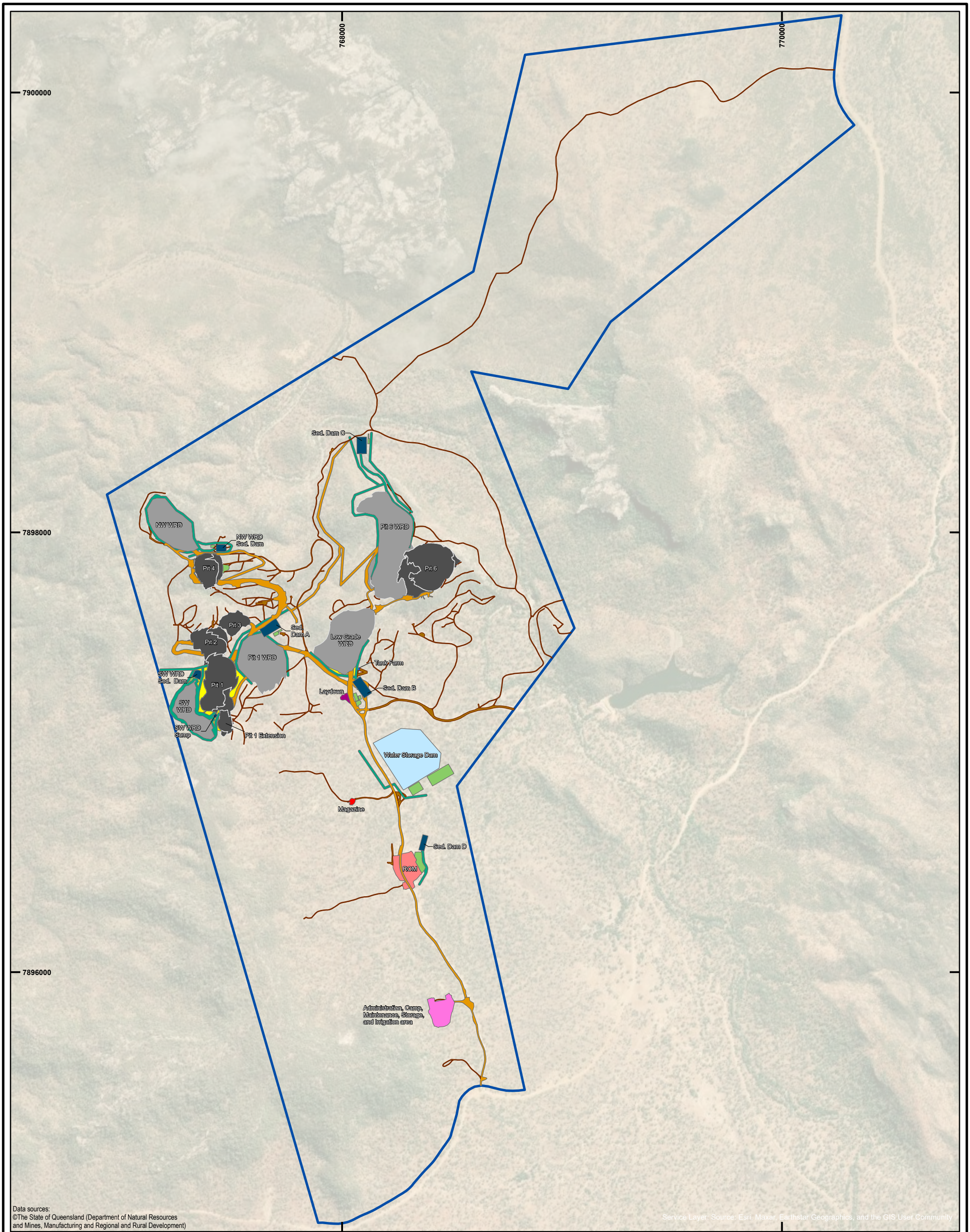
- Four open cut pits (Pit 1, Pit 2, Pit 4 and Pit 6);
- Four temporary waste rock dumps (Pit 1 WRD, Pit 6 WRD, NW WRD, SW WRD);
- One low grade WRD;
- ROM pad;
- Administration, camp, maintenance, storage and irrigation area;
- Explosives magazine;
- Laydown area;
- Mine work areas;
- Water Storage Dam;
- Seven sediment ponds (Sediment Ponds A-D, NW WRD Basin, SW WRD Basin, SW WRD Sump);
- Water diversion drains;
- Tank farm;
- Topsoil stockpiles; and
- Haul roads and access tracks.

The proposed mine features for the Project are defined in **Table 3** and shown in **Figure 3**.

Table 3 Primary Mine Features

Mine Domain	Mine Feature Name	Location (centroid) (GDA2020 MGA Zone 54)		Maximum Disturbance Area (ha)
		Easting	Northing	
Pits[1]	Pit 1 and Pit 2	767443	7897339	5.89
	Pit 3	767508	7897595	1.06
	Pit 4	767390	7897830	1.68
	Pit 6	768403	7897862	4.70
Waste rock dumps	NW WRD	767217	7898030	3.32
	SW WRD	767301	7897173	2.16
	Pit 1 WRD	767636	7897411	4.26
	Pit 6 WRD	768232	7897935	7.05
	Low grade WRD	768020	7897521	5.11
Mine Infrastructure	ROM Pad	768309	7896473	1.34
	Administration, Camp, Maintenance, Storage and Irrigation area	768452	7895821	1.26
	Explosives magazine	768046	7896776	0.08
	Laydown	768015	7897248	0.12
	Mine work areas	Refer **Figure 3**		0.84
Water Infrastructure	Water Storage Dam	768303	7896992	5.26
	Sediment Dams	Refer **Figure 3**		1.58
	Water Diversions	Refer **Figure 3**		6.10
	Tank Farm	768076	7897378	0.01
Topsoil Stockpiles	Topsoil Stockpiles	Refer **Figure 3**		1.37
Roads and Tracks	Haul road	Refer **Figure 3**		8.35
	Existing access tracks	Refer **Figure 3**		6.91
TOTAL				**68.45**

[1] Maximum disturbance area of pits include additional disturbance area required to achieve final landform design.



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Progressive Rehabilitation and Closure Plan

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Figure 3
Mine Features/ Infrastructure

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Requested by:	Jacob Arnold
Date:	10/11/2025

Sheet No.
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- ML 100030
- Pit
- WRD
- ROM Pad
- Administration, Camp, Maintenance, Storage, and Irrigation area
- Explosives Magazine
- Laydown
- Mine Work Area
- Water Storage Dam
- Sediment Dam
- Diversion Drain
- Tank Farm
- Topsoil Stockpile
- Haul Road
- Existing Access Track

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2.4 Type of Mining Operation

Agate Creek is an open cut gold mine operation that commenced production in 2019 with the establishment of the Sherwood open cut pit within the Sherwood Resource area. Agate Creek uses conventional haul truck and shovel operations supported by traditional drill and blast activities.

Ore is graded and stored on the ROM pad prior to being transported offsite via truck to the Georgetown Gold Processing Plant. No processing activities (other than ore crushing for haulage to Georgetown) will occur. Access to Agate Creek is to remain via Rungulla Road/Agate Creek Road /Cobb Road and onto Georgetown via Forsayth Road.

2.5 Proposed Duration of Mining Operation

Agate Creek has a current Life of Mine (LOM) estimated to be 3 years from commencement of expanded mining activities (2026).

ML 100030 extends until 28 February 2039. The rehabilitation duration extends beyond the current term of the mining lease, as the period to achieve a self-sustaining ecosystem is 20 years. It is assumed that the term of the mining lease will be extended at the appropriate time to allow for the completion of rehabilitation.

Mine Planning has determined the proposed mine sequence and duration as shown in **Table 4**, which details the stages and volumes for each pit.

Table 4 Proposed Mining Sequence and Duration

Mining Area	Resource (tonnes)	Commence Mining	Complete Mining	Landform Completed	Rehabilitation Completed
Pit 1	98,000	1 July 2026	1 December 2027	1 June 2029	2045
Pit 2	78,533	1 October 2027	1 December 2028	1 December 2029	2045
Pit 3	N/A	N/A	Completed	1 November 2026	2043
Pit 4	71,906	1 October 2028	1 June 2029	1 July 2030	2047
Pit 6	138,000	1 March 2029	1 December 2029	1 December 2030	2047

3. Rehabilitation Planning

3.1 Baseline Information

3.1.1 Climate

3.1.1.1 Current Climate

Agate Creek is located in the dry tropics region and experiences hotter and wetter periods during the summer months (wet season) and drier, cooler periods during the winter months (dry season). Climate data obtained from Georgetown airport weather station has been summarised in **Figure 4**.

The highest maximum temperature for 2022 was recorded in October (40.6°C). The minimum temperature recorded in 2022 was recorded in July (3.8°C). A total of 902.4 mm of rainfall was recorded at Georgetown for 2022 whilst evaporation totalled 2323 mm for 2022 (Queensland Government, 2023).

The highest average maximum temperatures are recorded in November (36.9°C) while the minimum average temperature is recorded in July (13.2°C). The highest average monthly rainfall occurs in January at 255.9 mm and the lowest monthly average recorded in August (1.5 mm) with a long-term annual average of 884.1 mm. Average annual evaporation (around 2,555mm) is considerably higher than average rainfall (Bureau of Meteorology (BoM), 2024).

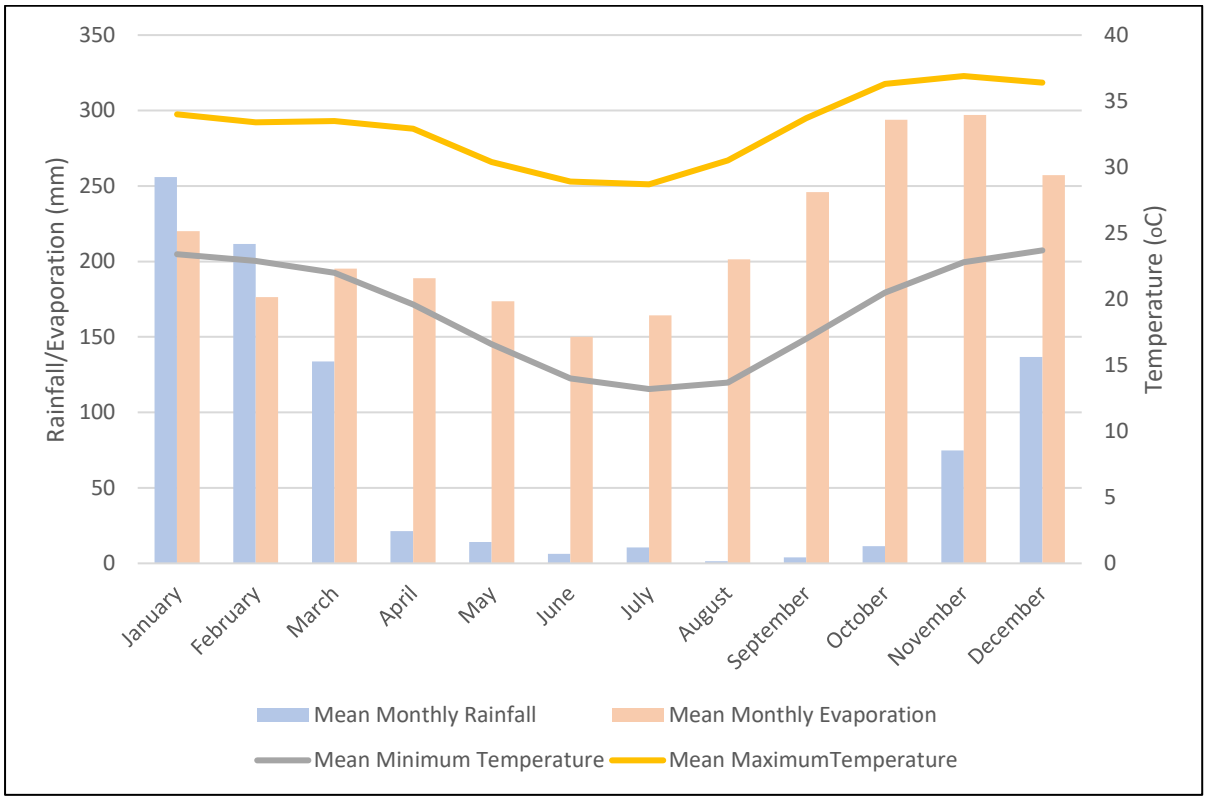
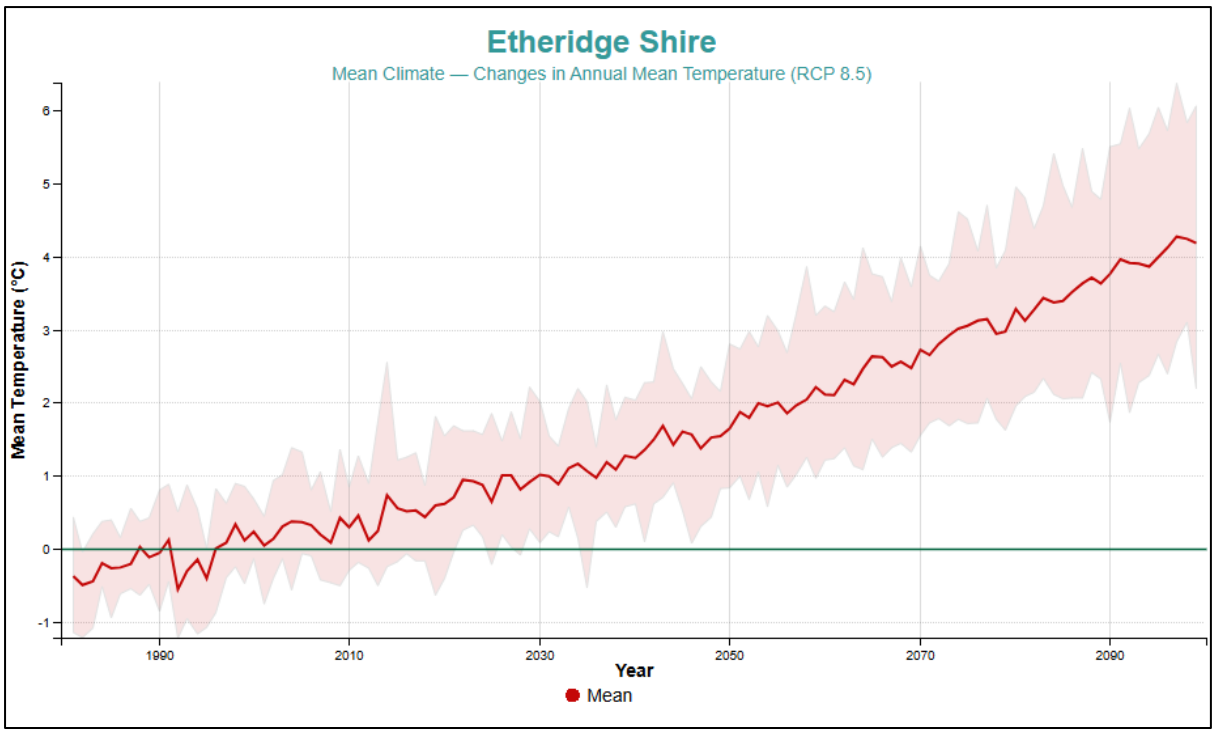


Figure 4 Climate Data Georgetown Airport (BOM Station: 030124)

3.1.1.2 Long-term Climate Projections

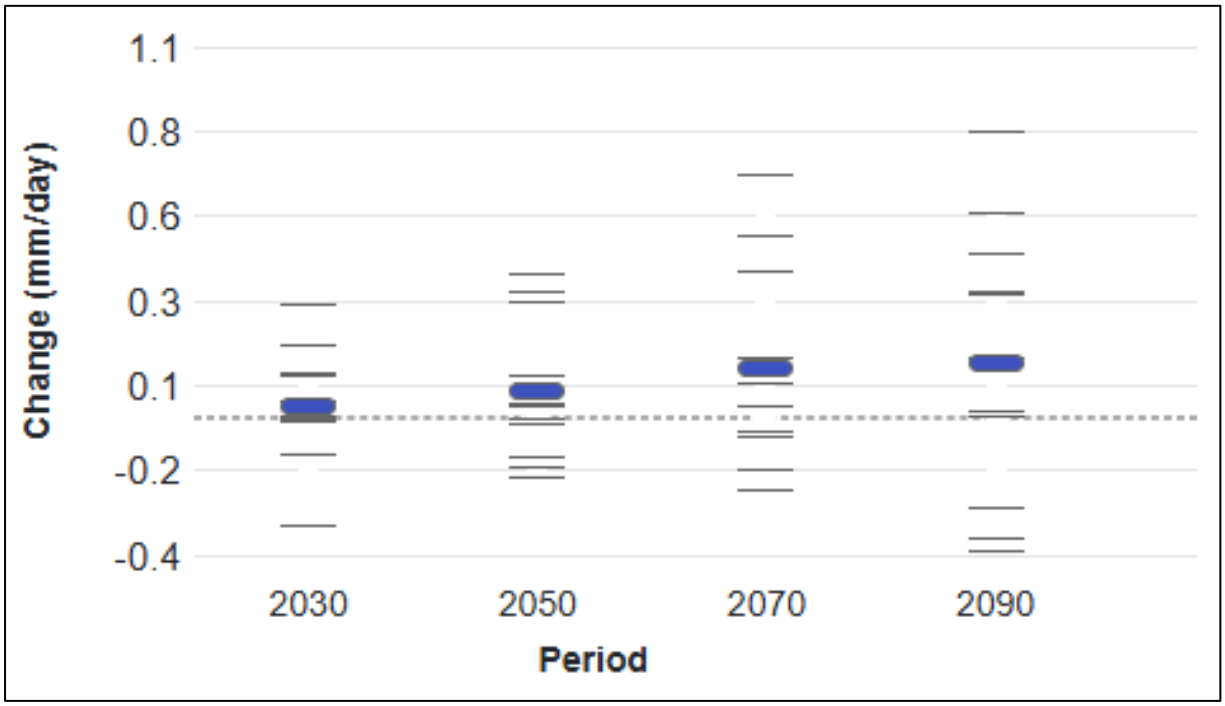
The long-term climate projections are important to understand when planning for rehabilitation. The mean annual temperature for the Etheridge Shire Council is predicted to rise by 1.0°C by 2030 and by approximately 3.8°C by 2090, as shown in **Figure 5**.



(Source: Long Paddock Queensland Future Climate, 2024)

Figure 5 Predicted Change in Annual Mean Temperature

Predicted annual rainfall is to remain relatively consistent with current rainfall figures, with 0.1mm/day increase in 2050 to 0.17mm/day increase by 2090, as shown in **Figure 6**.



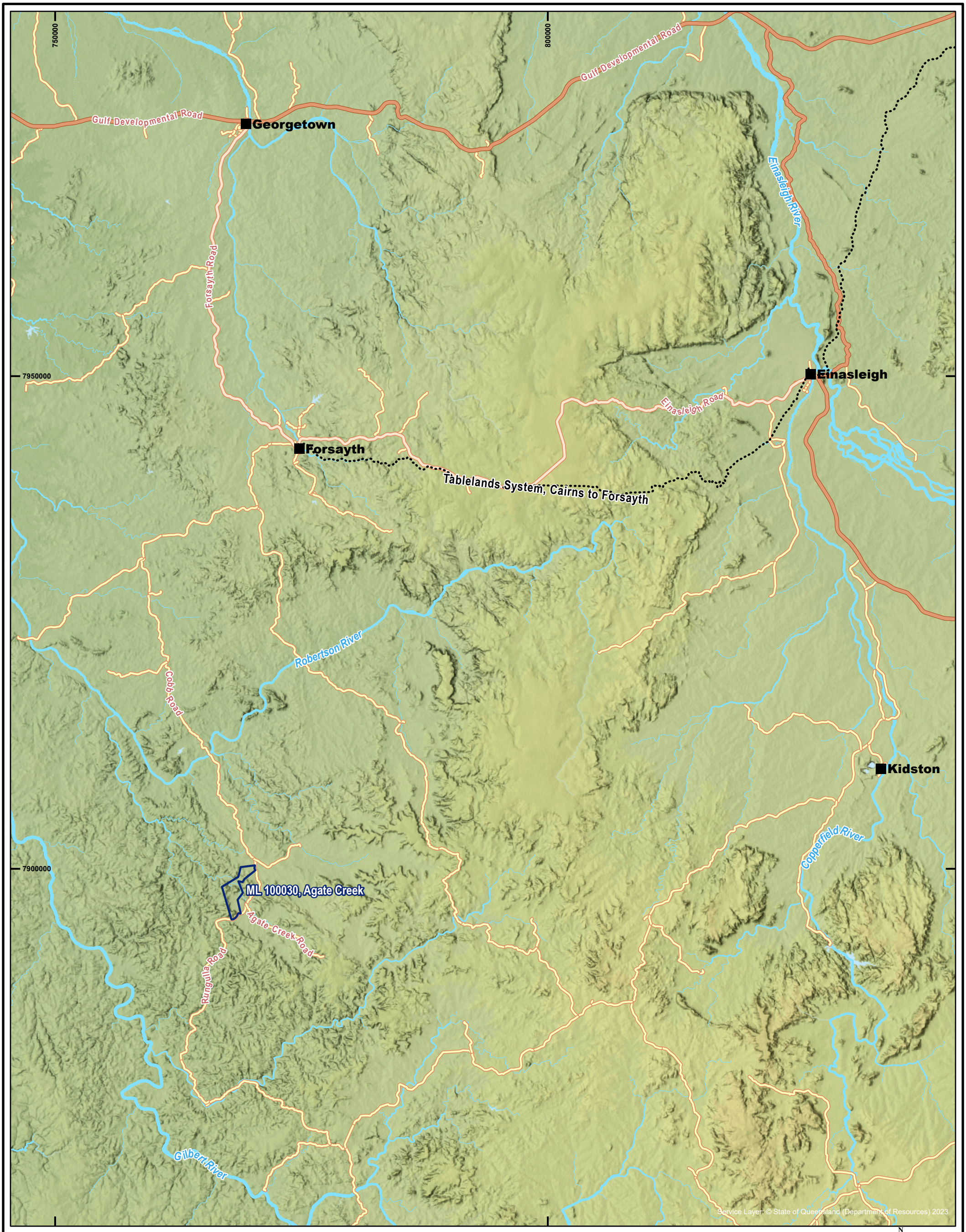
(Source: Long Paddock Queensland Future Climate, 2024)

Figure 6 Predicted Long-Term Change for Annual Rainfall (based on 1986-2005 reference period)

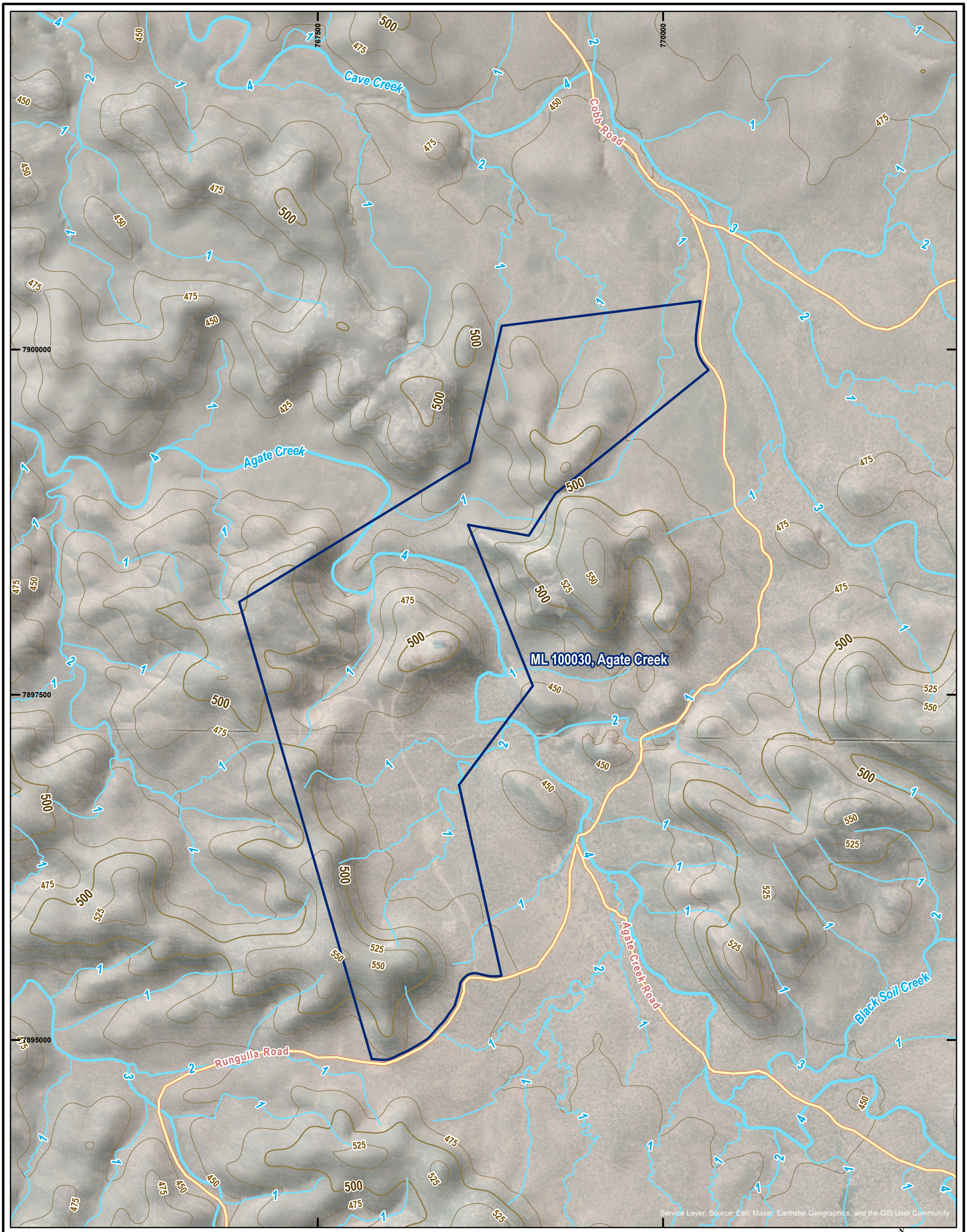
3.1.2 Topography

The topography of Agate Creek includes steep sandstone scarps and formations to the west and steeply undulating hills to gently undulating terrain on the ML, as shown in **Figure 7**.

The Project elevation is between 420m and 550m Australian Height Datum (AHD), with a number of drainage features, as shown in **Figure 8**.



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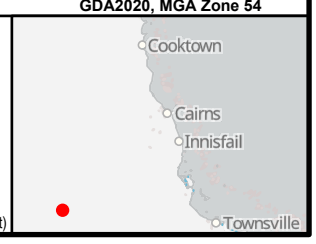
ML 100030 Topography and Drainage

Figure 8

Sheet No. RTPL_ARD_SVG001_PRCPRMAP_1004_B

Drawn By:	Chris Schlebusch
Requested by:	Jacob Arnold
Date:	24/07/2025

- Agate Creek Project Mining Lease
- Local Road
- Watercourse (with stream order)
- Contour (25m)



Data sources:
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3.1.3 Geological Setting

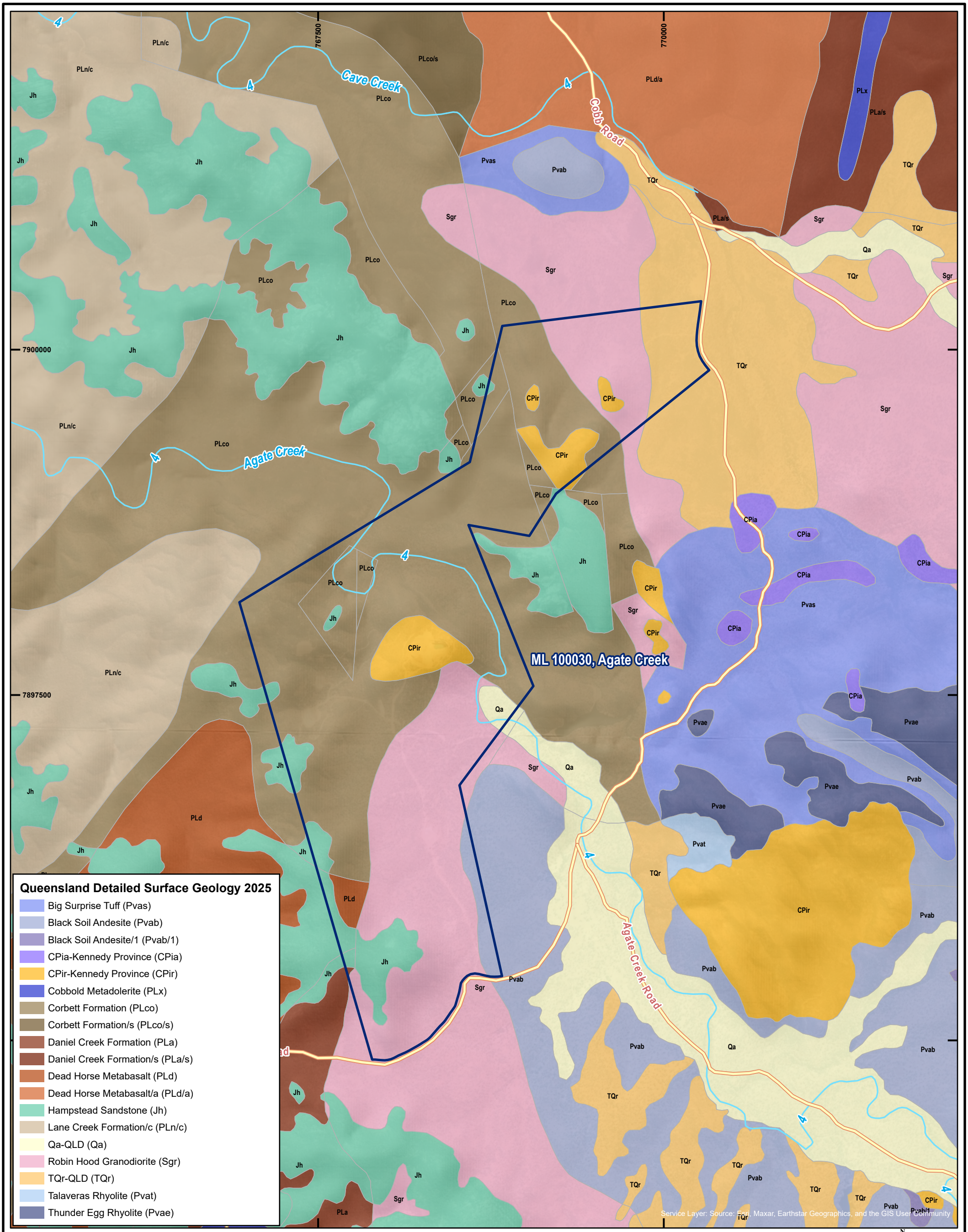
Agate Creek is situated within the Etheridge Goldfield. The region's gold mineralisation is described as predominantly epithermal and mesothermal systems within quartz veining, stockworks and breccias associated with the felsic volcanic units of the Permian Kennedy Igneous Group and the Proterozoic Forsayth Batholith.

The target is the Sherwood and Sherwood West deposits. Gold mineralisation at Sherwood is a low-sulphidation, adularia-sericite type epithermal system genetically related to the emplacement of Permo-Carboniferous porphyritic rhyolite and andesite extrusives and intrusives. Most mineralisation occurs within the Robertson Fault Zone, at the intersection of the Robin Hood Fault. The mineralised zones are interpreted as boiling outflow zones, likely fossil geysers. The Agate Creek Fault forms the eastern boundary, but mineralisation is open in all other directions. Sherwood West is hosted within a brecciated rhyolite, infilling a thrust fault truncated in the north by the Zig Zag Fault. The Sherwood West Fault is infilled with Permian rhyolites which host gold mineralisation in chalcedonic quartz veining and breccias.

The lithological summary for the surface geology present within ML 100030 is shown in **Figure 9** and described in **Table 5**.

Table 5 Geological Formations

Rock Unit	Age	Dominant Rock	Lithological Summary
Black Soil Andesite (Pvab)	Early Permian	Mafites (Lavas, Clastics & High-Level Intrusives)	Greyish-green locally sparsely porphyritic augite-hypersthene-basaltic andesite with agate-filled amygdales; probably includes intrusive equivalents
CPir-Kennedy Province (CPir)	Late Carboniferous - Early Permian	Felsites (Lavas, Clastics & High-Level Intrusives)	Mainly buff, pale grey to dark grey or brown, aphyric to highly porphyritic, intrusive rhyolite; commonly flow-banded; locally grades into microgranite
Robin Hood Granodiorite (Sgr)	Silurian	Granitoid	Pink to grey hornblende-biotite granodiorite with quartz phenocrysts
Corbett Formation (PLco)	Paleoproterozoic	Pelite	Greenish grey mudstone (+/- chloritoid); grades into mica schist (+/- staurolite, andalusite, sillimanite, garnet)
Dead Horse Metabasalt (PLd)	Paleoproterozoic	Mafites (Lavas, Clastics & High-Level Intrusives)	Metabasalt, locally pillowed, hyaloclastic and/or amygdaloidal; minor metadolerite, and metagabbro (unmapped) and interbedded siltstone
Daniel Creek Formation (PLa)	Paleoproterozoic	Arenite-Mudrock	Mudstone, siltstone, and fine subfeldspathic sandstone, locally calcareous and/or dolomitic. Grades into mica schist, quartzite, and minor calc-silicate rocks



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ML 100030
Detailed Surface Geology

Agate Creek Project Mining Lease
Local Road
Watercourse (with stream order)

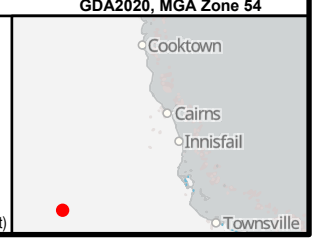


Figure 9

Sheet No.
RTPL_ARD_SVG001_PRCPRMAP_1014_A

Drawn By: Chris Schlebusch
Requested by: Jacob Arnold
Date: 24/07/2025

Data sources:
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3.1.4 Site Hydrology and Fluvial Networks

The Agate Creek project site forms part of the Gilbert River Catchment located in the Gilbert River Basin. The Basin generally flows from the south-east to the north-west ending at the Gulf of Carpentaria. A number of watercourses transect the Project area. These are predominately first order drainage features, classified as ephemeral and discharge into Agate Creek; which flows approximately south-east to north-west through the centre of the site (**Figure 8**). Agate Creek connects to the Robertson River and Gilbert River to the north-west of the Agate Creek location (**Figure 7**).

Surface water environmental values and water quality objectives have not been formally documented for the Gilbert River Basin, therefore the Australian and New Zealand Environment and Conservation Council (ANZECC) & Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) water quality guidelines are applicable. Based on the location and surrounding land use and potential downstream users, the most sensitive environmental values associated with the Project are:

- Aquatic ecosystems;
- Stock watering;
- Irrigation; and
- Cultural and spiritual values.

No water licences been issued under the *Water Act 2000* for the Project.

3.1.4.1 Surface Water Quality

Surface water monitoring has been conducted intermittently where water is present. A Receiving Environment Monitoring Program (REMP) has been implemented at Agate Creek, which includes surface water.

The purpose of the REMP is to identify any long-term trends within the surface waters across the site and to demonstrate that the Project has been rehabilitated to a condition that has not created a significant impact on downstream surface water quality.

Results of the REMP monitoring are reported in **Appendix 2** and include the laboratory analysis for physico-chemical properties, major ions, nutrients and hydrocarbons are presented in comparison to water quality guidelines.

To date, the REMP data is characteristic of the ephemeral nature of streams in north Queensland, with limited habitat opportunities for most aquatic organisms. Waterholes dry out too quickly to allow the establishment of sustained aquatic plant and macroinvertebrate communities. Ephemeral waterholes are also too small and transient to have recreational value or provide watering points for terrestrial fauna.

An annual report will be prepared throughout the life of the operations and will be used to inform environmental management onsite, include rehabilitation methodologies in conformance with the legislative regime.

The surface water monitoring sites are summarised in **Table 6** and shown in **Figure 10.** The proposed surface water quality objectives and compliance limits are outlined in **Table 7** for each parameter to be monitored.

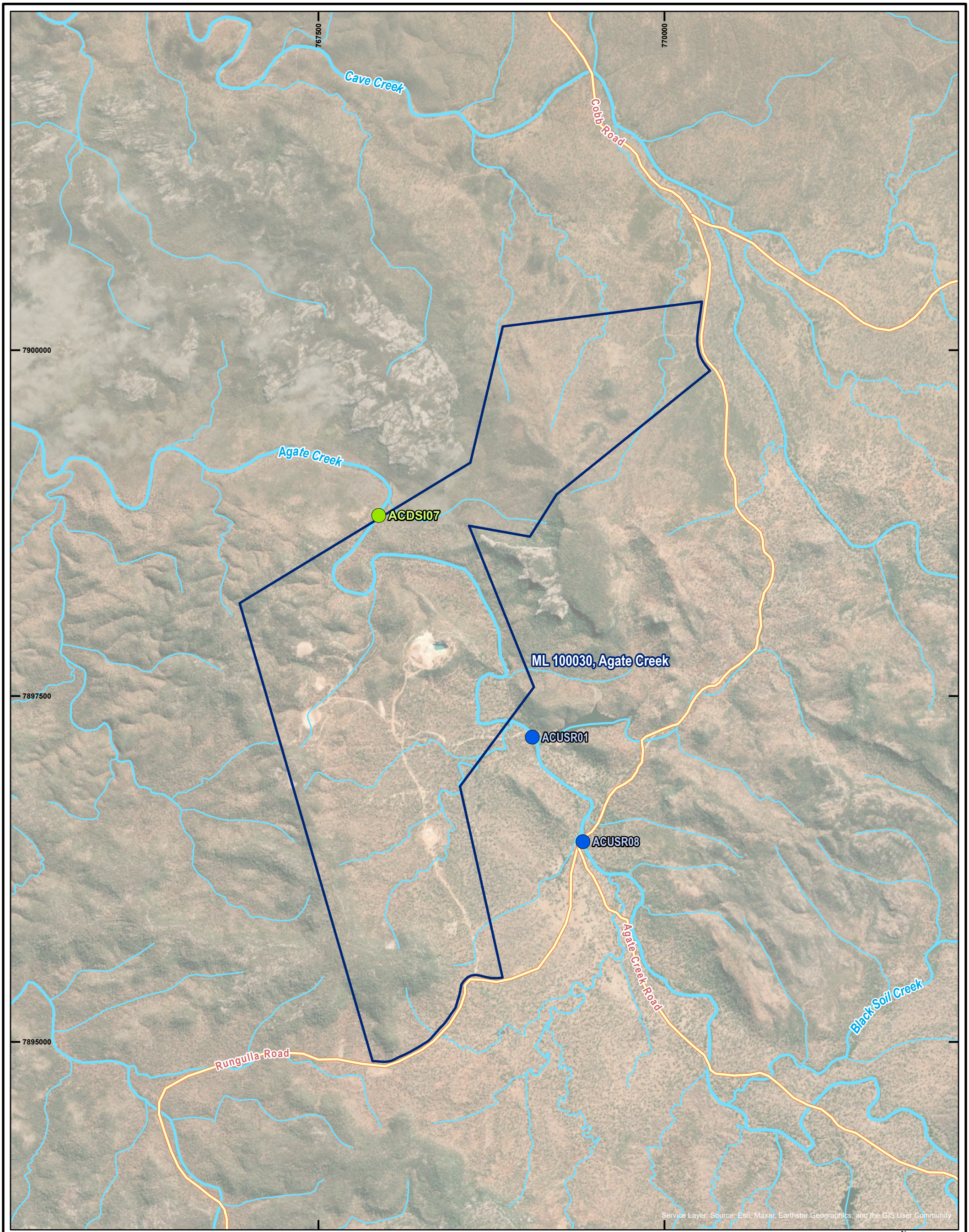
Table 6 Proposed Surface Water Monitoring Locations

Monitoring sites	Monitoring site description	Location	
		Easting (GDA2020 MGA Zone 54)	Northing (GDA2020 MGA Zone 54)
Upstream reference sites			
ACUSR08	Upstream Agate Creek; adjacent Cobb Road	769411	7896447
ACUSR01	Upstream Agate Creek; downstream of landholder dam	769045	7897203
Downstream compliance site			
ACDSI07	Boundary compliance point in Agate Creek	767935	7898805

Table 7 Receiving Waters Quality Objectives

Quality Characteristic	Unit	Water quality objective[1]	Compliance limit[1]
pH – lower	pH units	-	6[7, 9]
pH – upper	pH units	-	9.1[6, 7]
Electrical conductivity	µS/cm	-	434[6, 7]
Turbidity	NTU	298[5, 7]	331[6, 7]
Sulfate	mg/L	2[5]	3.2[6]
Fluoride	mg/L	1.5[5, 7]	1.8[6, 7]
Aluminium	mg/L	0.28[5]	0.31[6]
Arsenic	mg/L	0.003[6]	0.013[8]
Boron	mg/L	0.05[6]	0.37[8]
Cadmium	mg/L	0.0001[6]	0.0002[8]
Cobalt	mg/L	0.001[6]	1[10]
Copper	mg/L	0.0014[8]	0.003[6, 7]
Lead	mg/L	0.001[6]	0.0034[8]
Mercury	mg/L	0.0001[6]	0.0006[8]
Nickel	mg/L	0.002[6]	0.011[8]
Selenium	mg/L	0.01[6]	0.011[8]
Zinc	mg/L	0.008[8]	0.023[6, 7]
Hardness	mg/L	For interpretation purposes only	
Major cations and anions	mg/L	For interpretation purposes only	

[1] Water quality objectives and compliance limits based off laboratory results.
[2] All samples for metals/metalloids must be analysed for both the total (from analysis of an unfiltered sample) and dissolved (from analysis of a field filtered sample) fractions.
[3] 5th percentile surface water data
[4] 20th percentile surface water data
[5] 80th percentile surface water data
[6] 95th percentile surface data.
[7] Interim limit, to be reviewed once sufficient data has been collected.
[8] ANZECC (2000) trigger levels for freshwater 95% aquatic ecosystem protection for slightly to moderately disturbed ecosystems
[9] ANZECC (2000) trigger levels for Tropical Australia upland rivers.
[10] ANZECC (2000) trigger levels for livestock drinking water



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ML 100030 Surface Water Monitoring Sites

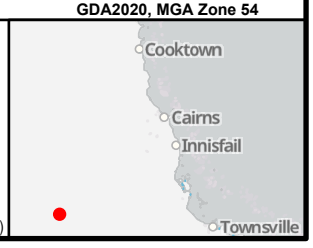
Figure 10

Sheet No.
RTPL_ARD_SVG001_PRCPRMAP_2003_B

Drawn By:	Chris Schlebusch
Requested by:	Jacob Arnold
Date:	10/11/2025

- Agate Creek Project Mining Lease
- Local Road
- Watercourse
- Upstream Reference Site
- Downstream Compliance Site

Data sources:
©The State of Queensland (Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development)



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3.1.4.2 *Water Infrastructure Quality*

There has been no requirement to date to monitor water storage quality. It is proposed that water storage monitoring should occur quarterly, and within 12 hours of the release from the Water Storage Dam, and weekly thereafter until flow ceases. The proposed water storages onsite are detailed in **Table 8**.

Table 8 Water Storages

Water Storage	Location (Centroid)	
	Easting (GDA2020 MGA Zone 54)	Northing (GDA2020 MGA Zone 54)
Water Storage Dam	768303	7896992
Sediment Pond A	767673	7897565
Sediment Pond B	768090	7897296
Sediment Pond C	768089	7898397
Sediment Pond D	768369	7896588
NW WRD Basin	767449	7897929
SW WRD Basin	767343	7897355
SW WRD Sump	767423	7897166

3.1.5 Flooding

The Project is located in an area completely dominated by ephemeral watercourses. For determination of flooding susceptibility and influence across the site, a flood impact assessment (**Appendix 3**) was conducted by ATC Williams Pty Ltd (ATC Williams), with flood modelling completed. The original flood modelling completed in 2022 has been reconsidered by ATC Williams in 2025 to assess any project changes (**Appendix 4**). Their 2025 assessment has confirmed the outcomes of the 2022 study are still relevant.

Mapping for 0.1%AEP Flood event shows maximum water depth (**Figure 11**), maximum water surface elevations (**Figure 12**), and maximum water velocity (**Figure 13**).

The results of the flood modelling indicate that flooding of Agate Creek overtops the creek's banks and generally follows the watercourse alignment. The 0.1% AEP event maximum flood depths vary from shallow depths on the outer banks to approximately 6-8 m in deeper areas of the creek. Flow predominately runs along the eastern extents of the proposed mine development area and flows to the northwest. All voids are well clear of the floodplain.

The flood event velocities are of high magnitude within the creek due to the relatively narrow channel and high peak flows. In the 0.1 % AEP event, velocity over the inundated Agate Creek floodplain vary between 0.5 - 5 m/s. Overland flow velocities from local gullies within the site were of less magnitude at only 0.5 m/s to 1.5 m/s. However, noting that localised velocities within the mine development area should be assessed as part of a site-specific detailed design of diversion bunds and drains for the site features.

The results of the sensitivity testing demonstrated that the model was not significantly sensitive to a change in Manning's 'n' in the surrounding vegetated areas. Sensitivity testing scenarios selected did not result in any of the voids being inundated by the 0.1% AEP event floodplain.

The key mine development area, in addition to the existing and proposed voids are all clear of the 0.1% AEP floodplain extents in accordance with the PRCP Guidelines.

The results indicate that Agate Creek floodplain traverses through the subject mine lease (ML 100030), with the major mine development features outside of the floodplain extents. Specifically, it was found that the proposed open cut pits (voids) are not impacted by the 0.1% AEP flood event.

NW WRD
PIT 4
PIT 6 WRD
PIT 6
LOW GRADE WRD
PIT 2
PIT 1
PIT 1 WRD
SW WRD
Pit 1 EXT
ROM PAD
ROAD CROSSING

LEGEND

- MINE LEASE
- FINAL LANDFORM EXTENTS
- ELVIS CONTOURS 10m
- 0.1% AEP FLOODPLAIN EXTENTS

MAXIMUM WATER DEPTH (m)

- <= 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- 3.00 - 4.00
- 4.00 - 5.00
- 5.00 - 6.00
- 6.00 - 7.00
- > 7.00

FIGURE 11

0.1% AEP Maximum Water Depth

Flood Modelling as per ATCW reference 121208-01-FIA-R01-RevA

AGATE CREEK GOLD MINE

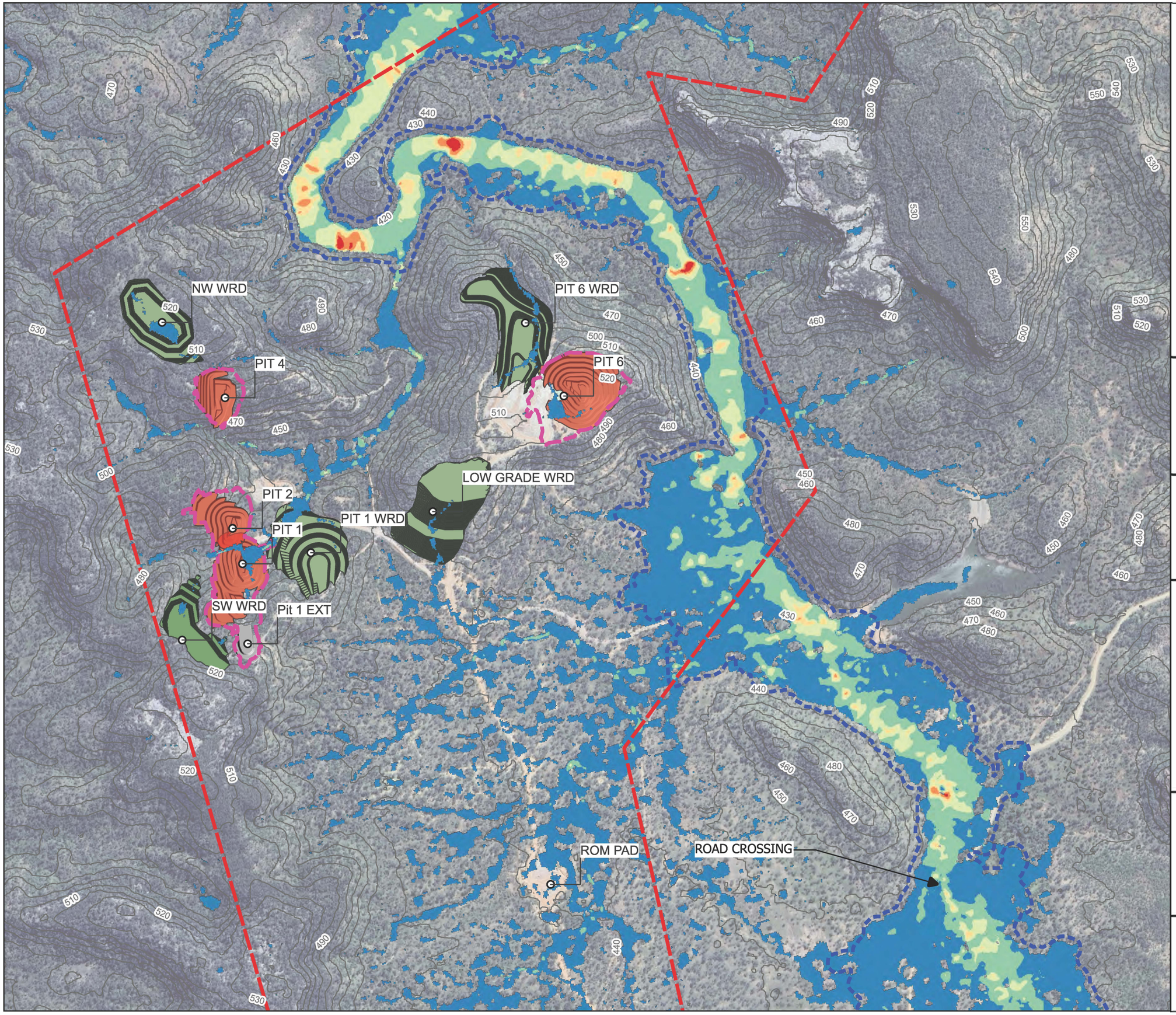
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0 100 200 300 400 m

ATC WILLIAMS

REF: 121208 DATE:2025-10-31

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LEGEND

- MINE LEASE
- FINAL LANDFORM EXTENTS
- ELVIS CONTOURS 10m
- 0.1% AEP FLOODPLAIN EXTENTS

MAXIMUM VELOCITY (m/s)

Band 1

- <= 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- > 5.0

FIGURE 12

0.1% AEP Maximum Velocity

Flood Modelling as per ATCW reference 121208-01-FIA-R01-RevA

AGATE CREEK GOLD MINE

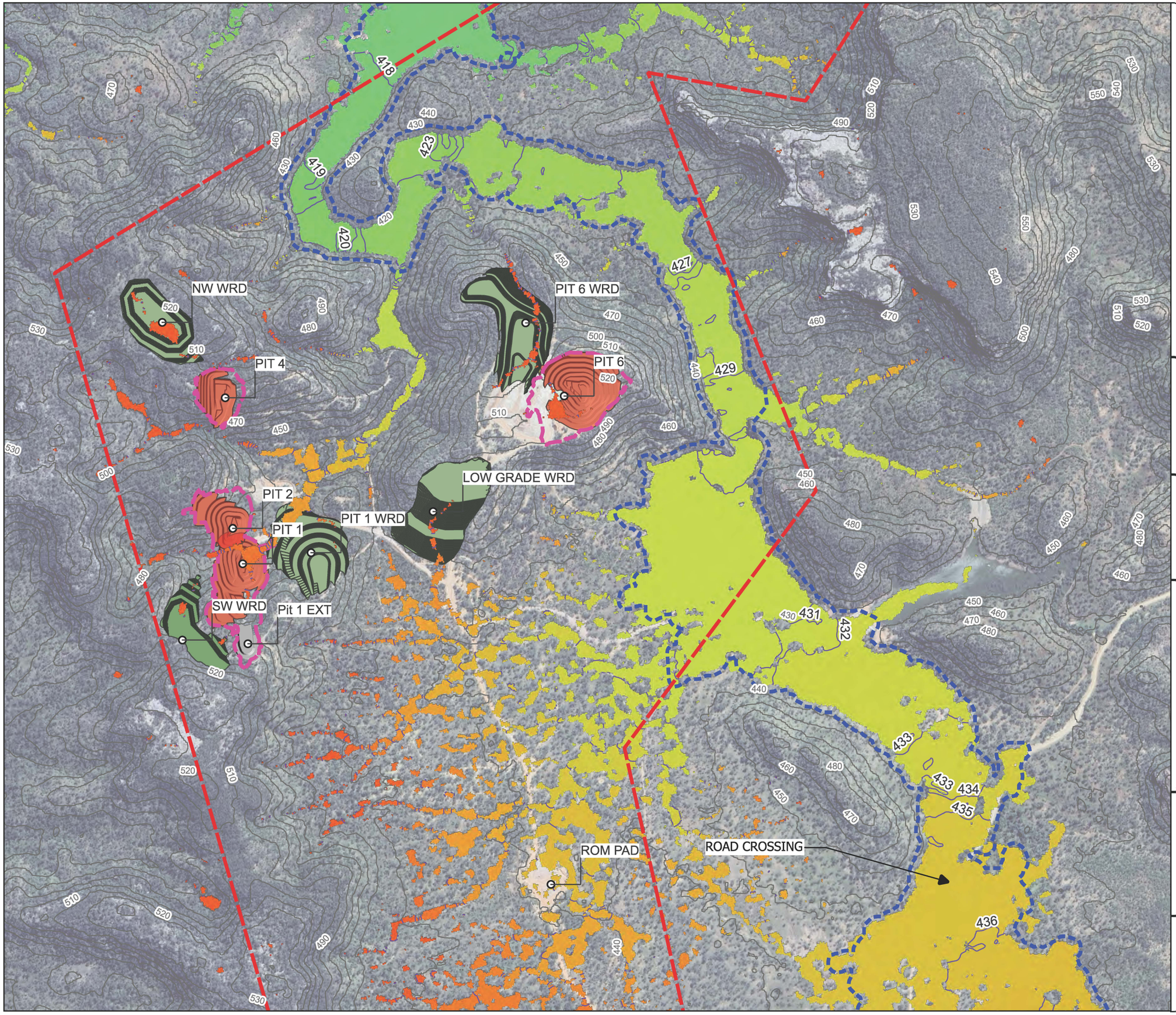
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ATC WILLIAMS

REF: 121208 DATE:2025-10-31

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LEGEND

- MINE LEASE
- FINAL LANDFORM EXTENTS
- ELVIS CONTOURS 10m
- 0.1% AEP FLOODPLAIN EXTENTS

MAXIMUM WATER ELEVATION (m)

- 400
- 410
- 420
- 430
- 440
- 450

FIGURE 13

0.1% AEP Maximum Water Elevation

Flood Modelling as per ATCW reference 121208-01-FIA-R01-RevA

AGATE CREEK GOLD MINE

N

0 100 200 300 400 m

ATC WILLIAMS

REF: 121208 DATE:2025-10-31

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3.1.6 Groundwater Levels and Properties

3.1.6.1 Key Hydrostratigraphic Units

A detailed groundwater assessment has been completed by C and R Consulting (Geochemical and Hydrobiological Solutions) Pty Ltd (C&R Consulting) and is included as **Appendix 5**.

The key hydro-stratigraphic units are:

- **The upper aquifer** is associated with Quaternary alluvium that is present on the northeastern section of the ML, linked to Cave Creek, and just off the ML to the south on Agate Creek.
- **The middle aquifer** is associated with the Mesozoic sandstones. Mesozoic aquifers in this area form part of the Great Artesian Basin groundwater system. Although minor sandstone is represented in the lower part of the ML, mapping indicates that the middle aquifer is absent on the ML.
- **The lower aquifer** is associated with the weathered and fractured zones of the Palaeozoic and Palaeoproterozoic rocks.

3.1.6.2 Existing Monitoring Network

The groundwater network consists of 22 monitoring bores, as detailed in **Table 9**. The locations of these monitoring bores are provided in **Figure 14**.

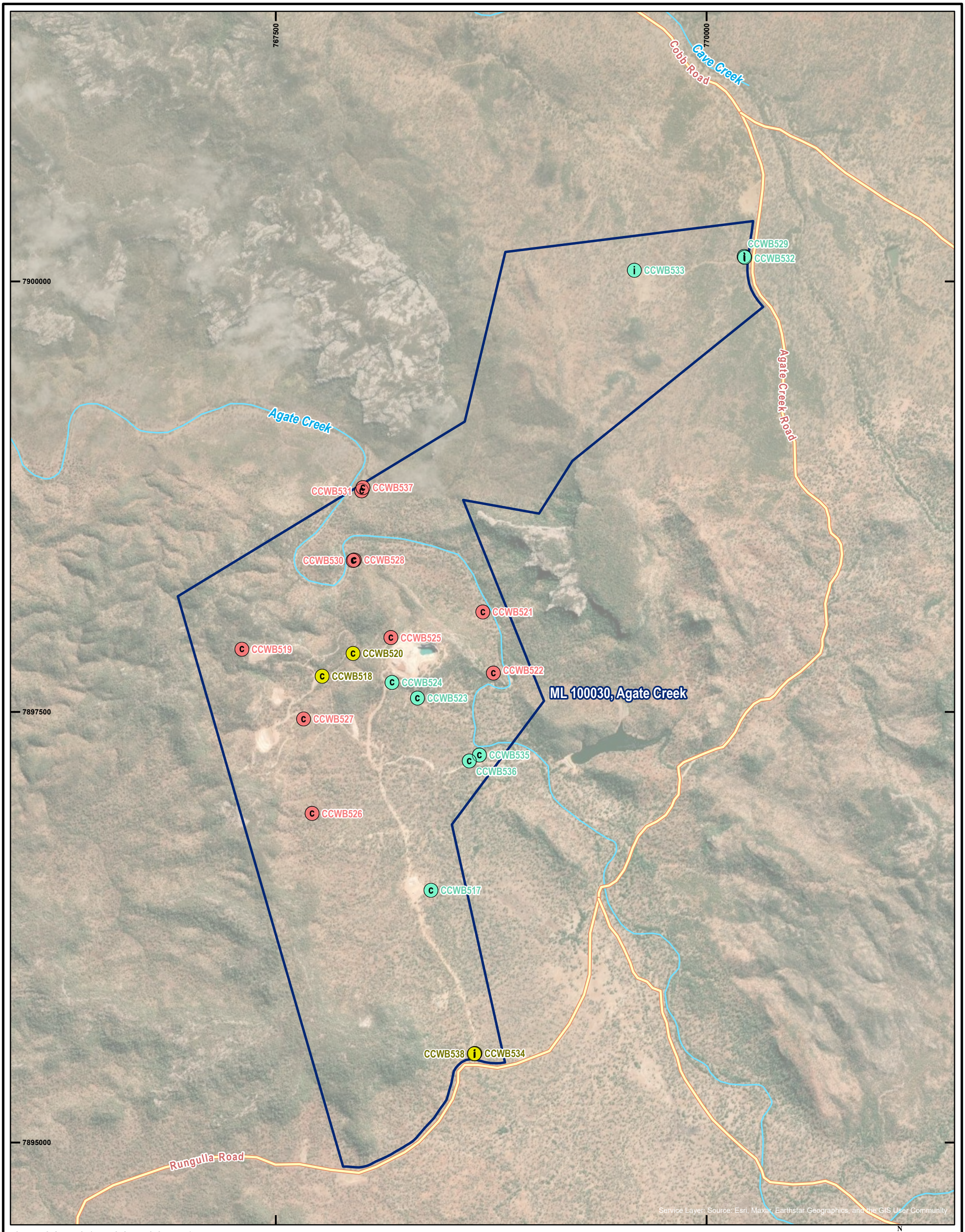
The network targets a section of the regional-scale Robertson Fault Zone and the northwest end of the Agate Creek Volcanic Complex. Specifically, all bores are screened within metamorphic rocks that have been intruded by Siluro-Devonian-age Robin Hood Granodiorite – and by early Permian rhyolitic and andesitic dykes and stocks that are related to the Agate Creek Volcanic Complex.

There are no registered groundwater bores (apart from the monitoring bore network) within 5 km of the project mining area.

Table 9 Groundwater Monitoring Network

Monitoring Bore[1]	Location		Surface RL (m)	Geological Formation
	Easting (GDA2020 – Zone 54)	Northing (GDA2020 – Zone 54)		
Interpretation bores				
CCWB529	770217.4	7900144	463.84	Robin Hood Granodiorite
CCWB532	770220.8	7900138	469.61	Robin Hood Granodiorite
CCWB533	769580.2	7900063	473.09	Robin Hood Granodiorite
CCWB534	768654.6	7895516	454.09	Rhyolite
CCWB538	768650.8	7895513	468.83	Rhyolite
Compliance bores				
CCWB517	768399.5	7896463	435.6	Robin Hood Granodiorite
CCWB518	767768.1	7897706	431.4	Andesite/ Rhyolite
CCWB519	767302	7897863	517.18	Corbett Formation Metasediments
CCWB520	767947.2	7897838	434.96	Andesite
CCWB521	768700.6	7898079	420.94	Corbett Formation Metasediments
CCWB522	768761.9	7897724	434.2	Corbett Formation Metasediments
CCWB523	768321.3	7897579	449.6	Robin Hood Granodiorite
CCWB524	768173.6	7897670	496.06	Robin Hood Granodiorite
CCWB525	768166.9	7897930	498.77	Corbett Formation Metasediments
CCWB526	767709.7	7896909	449.4	Corbett Formation Metasediments
CCWB527	767660.1	7897458	461.5	Corbett Formation Metasediments
CCWB528	767954.5	7898381	415.49	Corbett Formation Metasediments
CCWB530	767948	7898378	422.8	Corbett Formation Metasediments
CCWB531	767997.2	7898782	420.39	Corbett Formation Metasediments
CCWB535	768680.8	7897248	407.91	Alluvium / Robin Hood Granodiorite
CCWB536	768622	7897214	440.67	Robin Hood Granodiorite
CCWB537	768005	7898801	420.66	Corbett Formation Metasediments

[1]Monitoring is not required where a bore has been removed as a direct result of the mining activity.



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Agate Creek Project PRCP Report

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GDA2020, MGA Zone 54

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ML 100030 Groundwater Monitoring Sites

Figure 14

Sheet No. RTPL_ARD_SVG001_PRCPRMAP_2001_B

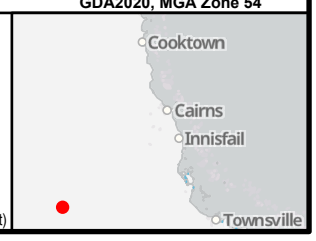
Drawn By:	Chris Schlebusch
Requested by:	Richard Davis
Date:	10/11/2025

- Agate Creek Project Mining Lease
- Local Road
- Watercourse

Monitoring Bore - Geology Unit

- Andesite / Rhyolite
- Corbett Formation Metasediments
- Robin Hood Granodiorite

- (c) Compliance Bore
- (i) Interpretation Bore



Data sources:
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3.1.6.3 Groundwater Levels

Project-scale geological mapping identified structural complexity across the site. This is associated with faulting and zones of brecciation along structures. The key faults on site include the Agate Creek Fault Zone, Zig Zag Fault and Sherwood West Fault. The primary source of groundwater within the Agate Creek mining lease is held within the fractured and weathered, igneous and metasedimentary rocks. Exploration drilling has reported that groundwater interception most commonly occurs within the zone of oxidation (C&R Consulting, 2025a).

The standing water levels (SWLs) across the monitoring network were assessed by C&R Consulting (2025) and are described below.

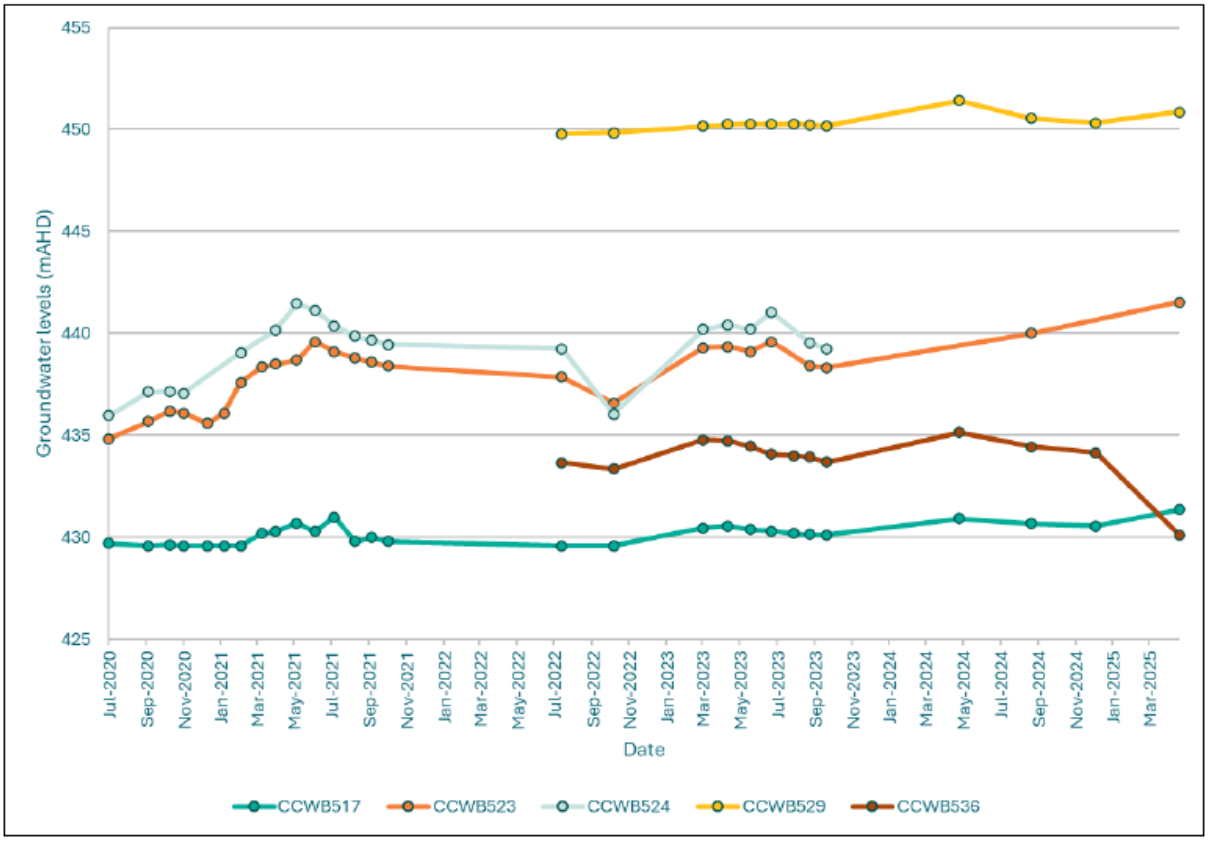
Robin Hood Granodiorite

This group of monitoring bores (CCWB517, CCWB523, CCWB524, CCWB529, CCWB536) displays groundwater levels ranging from approximately 425 mAHD to 452 mAHD (**Figure 15**). CCWB523 displays a continuous increasing trend over the monitoring period, with groundwater levels varying from 434.83 mAHD to 441.53 mAHD.

Groundwater levels across most bores are relatively stable with gradual long-term trends. Notably:

- CCWB529 consistently records the highest levels (449.78–451.42 mAHD), with minimal fluctuation over the five-year monitoring period.
- CCWB536 shows a steady increase in groundwater level (0.5 m) from mid-2022 onwards, excluding the April 2025 results, suggesting a long-term rising trend.
- CCWB517 displays a stable level around 428–430 mAHD, with minor seasonal or inter-annual variation.
- CCWB523 and CCWB524 exhibit the greatest increase over the monitoring period between 5.49 m (CCWB524) and 6.7 m (CCWB523).

The stability of trends indicates a system that is less dynamically influenced by short-term climate variability, possibly due to lower permeability or greater aquifer thickness buffering the impacts of rainfall.



(Source: C&R Consulting, 2025a)

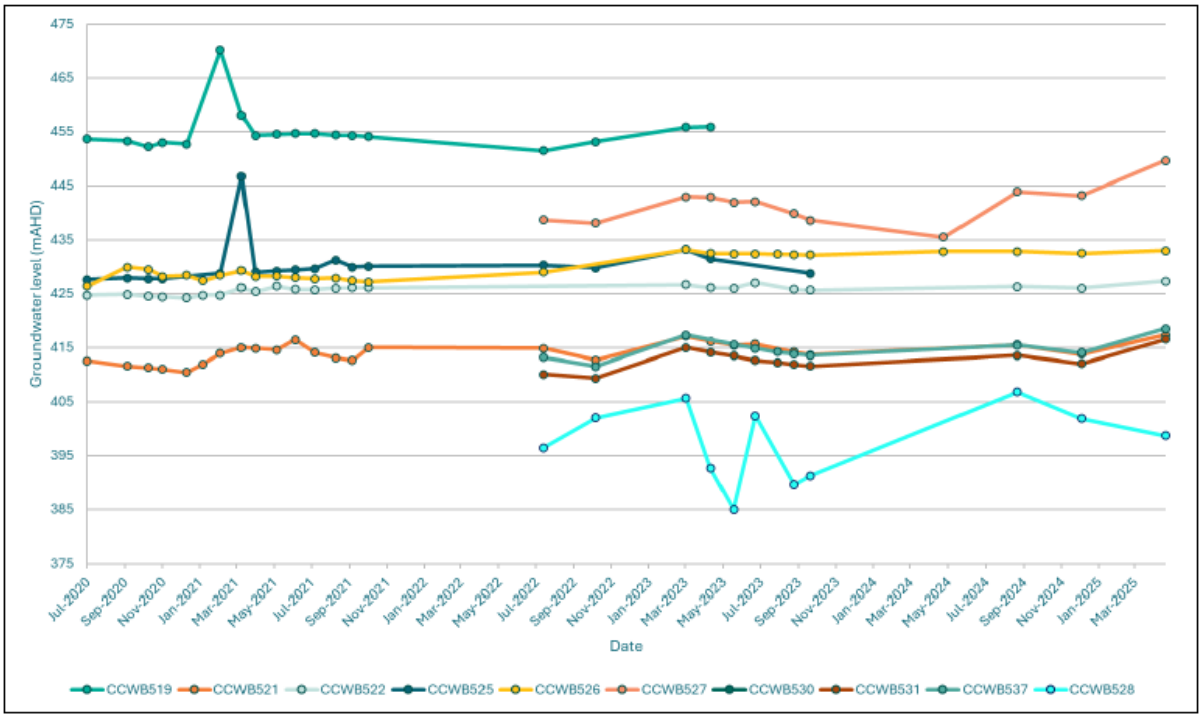
Figure 15 Groundwater Levels in Bores Screened Within the Robin Hood Granodiorite

Corbett Formation Metasediments

Bores screened within the Corbett Formation Metasediments (CCWB519, CCWB521, CCWB522, CCWB525, CCWB527, CCWB530, CCWB531, CCWB537, CCWB528) exhibits a broader range of groundwater levels between 375 mAHD to 470 mAHD (**Figure 16**). Notably:

- CCWB530 was recorded as dry throughout the monitoring period.
- CCWB519 and CCWB525 record the highest groundwater levels (~450–470 mAHD), with CCWB525 showing a sharp spike in early 2021, suggesting a strong recharge response albeit this response is not repeated for the remaining monitoring period.
- CCWB527 shows a more gradual declining trend until early 2024, followed by a marked rise, indicating possible seasonal recharge or delayed aquifer response.
- CCWB521 remains relatively flat (~415–417 mAHD) throughout, indicative of a relatively disconnected or slow-responding aquifer system.
- CCWB528 shows significant short-term variability, with levels dropping below 390 mAHD in 2023 before recovering to above 400 mAHD, pointing to a shallow, responsive system likely influenced by localised rainfall events.
- CCWB531 and CCWB537 show broadly similar trajectories with moderate increases through 2023 and 2024, suggesting some regional consistency in recharge effects.

Groundwater levels captured within the Corbett Formation Metasediments appears more sensitive to climatic conditions, as demonstrated by the noticeable spikes in early 2021 and variable trends in some bores. The high responsiveness of CCWB525 and CCWB528 suggests more permeable formations or shallow groundwater systems susceptible to direct rainfall infiltration or surface water connectivity.



(Source: C&R Consulting, 2025a)

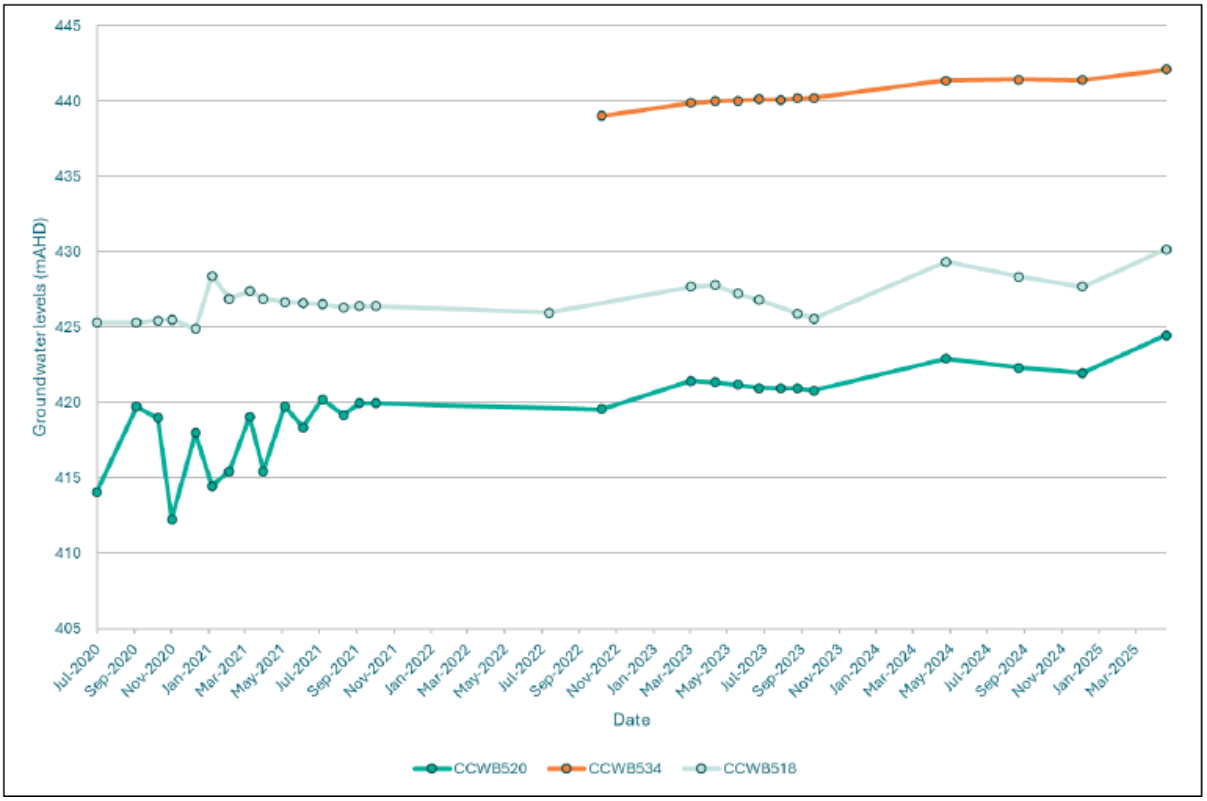
Figure 16 Groundwater Levels in Bores Screened Within the Corbett Formation Metasediments

Andesite and Rhyolite

The final group (CCWB520, CCWB534, CCWB518) has groundwater levels ranging approximately between 410 mAHD to 440 mAHD (**Figure 17**). Notably:

- CCWB534 shows a consistent upward trend, rising from ~437 mAHD in mid-2022 to ~442 mAHD by March 2025, indicating a potentially pressurised or recovering system.
- CCWB518 exhibits relatively flat groundwater levels (around 425–428 mAHD) until late 2023, with minor fluctuations and a modest increase in the most recent data.
- CCWB520 presents with the lowest levels (~414–422 mAHD), though with gradual increase from 2022 onwards, suggesting some recharge influence over the long term.
- CCWB538 remained dry throughout the monitoring period.

While these bores do not demonstrate strong seasonal fluctuations, the upward trends in CCWB534 and CCWB520 may indicate cumulative recharge effects over time rather than immediate responses to isolated rainfall events. The subdued variability points to moderate transmissivity and a relatively buffered groundwater system.



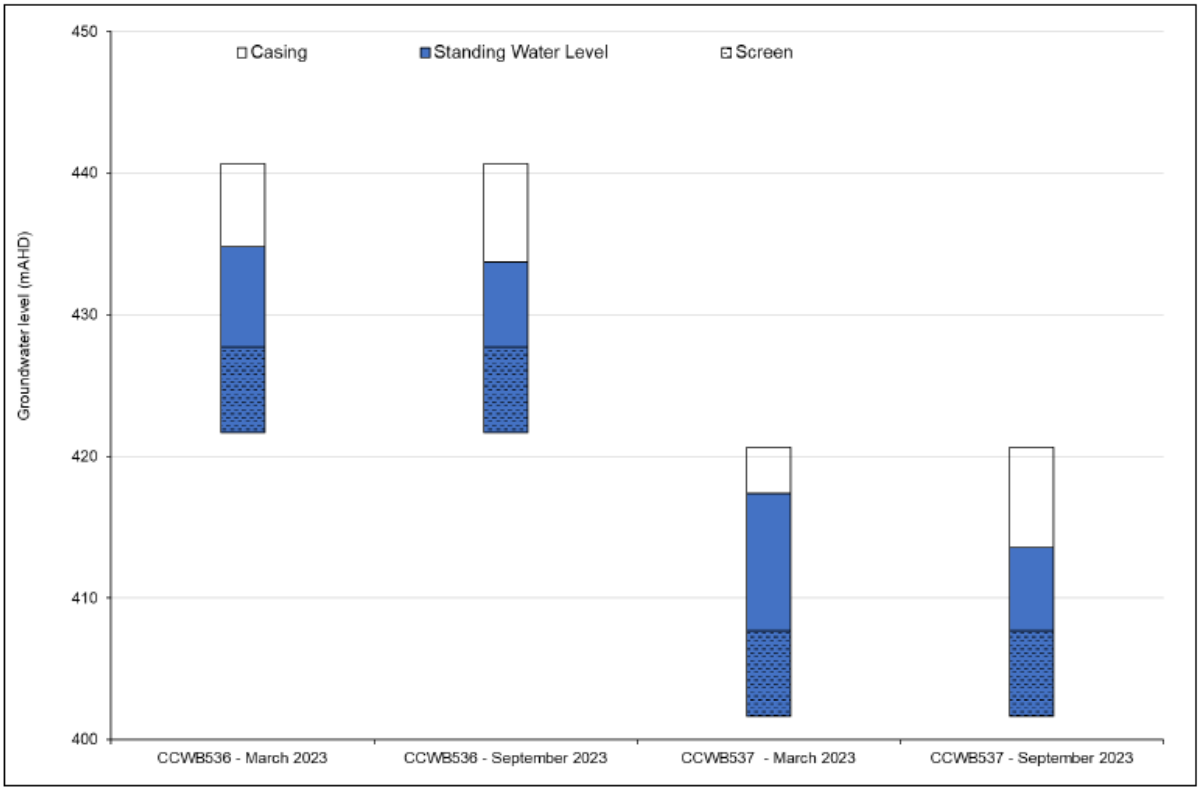
(Source: C&R Consulting, 2025a)

Figure 17 Groundwater Levels in Bores Screened Within the Andesite and Rhyolite Structures

Based on 1-m digital elevation models for the region, the banks and bed of Agate Creek are at approximately 430 mAHD and 425 mAHD, respectively. Four monitoring bores (CCWB530, CCWB532, CCWB535 and CCWB538) target the shallow groundwaters, with screened intervals between 4 and 7 m BGL. Based on the measured RLs, only CCWB30 (422.80 mAHD) and CCWB35 (407.91 mAHD) would likely intersect groundwater inflow to Agate Creek.

All shallow bores remained dry.

The two (CCWB536 and CCWB537) monitoring bores – constructed to design in 2021 (screened on 19 m BGL) and located within the closest proximity to Agate Creek and a smaller tributary – reflect the areas of lowest groundwater elevations, ranging between 411 and 433 mAHD (**Figure 18**). The elevation difference between the bed of Agate Creek and CCWB537 supports the understanding that the groundwater systems present within the mining lease do not impact or interact with flow in Agate Creek. **Figure 18** shows the groundwater levels of the two respective bores in April and September 2023, with minimal variation detected between the wet and dry season, particularly in CCWB536.



(Source: C&R Consulting, 2025a)

Figure 18 Groundwater Levels of CCWB536 and CCWB537 Beside Agate Creek

3.1.6.4 Groundwater Chemistry

The groundwater quality across the monitoring network has been assessed by C&R Consulting (2025a) and is described below.

Robin Hood Granodiorite

The pH values of bores screened within the Robin Hood Granodiorite indicate neutral conditions, ranging from 5.45 (CCWB523) and 8.31 (CCWB529), with a median value of 7.40. As shown in **Figure 19**, there is some variation in pH across the network. However, the majority of bores have remained relatively consistent throughout the monitoring period.

Located south of the main pit (Pit 6), CCWB23 consistently records the lowest pH within the Robin Hood network, with a median value of 6.31. Conversely, CCWB529, situated in the northeast corner of the mining lease, displays the highest median value of 8.09.

EC values exhibit a greater degree of variation across the network compared to pH, ranging from 91 µS/cm (CCWB523) to 7,540 µS/cm (CCWB536). The slightly acidic CCWB523 aligns with the freshest groundwater onsite, with a median EC of 127 µS/cm, while CCWB536 yields the most saline water, with a median EC of 6,990 µS/cm (**Figure 20**).

Figure 21 illustrates the variation in ionic composition of bores screened within the Robin Hood Granodiorite. The network displays a wide range of water types, including –

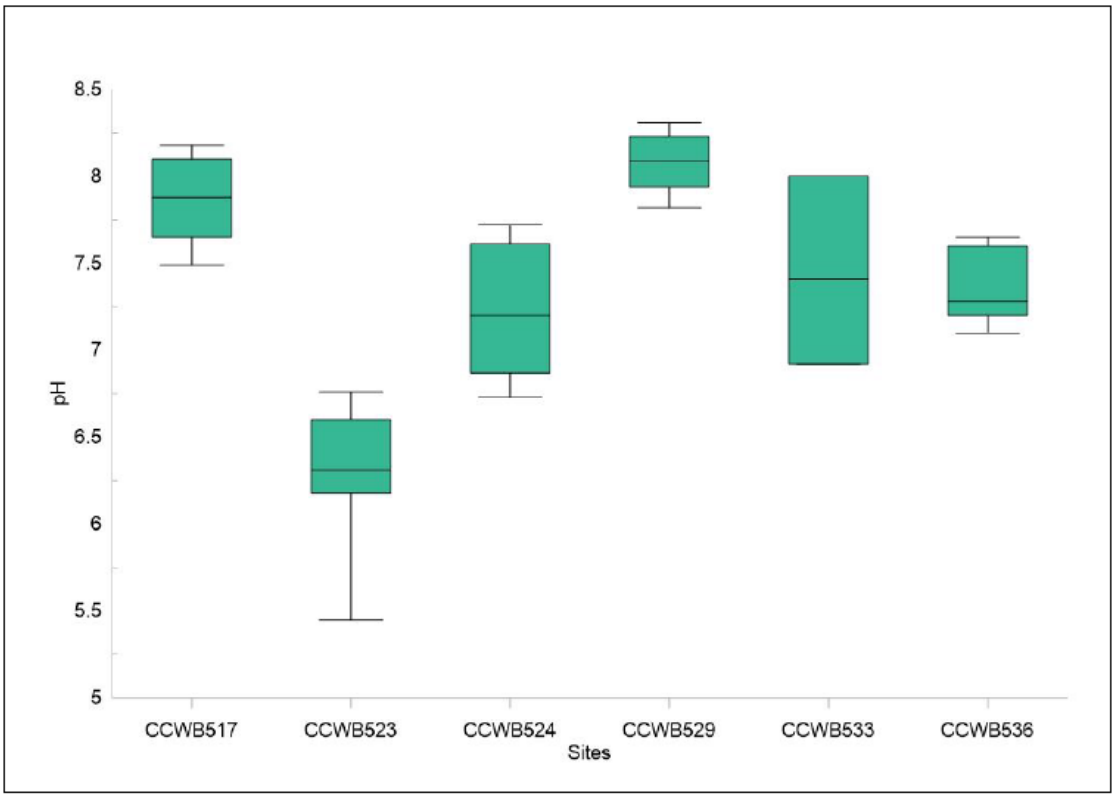
- CCWB517 – Sodium bicarbonate
- CCWB523 – Sodium-potassium bicarbonate
- CCWB524 – Sodium-calcium bicarbonate
- CCWB529 – Sodium bicarbonate
- CCWB533 – Sodium sulphate
- CCWB536 – Sodium chloride

While majority of ionic compositions have remained stable throughout the monitoring period, CCWB523 and CCWB524 – both located south of Pit 6 – display variables levels of bicarbonate.

Fluoride levels in CCWB17 and CCWB29 are above the livestock drinking water guideline (2 mg/L), with values in all bores increasing during the monitoring period. CCWB529 has recorded the largest increase, starting at 3.6 mg/L in May 2023 to a new maximum of 9 mg/L in August 2024, which is consistent with the same trend also occurring in CCWB517 whereby levels increased from 4 mg/L (October 2020) to 7.4 mg/L (August 2024).

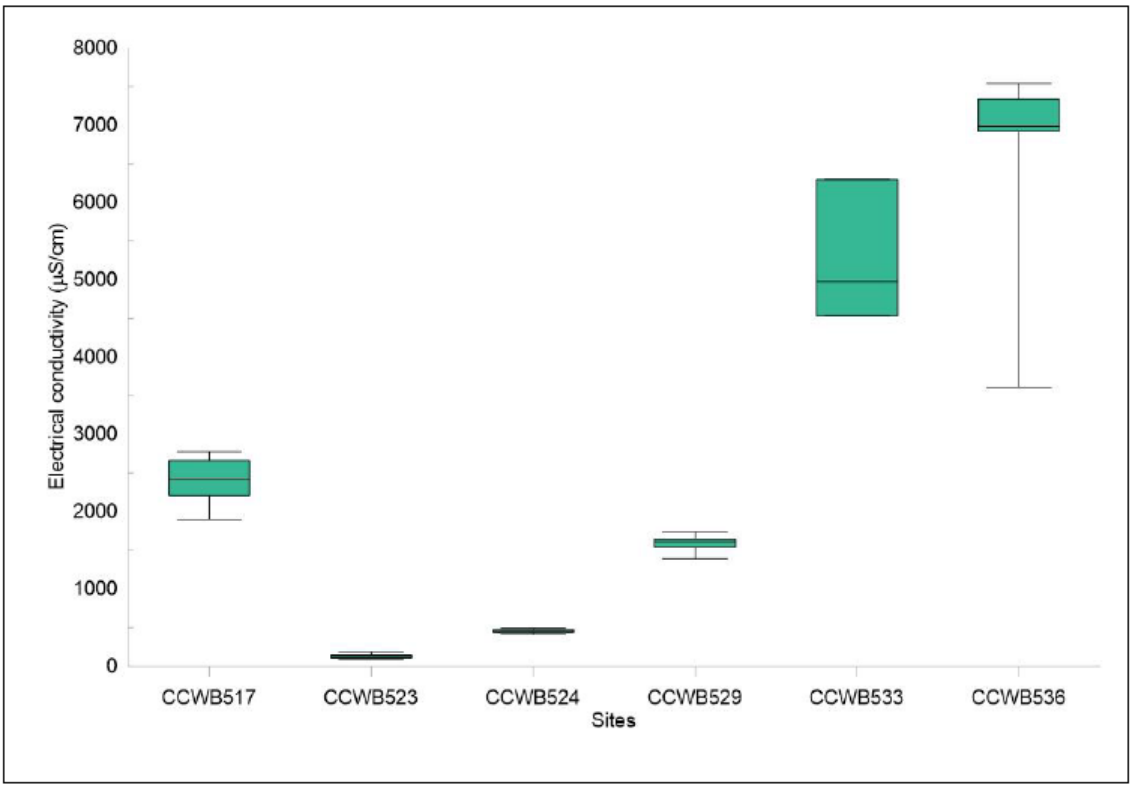
Levels of boron, cobalt, nickel, and zinc fluctuate across the monitoring network, with no discernible significant trends identified. These variations are consistent with the adsorption of minerals from the lithology into groundwater. Dissolved arsenic and cobalt concentrations in CCWB523 increased over the monitoring period from <0.001 mg/L to 0.006 mg/L and from 0.004 mg/L to 0.007 mg/L, respectively. Both dissolved arsenic and cobalt exhibit a statistically significant positive trend ($n = 24$, $p < 0.001$, $r = 0.786$). No other discernible trends were identified. The majority of parameters displayed a distinct increase in concentration between the November 2021 and October 2022 monitoring rounds. However, unlike arsenic and cobalt, most parameters subsequently returned to levels consistent with previous monitoring rounds (2020 and 2021). Dissolved arsenic and cobalt have remained relatively stable at the elevated concentrations recorded since early 2023. The interruption to monitoring and change in methodology have limited the ability to determine a potential cause.

CCWB536 shows the greatest variation in dissolved arsenic, with concentrations falling from a maximum of 0.187 mg/L (July 2022) to 0.03 mg/L (August 2024). This change in arsenic levels may be attributed to poor hydraulic conductivity, with field notes indicating very slow recharge.



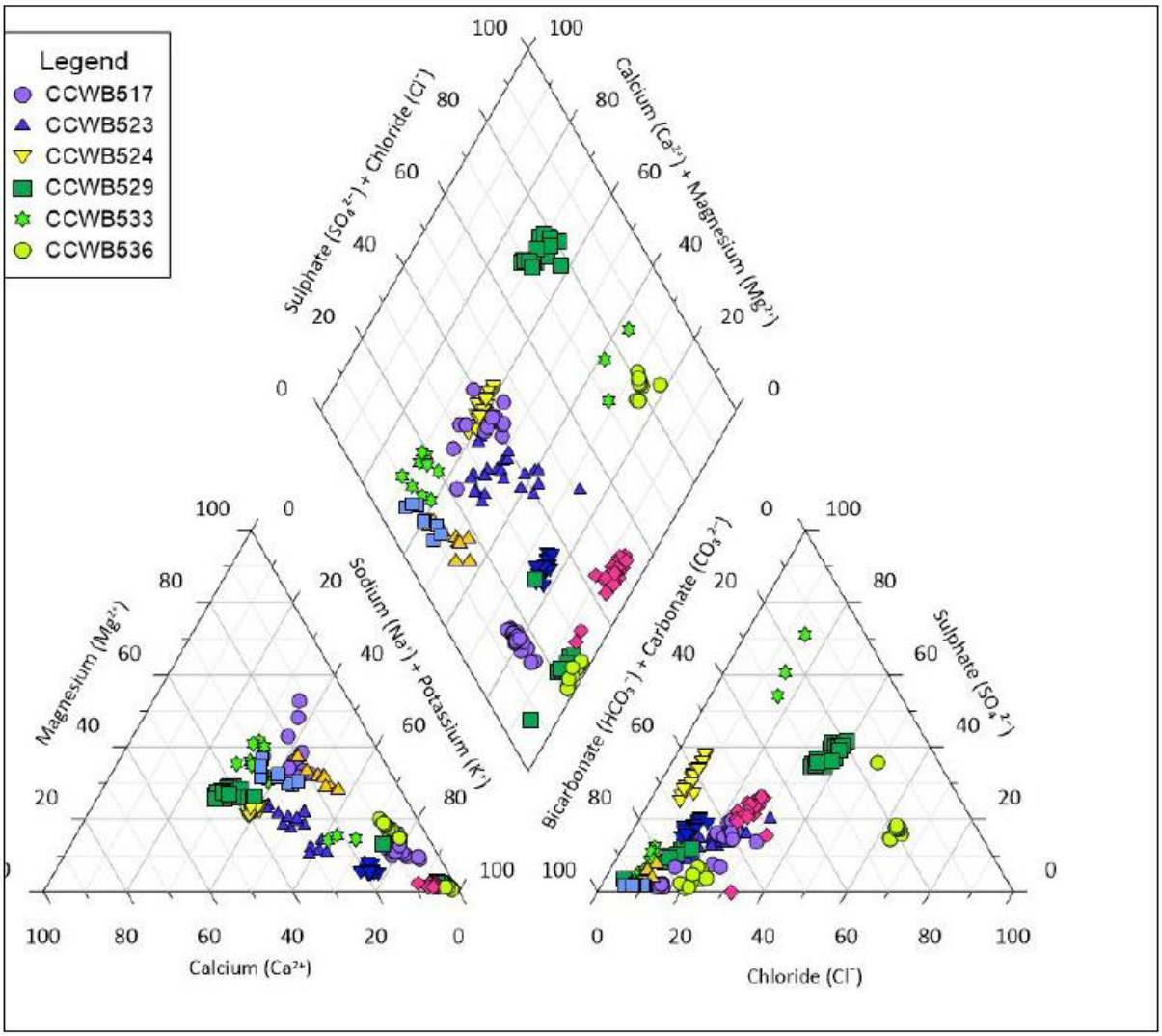
(Source: C&R Consulting, 2025a)

Figure 19 pH Values of Bores Screened in the Robin Hood Granodiorite



(Source: C&R Consulting, 2025a)

Figure 20 EC Values of Bores Screened in the Robin Hood Granodiorite



(Source: C&R Consulting, 2025a)

Figure 21 Ionic Composition of Bores Screened in the Robin Hood Granodiorite

Corbett Formation Metasediments

CCWB530 was consistently dry throughout the monitoring period.

The pH values of bores screened within the Corbett Formation Metasediments indicate generally neutral conditions, ranging from 6.13 (CCWB519) and 8.97 (CCWB528), with a median value of 7.43. As shown in **Figure 22**, there is some variation in pH across the network, as well as within individual bores over the monitoring period. This variability is visually evident in the boxplots, where the length of the whiskers represents the maximum and minimum pH values recorded during the monitoring period.

Located east of Pit 4, CCWB19 consistently records the lowest pH within the Corbett Formation network, with a median value of 6.52. Conversely, CCWB528, situated on the banks of Agate Creek, displays the highest median value of 8.84.

EC values exhibit a lesser degree of variation across the network compared to the Robin Hood Granodiorite, ranging from 130 µS/cm (CCWB519) to 2,000 µS/cm (CCWB528). The slightly acidic

CCWB519 aligns with the freshest groundwater onsite, with a median EC of 147 µS/cm, while CCWB528 yields the most saline water, with a median EC of 1,620 µS/cm (**Figure 23**). However, the elevated salinity noted within CCWB528 are inconsistent, with a consistent decline in values recorded over the monitoring period, with EC values in April 2025 recorded at 1,090 µS/cm.

Figure 24 illustrates the variation in ionic composition of bores screened within the Corbett Formation Metasediments. The groundwater is primarily dominated by sodium-bicarbonate, although there are several different water types within the network, including –

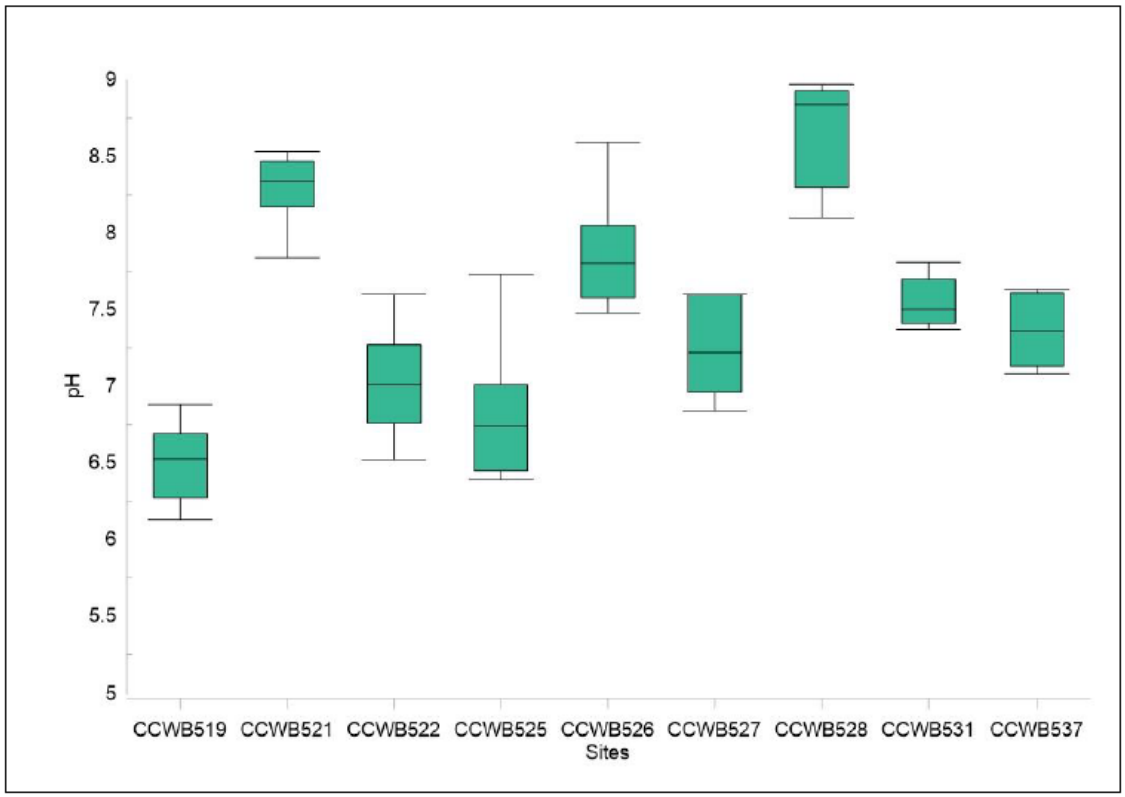
- CCWB519 – Magnesium-sodium bicarbonate
- CCWB521 – Sodium bicarbonate-chloride
- CCWB522 – Sodium bicarbonate
- CCWB525 – Calcium-magnesium sulphate-chloride
- CCWB526 – Sodium bicarbonate
- CCWB527 – Magnesium-calcium bicarbonate
- CCWB528 – Sodium bicarbonate
- CCWB531 – Sodium bicarbonate
- CCWB537 – Sodium-magnesium bicarbonate.

While the majority of ionic compositions have remained stable throughout the monitoring period, CCWB523 and CCWB524 – both located south of Pit 6 – display variables levels of bicarbonate. Additionally, CCQWB526 shows a consistent decline in proportion of sodium, with the percentage of sodium has decreasing from 76% to 67%, and calcium positively trending from 10 % to 21 %.

Fluoride levels across the Corbett Formation Metasediment monitoring network have varied significantly over the monitoring period. CCWB521, and to a lesser extent CCWB522, exhibit concentrations substantially higher than the rest of the network, with median values of 14.4 mg/L and 4.1 mg/L, respectively.

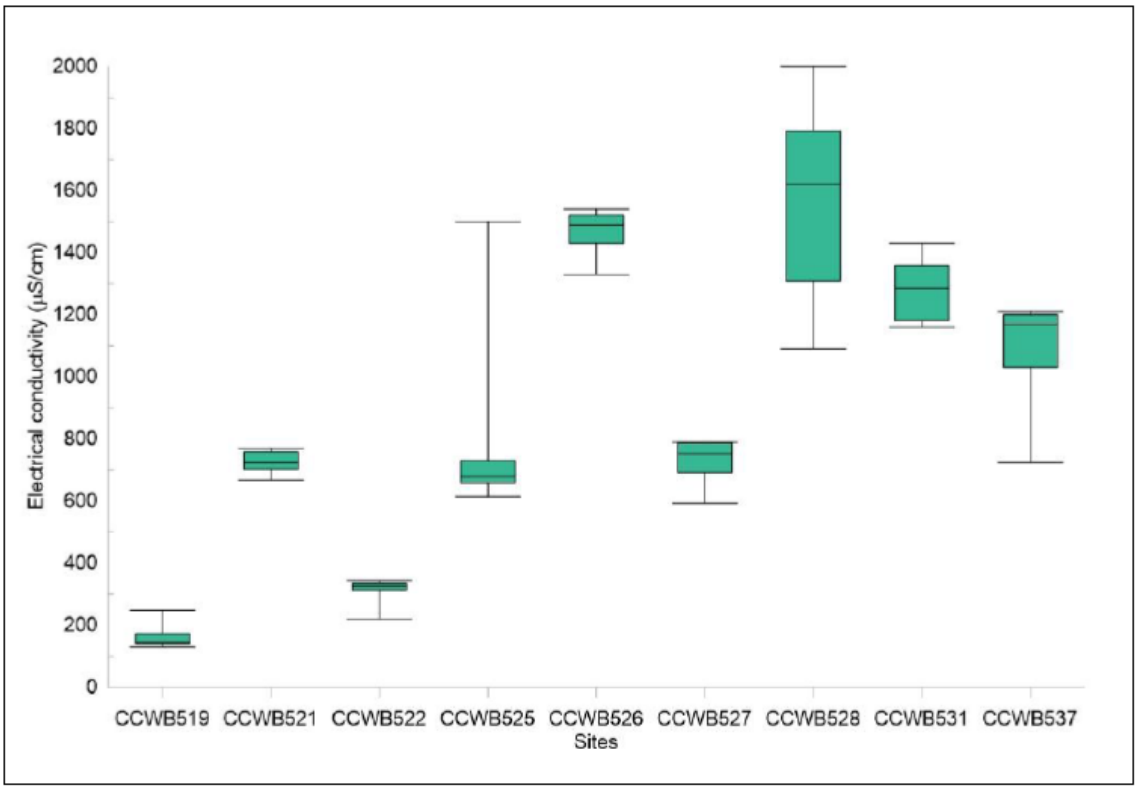
Many bores showed high variability during the initial monitoring period from late 2020 to 2021, likely due to poor hydraulic conductivity affecting bore development. Over time, natural attenuation processes have allowed groundwater chemistry to stabilise and more accurately reflect the conditions of the target aquifer. This has contributed to several declining concentration trends observed over the monitoring period.

Dissolved arsenic and cobalt concentrations in CCWB519 (<0.001 to 0.021 mg/L and <0.002 to 0.028 mg/L) and CCWB525 (0.011 to 0.021 mg/L and 0.003 to 0.028 mg/L) have steadily increased over the course of the monitoring period. These bores display a similar pattern observed within CCWB523 (Robin Hood Granodiorite), whereby levels substantially increased between the November 2021 and October 2022 monitoring rounds. Monitoring at both bores ceased in November 2023. Timeseries for each analyte is presented in **Appendix 5**.



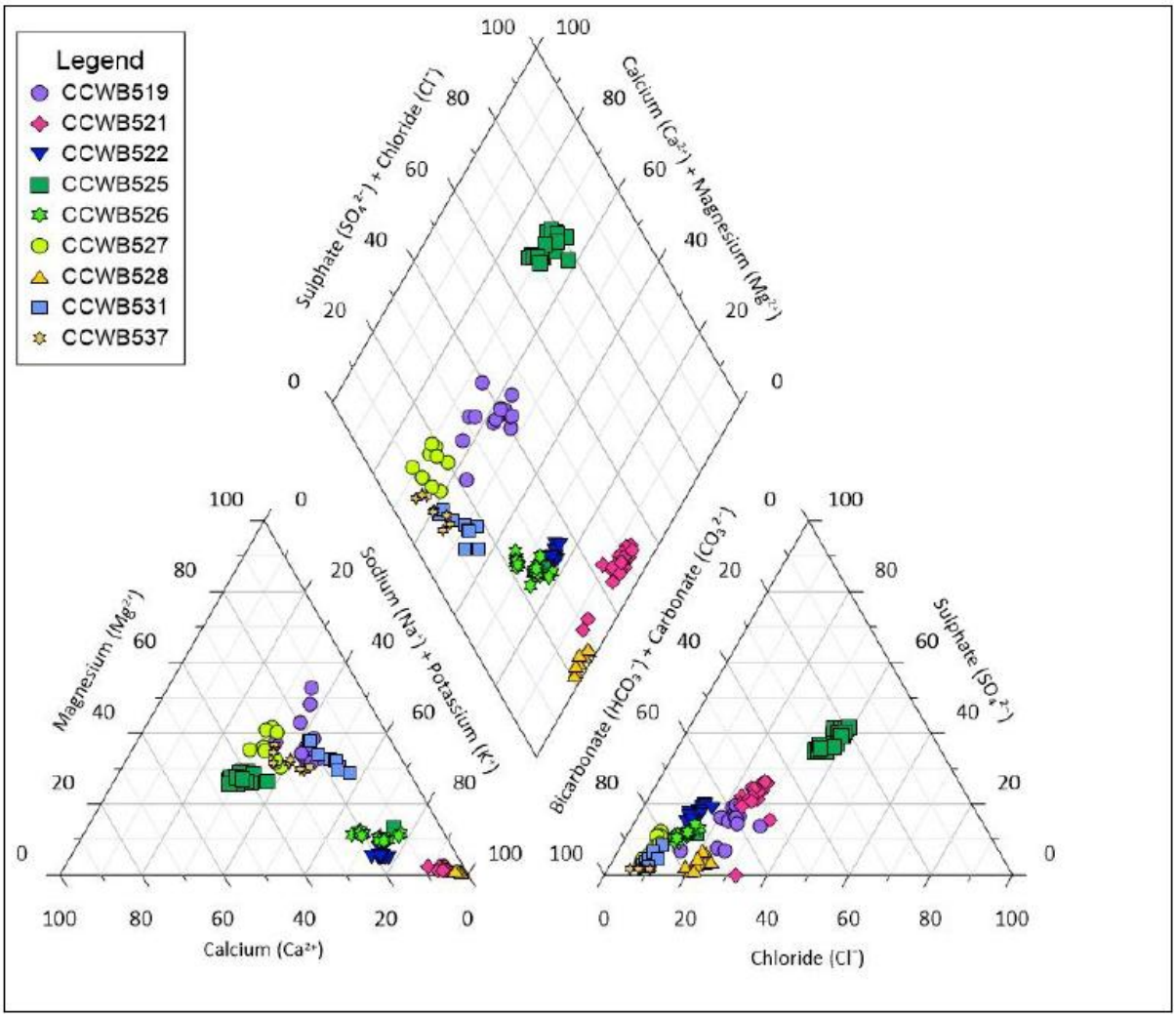
(Source: C&R Consulting, 2025a)

Figure 22 pH Values of Bores Screened in the Corbett Formation Metasediments



(Source: C&R Consulting, 2025a)

Figure 23 EC Values of Bores Screened in the Corbett Formation Metasediments



(Source: C&R Consulting, 2025a)

Figure 24 Ionic Composition of Bores Screened in the Corbett Formation Metasediments

Andesite and Rhyolite

Bores screened within andesite and rhyolite have been grouped together due to their shared hydrogeological characteristics and functional role within the groundwater system. These volcanic units form key structural features that act as preferential pathways for groundwater flow within the broader geological framework of the Robin Hood Granodiorite and Corbett Formation Metasediments. Their typically fractured and permeable nature facilitates enhanced connectivity and recharge, making them important conduits for subsurface water movement across lithological boundaries. As such, monitoring data from bores within these units provide valuable insights into the dynamic behaviour of groundwater within structurally controlled flow systems and their interaction with adjacent rock formations.

CCWB538 remained dry throughout the monitoring period.

The pH values of bores screened within the andesite and rhyolite indicate neutral conditions, with both the minimum and maximum values (7.07 to 8.13) recorded in CCWB520. The median value across the dataset is 7.69. As shown in **Figure 25**, while some variation in pH is observed across the network, the majority of bores have remained relatively consistent throughout the monitoring period.

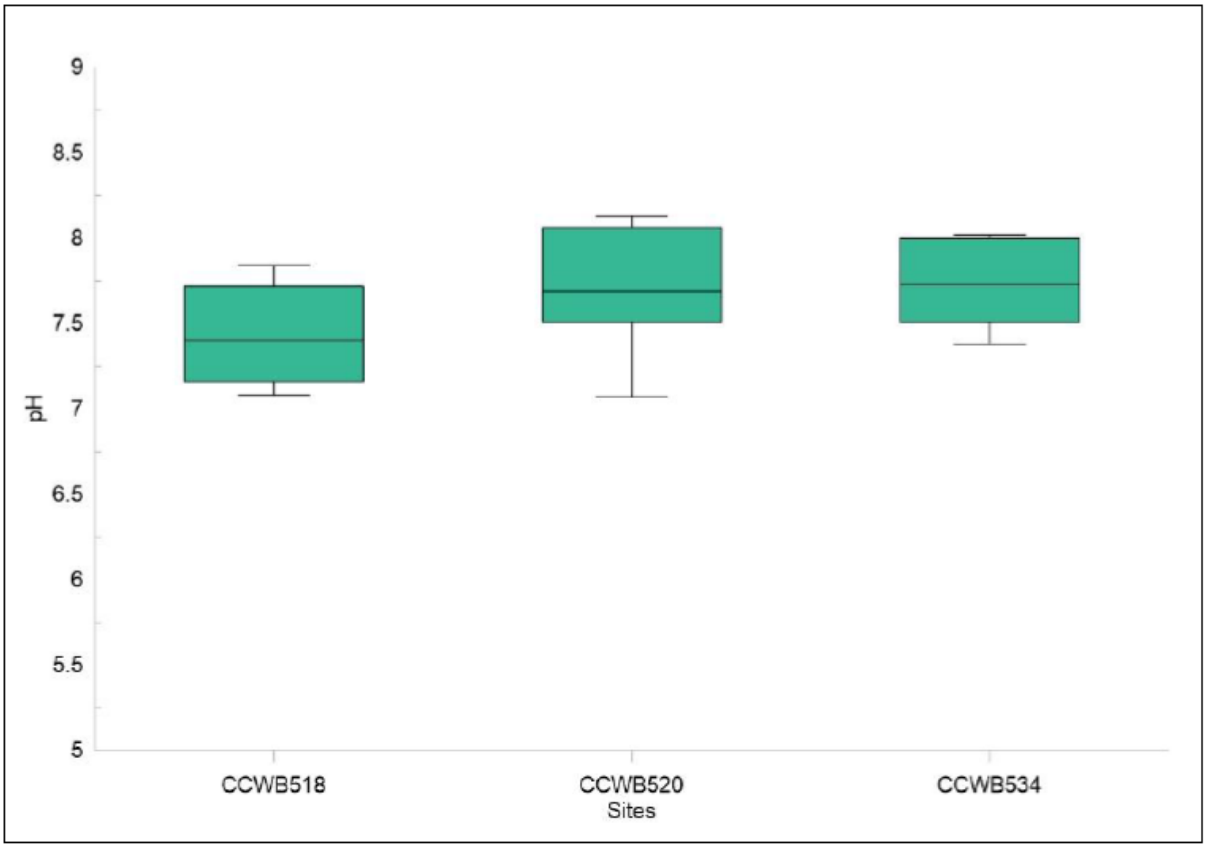
EC values exhibit greater variability across the network compared to pH, ranging from 466 µS/cm (CCWB518) to 3,960 µS/cm (CCWB534). Located along the southern mining lease boundary, CCWB534 consistently records saline water, with a median EC of 3,710 µS/cm—over five times higher than that of CCWB518 (median: 666 µS/cm) and CCWB520 (711 µS/cm), both situated between Pit 4 and Pit 6 within the fault zone (**Figure 26**).

Figure 27 illustrates the variation in ionic composition of bores screened within the andesite and rhyolite units. The network displays a range of water types, including:

- CCWB518 – Calcium bicarbonate
- CCWB520 – Sodium bicarbonate
- CCWB534 – Sodium bicarbonate

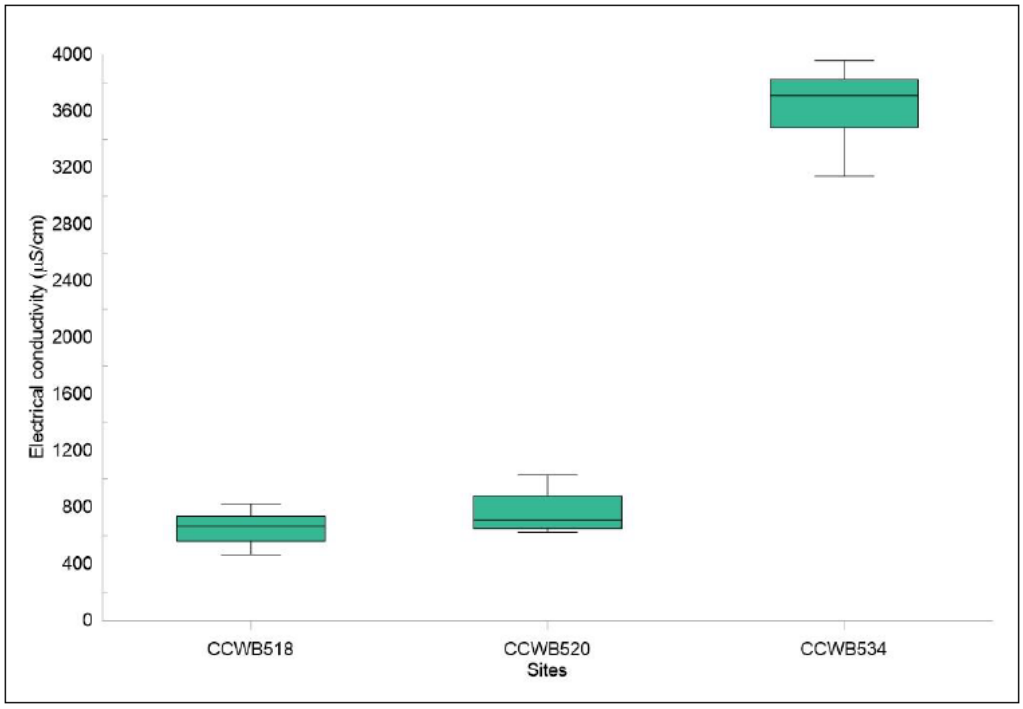
While the ionic composition of CCWB518 has remained stable throughout the monitoring period, CCWB520 and CCWB534 show opposing trends in bicarbonate. In CCWB534, the bicarbonate proportion has increased from 57% to 75%, whereas in CCWB520 it has declined from a maximum of 61% to a minimum of 32% over the monitoring period.

Metal concentrations reflect a similar trend is evident in bores screened within andesite and rhyolite, where natural attenuation processes over time have allowed groundwater chemistry to stabilise and better reflect the geochemical conditions of the host lithology. This has contributed to several declining concentration trends observed over the monitoring period. Timeseries for each analyte is presented in **Appendix 5**.



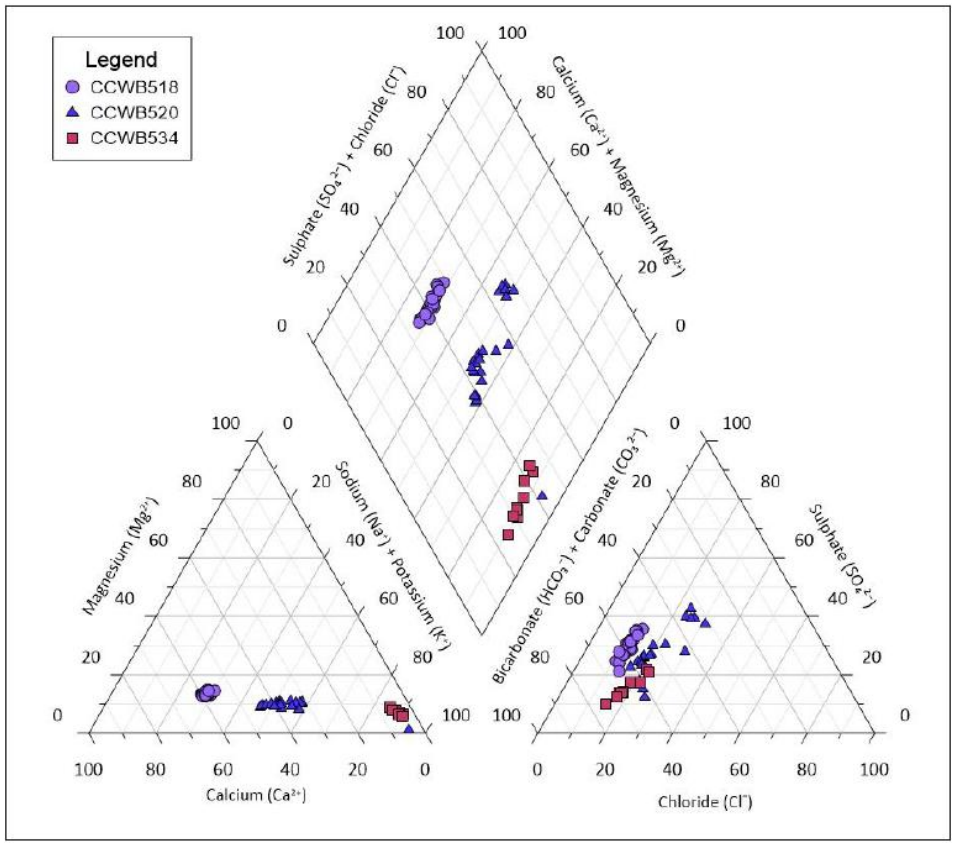
(Source: C&R Consulting, 2025a)

Figure 25 pH Values of Bores Screened in Andesite and Rhyolite (Fractured Volcanic Units)



(Source: C&R Consulting, 2025a)

Figure 26 EC Values of Bores Screened in Andesite and Rhyolite (Fractured Volcanic Units)



(Source: C&R Consulting, 2025a)

Figure 27 Ionic Composition of Bores Screened in Andesite and Rhyolite (Fractured Volcanic Units)

There are currently no Environmental Values provided in guidelines relating to the Gilbert Drainage Basin. The most relevant environmental values were derived from the *Environmental Protection (Water and Wetland Biodiversity) 2019* which include:

- For waters that may be used for agricultural purposes – the suitability of the water for agricultural purposes.
- For waters that may be used for recreation or aesthetic purposes – the suitability of water for-
  - Primary recreational use; or
  - Secondary recreational use; or
  - Visual recreational use
- For water that may be used for drinking water – the suitability of the water for supply as drinking water having regard to the level of treatment of the water;
- For waters that may be used for industrial purposes – the suitability of the water for industrial use.
- The cultural and spiritual values of the water.

To protect groundwater environmental values, groundwater quality objectives are proposed in the accompanying EA application and shown in **Table 10**.

Table 10 Groundwater Quality Objectives

Quality Characteristic	Unit	Sampling Sites																
		CCWB 517	CCWB 518	CCWB 519	CCWB 520	CCWB 521	CCWB 522	CCWB 523	CCWB 524	CCWB 525	CCWB 526	CCWB 527	CCWB 528	CCWB 530	CCWB 531	CCWB 535	CCWB 536	CCWB 537
pH - lower	pH unit	7.50[3, 5]	7.10[3, 5]	6.0[5, 6]	7.25[3, 5]	7.94[3, 5]	6.60[3, 5]	6.14[3, 5]	6.75[3, 5]	6.0[5, 6]	7.49[3, 5]	6.89[3, 5]	8.18[3, 5]	6.0[5, 6]	7.39[3, 5]	6.0[5, 6]	7.15[3, 5]	7.10[3, 5]
pH - upper	pH unit	8.00[4, 5]	7.46[4, 5]	7.55[5, 6]	7.67[4, 5]	8.34[4, 5]	7.38[4, 5]	6.41[4, 5]	7.2[4, 5]	7.55[5, 6]	7.79[4, 5]	7.6[4, 5]	8.95[4, 5]	7.55[5, 6]	7.77[4, 5]	7.55[5, 6]	7.63[4, 5]	7.62[4, 5]
EC	µS/cm	2758[4, 5]	731[4, 5]	228[4, 5]	992[4, 5]	768[4, 5]	344[4, 5]	169[4, 5]	488[4, 5]	733[4, 5]	1539[4, 5]	831[4, 5]	2240[4, 5]	250[5, 6]	1395[4, 5]	250[5, 6]	7470[4, 5]	1276[4, 5]
Sulfate	mg/L	28.7[4]	136.9[4]	14.1[4]	173[4]	77.4[4]	27.7[4]	12.8[4]	81.5[4]	125.7[4]	96.3[4]	76.6[4, 5]	545.1[4, 5]	1000[5, 7]	135[4, 5]	1000[5, 7]	689.4[4, 5]	55.8[4, 5]
Fluoride	mg/L	7.66[4, 5]	3.14[4, 5]	0.3[4, 5]	2.1[4, 5]	16.2[4, 5]	4.7[4, 5]	0.9[4, 5]	1.6[4, 5]	0.6[4, 5]	1.0[4, 5]	4[4, 5]	6.2[4, 5]	2[2, 5]	2.2[4, 5]	2[2, 5]	4.2[4, 5]	3.2[4, 5]
Aluminium	mg/L	0.573[4]	0.030[4]	0.185[4]	1.597[4]	0.714[4]	0.618[4]	0.576[4]	0.04[4]	0.055[2]	0.105[4]	0.055[2, 5]	0.184[4, 5]	0.055[2, 5]	0.046[4, 5]	0.055[2, 5]	0.055[2, 5]	0.055[2, 5]
Arsenic	mg/L	0.003[4]	0.045[4]	0.015[4]	0.033[4]	0.02[4]	0.005[4]	0.006[4]	0.018[4]	0.02[4]	0.006[4]	0.012[4, 5]	5.26[4, 5]	0.013[2, 5]	0.06[4, 5]	0.013[2, 5]	0.174[2, 5]	0.038[2, 5]
Boron	mg/L	0.42[4, 5]	0.23[4, 5]	0.37[2, 5]	0.3[4, 5]	0.42[4, 5]	0.21[4, 5]	0.37[2, 5]	0.37[2, 5]	0.37[2, 5]	0.68[4, 5]	0.37[2, 5]	0.58[4, 5]	0.37[2, 5]	0.37[2, 5]	0.37[2, 5]	0.37[2, 5]	0.37[2, 5]
Cadmium	mg/L	0.0002[2]	0.0002[4]	0.0002[2]	0.0002[2]	0.0002[2]	0.0002[2]	0.0002[2]	0.0002[2]	0.0005[4]	0.0002[2]	0.0002[2, 5]	0.0002[2, 5]	0.0002[2, 5]	0.0002[2, 5]	0.0002[2, 5]	0.0002[2, 5]	0.0002[2, 5]
Cobalt	mg/L	0.008[4]	0.004[4]	0.025[4]	0.004[4]	0.001[4]	0.008[4]	0.008[4]	0.003[4]	0.028[4]	0.0035[4]	1[5, 7]	1[5, 7]	1[5, 7]	0.0065[4, 5]	1[5, 7]	1[5, 7]	0.0048[4, 5]
Copper	mg/L	0.004[4]	0.003[4]	0.008[4]	0.005[4]	0.003[4]	0.0025[4]	0.0014[2]	0.0014[2]	0.004[4]	0.0034[4]	0.0014[2, 5]	0.0014[2, 5]	0.0014[2, 5]	0.0014[2, 5]	0.0014[2, 5]	0.0014[2, 5]	0.0014[2, 5]
Lead	mg/L	0.0034[2]	0.0034[2]	0.0034[2]	0.0034[2]	0.0034[2]	0.0034[2]	0.0034[2]	0.0034[2]	0.0034[2]	0.0034[2]	0.0034[2, 5]	0.0034[2, 5]	0.0034[2, 5]	0.0034[2, 5]	0.0034[2, 5]	0.0034[2, 5]	0.0034[2, 5]
Mercury	mg/L	0.0006[2]	0.0006[2]	0.0006[2]	0.0006[2]	0.0006[2]	0.0006[2]	0.0006[2]	0.0006[2]	0.0006[2]	0.0006[2]	0.0006[2, 5]	0.0006[2, 5]	0.0006[2, 5]	0.0006[2, 5]	0.0006[2, 5]	0.0006[2, 5]	0.0006[2, 5]
Nickel	mg/L	0.004[4]	0.02[4]	0.026[4]	0.004[4]	0.001[4]	0.004[4]	0.008[4]	0.008[4]	0.044[4]	0.005[4]	0.011[4, 5]	0.013[4, 5]	0.011[2, 5]	0.007[4, 5]	0.011[2, 5]	0.011[2, 5]	0.011[2, 5]
Selenium	mg/L	0.011[2]	0.011[2]	0.011[2]	0.011[2]	0.011[2]	0.011[2]	0.011[2]	0.011[2]	0.011[2]	0.011[2]	0.011[2, 5]	0.011[2, 5]	0.011[2, 5]	0.011[2, 5]	0.011[2, 5]	0.011[2, 5]	0.011[2, 5]
Zinc	mg/L	0.04[4]	0.046[4]	0.131[4]	0.063[4]	0.015[4]	0.025[4]	0.113[4]	0.06[4]	0.221[4]	0.032[4]	0.047[4, 5]	0.029[4, 5]	0.008[2, 5]	0.052[4, 5]	0.008[2, 5]	0.034[4, 5]	0.008[2, 5]
Hardness	mg/L	For interpretation purposes only																
Major cations and anions	mg/L	For interpretation purposes only																

[1] All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample).

[2] ANZECC (2000) trigger levels for freshwater 95% aquatic ecosystem protection for slightly to moderately disturbed ecosystems

[3] 5th percentile bore data

[4] 95th percentile bore data.

[5] Interim limit, to be reviewed once sufficient data has been collected.

[6] ANZECC (2000) trigger levels for Tropical Australia upland rivers.

[7] ANZECC (2000) trigger levels for livestock drinking water; no aquatic ecosystem default guideline value available.

3.1.7 Soil Types, Properties and Productivity

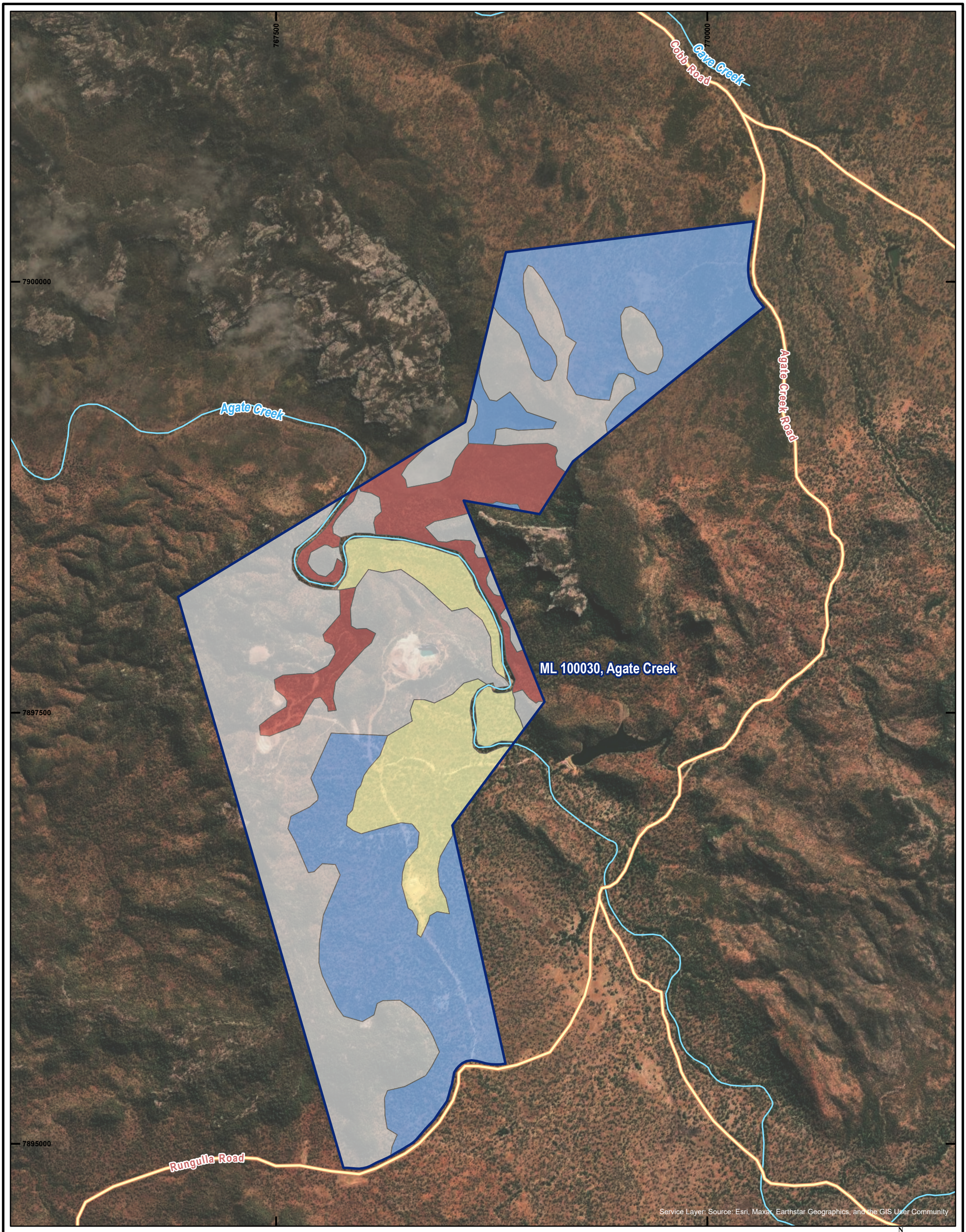
A Soils and Land Suitability Assessment (SLSA) was undertaken by Wulguru Technical Services Pty Ltd (WTS) to provide a baseline understanding of soil resources sampled, and their suitability for use in rehabilitation activities at the Project. The SLSA focused on areas of minimal disturbance to previously undisturbed land, evaluating resources such as topsoil material availability, suitability for use in rehabilitation and potential constraints to plant growth. The full report is provided in **Appendix 6** with results discussed throughout this PRCP.

The identified soil units and their key properties from the SLSA are in identified four soil map units across the ML (**Figure 28**). Representative soil profiles are described in **Table 11.**

Soils are generally non-sodic and are not anticipated to need ameliorants, other than fertiliser, to support vegetation growth. The soil types currently support native vegetation communities and there are no detrimental elements in the soil expected to limit that capacity in future.

Table 11 Representative Soil Profiles

Soil Management Unit	Reference Si	A - Horizon Results								Area (ha)	Area (%)
		pH (pH Units)	EC (µS/cm)	TKN (mg/kg)	TP (mg/kg)	TOC (%w/w)	CEC (meq/100g)	ESP (%)	PSD (clay:silt:sand:gravel%)		
Brown Mellic Kandosol	S1	6.2	20	190	144	0.23	2.9	1.2	7/9/30/54	232.58	34.3
Red Massive Gypsic Vertosol	S3	6.6 -7.0	10-42	700-780	138-169	1.29-1.76	17.6-21.7	0.1-0.2	30-36/43-47/19-20/2-3	63.97	9.4
Brown Bleached Kandosol	S4	6.5	18	630	168	0.96	4.4	<0.1	10/8/81/1	83.51	12.3
Brown Lithsolic Rudosol	S5	5.3	4-6	360-510	169-256	0.6-0.9	2.1-2.3	1.2-2.6	13/34-37/21-24/29	299.13	44



0 0.2 0.4 0.6 0.8 1
km

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ML 100030
Ground-truthed Soil Types

Agate Creek Project Mining Lease
Local Road
Watercourse

Ground-truthed Soil Type
- Brown bleached kandosol
- Brown lithsolic rudosol
- Brown mellic kandosol
- Red massive gypsic vertosol

Data sources:
©The State of Queensland (Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development)

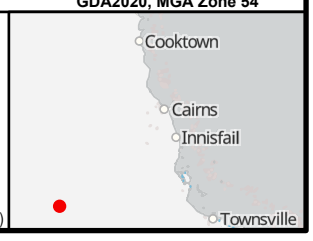


Figure 28

Sheet No.
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Drawn By: Chris Schlebusch
Requested by: Jacob Arnold
Date: 10/07/2025

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An assessment of soil erosion susceptibility is given in **Table 12** lists influencing factors for each soil type that has been identified. Each soil type generally has a low erosion susceptibility.

Table 12 Soil Erosion Susceptibility

Soil Type	Depth (cm)	Texture	ECEC (meq/100g)	Rating	ESP (%)	Rating	Landform	Vegetation Cover	Erosion Susceptibility
Brown Mellic Kandosol	0 - 10	Loam	1.2	Low	1.2	Non-Sodic	Gently undulating.	Sparse *Eucalyptus microneura* +/- *Terminalia spp.* low woodland	Moderate susceptibility due to sparse erosion protection
	10-60	Loam	1.5	Low	1.6	Non-Sodic			
	60-90	Loam	2.4	Low	6.2	Slightly Sodic			
Red Massive Gypsic Vertosol	0-20	Clay Loam	20	Moderate	0.15	Non-Sodic	Flat to gently undulating	Sparse *Eucalyptus crebra* and/or *E. whitei* +/- *Corymbia erythrophloia* open woodland.	Moderate susceptibility due to sparse erosion protection
	20-30	Clay	19	Moderate	0.3	Non-Sodic			
	30-60	Clay	17.6	Moderate	0.35	Non-Sodic			
Brown Bleached Kandosol	0-10	Loam	4.4	Low	0.1	Non-Sodic	Flat to gently undulating.	Sparse *Eucalyptus microneura* +/- *Terminalia spp.* low woodland.	Moderate susceptibility due to sparse erosion protection
	10-50	Sandy Loam	2.9	Low	0.35	Non-Sodic			
	50-80	Sandy Loam	3.1	Low	0.8	Non-Sodic			
	80-120	Sandy Loam	6.2	Low	1.2	Non-Sodic			
Brown Lithsolic Rudosol	0 -20	Loam	2.2	Low	1.8	Non-Sodic	Slight to steeply undulated terrain	*Eucalyptus crebra* woodland, +/- *Corymbia pocillum*.	Moderate susceptibility due to sparse erosion protection

3.1.8 Land Stability

The Project area is currently used for low-intensity grazing on native bushland across the mining lease.

Mining activities have been undertaken on ML 100030 since the grant of the mining lease in 2019.

There are no significant pre-existing land degradation or erosion issues identified.

The Project site is considered geologically stable in its current state, with no concerns regarding land degradation and erosion susceptibility, as shown in **Table 12**. Each soil type generally has a low erosion susceptibility.

3.1.9 Vegetation Communities and Ecological Data

Vegetation to be disturbed by the development of the project is dominated by Regional Ecosystem (RE) 9.12.11, with areas of RE 9.3.13, RE 9.3.26, RE 9.5.10a and RE 9.11.16 which are all classed as "least concern" under the *Vegetation Management Act 1999* (VM Act). SLR Consulting (2021) ground-truthed REs across the ML which all have a 'least concern' status under the VM Act and a 'no concern at present' biodiversity status under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), except for RE 9.3.13 and RE 9.3.26, which both have an 'of concern' biodiversity status. The ground-truthed REs are detailed in **Table 13** and displayed on **Figure 29**. SLR Consulting (2021) noted minor to moderate cattle grazing and agriculture impacts in all vegetation communities concentrating along watercourses and riparian zones. Small sections of non-remnant vegetation occur on previously cleared areas for mining operations.

No Environmentally Sensitive Areas (ESA) were ground-truthed to occur within the Project area. One Category A ESA, the Rungulla National Park, is State mapped to the southwest of the study area and one Category C ESA, is also State mapped to the southwest of the Project (SLR Consulting, 2021).

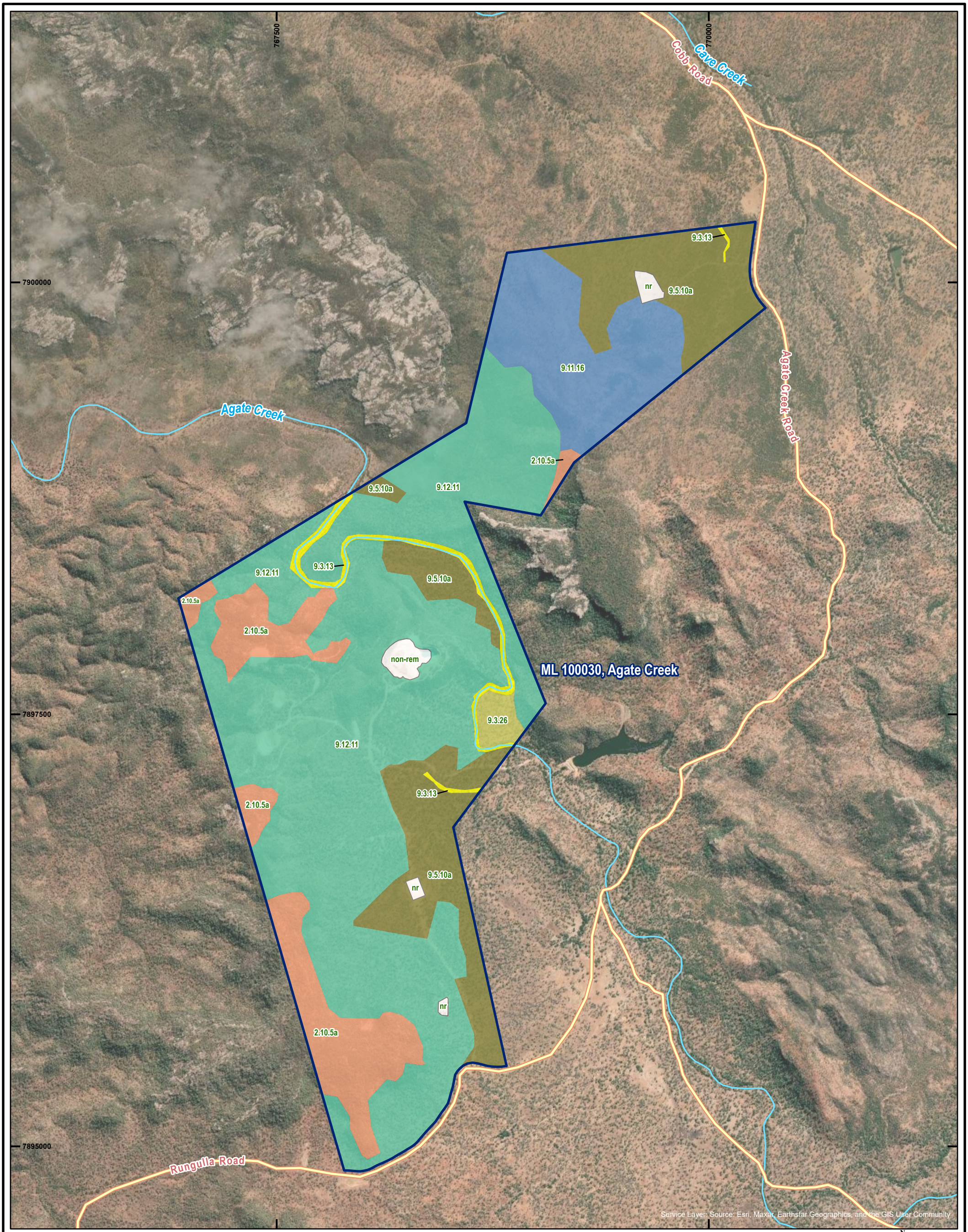
The Rungulla National Park boundary is 2.7km west and 1km south of the ML. Rungulla Resource Reserve, is approximately 200m to the west of the ML. Both are a Matter of State Environmental Significance (MSES), along with remnant vegetation located within a defined distance from the defining banks of a relevant watercourse or relevant drainage features. No other MSES were identified to occur within the Project. MSES at the Project are displayed in **Figure 30**.

No threatened flora species, as listed under the *Nature Conservation Act 1992* (NC Act) or EPBC Act, were identified by SLR Consulting (2021) within the ML. Terrestrial Flora and Fauna Report is included **Appendix 7**.

Table 13 Ground-truthed Regional Ecosystems

RE	VM Act Status	Biodiversity Status	Ground-Truthed Description	Presence relative to Project location
2.10.5a	Least Concern	No Concern at Present	Dominated by sandstone scarps, outcrops, and plateaus. Vegetation dominated by Paperbark Gums and Lancewood. The sub-canopy and shrub layers dominated by *Acacia spp*.	Western edges of the ML
9.3.13	Least Concern	Of Concern	Canopy included *Eucalyptus camaldulensis, Melaleuca fluviatilis,* and *Lophostemon grandiflorus.*	Occurs along several of the State mapped watercourses including Agate Creek within the ML.
9.3.26	Least Concern	Of Concern	Abundance of black soil. Sparse canopy (primarily Gilbert River Box), woody shrub layers, and variety of grasses. Increased grazing pressure.	South-east of pit.
9.5.10a	Least Concern	No Concern at Present	Canopy dominated by Gilbert River Box. Density of sub-canopy varied. Shrub layer was generally sparse, dominated by *Cassia lanceolata.* Significant grazing occurring.	Lower flood plains of ML.
9.11.16	Least Concern	No Concern at Present	Dominated by Narrow-leaved Ironbark with variable sub-canopy and shrub layer. Groundcover typically dominated by *Aristida spp.* On folded metamorphic surface geology.	North-eastern portion of ML on steep slopes, low undulations, and hill crests.
9.12.11	Least Concern	No Concern at Present	Dominated by Narrow-leaved Ironbark with variable sub-canopy and shrub layer. Groundcover typically dominated by *Aristida spp.*	Southern and central areas on igneous rocks on steep slopes, low undulations, and hill crests.

(Source: SLR Consulting, 2021)



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ML 100030 Ground-truthed Regional Ecosystems

Figure 29

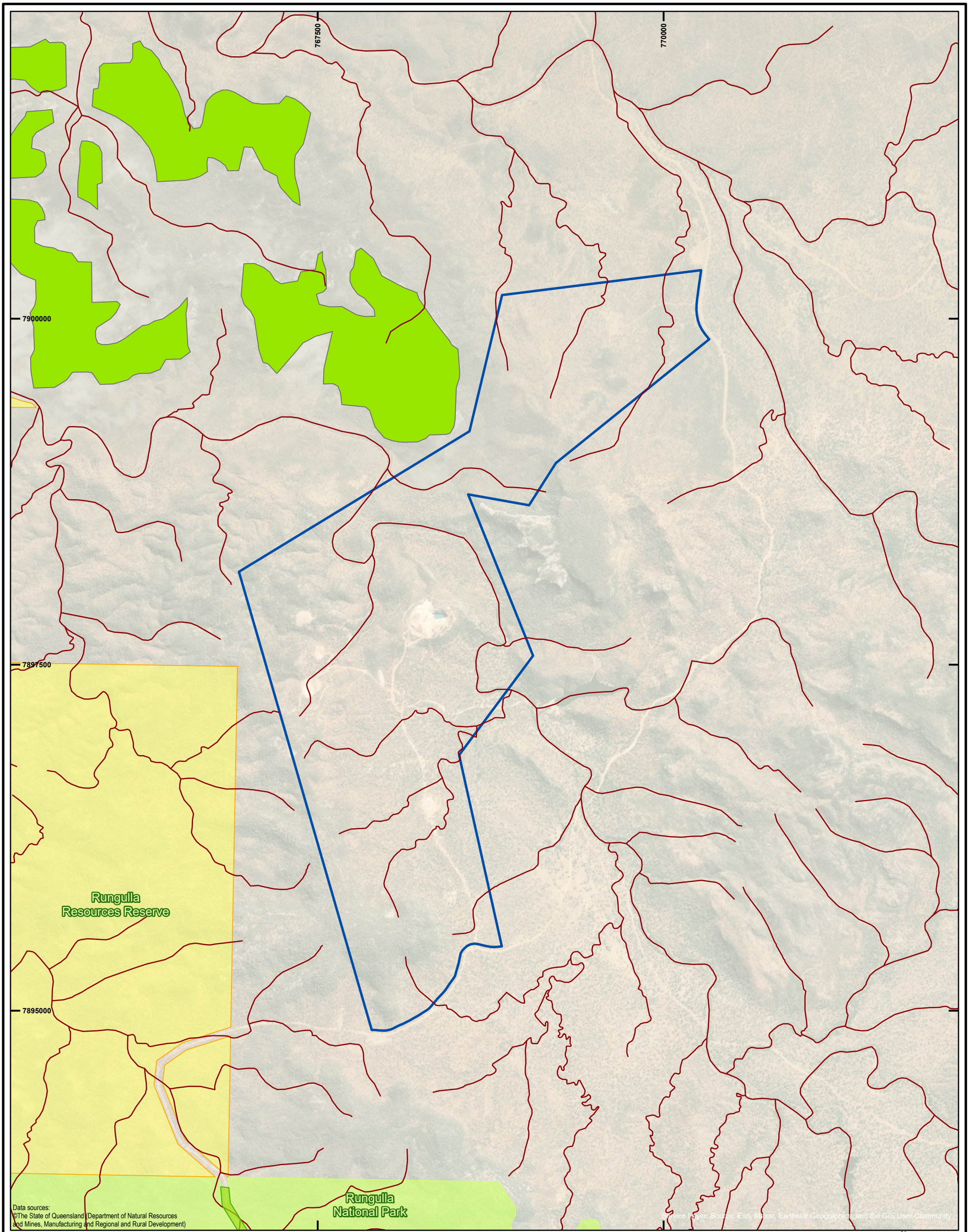
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Date: 24/07/2025

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Progressive Rehabilitation and Closure Plan

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ML 100030
Matters of State Environmental Significance (MSES)

Figure 30

Sheet No.
RTPL_ARD_SVG001_PRCMAP_2013_A

Drawn By: Chris Schlebusch
Requested by: Jacob Arnold
Date: 11/11/2025

- ML 100030
- Of Concern Category B Remnant Regional Ecosystems
- Endangered Category B Remnant Regional Ecosystems (none)
- Regulated Vegetation - Essential Habitat (none)
- Regulated Vegetation - Defined Watercourse
- Wetland Protection Area - Trigger area (none)
- Declared high ecological value waters - Wetlands (none)
- Declared high ecological value waters - Watercourse (none)
- High Ecological Significance Wetland (none)
- National Park
- Resources Reserve
- Wildlife Habitat - Endangered or Vulnerable Wildlife (none)
- Wildlife Habitat - Special Least Concern Animal (none)
- Wildlife Habitat - Koala Habitat (none)
- Flora Survey Trigger Map for Clearing Protected Plants

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3.1.10 Fauna Presence and Populations

During SLR Consulting's (2021) Flora and Fauna survey (**Appendix 7**), the species observed were mostly common to the region. One Endangered, Vulnerable, or Near Threatened (EVNT) species, *Acanthophis antarcticus* (common death adder), was recorded by SLR Consulting (2021), however the exact location the species was spotted is unknown. The common death adder is listed as Vulnerable under the *Nature Conservation Act 1992* (NC Act). There were 14 microbat species identified which are listed as 'least concern' under the NC Act.

All other species identified during the survey are not listed as EVNT species.

The Gilbert Gecko (*Lucasium iris*) and Silver-eyed Velvet Gecko (*Oedura argentea*) were identified at Agate Creek, however, both species were described in recent years, poorly known, and have restricted distributions thus are currently not evaluated under the NC Act or EPBC Act.

While no Matters of National Environmental Significance (MNES) were identified during the SLR Consulting (2021) Flora and Fauna survey, desktop analysis indicated some species listed as a MNES that may occur within the ML.

Table 14 MNES Fauna Potentially Occurring within the Project (SLR Consulting, 2021)

Species	NC Act Listing	EPBC Act Listing	Likelihood of occurrence	Description
Ghost Bat *Macroderma gigas*	Endangered	Vulnerable	Moderate	ML contains suitable foraging habitat. No suitable roost habitat was ground-truthed. Not detected during survey.
Koala *Phascolarctos cinereus*	Endangered	Endangered	Moderate	Not detected during survey. Potentially suitable habitat Desktop analysis indicated records within 20 km.
Large-eared horseshoe bat *Rhinolophus robertsi*	Vulnerable	Vulnerable	Moderate	ML contains some potentially suitable foraging and roosting habitat. No evidence of the species was identified during the survey.

3.1.11 Pre-Mining Land Use

Agate Creek is located within the Etheridge Goldfields which is characterised by mineral exploration, mining and pastoral activities. Prior to the development of the operation, the area was used for cattle grazing. In the region generally, mining and cattle grazing are the predominant land uses.

3.1.12 Landholders

As noted in section **2.2**, the Project is located entirely within two parcels of leasehold land. The Project area is currently used for low-intensity grazing. The landholder details are included in **Table 2**.

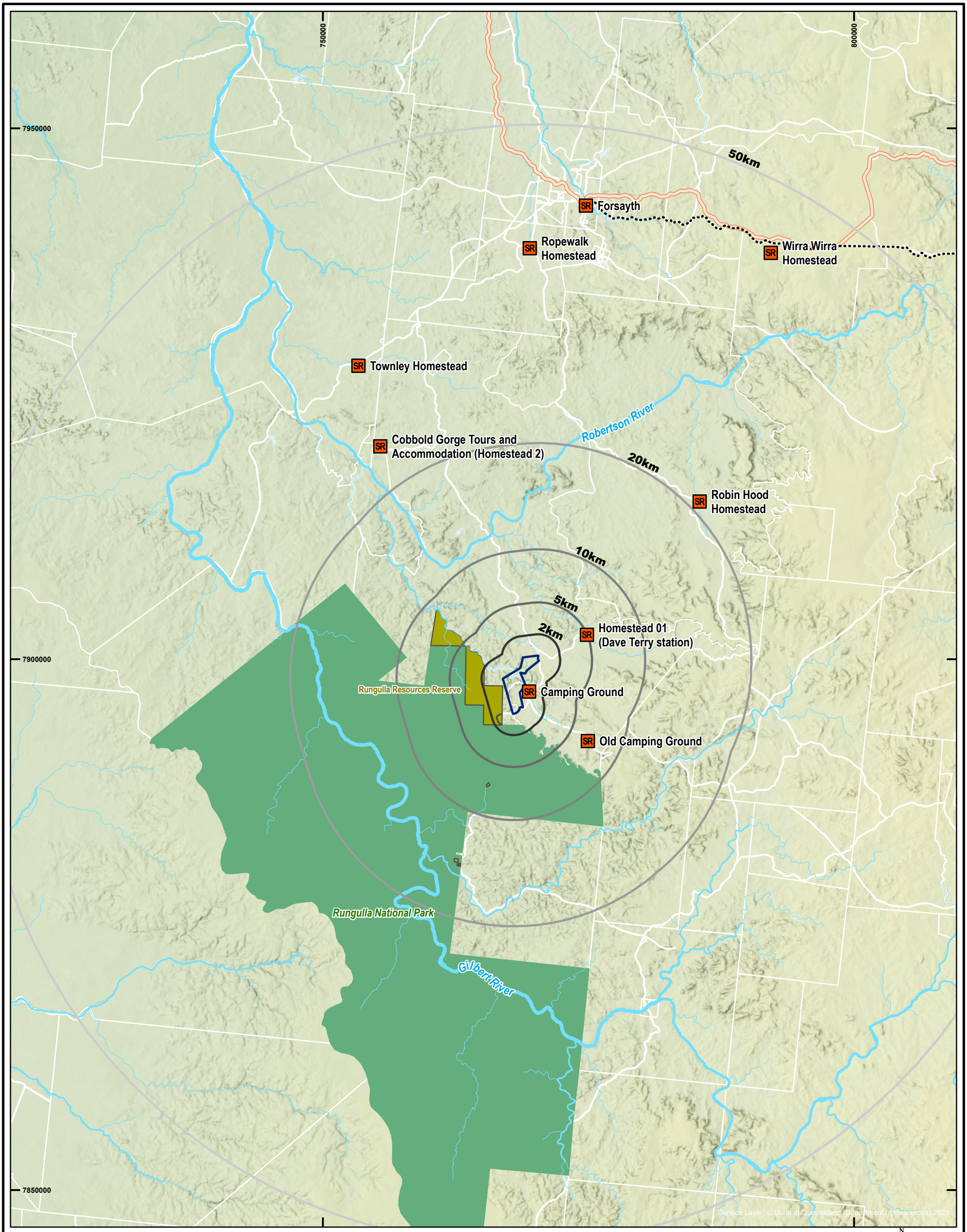
3.1.13 Sensitive Receptors

The sensitive receptors of the Agate Creek Project are identified in **Table 15** and shown in **Figure 31**.

Table 15 Sensitive Receptors

Receptors	Distance (km)	Easting (m)	Northing (m)
Homesteads / Accomodation			
Mine camp	1.9	768467	7895830
Camping ground	1.5	769,414	7,896,910
Old campground	11	774,938	7,892,300
Homestead 01 (Dave Terry station – Known as Old Robin Hood Station))	8	774,833	7,902,308
Homestead 02 (Cobbold George Tours and Accommodation)	25	755,374	7,920,060
Forsayth Town	45	774,789	7,942,670
Protected Area or Critical Area			
Rungulla National Park (closest point)	4.0	765,100	7,895,650
Rungulla Resource Reserve (closest point)	1.4	766,918	7,897,490

Coordinates are in GDA 2020, MGA Zone 54



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ML 100030
Sensitive Receptors

Agate Creek Project Mining Lease
Secondary Road
Connector Road
Watercourse
Rail Network
SR Sensitive Receptor
Rungulla Resources Reserve
Rungulla National Park

Data sources:
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Figure 31

Sheet No.
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Date:	24/07/2025

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3.2 Design for Closure

The Agate Creek expansion was designed to minimise the disturbance footprint of the operation as much as practical. Mine features were selectively placed to target the resource efficiently and also to limit haul distances and disturbance areas of roads and waste dumps.

Progressive rehabilitation and closure have been considered in the mine design in the following aspects:

- The staging of mining in each individual pit will be sequential.
- The sequential mining will enable the overburden / waste rock from the subsequent pit to be backfilled into the previously immediately mined area.
- Haul roads can be progressively rehabilitated following successful closure of each individual pit.
- Ore processing will not be undertaken on site, thereby reducing the disturbance area that might otherwise be required.
- Final landform design and surface treatments have been designed to return the area to the desired PMLU.

The location of mine features/infrastructure has been designed for closure in the following ways:

- The pit locations are constrained by the resource location.
- Waste rock dumps have been located adjacent to mine pits, to reduce haul distances during rehabilitation.
- Sediment dam locations for active mining, will be able to be used during rehabilitation, without disturbing additional land.
- The water storage dam, ROM pad and administration, camp maintenance, storage and irrigation area has been located in the flatter areas of the site, to limit the disturbance area from this infrastructure, thereby limiting the time taken for closure.

The size and shape of mine features/infrastructure have been designed for closure in the following ways:

- A single low grade WRD has been designed to make rehabilitation more efficient, reduce the number of haul roads and limit the area of disturbance.
- A single water storage dam has been designed to limit the required water storage size.
- The shape of the water storage dam has been designed to avoid any disturbance to the watercourses on site.
- A single site access and haul road has been designed along existing disturbance areas to limit the area of disturbance.

The mining method has been designed for closure in the following ways:

- The small pits targeting the highest-grade resource results in much lower waste rock volumes, and therefore smaller waste rock dump areas.
- The size of the mining equipment has been optimised so that narrow pits can be used to mine the highest-grade parts of the resource.
- Ore processing will not be undertaken on site, thereby reducing the area to be impacted by the operation.

3.3 Rehabilitation / Improvement Planning

3.3.1 Progressive Rehabilitation

To facilitate progressive rehabilitation on site, the mine planning process has aimed to maximise progressive rehabilitation by scheduling the commencement and completion of rehabilitation as soon as practicable after land becomes available.

The mining sequence and waste rock dump temporary areas have been designed specifically to enable the sequential backfilling of the pits with waste rock from the next open pit area. The final open pit will be backfilled with the remaining waste rock on surface, except for the low grade WRD, which will remain a landform in the post rehabilitation surface. As soon as a pit has been backfilled completely, it will be scheduled for rehabilitation.

Where progressive rehabilitation occurs, it is expected that at least one wet season will be needed to establish vegetation. As such each rehabilitation campaign is to be completed, at the latest, by October of each year to allow for vegetation establishment prior to the wet season and to minimise erosion potential.

3.3.2 Rehabilitation and Improvement Areas and Relevant Activities

For the purpose of this PRCP, Rehabilitation Areas and relevant activities have been defined and shown in **Table 16**. The mining duration is also specified. There are no improvement areas proposed.

It is anticipated that landform development (RM3) and surface preparation (RM5) will take around 12 to 18 months, depending on the rehabilitation area and time of year (dry/wet season).

Revegetation to the extent of achieving the specified rehabilitation criteria (RM7, RM8) is estimated to be completed within 6 to 10 years, again depending on the rehabilitation area.

Dates in the PRCP schedule (**Appendix 1**) have been selected based on the mine plan as described in this document.

The rehabilitation areas and improvements are shown in **Table 16**.

Table 16 Rehabilitation Areas, Improvement Areas and Relevant Activities

Rehabilitation / Improvement Area	Relevant Activity	Duration of Relevant Activity (Calendar Year)	Size/ Extent of Relevant Activity (ha)	Progressive Rehabilitation Possible
RA1	Open Cut Pits (Pit 1, Pit 2, Pit 3, Pit 4, Pit 6)	2026-2029	13.33	Yes
RA2	Former waste rock dumps	2026-2029	16.79	Yes
RA3	Low Grade Waste Rock Dump	2026-2030	5.11	No
RA4	Mine Infrastructure (ROM Pad, Administration, Camp, Maintenance, Storage and Irrigation area, Explosives Magazine, Laydown, Mine Work Areas)	2026-2030	3.64	No

Rehabilitation / Improvement Area	Relevant Activity	Duration of Relevant Activity (Calendar Year)	Size/ Extent of Relevant Activity (ha)	Progressive Rehabilitation Possible
RA5	Water Infrastructure (Water Storage Dam, Sediment Dams, Water Diversions, Tank Farm)	2026-2031	12.95	No
RA6	Haul roads and existing access tracks	2026-2034	15.26	No
RA7	Topsoil Stockpiles	2026-2031	1.37	No

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7900000

7898000

7896000

Sed. Dam C

NW WRD

NW WRD Sed. Dam

Pit 4

Pit 6 WRD

Pit 6

Pit 3

Pit 2

Sed. Dam A

Low Grade Stockpile

Pit 1 WRD

SW WRD Sed. Dam

Pit 1

Laydown

Sed. Dam B

SW WRD

SW WRD Sump

Pit 1 Extension

Water Storage Dam

Magazine

Sed. Dam D

ROM

Administration, Camp, Maintenance, Storage, and Irrigation area

Data sources:
©The State of Queensland (Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development)

Service Layer: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Progressive Rehabilitation and Closure Plan

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Figure 32
ML 100030
Rehabilitation Areas

Sheet No.
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Drawn By: Chris Schlebusch
Requested by: Jacob Arnold
Date: 10/11/2025

- ML 100030
- Permanent Infrastructure - Retained Road
- RA1 - Open Cut Pits (Pit 1, Pit 2, Pit 3, Pit 4, Pit 6)
- RA2 - Former waste rock dumps
- RA3 - Low Grade Waste Rock Dump
- RA4 - Mine Infrastructure (ROM Pad, Administration, Camp, Maintenance, Storage and Irrigation area, Explosives Magazine, Laydown, Mine Work Areas)
- RA5 - Water Infrastructure (Water Storage Dam, Sediment Dams, Water Diversions, Tank Farm)
- RA6 - Haul roads and existing access tracks
- RA7 - Topsoil Stockpiles

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3.3.3 Rehabilitation Undertaken to Date

Prior to commencement of operations, extensive exploration activities were undertaken by other parties. An assessment of the rehabilitation was undertaken by WTS in 2022, with the full technical memorandum included at **Appendix 8.** The rehabilitation undertaken is displayed in **Figure 33.**

Rehabilitation of a number of these historic exploration tracks has occurred, consisting of 9.94km of exploration track at a width of 2.8m, totalling 2.783 ha. All rehabilitated tracks have been mapped as remnant vegetation and ground-truthed as RE 2.10.5a *Acacia shirleyi* woodland and *Triodia pungens* hummock grassland on scarps and stony ledges.

Additionally, a 0.93 ha section of the western side of the Sherwood Waste Rock Dump was rehabilitated in 2019.

The assessment of the rehabilitation undertaken to date confirmed that it is well established and either similar to or on a successional pathway towards vegetation of the surrounding area.