

Permit

Environmental Protection Act 1994

Environmental Authority EPML00881213

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPML00881213

Environmental authority takes effect on 19 January 2026.

Environmental authority holder(s)

Name(s)	Registered address
MINERAL PROJECTS PTY LTD	Level 15, 300 Queen Street Brisbane
TABLELAND RESOURCES PTY LTD	

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 17 – Mining copper ore	ML2810, ML2811, ML2831, ML2832, ML2833, ML2834
Schedule 2 8 – 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)	
Schedule 2 30 – Metal smelting and refining (d) more than 10,000t of metals or metalloids	
Schedule 2 31 – Mineral processing (2) processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	
Schedule 2 60 – Waste disposal (2) operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) – (a) less than 2,000t	
Schedule 2 63 – Sewage treatment (1) operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (a) 21 to 100EP (i) if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme.	

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of land give written notice to the administering authority if they become aware of the following:

- the presence of, or happening of an event involving, a hazardous contaminant on the land that is causing, or is reasonably likely to cause, serious or material environmental harm (notice must be given within 24 hours); or
- if the land is contaminated land – a change in the condition of the land that is causing, or is reasonably likely to cause, serious or material environmental harm (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the land (notice must be given within 20 business days).

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

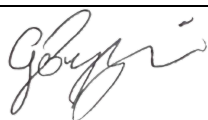
- a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority – on the nominated day; or
- b) if the authority states a day or an event for it to take effect – on the stated day or when the stated event happens; or
- c) otherwise – on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

The anniversary day of this environmental authority is the same day each year as the effective date. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.



Signature

Giles Bezzina

Department of the Environment, Tourism, Science and Innovation

Delegate of the administering authority

Environmental Protection Act 1994

19 January 2026

Date

Enquiries:

Minerals Business Centre

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Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443).

Conditions of environmental authority

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following site-specific conditions of approval. This environmental authority consists of the following Schedules:

Schedule Matter

- A General
- B Air and Noise
- C Surface Water
- D Groundwater
- E Land
- F Regulated Structures
- G Definitions
- H Figures

Schedule A – General

Activity

- A1 This environmental authority authorises environmental harm referred to in the conditions. Where there is no condition or this environmental authority is silent on a matter, the lack of condition or silence does not authorise environmental harm.
- A2 In carrying out the mining activity authorised by this environmental authority, the holder of this environmental authority must comply with **Schedule A – Table 1 (Project Infrastructure Layout – Mine Area)** and **Schedule H – Figure 1 (Mine Infrastructure Layout)**.

Schedule A – Table 1 (Project Infrastructure Layout – Mine Area)

Domain	Mine Feature Name	Disturbance Area (ha)	Co-ordinates GDA 94 MCA Zone 55	
			Easting	Northing
Mining Area	Pit	4.84	234452.076	8218784.949
			234612.5	8218665.429
			234593.75	8218619
			234438.199	8218636.773
Water Storages	Release Dam (previously referred to as the Settling Dam)	1.3	234130.233	8218591.617
			234159.378	8218200.644
			234145.038	8218181.894
			234106.027	8218249.316
	Process Water Dam	1.3	234622.07	8218613.661
			234700.178	8218525.886
			234643.53	8218491.329
			234575.607	8218557.597
	PLS Pond	0.1	234663.646	8218480.361
			234694.099	8218507.021
			234678.744	8218462.079
			234710.055	8218489.968
	ILS Pond	0.2	234699.955	8218512.241
			234733.292	8218540.343
			234715.769	8218492.366
			234749.635	8218522.87
	Raffinate Pond	0.1	234739.765	8218544.229
			234764.531	8218564.744
			234753.131	8218527.898
			234777.674	8218549.674
	Overflow Dam 1	0.5	234784.292	8218541.184
			234826.552	8218462.073
			234798.565	8218403.611
			234717.024	8218481.393
	Overflow Dam 2	0.4	234878.172	8218637.266
			234906.630	8218562.733
			234892.567	8218534.144
			234786.985	8218556.217
	Water Management Dams (Sediment Dams, Clean Water Dams)	1.7	As Indicated on Schedule H: Figure 1 – Mine Infrastructure Layout	
	Raw Water Dam 1	3.5	As Indicated on Schedule H: Figure 1 – Mine Infrastructure Layout	

Infrastructure	Roads and Tracks	0.5	As Indicated on Schedule H: Figure 1 – Mine Infrastructure Layout	
	Access Road	19.7	As Indicated on Schedule H: Figure 1 – Mine Infrastructure Layout	
	Processing Area	7.0	As Indicated on Schedule H: Figure 1 – Mine Infrastructure Layout	
	Infrastructure	0.4	As Indicated on Schedule H: Figure 1 – Mine Infrastructure Layout	
Topsoil Stockpiles	Topsoil Stockpiles	0.6	As Indicated on Schedule H: Figure 1 – Mine Infrastructure Layout	
	Overburden Stockpile	4.74	234157.83	8218591.617
			234234.333	8218404.911
			234069.598	8218351.495
			233964.15	8218466.431
Other	Other Disturbance (including Buffer Areas, fire breaks, fences, minor clean water drains and erosion and sediment controls, minor tracks and other ancillary infrastructure. Areas will only be disturbed if and when required.)	26.4	As Indicated on Schedule G: Figure 1 – Mine Infrastructure Layout	
Exploration	Exploration	10	NA	

Maintenance of Measures, Plant and Equipment

A3 The holder of this environmental authority must:

- (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority;
- (b) maintain such measures, plant and equipment in a proper and efficient condition;
- (c) operate such measures, plant and equipment in a proper and efficient manner;
- (d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.

Monitoring

- A4 Except where specified otherwise in another condition of this authority, all monitoring records, reports and other site data generated as a requirement of this authority must be kept for a period of not less than **five (5) years**.
- A5 All analysis and tests required to be conducted under this environmental authority must be carried out by an appropriately qualified person and analysed by a laboratory that has a NATA accreditation for such analysis and tests, except as otherwise authorised by the administering authority.
- A6 Monitoring and analysis required by this environmental authority must be undertaken in accordance with the requirements of the administering authority's latest guidelines, unless otherwise agreed by the administering authority in writing.

Risk Management

- A7 The holder of this environmental authority must develop and implement a risk management system for mining activities which satisfies the content requirements of the Standard for Risk Management (ISO31000:2009), or the latest edition of an Australian Standard for Risk Management, to the extent relevant to environmental management.

Notification of Emergencies, Incidents and Exceptions

- A8 The holder of this environmental authority must notify the administering authority by written notification within **twenty-four (24) hours**, after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority.
- A9 Within **ten (10) business days** following the initial notification of an emergency or incident, or receipt of the monitoring results, whichever is the latter, further written advice must be provided to the administering authority, and must include, but not necessarily be limited to the following:
- (a) results and interpretation of any samples taken and analysed;
 - (b) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm;
 - (c) proposed actions to prevent a recurrence of the emergency or incident.

Complaints

- A10 The holder of this environmental authority must record all environmental complaints received about the mining activities including:
- (a) name, address and contact number for the complainant;
 - (b) time and date of complaint;
 - (c) reasons for the complaint;
 - (d) investigations undertaken;
 - (e) conclusions formed;
 - (f) actions taken to resolve the complaint;
 - (g) any abatement measures implemented;
 - (h) person responsible for resolving the complaint.
- A11 The holder of this environmental authority must, when requested by the administering authority, undertake relevant specified monitoring within a reasonable timeframe nominated or agreed to by the administering authority to investigate any complaint of environmental harm. The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures, where implemented, must be provided to the administering authority within **ten (10) business days** of completion of the investigation, or no later than **ten (10) business days** after the end of the timeframe nominated by the administering authority to undertake the investigation.

Third-Party Reporting

- A12 The holder of this environmental authority must:
- (a) within **one (1) year** of the commencement of this authority, obtain from an appropriately qualified person, a report on compliance with the conditions of this environmental authority;
 - (b) obtain further such reports at regular intervals not exceeding **three (3) years** from the completion of the report referred to above;
 - (c) provide each report to the administering authority within **ninety (90) days** of its completion.

Amendments to Standards, Policies or Guidelines

- A13 Where a condition of this environmental authority requires compliance with a standard, policy or guideline published externally to this environmental authority and the standard is amended or changed subsequent to the issue of this environmental authority the holder of this environmental authority must:
- (a) comply with the amended or changed standard, policy or guideline within **two (2) years** of the amendment or change being made, unless a different period is specified in the amended standard or relevant legislation, or where the amendment or change relates specifically to regulated structures referred to in **Schedule F – Regulated Structures**, the time specified in that schedule;

- (b) until compliance with the amended or changed standard, policy or guideline is achieved, continue to remain in compliance with the corresponding provision that was current immediately prior to the relevant amendment or change.

Investigation

- A14 If monitoring results indicate an exceedance of any quality objectives specified in a condition of this environmental authority, the holder of this environmental authority must notify the administering authority in writing within **ten (10) business days** and:
- (a) complete an investigation to identify the potential cause of the exceedance;
 - (b) if the investigation demonstrates that the exceedance is not attributable to the mining activities, then no further action is required; or
 - (c) if the cause of the exceedance is inconclusive or attributable to the mining activities, provide a written report to the administering authority within **three (3) months** of the date of receiving the monitoring results showing an exceedance, outlining:
 - (i) all pertinent details of the investigation carried out; and
 - (ii) actions taken or planned to minimise environmental harm.

Exploration

- A15 All exploration activities carried out on the mining lease must comply with each of the Standard Environmental Conditions contained in the *“Eligibility criteria and standard conditions for exploration and mineral development projects”* (ESR/2016/1985).

END OF SCHEDULE A

Schedule B – Air and Noise**General**

- B1 Unless authorised by this environmental authority, the release of noxious or offensive odour, dust or any other airborne contaminant resulting from the mining activity must not cause environmental harm beyond the boundary of the licenced place.
- B2 The holder of this environmental authority must ensure that noise and vibration generated by the mining activity does not cause environmental harm beyond the boundary of the licenced place.

END OF SCHEDULE B

Schedule C – Surface Water

Contaminant Release to Waters

C1 The release of contaminants to waters must:

- a) only occur during flow events in the receiving waters;
- b) only occur from the release point specified in **Schedule C – Table 1 (Release Point Location)**.
- c) be monitored at the release point and at the monitoring frequency specified in **Schedule C – Table 1 (Release Point Location)** and depicted in Schedule H – Figure 2 (Release Point Monitoring Location) for the total daily volume of water release and for each parameter specified in **Schedule C – Table 2 (Release Quality Objectives)**.

Schedule C – Table 1 (Release Point Location)

Release Point	Description of Release	Description of Source	Description of Receiving Waters	Co-ordinates GDA 2020 MGA Zone 55		Monitoring Frequency
				Latitude	Longitude	
RPI	Release Dam spillway	Drainage from mine catchment exiting via Release Dam spillway	Drainage line originating at Raw Water Dam 1, passing the confluence of the Release Dam spillway drainage line and reporting to Gum Creek	-16.101713	144.51471	For all parameters, 1 sample must be taken within 12 hours of a release event commencing and for events with duration of greater than 24 hours, samples must be taken daily for 1 week and once a week thereafter until the event concludes.
FG1	Flow Gauge 1 – Spillway	Flow gauge within Release Dam spillway	This flow gauging provides an indication of the level of dilution of any releases (i.e., spills) from the Release Dam experience from broader catchment runoff to Gum Creek	-16.101713	144.51471	
FG2	Flow Gauge 2 – Creek	Flow gauge within Gum Creek tributary	Downstream of RP1 on Gum Creek tributary, approx. 300m downstream	-16.10205	144.5127	

C2 At the time of release from the authorised release point specified in **Schedule C – Table 1 (Release Point Location)** the water flow (m³/hour) in the respective receiving water must be at least twenty (20) times the water flow (m³/hour) at which respective contaminated waters are release from each release point.

Release Event Flow Monitoring

C3 For any release of contaminants to receiving waters, the environmental authority holder must:

- a) record the date and time for both the commencement and cessation of the release event; and
- b) determine and record the total daily volume of contaminated waters released; and

- c) determine and record receiving waters background flow (m³/hour) at the monitoring point FMP specified in **Schedule C – Table 4 (Receiving Waters Monitoring Locations)** for the duration of the release event; and
- d) if requested by the administering authority, provide this information to the administering authority within **twenty-four (24) hours** of any request.

- C4 The release of mine affected water to waters in accordance with condition C1, when measured at the locations specified in **Schedule C – Table 1 (Release Point Location)** must not exceed the release limits specified in **Schedule C – Table 2 (Release Limits)**.
- C5 The holder must ensure a stream flow gauging station/s is installed, operated and maintained to determine and record stream flows at the locations and flow recording frequency specified in **Schedule C – Table 1 (Release Point Location)**.
- C6 Notwithstanding any other condition of this environmental authority, the release of mine affected water to waters in accordance with condition C1 must only take place during periods of natural flow in the receiving waters.

Schedule C – Table 2 (Release Limits)

Parameter ¹	Water Quality Objective Concentration (mg/L unless otherwise stated)
pH (pH units)	Lower limit - 6.0. Upper Limit - 8.0.
EC (µs/cm)	2500 ² .
Dissolved Oxygen	For interpretational purposes only
Total Suspended Solids	20 times the 80 th percentile of reference site concentration ⁴
Sulfate (mg/L)	1000 ⁶
Fluoride (mg/L)	20 times the 80 th percentile of reference site concentration ⁴
Major cations (mg/L)	For interpretive purposes
Major anions (mg/L)	For interpretive purposes
Aluminium (mg/L)	1.1 ³
Arsenic ⁵ (mg/L)	0.26 ³
Boron (mg/L)	7.4 ³
Cadmium (mg/L)	0.004 ³
Chromium ⁵ (mg/L)	0.02 ³
Copper (mg/L)	0.028 ³
Manganese (mg/L)	38 ³
Nickel (mg/L)	0.22 ³
Selenium (mg/L)	0.1 ⁴

Silver (mg/L)	0.001 ³
Zinc (mg/L)	0.16 ³
Total petroleum hydrocarbons	No detectable film or odour

1. For water quality objectives parameters, all metals and metalloids must be measured and reported as both total (unfiltered) and dissolved (field filtered) levels. Limits apply to dissolved fraction.
2. Twenty times higher than values derived from QWQG (2009) appendix G – Salinity guidelines for Queensland freshwaters.
3. Twenty times higher than ANZECC (2000) table 3.4.1 – Trigger values for toxicants at alternative levels of protection. Values are the trigger values applying to typical slightly-moderately disturbed systems.
4. Values derived from reference sites listed in Schedule C – Table 4 (Receiving waters monitoring locations) and in accordance with QWQG (2009) methodology.
5. Routine analysis for this parameter is based on combined/total species of the element, where the exceedance of the WQO is identified, an additional sample must be taken and analysed as soon as practicable to determine and quantify specified forms of this element.
6. Derived based on ANZG (2023) for livestock drinking water (chronic exposure).

C7 Water Quality Objectives specified in **Schedule C – Table 3 (Receiving Waters Quality Objectives)** must not be exceeded when measured at the monitoring points as specified in **Schedule C – Table 4 (Receiving Waters Monitoring Locations)** and depicted in Schedule H – Figure 3 (Receiving Waters Monitoring Locations).

Schedule C – Table 3 (Receiving Waters Quality Objectives)

Parameter ¹	Water Quality Objective ⁶
pH (pH units)	7.2-8.1 ²
Electrical conductivity (in-situ, µS/cm)	487 ⁴ µS/cm
Dissolved oxygen (in-situ, mg/L)	For interpretive purposes only
Total suspended solids (mg/L)	80 th percentile ⁵ of reference site concentration
Sulphate (mg/L)	1.2 ²
Fluoride (mg/L)	1.7 ³
Major cations (mg/L)	For interpretive purposes
Major anions (mg/L)	
Dissolved organic carbon (mg/L)	
Dissolved Aluminium (mg/L)	0.3 ²
Dissolved Antimony (mg/L)	Not applicable
Dissolved Arsenic (mg/L)	0.013 ³
Dissolved Boron (mg/L)	0.940 ³
Dissolved Cadmium (mg/L)	0.0002 ³
Dissolved Chromium ⁸ (mg/L)	0.001 ³
Dissolved Copper (mg/L)	0.014 ²
Dissolved Manganese (mg/L)	0.011 ²
Dissolved Nickel (mg/L)	0.011 ³
Dissolved Selenium (mg/L)	0.005 ³
Dissolved Silver (mg/L)	0.00005 ³
Dissolved Zinc (mg/L)	0.008 ³
Total Hardness (mg/L)	For interpretive purposes only

Total Organic Carbon	Not applicable
Total petroleum hydrocarbons	No detectable film or odour

- For water quality objectives parameters, all metals and metalloids must be measured and reported as both total (unfiltered) and dissolved (field filtered) levels. Limits apply to dissolved fraction only.
- Value derived from 80th percentile of site-specific data.
- Based on Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018) Values are for 95% species protection applying to typical slightly-moderate disturbed systems.
- Values derived from interim 80th percentile of site specific data as per DES 2022 – Salinity guidelines for Queensland freshwaters.
- Must be determined in accordance with QWQG (2009) methodology.

C8 Releases to waters must be undertaken in a manner that does not cause erosion of the bed and banks of the receiving waters or cause a material build-up of sediment in such waters.

C9 Water quality objectives specified as derived from site-specific data within **Schedule C – Table 3 (Receiving Waters Quality Objectives)** must be reviewed and updated within an amendment application lodged pursuant to the *Environmental Protection Act 1994* to this environmental authority by 30 March 2028.

Receiving Environment Monitoring Program (REMP)

C10 The environmental authority holder must develop and implement a Receiving Environment Monitoring Program (REMP) sufficient to monitor, identify and describe any adverse impacts to surface water environmental values, quality and flows due to the authorised mining activity.

For the purposes of the REMP, the receiving environment is waters of the drainage lines downstream of the Raw Water Dam 1 and Release Dam as specified in **Schedule A – Table 1 (Project Infrastructure Layout – Mine Area)**, and Gum Creek and connected or surrounding waterways. At a minimum, the REMP must include:

- Monitoring of all parameters specified in **Schedule C – Table 3 (Receiving Waters Quality Objectives)** at all locations specified in **Schedule C – Table 4 (Receiving Waters Monitoring Locations)** and depicted in Schedule H – Figure 3 (Receiving Waters Monitoring Locations) and at the following minimum frequency:
 - For sediment quality objectives, biannually between 1 September and 1 November and also between 1 April and 1 May; and
 - For water quality objectives of receiving waters during any release event or flow event in receiving waters, one sample must be taken within **twelve (12) hours** of the event commencing. Where release or flow events have duration of greater than **twenty-four (24) hours**, samples must be taken daily for **one (1) week** and once a week thereafter until the release or flow event ceases.
- Monitoring of suitable biological indicators of aquatic ecosystem health.

Schedule C – Table 4 (Receiving Waters Monitoring Locations)

Monitoring Point	Description	Co-ordinates GDA 2020 MGA Zone 55	
		Latitude	Longitude
Receiving Water Sites			
S11	Downstream of RP1 on Gum Creek tributary, approx. 300m downstream	-16.10205	144.5127
S12	Downstream of RP1 on Gum Creek tributary, approx. 600m downstream	-16.10162	144.51074
AQ01	North creek upstream	-16.095052	144.516827
AQ02	North creek downstream	-16.097754	144.504558
AQ03	Gum creek downstream	-16.09924	144.50487
AQ05	South creek upstream	-16.114068	144.524454
AQ06	Gum creek upstream	-16.123854	144.527052

S14	South creek downstream	-16.101356	144.506168
Reference (Background) Sites			
S13	Upstream of RP1 on Gum Creek tributary, approx. 500m upstream	-16.10468	144.51598
S7	Upstream of RP1 on Gum Creek tributary, approx. 100m upstream	-16.10302	144.51483

- C11 A REMP Design Document that addresses the requirements of the REMP must be prepared and made available to the administering authority
- C12 A report outlining the findings of the REMP, including all monitoring results and interpretations must be prepared annually, by 1 July, and made available on request to the administering authority, this must include an assessment of background reference water quality, the condition of downstream water quality compared against water quality objectives, and the suitability of current discharge limits to protect downstream environmental values.

Water Management Plan

- C13 A Water Management Plan must be developed by an appropriately qualified person and implemented. The Water Management Plan must be reviewed annually, by 1 September, to assess the adequacy of the plan, ensure actual and potential environmental impacts are managed, and identify any necessary amendments to the plan to ensure compliance with this environmental authority.

Erosion and Sediment Control

- C14 An Erosion and Sediment Control Plan must be developed by an appropriately qualified person and implemented for all stages of the mining activities on site to minimise erosion, contamination of stormwater and the release of sediment to receiving waters.

END OF SCHEDULE C

Schedule D – Groundwater

- D1 The holder of this environmental authority must not release contaminants to groundwater.
- D2 Groundwater quality and level must be monitored at the locations and frequencies defined in Schedule D – Table 1 (Groundwater Monitoring Locations and Frequency) and Schedule H – Figure 4 (Groundwater Monitoring Locations), for the quality characteristics identified in Schedule D – Table 2 (Groundwater Quality Limits).

Schedule D – Table 1 (Groundwater Monitoring Locations and Frequency)

Monitoring Point	Screened Hydrogeological Unit	Screen Depth (mBGL)	Co-ordinates MGA 2020 Zone 55		Monitoring Frequency ¹
			Latitude	Longitude	
GW01	Hodgkinson Formation – Metasediment (phyllite/slate)	80.5-86.5	-16.095544	144.5179465	Monthly
GW03	Hodgkinson Formation – Metasediment (sandstone/greywacke)	50-56	-16.10214	144.5134542	Monthly
GW04	Hodgkinson Formation – Metasediment (sandstone/greywacke)	75-81	-16.100899	144.5201505	Monthly
GW05	Hodgkinson Formation - Unconsolidated sediments	1.5-6	-16.102158	144.5135007	Monthly
GW06	Hodgkinson Formation – Metasediment (sandstone/greywacke)	16.6-22.6	-16.098042	144.5145424	Monthly
GW07	Hodgkinson Formation – Metasediment (sandstone/greywacke)	71.2-77.2	-16.096371	144.5168337	Monthly
GW08 ²	Hodgkinson Formation – Unconsolidated sediments	TBA	-16.098049	144.5189805	Monthly
GW09 ²	Hodgkinson Formation – Metasediment (phyllite/slate)	TBA	-16.098049	144.5189805	Monthly
GW10 ²	Hodgkinson Formation – Unconsolidated sediments	TBA	-16.099104	144.5172482	Monthly
GW11 ²	Hodgkinson Formation – Metasediment (microdiorite)	TBA	-16.096094	144.5171081	Monthly

- Monitoring frequency can be amended to quarterly once minimum 18 records is captured. The amendment to this table must occur via an amendment application under the EP Act.
- TBA value – refer to Condition D3.

Schedule D – Table 2 (Groundwater Quality Limits)

Quality Characteristics ¹	Contaminant Limit
pH (pH unit)	6.0-8.0 ²
Electrical Conductivity (in-situ, µS/cm)	1400 ³
Sulphate (mg/L)	250
Dissolved aluminium (mg/L)	0.055
Dissolved cadmium (mg/L)	0.0002
Dissolved chromium (mg/L)	0.001

Dissolved copper (mg/L)	0.0014
Dissolved manganese (mg/L)	5 ³
Dissolved nickel (mg/L)	0.011
Dissolved selenium (mg/L)	0.005
Dissolved silver (mg/L)	0.00005
Dissolved zinc (mg/L)	0.016 ³
All other major cations and anions	For interpretation purposes
Hardness	
Dissolved organic carbon	
C6 – C9 fraction (µg/L)	20
C10 – C36 fraction (µg/L)	100

1. All metal must be derived and metalloids must be measured as total (unfiltered) and dissolved (filtered) concentrations. Groundwater quality limits are applicable to dissolved fraction.
2. The pH limits are applicable to field measurements; the pH limits are based on ANZG (2018) and ANZECC & ARMCANZ 2000, (upland/lowland rivers in Tropical Australia).
3. Derived based on interim site-specific 80th percentile of data

- D3 By 30 November 2026, the holder of this environmental authority must submit an amendment application lodged pursuant to the *Environmental Protection Act 1994* to this environmental authority, nominating the TBA values for Monitoring Points GW08, GW09, GW10 and GW11 as identified in Footnote 2 of **Schedule C – Table 1 (Groundwater Monitoring Locations and Frequency)**.
- D4 Water quality limits specified as derived from site-specific data within **Schedule C – Table 6 (Groundwater Quality Limits)** must be reviewed and updated within an amendment application lodged pursuant to the *Environmental Protection Act 1994* to this environmental authority by 30 March 2028.

Exceedance Investigation

- D5 Results of monitoring of groundwater from groundwater bores identified in **Schedule C – Table 5 (Groundwater Monitoring Locations and Frequency)**, must not exceed any of the contaminant limits defined in **Schedule C – Table 6 (Groundwater Quality Limits)** on any three (3) consecutive sampling occasions.
- D6 If groundwater from bores identified in **Schedule C – Table 5 (Groundwater Monitoring Locations and Frequency)** exceed the contaminant limits specified in **Schedule C – Table 6 (Groundwater Quality Limits)** on three consecutive occasions, the holder of the environmental authority must complete an investigation within fourteen (14) days of receiving the results to determine if the exceedance is a result of:
- a) activities authorised under this environmental authority; or
 - b) natural variation; or
 - c) neighbouring land use resulting in groundwater impacts.
- D7 The holder of this environmental authority must provide a report of the investigation to the administering authority within **fourteen (14)** days of completion of the investigation under condition D6.
- D8 If the investigation under condition D6 determines that the exceedance was the result of activities authorised under this environmental authority, then a further investigation must be completed within **twenty-eight (28)** days of provision of the report under D7 to determine the source, cause and extent of contamination and implement appropriate mitigation and management measures to address any groundwater contamination and

prevent recurrence of groundwater contamination. The further investigation report must be provided to the administering authority within **twenty-eight (28)** days of completion.

- D9 By **31 July 2026**, a Groundwater Monitoring and Management Program must be developed, documented and implemented by an appropriately qualified person.
- D10 The Groundwater Monitoring and Management Program required under **Condition D9** must include at a minimum:
- (a) An assessment of compliance against the conditions of this environmental authority; and
 - (b) Identify potential sources, mechanisms, and pathways of contamination to groundwater from the activity; and
 - (c) Ensure that all potential groundwater impacts due to the activity are identified, monitored and mitigated; and
 - (d) Document sampling and monitoring methodology; and
 - (e) Ensure that adequate groundwater monitoring and data analysis is undertaken to achieve the following objectives:
 - (i) Detect any impacts to groundwater levels due to the activity,
 - (ii) Detect any impacts to groundwater quality due to the activity, and
 - (iii) Determine trends in groundwater quality showing decreasing and increasing trends; and
 - (f) Include an appropriate quality assurance and quality control program; and
 - (g) Specify the purpose of each groundwater bore, the monitoring location, quality characteristics and frequency; and
 - (h) Include a review process to identify improvements to the program that includes addressing any comments provided by the administering authority.
- D11 The Groundwater Monitoring and Management Program must be reviewed on an annual basis by 30 June by an appropriately qualified person. The review must include at a minimum:
- (a) An assessment that the Groundwater Monitoring and Management Program continues to meet the requirements stated in **Condition D10**; and
 - (b) An assessment of the suitability of the monitoring network for groundwater specified in **Schedule D – Table 1 (Groundwater Monitoring Locations and Frequency)** and **Schedule H – Figure 4 (Groundwater Monitoring Locations)** to detect impacts from the mining activities; and
 - (c) Where relevant information gaps or uncertainty are identified as pertinent to the accuracy of the investigation's findings/conclusions, include recommendations and associated timeframes to address those information gaps and resolve uncertainty.
- D12 The construction, maintenance and decommissioning of groundwater monitoring bores must be undertaken by a licenced appropriately qualified person in a manner that:
- (a) Prevents contaminants entering the groundwater; and
 - (b) Ensures the integrity of the bores obtain representative groundwater samples from the target aquifer; and
 - (c) Maintains the hydrogeological environment within the aquifer.
- D13 A bore drill log must be kept for each groundwater monitoring bore which includes:
- (a) Bore identification reference and geographic coordinate location;
 - (b) Specific construction information including, but not limited to, depth of bore, depth and length of casing, depth and length of screening and bore sealing details;
 - (c) Standing groundwater level and water quality characteristics including physical characteristics and results of laboratory analysis for the possible trigger characteristics;

- (d) Lithological data and stratigraphic interpretation by an appropriately qualified person to identify important features associated with groundwater monitoring; and
- (e) Target hydrogeological feature of the bore.

END OF SCHEDULE D

Schedule E – Land

Release of Contaminants

- E1 Unless authorised by this environmental authority, contaminants that will or may cause environmental harm must not be directly or indirectly released to land.

Waste

- E2 Unless otherwise authorised by the conditions of this environmental authority:
- (a) waste must not be accepted onto the licensed place; and
 - (b) all waste generated in carrying out the activity must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.
- E3 The environmental authority holder must not dispose of waste at the licensed place, with the following exceptions:
- (a) waste rock;
 - (b) spent ore; and
 - (c) general waste.
- E4 The quantity of general waste disposed of at the licenced place must not exceed a volume of 2,000 metres cubed (m³) and must be:
- (a) demonstrably unreasonable to be managed by a higher order precept of the waste and resource management hierarchy;
 - (b) free of hydrocarbons, dangerous goods and hazardous waste; and
 - (c) recorded in the waste management plan required under **condition E5**, including—
 - i. type;
 - ii. quantity (by weight and volume); and
 - iii. location of disposal.
- E5 By **31 July 2026**, the holder of this environmental authority must develop, document and implement a waste management program for all mining activities at the licenced place.
- E6 The waste management program required under condition E5 must be regularly reviewed and updated at intervals of no greater than **two (2) years**. The program must include:
- (a) A description of the mining activity that may generate waste; and
 - (b) Waste management control strategies including:
 - i. recording the types and amounts of wastes generated by the mining activity;
 - ii. segregation of the wastes;
 - iii. storage of the wastes;
 - iv. transport of the wastes;
 - v. monitoring and reporting matters concerning the waste;
 - (c) The hazard characteristics of the wastes generated including disposal procedures for regulated wastes; and
 - (d) A program for reusing, recycling or disposing of all wastes; and
 - (e) How the waste will be dealt with in accordance with the waste and resource management hierarchy, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices in the waste management hierarchy (i.e., avoidance, reuse, recycling, energy recovery, disposal); and
 - (f) How the waste will be stored, handled and transferred in a proper and effective manner; and

- (g) Procedures for identifying and implementing opportunities to minimise the amount of waste generated, promote efficiency in the use of resources and improve the waste management practices employed; and
- (h) Procedures for dealing with accidents, spills, and other incidents that may impact on waste management; and
- (i) Details of any accredited management system employed, or planned to be employed, to deal with the waste; and
- (j) How often the performance of the waste management practices will be assessed; and
- (k) The indicators or other criteria on which the performance of the waste management practices will be assessed; and
- (l) Staff training and induction to the waste management program.

E7 Unless otherwise permitted by the conditions of this environmental authority or with prior approval from the administering authority and in accordance with a relevant standard operating procedure, waste must not be burnt.

Regulated Waste

E8 Where regulated waste is removed from the licenced place, the holder of this environmental authority must ensure that:

- (a) The removal and transport of such wastes is carried out by a licensed operator; and
- (b) Records are kept of the following:
 - i. The date, quantity and type of waste removed; and
 - ii. Name of the regulated waste transporters that removed the waste; and
 - iii. The intended treatment/disposal destination of the waste.

Note: Records of documents maintained in compliance with a waste tracking system established under the *Environmental Protection Act 1994* or any other law for regulated waste will be deemed to satisfy this environmental authority condition.

E9 Regulated waste generated when carrying out the mining activity can be temporarily stored on site awaiting removal provided it is stored to ensure there is minimal risk of causing fire or contamination to land or waters.

Contaminated Land

E10 Before applying for surrender of a mining lease, the holder must (if applicable) provide to the administering authority a site investigation report under the Act, in relation to any part of the mining lease which has been used for notifiable activities or which the holder is aware is likely to be contaminated land, and also carry out any further work that is required as a result of that report to ensure that the land is suitable for its final land use.

E11 Before applying for progressive rehabilitation certification for an area, the holder must (if applicable) provide to the administering authority a site investigation report under the Act, in relation to any part of the area the subject of the application which has been used for notifiable activities or which the holder is aware is likely to be contaminated land, and also carry out any further work that is required as a result of that report to ensure that the land is suitable for its final land use.

Waste Rock Management Plan

- E12 All waste rock must be:
- (a) Geochemically characterised and disposed of in a manner that minimises the potential generation and/or release of contaminants to the receiving environment;
 - (b) Where the geochemical characteristics of tailings is uncertain, this material must be treated as potentially acid forming, saline mine drainage or neutral mine drainage forming until demonstrated otherwise; and
 - (c) Details pertaining to meeting the requirements of this condition must be recorded and retained until this environmental authority is surrendered.

- E13 A Waste Rock Management Plan must be developed and certified by an appropriately qualified person and implemented. The Waste Rock Management Plan must be reviewed annually to assess the adequacy of the plan, ensure actual and potential environmental impacts are managed, and identify any necessary amendments to the plan to ensure compliance with this environmental authority. The Waste Rock Management Plan must include, but not necessarily be limited, the following:
- (a) A detailed design of any waste rock dump(s) to be constructed; and
 - (b) A detailed design plan showing the location of existing and planned waste rock dumps, including drainage features; and
 - (c) An Action Plan for the management of the existing waste rock dump, as identified in Schedule A – Table 1 (Project Infrastructure Layout – Mine Area). The Action Plan must include, but not necessarily be limited to, the following:
 - a. Timeframes and critical dates;
 - b. Details of relocation, capping or other control strategies that remove, minimise or mitigate the current environmental risk from mine drainage, including contingency plans;
 - c. Characterisation of the waste rock to allow conclusive determination of the chemistry runoff and seepage generated;
 - d. A materials balance and disposal plan demonstrating how waste rock will be managed to minimise the generation of acid, neutral and/or saline mine drainage;
 - e. A sampling program to verify the management of potentially acid forming rock and acid forming rock and waste rock that has potential to generate neutral mine drainage.
- E14 The actions referred to in condition E13(c) must be completed within the timeframes stated in the action plan, unless written agreement has been obtained from the administering authority.

Biodiversity

- E15 Prior to commencement of vegetation clearing, the holder of this environmental authority must:
- a) Engage an appropriately qualified person to develop, document, implement and maintain a vegetation clearing plan, for all stages of the activity, including measures to minimise impacts on significant flora species.
 - b) Conduct a pre-clearance survey, undertaken by an appropriately qualified person to identify and assess significant flora species, including threatened or endangered species, in accordance with the latest version of the administering authority's Guidelines for Flora Survey and Assessment in Northern Queensland; and
 - c) Provide a report, in accordance with the latest version of the administering authority's Guidelines for Flora Survey and Assessment in Northern Queensland, to the administering authority.
- E16 If the report required by condition E15 indicates the presence of prescribed native wildlife, breeding places, or conservation listed flora (including threatened or protected plant species), the holder of this environmental authority must:
- (a) Engage an appropriately qualified spotter/catcher to work ahead of vegetation clearing to manage and mitigate impacts on native wildlife and their breeding places; and
 - (b) Ensure that an appropriately qualified person is engaged to identify and implement measures to avoid or minimise impacts on conservation listed flora, including their relocation or protection of threatened or protected plant species where feasible.

Note: This environmental authority does not authorise the taking of native wildlife or the tampering with a breeding place that is being used by prescribed native wildlife to incubate or rear the animal's offspring.

- E17 In the event of identification of rare or threatened species on the licensed place, a diagrammatic representation of the species occurrence relative to the mining activity together with a management and monitoring strategy for species conservation must be prepared and implemented and submitted to the administering authority within 90 days of the event.
- E18 Significant residual impacts to prescribed environmental matters are not authorised under this environmental authority or the *Environmental Offsets Act 2014*.

- E19 Records demonstrating that each impact to a prescribed environmental matter did not, or is not likely to, result in a significant residual impact to that matter must be:
- (a) Completed by an appropriately qualified person; and
 - (b) Kept for the life of the environmental authority.

END OF SCHEDULE E

Schedule F – Regulated Structures

Assessment of consequence category

- F1 The consequence category of any structure must be assessed by a suitably qualified and experienced person in accordance with the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)* at the following times:
- (a) Prior to the design and construction of the structure, if it is not an existing structure; or
 - (b) Prior to any change in its purpose or the nature of its stored contents.
- F2 A consequence assessment report and certification must be prepared for each structure assessed and the report may include a consequence assessment for more than one structure.
- F3 Certification must be provided by the suitably qualified and experienced person who undertook the assessment, in the form set out in the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)*.

Design and construction of a regulated structure

- F4 Conditions F5 to F9 inclusive do not apply to existing structures.
- F5 All regulated structures must be designed by, and constructed under the supervision of, a suitably qualified and experienced person in accordance with the requirements of the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)*.
- F6 Construction of a regulated structure is prohibited unless:
- (a) The holder has submitted a consequence category assessment report and certification to the administering authority; and
 - (b) Certification for the design, design plan and the associated operating procedures has been certified by a suitably qualified and experienced person in compliance with the relevant conditions of this authority.
- F7 Certification must be provided by the suitably qualified and experienced person who oversees the preparation of the design plan in the form set out in the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)* and must be recorded in the Register of Regulated Structures.
- F8 Regulated structures must:
- (a) Be designed and constructed in compliance with the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)*;
 - (b) Be designed and constructed with due consideration given to ensuring that the design integrity would not be comprised on account of:
 - a. Flood waters from entering the regulated dam from any watercourse or drainage line; and
 - b. Wall failure due to erosion by floodwaters arising from any watercourse or drainage line.
- F9 Certification by the suitably qualified and experienced person who supervises the construction must be submitted to the administering authority on the completion of construction of the regulated structure, and state that:
- (a) The 'as constructed' drawings and specifications meet the original intent of the design plan for that regulated structure
 - (b) Construction of the regulated structure is in accordance with the design plan.
- F10 All affected persons must be provided with a copy of the emergency action plan in place for each regulated structure:
- (a) For existing structures that are regulated structures, within **ten (10)** business days of this condition taking effect;
 - (b) Prior to the operation of the new regulated structure; and
 - (c) If the emergency action plan is amended, within 5 business days of it being amended.

Operation of a regulated structure

- F11 Operation of the regulated structure, except for an existing structure, is prohibited unless the holder has submitted to the administering authority in respect of regulated structure, all of the following:
- (a) One paper copy and one electronic copy of the design plan and certification of the 'design plan' in accordance with Condition F6;
 - (b) A set of 'as constructed' drawings and specifications;
 - (c) Certification of the 'as constructed drawings and specifications' in accordance with Condition F9;
 - (d) Where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system, a copy of the certified system design plan;
 - (e) The requirements of this authority relating to the construction of the regulated structure have been met;
 - (f) The holder has entered the details required under this authority, into a Register of Regulated Structures; and
 - (g) There is a current operational plan for the regulated structure.
- F12 For existing structures that are regulated structures:
- (a) Where the existing structure that is a regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system the holder must submit to the administering authority within 12 months of the commencement of this condition a copy of the certified system design plan including that structure; and
 - (b) There must be a current operational plan for the existing structures.
- F13 Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitated, in compliance with the current operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings.

Mandatory reporting level

- F14 Conditions F15 to F18 inclusive only apply to Regulated Structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
- F15 The Mandatory Reporting Level (the MRL) must be marked on a regulated dam in such a way that during routine inspections of that dam, it is clearly observable.
- F16 The holder must, as soon as practicable but within **forty-eight (48)** hours of becoming aware, notify the administering authority when the level of the contents of a regulated dam reaches the MRL.
- F17 The holder must, immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised discharge from the regulated dam.
- F18 The holder must record any changes to the MRL in the Register of Regulated Structures.

Design storage allowance

- F19 The holder must assess the performance of each regulated dam or linked containment system over the preceding November to May period based on actual observations of the available storage in each regulated dam or linked containment system taken prior to 1 July of each year.
- F20 By 1 November of each year, storage capacity must be available in each regulated dam (or network of linked containment systems with a shared DSA volume), to meet the Design Storage Allowance (DSA) volume for the dam (or network of linked containment systems).
- F21 The holder must, as soon as practicable but within **forty-eight (48)** hours of becoming aware that the regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, notify the administering authority.
- F22 The holder must, immediately on becoming aware that a regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, act to prevent the occurrence of any unauthorised discharge from the regulated dam or linked containment systems.

Annual inspection report

- F23 Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.
- F24 At each annual inspection, the condition and adequacy of all components of the regulated structure must be assessed and a suitably qualified and experienced person must prepare an annual inspection report containing details of the assessment and include a recommendations section, with any recommended actions to ensure the integrity of the regulated structure or a positive statement that no recommendations are required.
- F25 The suitably qualified and experienced person who prepared the annual inspection report must certify the report in accordance with the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)*.
- F26 The holder must within **twenty (20)** business days of receipt of the annual inspection report, provide to the administering authority:
- (a) The recommendations section of the annual inspection report; and
 - (b) If applicable, any actions being taken in response to those recommendations; and
 - (c) If, following receipt of the recommendations and (if applicable) recommended actions, the administering authority requests a copy of the annual inspection report from the holder, provide this to the administering authority within 10 business days of receipt of the request.
- F27 The holder must provide a copy of any reports, documentation and certifications prepared under this authority, including but not limited to any Register of Regulated Structures, consequence assessment, design plan and other supporting documentation, to a new holder on the transfer of this authority.

Register of Regulated Structures

- F28 Each regulated dam listed in Schedule F – Table 1 (Regulated Dams) must meet the hydraulic performance criteria listed in Schedule F – Table 1 (Regulated Dams) for that structure.

Schedule F – Table 1 (Regulated Dams)

Name of Regulated Dam	Co-ordinates GDA 2020 MGA Zone 55		Consequence Category	Max Operating Level (mAHD)	Spillway Capacity Design Criteria	Design Storage Allowance (DSA)			Mandatory Reporting Level (MRL)		
	Latitude	Longitude				Design Criteria	Volume (ML)	Level (mAHD)	Design Criteria	Volume (ML)	Level (mAHD)
Process Water Dam (PWD)	-16.098012	144.5189623	High	407	1% AEP	5% AEP Wet Season	44.6 ¹	N/A	10% AEP 72hr event	13.9	404.6
	-16.098979	144.5198192									
	-16.099287	144.5191146									
	-16.098548	144.5184604									
Overflow Dam 1	-16.098826	144.5205873	High	407	1% AEP	5% AEP Wet Season	Shared with PWD ¹	N/A	10% AEP 72hr event	Included in PWD MRL ²	Not Required
	-16.099323	144.5205998									
	-16.099544	144.5209801									
	-16.099360	144.5199546									
Overflow Dam 2	-16.097969	144.5214762	High	411	1% AEP	5% AEP Wet Season	Shared with PWD ¹	N/A	10% AEP 72hr event	Included in PWD MRL ²	Not Required
	-16.098546	144.5214223									
	-16.098787	144.5219655									
	-16.098691	144.5206170									
ILS Pond	-16.099079	144.5197993	High	407.5	1% AEP	5% AEP Wet Season	Included with PWD ¹	N/A	10% AEP 72hr event	Included in PWD MRL ²	Not Required
	-16.098829	144.5201107									
	-16.099261	144.5199465									
	-16.098985	144.5202676									
PLS Pond	-16.099364	144.5194594	High	407.5	1% AEP	5% AEP Wet Season	Included with PWD ¹	N/A	10% AEP 72hr event	Included in PWD MRL ²	Not Required
	-16.099123	144.5197427									
	-16.099528	144.5195975									
	-16.099287	144.5198901									
Raffinate	-16.098794	144.5201766	High	408.7	1% AEP			N/A			

	-16.098607	144.5204125				5% AEP Wet Season	Included with PWD ¹		10% AEP 72hr event	Included in PWD MRL ²	Not Required
	-16.098940	144.5202962									
	-16.098744	144.5205322									
Settling Dam ³	-16.101691	144.5145156	Significant	383.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	-16.101400	144.5143137									
	-16.100928	144.5156837									
	-16.101235	144.5157360									
Release Dam	-16.101691	144.5145156	Significant	386	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	-16.101400	144.5143137									
	-16.100928	144.5156837									
	-16.101235	144.5157360									
Raw Water Dam 2 ⁴	-16.098982	144.5192305	Significant	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	-16.098422	144.5184900									
	-16.098193	144.5190347									
	-16.098651	144.5195803									

1. A total DSA of 44.6ML is shared across the PWD and Overflow Dams.
2. As the point of last release from the Heap Leach Pad storages, the PWD is to contain the entire 72 hour 1% AEP allowance.
3. The hydraulic performance criteria for the 'Release Dam' override those of the 'Settling Dam' at such time the 'Release Dam' has completed construction.
4. The hydraulic performance criteria for the 'Raw Water Dam 2' will not apply after the time that said structure is decommissioned.

END OF SCHEDULE F

Schedule G – Definitions

Key terms and/or phrases used in this document are defined in this section. Applicants should note that where a term is not defined, the definition in the Environmental Protection Act 1994, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

"80th percentile of reference" must be determined in accordance with QWQG (2009) and ANZECC (2000) methodology. Reference sites are specified in Schedule C - Table 4 (Receiving Waters Monitoring Locations).

"administering authority" is the agency or department that administers the environmental authority provisions under the *Environmental Protection Act 1994*.

"affected person" is someone whose drinking water can potentially be impacted as a result of discharges from a dam or their life or property can be put at risk due to dwellings or workplaces being in the path of a dam break flood.

"Annual Exceedance Probability" or **"AEP"** the probability that at least one event in excess of a particular magnitude will occur in any given year.

"AHD" means **'Australian Height Datum'** which is the Australian national standard of geodetic datum for altitude measurements and is measured in meters (m). The level of 0.0 meters (m) AHD approximates the mean sea level (as previously measured for the period 1966-1968).

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

"ANZECC (2000)" means the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) published by the Australian and New Zealand Environment and Conservation Council and the Agriculture and Resource Management Council of Australia and New Zealand or any equivalent update/replacement guidelines.

"appropriately qualified person" means a person who has professional qualifications, training, skills and experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods or literature.

"assessed" and **"assessment"** by a suitably qualified and experienced person in relation to a hazard assessment of a dam, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit of the assessment:

- (a) exactly what has been assessed and the precise nature of that determination;
- (b) the relevant legislative, regulatory and technical criteria on which the assessment has been based;
- (c) the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- (d) the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

"associated works" in relation to a dam, means:

- (a) operations of any kind and all things constructed, erected or installed for that dam; and (b) any land used for those operations.

"authority" means environmental authority (mining activities) under the Environmental Protection Act 1994.

"certification", means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by the Manual for assessing consequence categories and hydraulic performance of structures including design plans, 'as constructed' drawings and specifications, construction,

operation or an annual report regarding regulated structures, undertaken in accordance with the Board of Professional Engineers of Queensland Policy Certification by RPEQs (ID: 1.4 (2A)).

"certifying", "certify" or "certified" have a corresponding meaning as 'certification'.

"construction" or "constructed" in relation to a dam includes building a new dam and modifying or lifting an existing dam, but does not include investigations and testing necessary for the purpose of preparing a design plan.

"consequence" in relation to a structure as defined, means the potential for environmental harm resulting from the collapse or failure of the structure to perform its primary purpose of containing, diverting or controlling flowable substances.

"consequence category" means a category, either low, significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)*.

"chief executive" means the chief executive of the Department of Environment and Heritage Protection or its successor.

"commercial place" means a place used as an office or for business or commercial purposes, other than a place within the boundaries of the operational land.

"dam" means a land-based structure or a void that contains, diverts or controls flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void. A dam does not mean a fabricated or manufactured tank or container, designed and constructed to an Australian Standard that deals with strength and structural integrity of that tank or container.

"dam crest volume" means the volume of material (liquids and/or solids) that could be within the walls of a dam at any time when the upper level of that material is at the crest level of that dam. That is, the instantaneous maximum volume within the walls, without regard to flows entering or leaving (e.g. via spillway).

"Design Storage Allowance" or "DSA" means an available volume, estimated in accordance with the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams published by the Department of Environment and Heritage Protection, that must be provided in a dam as at 1 November each year in order to prevent a discharge from that dam to an annual exceedance probability (AEP) specified in that Manual.

"designer" for the purposes of a regulated dam, means the certifier of the design plan for the regulated dam.

"design plan" is a document setting out how all identified consequence scenarios are addressed in the planned design and operation of a regulated structure.

"dried process residue" means the thickened and filtered tailings that are produced as a result of processing ore.

"EC" means electrical conductivity.

"emergency action plan" means documentation forming part of the operational plan held by the holder or a nominated responsible officer, that identifies emergency conditions that sets out procedures and actions that will be followed and taken by the dam owner and operating personnel in the event of an emergency. The actions are to minimise the risk and consequences of failure, and ensure timely warning to downstream communities and the implementation of protection measures. The plan must require dam owners to annually update contact details that are part of the plan, and to comprehensively review the plan at least every five years.

"environmental authority" means a licence or approval issued pursuant to the Environmental Protection Act 1994.

“**environmental offset**” has the meaning in section 7 of the *Environmental Offsets Act 2014*.

“**flow event**” in regards to receiving waters, means stream flow resulting in the flux of waters between permanent pools in drainage lines downstream of Raw Water Dam 1 and Settling Dam, as specified in Schedule A — Table 1 (Project Infrastructure Layout — Mine Area), and in Gum Creek and surrounding and connected waterways.

“**flowable substance**” means matter or a mixture of materials which can flow under any conditions potentially affecting that substance. Constituents of a flowable substance can include water, other liquids, fluids or solids, or a mixture that includes water and any other liquids, fluids or solids either in solution or suspension. “**hazard**” in relation to a dam as defined, means the potential for environmental harm resulting from the collapse or failure of the dam to perform its primary purpose of containing, diverting or controlling flowable substances.

“**hazard category**” means a category, either low, significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams.

“**holder**” means:

- (a) where this document is an environmental authority, any person who is the holder of, or is acting under, that environmental authority; or
- (b) where this document is a development approval, any person who is the registered operator for that development approval.

“**hydraulic performance**” means the capacity of a regulated dam to contain or safely pass flowable substances based on a probability (AEP) of performance failure specified for the relevant hazard category in the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams.

“**in situ**” in relation to water quality monitoring, means sampling a population variable (e.g., the concentration of an aquifer groundwater quality parameter) as close as possible to its origin. Unless otherwise specified under a condition of this environmental authority, in situ water quality parameters must include pH, electrical conductivity, dissolved oxygen (O_2 saturation) and total suspended solids.

“**infrastructure**” means dams, roads and tracks, buildings and other structures built for the purpose of mining activities but does not include facilities required for the long-term management of mining impacts or the protection of potential resources. Such facilities include dams containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

“**land**” in the “land schedule” of this document means land excluding waters and the atmosphere, that is, the term has a different meaning from the term as defined in the *Environmental Protection Act 1994*. For the purposes of the *Acts Interpretation Act 1954*, it is expressly noted that the term ‘land’ in this environmental authority relates to physical land and not to interests in land.

“**land use**” means the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

“**leachate**” means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

“**levee**” means an embankment that only provides for the containment and diversion of stormwater or flood flows from a contributing catchment, or containment and diversion of flowable materials resulting from releases from other

works, during the progress of those stormwater or flood flows or those releases; and does not store any significant volume of water or flowable substances at any other times.

“licenced place” means the mining activities carried out at the mining tenements detailed on Page 1 of this environmental authority.

“low consequence dam” means any dam that is not a high or significant consequence category as assessed using the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)*.

“m” means metres.

"Mandatory Reporting Level" or "MRL" means a warning and reporting level determined in accordance with the criteria in the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)* published by the administering authority.

“manual” means the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)* published by the administering authority, as amended from time to time.

"major anions" in regards to water quality monitoring, includes at minimum the carbonate ion (CO₃²⁻), bicarbonate ion (HCO₃⁻) and chloride ion (Cl⁻).

"major cations" in regards to water quality monitoring, includes at minimum the sodium ion (Na⁺), potassium ion (K⁺), magnesium ion (Mg²⁺) and calcium ion (Ca²⁺).

“maximum extent of impact” means the total, cumulative, residual extent and duration of impact to a prescribed environmental matter that will occur over a project's life after all reasonable avoidance and reasonable on-site mitigation measures have been, or will be, undertaken.

“measures” includes any measures to prevent or minimise environmental impacts of the mining activity, such as bunds, silt fences, diversion drains, capping, and containment systems.

"modification" or "modifying" (see definition of "construction").

"mineral" means a substance which normally occurs naturally as part of the earth's crust or is dissolved or suspended in water within or upon the earth's crust and includes a substance which may be extracted from such a substance, and includes—

- a) clay if mined for use for its ceramic properties, kaolin and bentonite;
- b) magnetite;
- c) metal or metalloid compounds, including but not limited to compounds containing gold, copper, silver, lead, nickel, and zinc.
- d) foundry sand;
- e) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil therefrom;
- f) limestone if mined for use for its chemical properties;
- g) marble;
- h) mineral oil or gas extracted or produced from shale or coal by in situ processes;
- i) peat;
- j) salt including brine;
- k) shale from which mineral oil may be extracted or produced;

- l) silica, including silica sand, if mined for use for its chemical properties;
- m) rock mined in block or slab form for building or monumental purposes; but does not include—
- n) living matter;
- o) petroleum within the meaning of the Petroleum Act 1923;
- p) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form;
- q) water.

“minimise” is to reduce to the smallest possible amount or degree.

“NATA” means National Association of Testing Authorities, Australia.

“operational plan” for a dam means a document that amongst other things sets out procedures and criteria to be used for operating a dam during a particular time period, The operational plan as defined herein may form part of a plan of operations or plan otherwise required in legislation.

“prescribed environmental matters” has the meaning in section 10 of the *Environmental Offsets Act 2014*, limited to the matters of State environmental significance listed in schedule 2 of the Environmental Offsets Regulation 2014.

“prescribed native wildlife” for the purposes of this environmental authority, means native wildlife (including plants) listed as near threatened, vulnerable or endangered, under the Nature Conservation (Wildlife) Regulation 2006.

“QWQG (2009)” means the Queensland Water Quality Guidelines 2009 published by the Queensland Government or any equivalent update/replacement guidelines.

“receiving environment” in relation to an activity that causes or may cause environmental harm, means the part of the environment to which the harm is, or may be, caused. In relation to releases as defined in this environmental authority, the receiving environment can be further defined as the receiving waters of Gum Creek and connected or surrounding waterways.

“receiving waters” means the waters into which this environmental authority releases of mine affected water.

“reference site” specified in Schedule C - Table 4 (Receiving Waters Monitoring Locations).

“Register of Regulated Structures” includes:

- (a) Date of entry in the register;
- (b) Name of the structure, its purpose and intended/actual contents;
- (c) The consequence category of the dam as assessed using the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)*;
- (d) Dates, names, and reference for the design plan plus dates, names, and reference numbers of all document(s) lodged as part of a design plan for the dam;
- (e) Name and qualifications of the suitably qualified and experienced person who certified the design plan and ‘as constructed’ drawings;
- (f) For the regulated dam, other than in relation to any levees –
 - a. The dimensions (metres) and surface area (hectares) of the dam measured at the footprint of the dam;
 - b. Coordinates (latitude and longitude in GDA 2020) within five metres at any point from the outside of the dam including its storage area;
 - c. Dam crest volume (megalitres);
 - d. Spillway crest volume (metres AHD);
 - e. Maximum operating level (metres AHD);

- f. Storage rating table of stored volume versus level (metres AHD);
- g. Design storage allowance (megalitres) and associated level of the dam (metres AHD);
- h. Mandatory reporting level (metres AHD);
- (g) The design plan title and reference relevant to the dam;
- (h) The date construction was certified as compliant with the design plan;
- (i) The name and details of the suitably qualified and experienced person who certified that the constructed dam was compliant with the design plan;
- (j) Details of the composition and construction of any liner;
- (k) The system for the detection of any leakage through the floor and sides of the dam;
- (l) Dates when the regulated dam underwent an annual inspection for structural and operational adequacy, and to ascertain the available storage volume for 1 November of any year;
- (m) Dates when recommendations and actions arising from the annual inspection were provided to the administering authority;
- (n) Dam water quality as obtained from any monitoring required under this authority as at 1 November of each year.

“regulated structure” means any structure in the significant or high consequence category as assessed using the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)* published by the administering authority. A regulated structure does not include:

- A fabricated or manufactured tank or container, design and constructed to an Australian Standard that deals with strength and structural integrity of that tank or container;
- A sump or earthen pit used to store residual drilling material and drilling fluid only for the duration of drilling and well completion activities;
- A flare pit.

“rehabilitation” the process of reshaping and revegetating land to restore it to a stable landform.

“release” means the discharge of water (whether intentional or due to failure to prevent) to the receiving environment from any area, structure or feature located on a mining lease listed on this environmental authority.

“representative” means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

“RL” means reduced level, relative to mean sea level as distinct from depths to water.

“sensitive place” means;

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical centre or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes which is not part of the mining activity and does not include employees accommodation or public roads.

“significant residual impact” has the meaning in section 8 of the *Environmental Offsets Act 2014*.

“spillway” means a weir, channel, conduit, tunnel, gate or other structure designed to permit discharges from the dam, normally under flood conditions or in anticipation of flood conditions.

"spotter/catcher" means a person who holds a rehabilitation permit in accordance with section 207 of the Nature Conservation (Wildlife Management) Regulation 2006 for the purpose of care and rehabilitation of a sick, injured or orphaned protected animal, or a protected animal whose habitat has been, or will be, destroyed by human activity or a natural disaster.

"stable" means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability), erosion resistance and geochemical stability with respect to seepage and contaminant generation.

"structure" means dam or levee.

“suitably qualified person” means a person who is a Registered Professional Engineer of Queensland under the provisions of the *Professional Engineers Act 2002*, who has an appropriate level of expertise in the structures, geomorphology, hydrology, hydraulics and environmental impact of watercourse diversions.

An appropriate level of expertise includes:

- Demonstrable competency, experience and expertise in:
 - Investigation, design or construction of watercourse diversions
 - Operation and maintenance of watercourse diversions
 - Geomechanics with particular emphasis on channel equilibrium, geology and geochemistry
 - Hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology
 - Hydraulics with particular reference to sediment transport and deposition and erosion control
 - Hydrogeology with particular reference to seepage and groundwater
 - Solute transport processes and monitoring thereof, or
- Sufficient knowledge and experience to certify that where the suitably qualified and experienced person has relied on advice and information provided by other persons with relevant expertise:
 - They consider it reasonable to rely on that advice and information
 - The expert providing the advice and information has knowledge, competency, suitable experience and demonstrated expertise in the matters related to watercourse diversions.

Persons with relevant expertise include:

- Geomorphologist: person who has demonstrated competency and relevant experience in stream geomorphology and watercourse diversions.
- Geotechnical Expert: person who has demonstrated competency and relevant experience in geotechnical assessment of soil characteristics suitable for watercourse diversions.
- Vegetation Expert: person who has demonstrated competency and relevant experience in the identification, role and function of vegetation with watercourses and adjoining floodplains, and has demonstrated competency and relevant experience in revegetation of watercourse diversions and adjoining floodplains.
- Groundwater Expert: person who has demonstrated competency and relevant experience in groundwater systems.
- Surface Water Expert: person who has demonstrated competency and relevant experience in hydrology.
- Engineer: person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the *Professional Engineers Act 2002* or has similar qualifications under a respected

professional registration association, and has demonstrated competency and relevant experience in design and construction of watercourse diversions.

- Soils Expert: person who has demonstrated competency and relevant experience in soil classification including the physical, chemical and hydrologic analysis of soil.

"system design plan" means a plan that manages an integrated containment system that shares the required DSA volume across the integrated containment system.

"the Act" means the *Environmental Protection Act 1994*.

"tolerable limits" means that a range of values could be accepted to achieve an overall environmental management objective (e.g. a range of settlement of a tailing cover could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation).

"µS/cm" means micro siemens per centimetre.

"waste and resource management hierarchy" retains its meaning under section 9 of the *Waste Reduction and Recycling Act 2011*.

"water" is defined under Schedule 4 of the *Water Act 2000*.

"watercourse" has the same meaning given in the Water Act 2000.

"waters" includes a river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water in natural or artificial watercourses, bed and bank of any watercourse, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater.

"water quality" means the chemical, physical and biological condition of water.

"water table level" means the top of the saturated zone of an unconfined aquifer (in m AHD), the standing water level.

"wet season" means the time of year, covering one or more months, when most of the average annual rainfall in a region occurs. For the purposes of DSA determination this time of year is deemed to extend from 1 November in one year to 31 May in the following year inclusive.

END OF SCHEDULE G

Schedule H – Figures

Figure 1 – Mine Infrastructure Layout

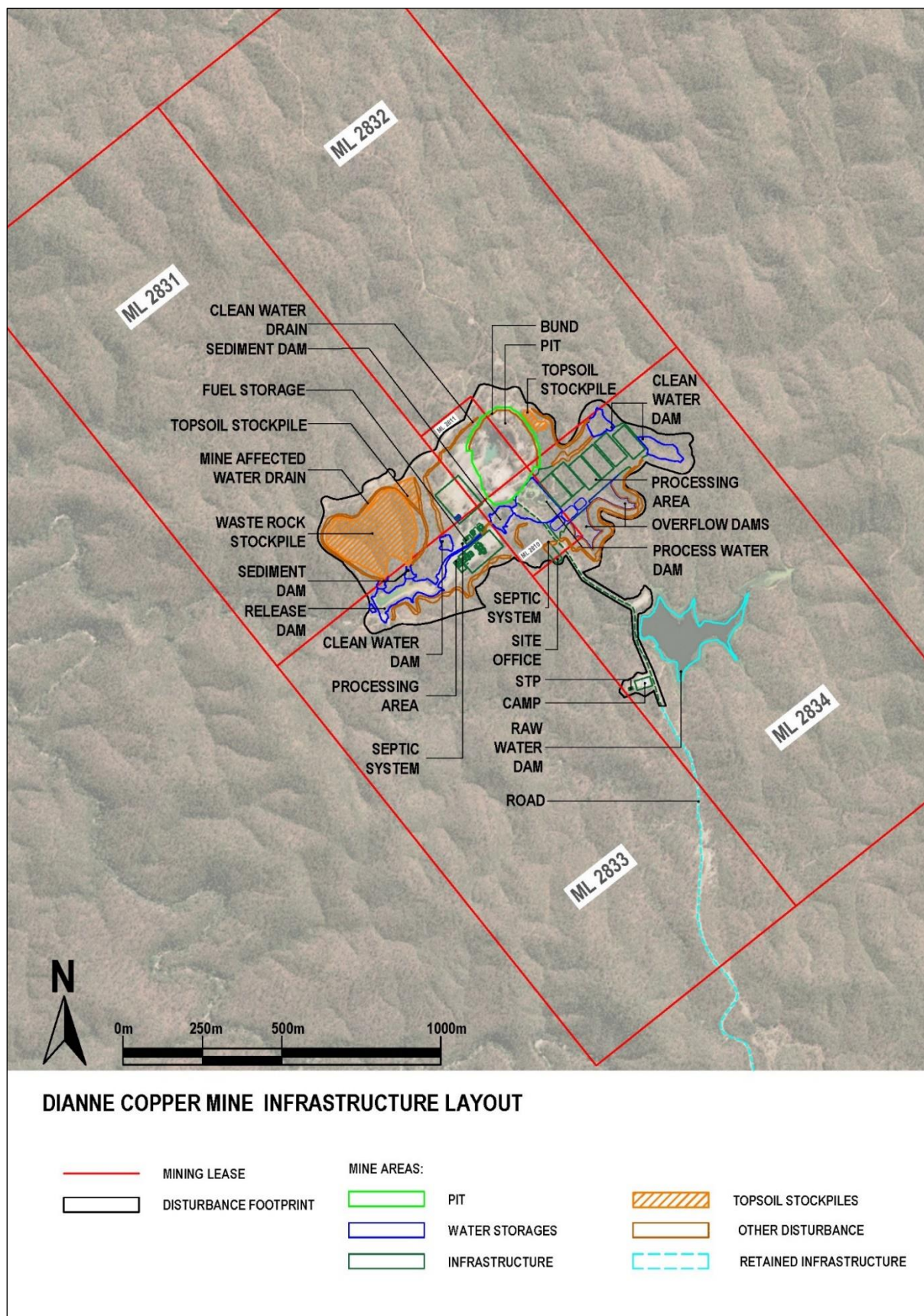


Figure 2 – Release Point Monitoring Location

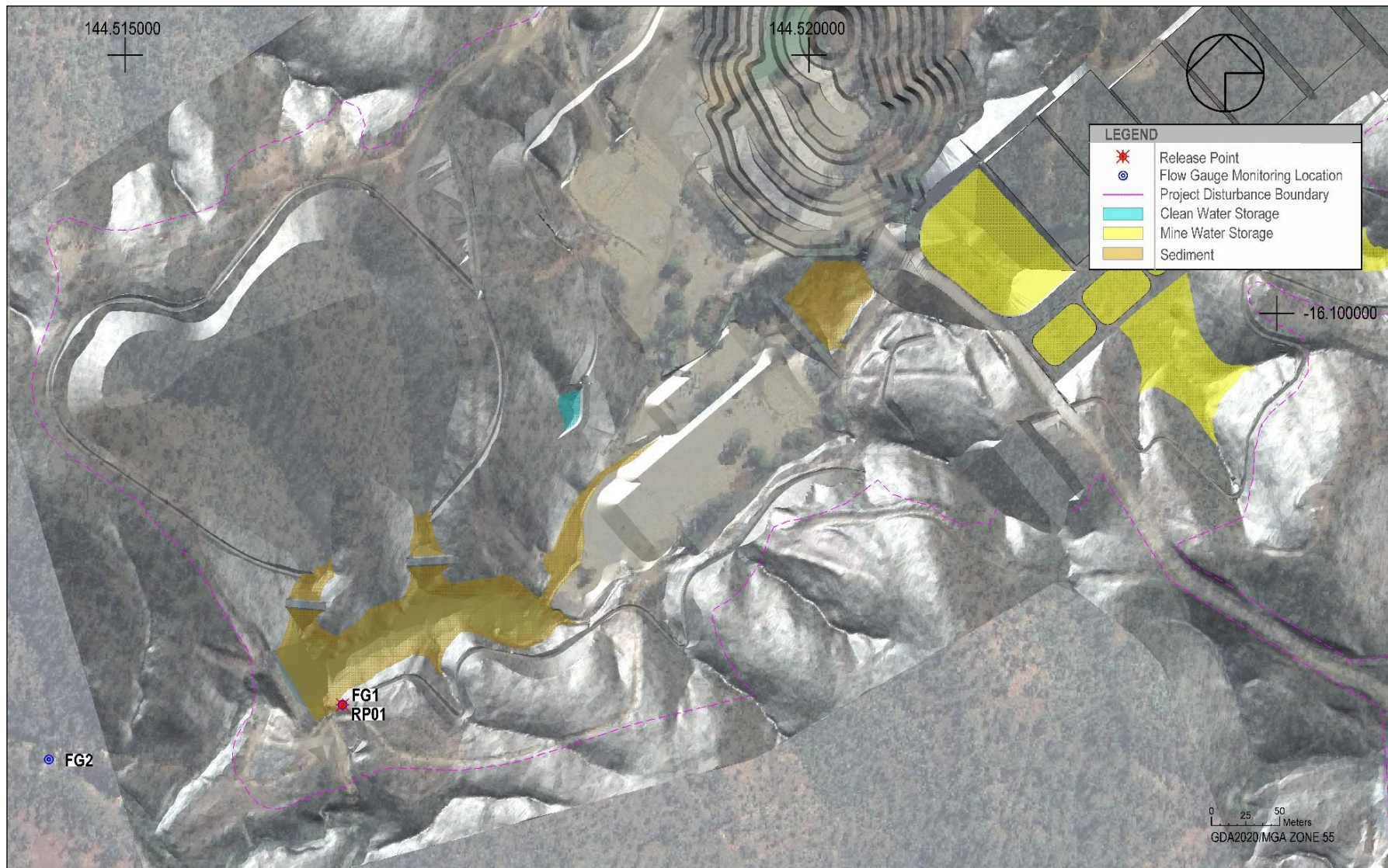


Figure 3 – Receiving Waters Monitoring Locations

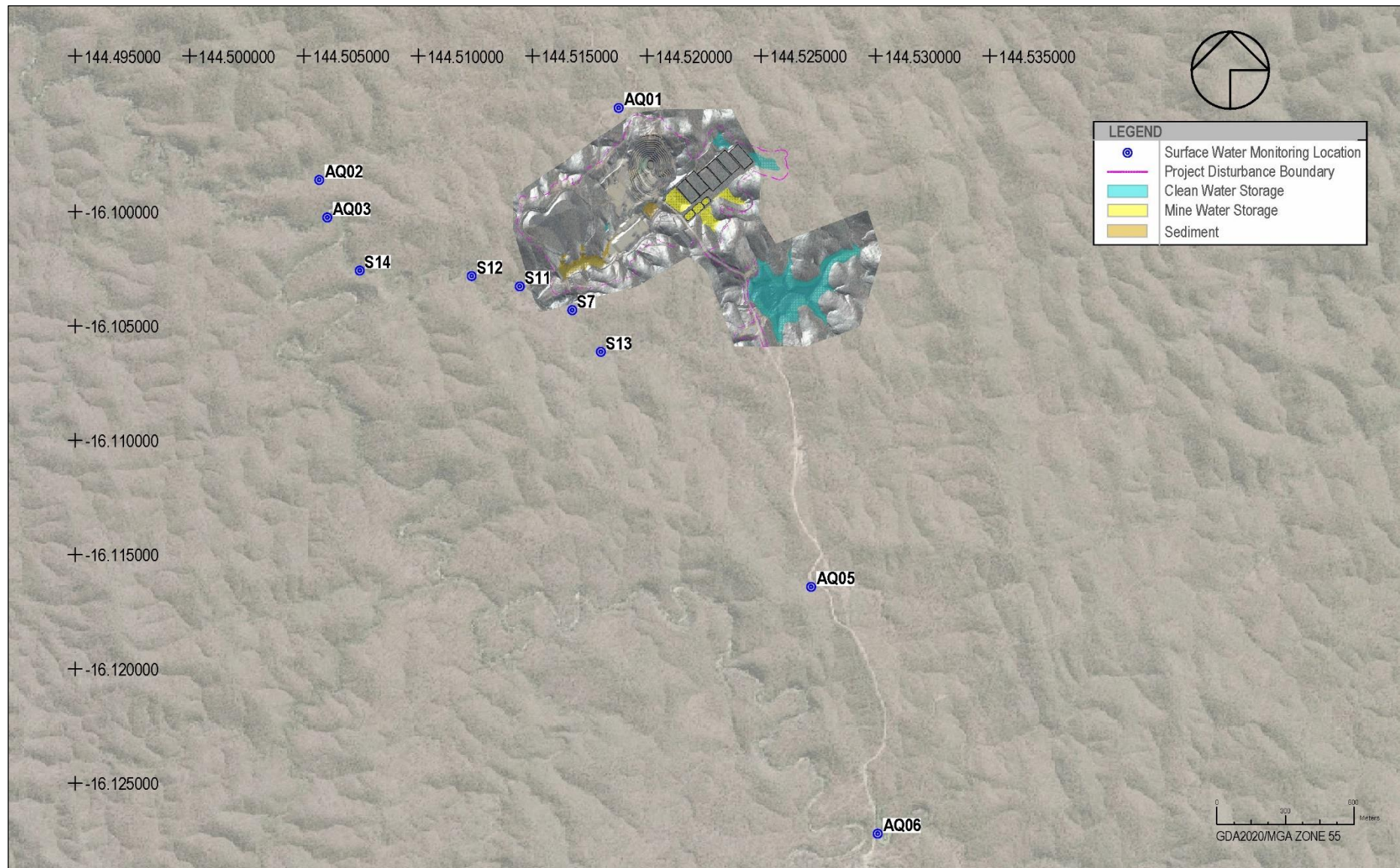
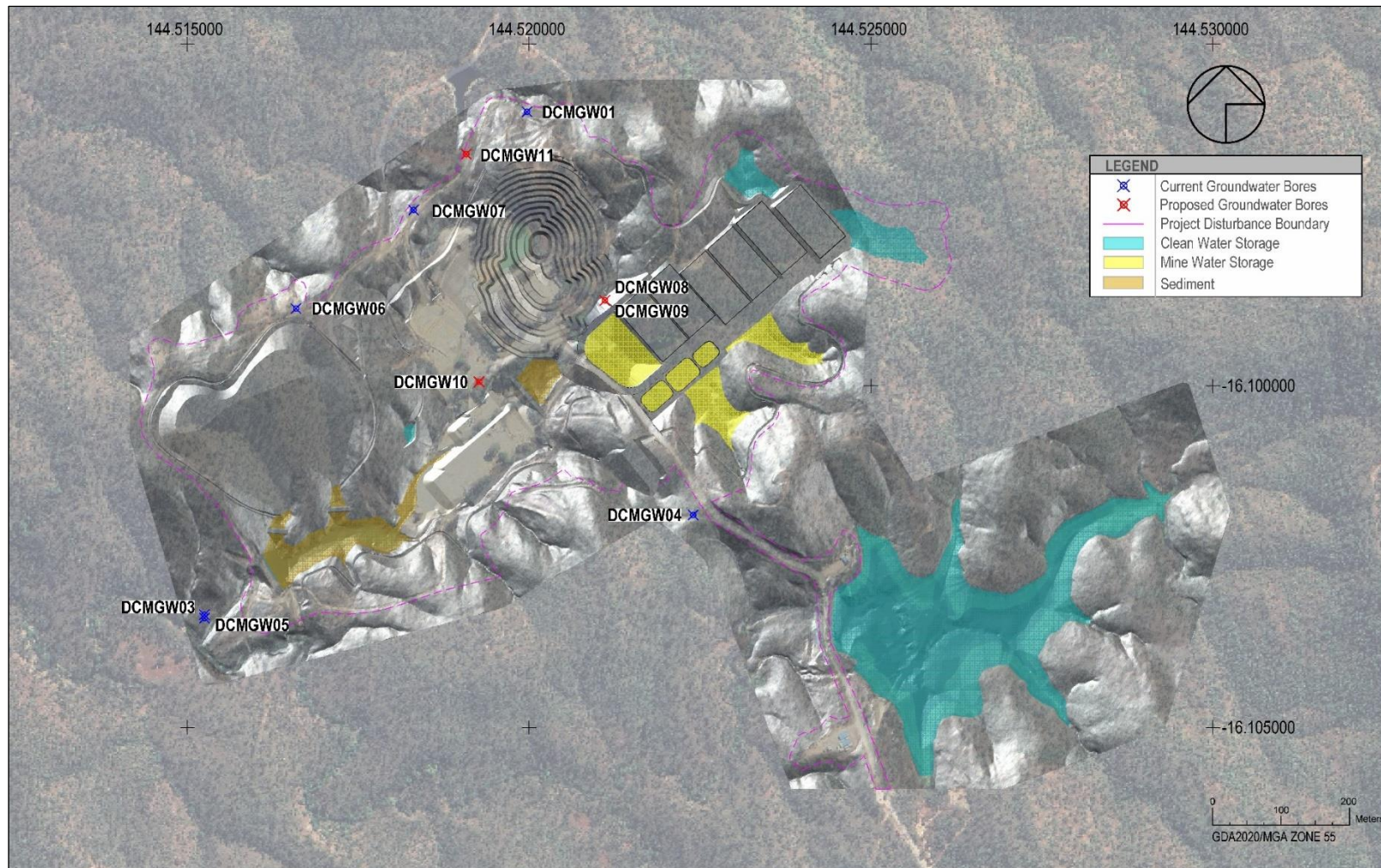


Figure 4 – Groundwater Monitoring Locations



END OF SCHEDULE H

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