

Permit

Environmental Protection Act 1994

Environmental authority EPML00863713

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

Environmental authority number: EPML00863713

Environmental authority takes effect on 2 June 2025

The anniversary date of this environmental authority is 8 September each year.

An annual return will be due each year on 01 April.

Environmental authority holder(s)

Name(s)	Registered address
Newmont Landco Pty Ltd	Level 5 500 Hay Street SUBIACO WA 6008

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 16: Mining gold ore	ML1546, ML10173, ML10148, ML10144, ML10172
Ancillary 54 - Mechanical waste reprocessing 2: Operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of general waste- (c) more than 10,000t	ML1546, ML10173, ML10148, ML10144, ML10172
Ancillary 33 - Crushing, milling, grinding or screening Crushing, grinding, milling or screening more than 5000t of material in a year	ML10144
Ancillary 08 - Chemical Storage 3: Storing more than 500 cubic metres of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	ML10144
Ancillary 60 – operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a) – (d) more than 200,000t	ML10144, ML10173

Additional information for applicantsEnvironmentally 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 contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (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 contaminated land (notice must be given within 20 business days)

that is causing, or is reasonably likely to cause, serious or material environmental harm.

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. 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.

Permit

Environmental authority EPML00863713

T. Gibbs

Signature

2 June 2025

Date

Teale Gibbs
Department of the Environment, Tourism, Science
and Innovation
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Minerals Business Centre
Department of the Environment, Tourism, Science
and Innovation
Phone: 07 4222 5352
Email: ESCairns@des.qld.gov.au

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)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state-controlled roads), the Department of Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Conditions of environmental authority

Schedule A - General

Activity

(A1-1) In carrying out the mining activity the environmental authority holder must comply with Schedule A -Table 1 (Authorised Mining Activities)

Schedule A - Table 1 (Authorised Mining Activities)

Mine Domain	Mine Feature	Tenure	Maximum Area of Disturbance (ha)	Easting (GDA2020)	Northing (GDA2020)
Dams	Raw Water Dam	ML10144	10.9	424476	7757249
				424840	7757219
				424559	7756705
				424746	7756831
				424690	7757319
	Upper Plum Tree Creek Dam	ML10144	0.5	422729	7756912
				422791	7756913
				422788	7756848
				422722	7756825
	Plum Tree Creek Dam	ML10144	1.3	422766	7757122
				422894	7757049
				422729	7756912
	Mt Hope Dam	ML10144	1.8	424411	7754489
				424628	7754489
				424713	7754632
				424398	7754671
	Mt Hope Extension Dam	ML10144	0.2	425234	7754586
				425388	7754597
				425221	7754665
				425355	7754654
	Supergene Dam	ML10144	0.7	422980	7755891
				422915	7755718

Mine Domain	Mine Feature	Tenure	Maximum Area of Disturbance (ha)	Easting (GDA2020)	Northing (GDA2020)
				422988	7755672
				423073	7755818
	Mt Mawe Dam	ML10144	1.3	425604	7755550
				425735	7755570
				425728	7755652
				425585	7755739
				425585	7755739
	Settlement Dam	ML10144	3.9	422824	7754857
				422975	7754712
				423080	7754826
				422926	7754962
				423083	7754998
	Southern Tailings Storage Facility	ML10144	62.0	424339	7754208
				424272	7754876
				423560	7754722
				423866	7754745
				423977	7753935
				423530	7753893
	New Northern Tailings Storage Facility	ML10144	102.3	423573	7758566
				424331	7757741
				423518	7757516
				424154	7758440
				423086	7757295
				423003	7758019
	Old Northern Tailings Storage Facility	ML10144	52.7	424453	7757087
				424501	7756828
				424003	7757315
				423634	7756750
				424169	7756744
				423218	7756723

Permit
Environmental authority EPML00863713

Mine Domain	Mine Feature	Tenure	Maximum Area of Disturbance (ha)	Easting (GDA2020)	Northing (GDA2020)
Waste	Northern Waste Rock Dump	ML10144	34.3	423478	7757354
				423171	7757028
				423740	7756698
				423572	7756238
				423301	7756119
				423054	7756314
	Eastern Waste Rock Dump	ML10144, ML10172, ML10173	179.8	423087	7756597
				423348	7756781
				424867	7756411
				425429	7754685
				425701	7755045
				424321	7754713
				424361	7755596
	Southern Waste Rock Dump	ML10144	22.0	424819	7755870
				425472	7756159
				423866	7755177
				424238	7755173
				424266	7754882
Void	Pit	ML10144	70.4	423857	7754744
				423421	7754985
	Scats Stockpile	ML10144	21.2	422883	7756980
				422708	7756806
				422750	7756225
				422935	7756076
				423024	7756610
		ML10144	4.5	Refer to Schedule J, Figure 2: Void Extent	
		ML10144	4.5	424498	7756812

Mine Domain	Mine Feature	Tenure	Maximum Area of Disturbance (ha)	Easting (GDA2020)	Northing (GDA2020)
Run of Mine (ROM)	Decommissioned and Reclaimed Water Treatment Pond			424543	7756563
				424424	7756464
				424205	7756739
Processing area	Heap Leach Stockpile	ML10144	10.0	422976	7755658
				423145	7755859
				423389	7755518
				423229	7755366
				423060	7755451
	Low Grade Stockpile	ML10144	10.0	423910	7755432
				423824	7755243
				423620	7755359
				423663	7755786
	NAF Oxide Stockpile	ML10144	7.8	424573	7757691
				424323	7757687
				424300	7757955
				424589	7757932
	PAF Oxide Stockpile	ML10144	3.5	423982	7757599
				424286	7757689
				424203	7757732
				424088	7757525
Quarry	Quarry	ML10144	3.26	424223	7758654
				424191	7758870
				424216	7759476
				424281	7759521
				424576	7759147
				424611	7759472
				424808	7759593
				424806	7759376
				424968	7759344

Mine Domain	Mine Feature	Tenure	Maximum Area of Disturbance (ha)	Easting (GDA2020)	Northing (GDA2020)
				425022	7759123
				424946	7758969
Borrow Pit	Northern Borrow Pit	ML10144	40.15	422726	7757161
				422753	7757158
				422756	7757062
				422717	7756841
				422692	7756760
				422636	7756686
				422601	7756707
				422571	7756782
				422583	7756848
				422660	7756889
Ancillary Infrastructure	Reclaimed Workshop Area	ML10144	0.5	423397	7755598
				423510	7755660
				423485	7755686
				423372	7755632
	Office	ML10144	0.3	423486	7755637
				423517	7755569
				423545	7755614
				423522	7755654
	Fuel storage	ML10144	0.02	423571	7755593
				423559	7755589
				423566	7755571
				423576	7755576
	Roads & Tracks	ML10144	20.0	Not feasible	Not feasible

Maintenance of Measures, Plant and Equipment

(A2-1) The environmental authority holder must:

- (a) Install all measures, plant, and equipment necessary to ensure compliance with the conditions of this environmental authority; and
 - (b) Maintain such measures, plant, and equipment in a proper condition; and
 - (c) Operate such measures, plant, and equipment in a proper manner.
- (A2-2) No change, replacement or alteration of any plant or equipment is permitted if the change, replacement, or alteration increases, or is likely to increase, the risk of environmental harm.
- (A2-3) All instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority must be calibrated, and appropriately operated and maintained.

Monitoring and measurements

- (A3-1) Record, compile and keep for a minimum of five years all monitoring results required by this environmental authority and make available for inspection all or any of these records upon request by the administering authority.
- (A3-2) The environmental authority holder must upon request from the administering authority, supply monitoring records, plans and reports in the form and by the means requested by the administering authority within five business days.
- (A3-3) Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.
- (A3-4) All analyses, and tests required to be conducted under this environmental authority must be carried out by a laboratory that has NATA accreditation for such analyses and tests, except as otherwise authorised by the administering authority.

Emergency response / contingency

- (A4-1) An emergency response/contingency plan must be developed, maintained and implemented to respond to emergency events and incidents.
- (A4-2) The emergency response/contingency plan required under condition A4-1 must be provided to the administering authority on request and address the following matters as a minimum:
- (a) response procedures to be implemented to prevent or minimise the risk of environmental harm arising from incidents.
 - (b) response procedures to minimise the extent and duration of environmental harm caused by an incident.
 - (c) the practices and procedures to be employed to rehabilitate the environment or mitigate any environmental harm caused.

- (d) the resources to be used in response to an incident.
- (e) procedures to investigate the cause of any incidents, including releases, and where necessary, implement remedial actions to reduce the likelihood of recurrence of similar events.
- (f) the provision and availability of documented procedures to staff attending any incident to enable them to effectively respond; and
- (g) training of staff that will be called upon to respond to incidents to enable them to effectively and safely respond.
- (h) timely and accurate reporting of the circumstance and nature of incidents to the administering authority in accordance with conditions A5-1 to A5-3.
- (i) procedures for accessing monitoring points during incidents.
- (j) procedures to notify any person who may be affected by the event within 24 hours, with information to be provided at a minimum:
 - (i) the location of the release.
 - (ii) the date and time of the release.
 - (iii) the estimated quantity and type of any substances (if available concentrations) involved in the incident.
 - (iv) the potential impacts to environmental values caused by the release.

Notification of Emergencies, Incidents and Exceedance

- (A5-1) The environmental authority holder must notify the administering authority by phone and email as soon as possible (no later than 24 hours) after becoming aware of:
- (a) 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; or
 - (b) any monitoring result that indicates an exceedance of any environmental authority limit.
- (A5-2) The notification in condition (A5-1) must include, but not be limited to, the following:
- (a) the environmental authority number and name of the environmental authority holder.
 - (b) the name and telephone number of the designated contact person.
 - (c) the location of the emergency, incident, or exception
 - (d) the date and time of the emergency, incident, or exception.
 - (e) the time that the environmental authority holder became aware of the emergency, incident, or exception.

- (f) the estimated quantity and type of substances involved in the emergency, incident, or exception.
- (g) the actual or potential cause of the emergency, incident, or exception.
- (h) a description of the nature and effects of the emergency, incident, or exception, including environmental risks, any risks to public health or livestock
- (i) immediate actions taken to prevent or mitigate any further environmental harm caused by the release.
- (j) what notification of persons who may be affected by the event has occurred/is being undertaken.

(A5-3) Within twenty-eight days following the initial notification of an emergency or incident, further written advice must be provided to the administering authority, including 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.

Risk Management

(A6-1) The environmental authority holder must develop, maintain, and implement a risk management system for mining activities which conforms to the Standard for Risk Management (ISO31000:2009) or the latest edition of the Australian Standard for Risk Management.

Third Party Auditing

- (A7-1) Compliance with the conditions of this environmental authority must be audited by an appropriately qualified third-party auditor, nominated by the environmental authority holder, and accepted by the administering authority at regular intervals not exceeding once every two years.
- (A7-2) Upon receipt of the third-party audit report, the environmental authority holder must submit a copy to the administering authority.
- (A7-3) The third-party auditor must certify the independent findings of the audit in the report.
- (A7-4) The financial cost of the third-party audit is the responsibility of the environmental authority holder.
- (A7-5) The environmental authority holder must immediately act upon any recommendations arising from the audit report by:
 - (a) investigating any non-compliance issues identified; and
 - (b) implementing measures or taking necessary action to ensure compliance with the requirements of this environmental authority.

- (A7-6) Subject to condition (A7-5), and not more than one month following the submission of the audit report to the administering authority, the environmental authority holder must provide a written report to the administering authority addressing the:
- (a) actions taken by the environmental authority holder to ensure compliance with this environmental authority; and
 - (b) actions taken to prevent a recurrence of any non-compliance issues identified.

END OF CONDITIONS FOR SCHEDULE A

Schedule B – Air**Dust nuisance**

- (B1-1) Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nuisance, at any sensitive place.
- (B1-2) When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B1-3) If the environmental authority holder can provide evidence through monitoring that the following limits are not being exceeded then the environmental authority holder is not in breach of (B1-1):
- (a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulates - Deposited matter - Gravimetric method of 1991; and
 - (b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, at a sensitive place downwind of the operational land, when monitored in accordance with:
 - (i) Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method, when monitored in accordance with AS 3580.9.6 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM (sub) 10 high volume sampler with size-selective inlet - Gravimetric method of 1990; or
 - (ii) Any alternative method of sampling PM10, which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

NOTE: You must propose which monitoring method is appropriate in accordance with condition (B1-3) (a) or (b) or both.

- (B1-4) If monitoring indicates exceedance of the relevant limits in Condition (B1-3), then the environmental authority holder must:
- (a) Address the complaint including the use of appropriate dispute resolution if required; or
 - (b) Immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.

END OF CONDITIONS FOR SCHEDULE B

Schedule C – Water

General

- (C1-1) Contaminants that will, or have the potential to cause environmental harm, must not be released directly or indirectly to any waters except as permitted under the conditions of this environmental authority.
- (C1-2) The maintenance and cleaning of vehicles and any other equipment or plant must not be carried out in areas from which contaminants can be released into any receiving waters.
- (C1-3) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable to minimise the release of wastes, contaminants, or materials to any receiving waters.
- (C1-4) By 6 February each year the environmental authority holder must provide the administering authority an update of monitoring data and associated trigger levels and contaminant limits specified in Schedule C of this environmental authority, incorporating monitoring data obtained during the previous twelve months.
- (C1-5) All determinations of water quality/sample analysis required under a condition of this environmental authority must be:
- (a) performed by a person or body possessing appropriate experience and qualifications to perform the required measurements.
 - (b) made in accordance with methods prescribed in the latest edition of the administering authorities *Monitoring and Sampling Manual*.
 - (c) carried out on representative samples.
 - (d) collected from the monitoring locations identified in this environmental authority, within two hours of each other where possible; and
 - (e) for laboratory determinations, carried out in a laboratory accredited (e.g., NATA) for the method of analysis being used except as otherwise authorised by the administering authority.
- (C1-6) The following information must be recorded in relation to all water quality monitoring data for a specified period as required by this environmental authority and submitted to the administering authority in the specified format when requested:
- (a) the date and time when the sample was taken.
 - (b) the monitoring point where the sample was taken.
 - (c) the release flow rate at the time of sampling for each release point.
 - (d) the measured or estimated daily quantity of the contaminants released from all release points.
 - (e) the results of all monitoring and details of any exceedances with the conditions of this environmental authority; and

(f) all water quality monitoring data.

(C1-7) The release of contaminants directly or indirectly to waters must not:

- (a) produce any visible discolouration of receiving waters; or
- (b) produce any slick or other visible or odorous evidence of oil, grease or petrochemicals nor contain visible floating oil, grease, scum, litter, or other objectionable matter.

(C1-8) The environmental authority holder must develop, maintain, and implement a Sulphate Management Plan. The Sulphate Management plan must address as a minimum:

- (a) Measures to prevent sulphate release from the New Northern TSF, Southern TSF and Eastern WRD as identified in the Mt Leyshon Environmental Evaluation Report, May 2012.
- (b) Measures to ensure water leaving the site contains sulphate at levels that comply with Schedule C of this environmental authority.
- (c) A remedial works plan for areas downstream of the mine that details:
 - (i) the degree to which the measured sulphate concentrations are an issue for environmental values of surface waters and ground waters.
 - (ii) actions to address any existing sulphate related issues known to be currently occurring or causing environmental harm; and
 - (iii) actions to address potential sulphate related issues that may cause environmental harm, such as the formation of Monosulfidic Black Ooze (MBO).
- (d) Develop site-specific water quality objectives for sulphate using local biological effects data to assess risks to the aquatic ecosystem values.

Contaminant Release to Waters

(C2-1) Unless otherwise permitted under the conditions of this environmental authority, the release of contaminants to waters must only occur from the release points specified in Schedule C - Table 1 (Release Points) and depicted in Figure 1.

Schedule C – Table 1 (Release Points)

Monitoring point	Easting (GDA2020)	Northing (GDA2020)	Contaminant Source and Location	Receiving waters description	Monitoring frequency
Release Points - Interpretation					

Monitoring point	Easting (GDA2020)	Northing (GDA2020)	Contaminant Source and Location	Receiving waters description	Monitoring frequency
Mt Hope Dam Bypass	424374	7754660	Eastern Waste Rock Dump	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Settlement Dam Bypass	423134	7754971	Roche Hill. Southern Waste Rock Dump	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Release Points					
Mt Hope Dam Bypass	424358	7754065	Eastern Waste Rock Dump	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access)
Settlement Dam Bypass	423037	7754480	Roche Hill. Southern Waste Rock Dump	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access)
Plum Tree Creek Dam	422765	7757090	Scats Stockpile	Plum Tree Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).

Permit
Environmental authority EPML00863713

Monitoring point	Easting (GDA2020)	Northing (GDA2020)	Contaminant Source and Location	Receiving waters description	Monitoring frequency
Southern Tailings Storage Facility West Sump	423547	7754363	Southern Tailings Storage Facility	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Southern Tailings Storage Facility Southwest Sump	423521	7753799	Southern Tailings Storage Facility	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Southern Tailings Storage Facility Southeast Sump	424353	7754096	Southern Tailings Storage Facility	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Settlement Dam	423069	7754825	Roche Hill. Southern Waste Rock Dump	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Settlement Dam Sump	422840	7754727	Roche Hill. Southern Waste Rock Dump	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).

Permit
Environmental authority EPML00863713

Monitoring point	Easting (GDA2020)	Northing (GDA2020)	Contaminant Source and Location	Receiving waters description	Monitoring frequency
Supergene Dam	422936	7755782	Northern Waste Rock Dump. Heap leach Stockpile	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Supergene Dam Sump	422910	7755583	Northern Waste Rock Dump. Heap leach Stockpile	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Western Scats Sump	422750	7756169	Scats Stockpile	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Mt Hope Extension Dam	425359	7754601	Eastern Waste Rock Dump	One Mile Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Mt Hope Dam	424375	7754482	Eastern Waste Rock Dump. Southern Waste Rock Dump. Southern Tailings Storage Facility	Puddler Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).

Permit
Environmental authority EPML00863713

Monitoring point	Easting (GDA2020)	Northing (GDA2020)	Contaminant Source and Location	Receiving waters description	Monitoring frequency
Mt Mawe Dam	425608	7755562	Eastern Waste Rock Dump	Two Mile Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Old Northern Tailings Storage Facility West Sump	423196	7757314	Old Northern Tailings Storage Facility	Clarke Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
New Northern Tailings Storage Facility West Sump	423199	7757225	New Northern Tailings Storage Facility	Plum Tree Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
New Northern Tailings Storage Facility North Sump	423487	7758614	New Northern Tailings Storage Facility	Clarke Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Raw Water Dam	424483	7757221	Mt Mawe, Old Northern Tailings Storage Facility, Eastern Waste Rock Dump	Schreibers Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).

Permit
Environmental authority EPML00863713

Monitoring point	Easting (GDA2020)	Northing (GDA2020)	Contaminant Source and Location	Receiving waters description	Monitoring frequency
Raw Water Dam Sump	424692	7757332	Mt Mawe, Old Northern Tailings Storage Facility, Eastern Waste Rock Dump	Schreibers Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Old Northern Tailings Storage Facility East Sump	423931	7757413	Old Northern Tailings Storage Facility	Schreibers Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Old Northern Tailings Storage Facility North Sump	423681	7757436	Old Northern Tailings Storage Facility	Schreibers Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).
Mt Mawe Dam Sump	425810	7755584	Eastern Waste Rock Dump	Two Mile Creek	Daily during release (the first sample must be taken within 2 hours of commencement of release subject to safe access).

- (C2-2) The release of contaminants to waters from the authorised release points must be monitored at the locations and frequencies specified in Schedule C – Table 1 (Release Points) for each quality characteristic specified in Schedule C – Table 2 (Contaminant Release Trigger Levels and Limits).

Schedule C – Table 2 (Contaminant Release Trigger Levels and Limits)

Quality Characteristic	Contaminant release limit	Trigger Levels
Physicochemical		
Electrical conductivity (EC)	TBA ¹ µS/cm	TBA ¹ µS/cm

Quality Characteristic	Contaminant release limit	Trigger Levels
pH (pH Unit)	TBA ¹ (minimum)	TBA ¹ (minimum)
	TBA ¹ (maximum)	TBA ¹ (maximum)
Temperature (°C)	For interpretation purposes	For interpretation purposes
Dissolved Oxygen (DO)	For interpretation purposes	For interpretation purposes
Turbidity (NTU)	For interpretation purposes	For interpretation purposes
Total Suspended Solids (TSS)	50 mg/L	N/A
Hardness	For interpretation purposes.	For interpretation purposes.
Sulphate (SO ₄ ²⁻)	1000 ² mg/L	TBA ¹ .
Metals and Metalloids		
Total Aluminium (Al)	For interpretation purposes	N/A
Dissolved Aluminium (Al)	5 ² mg/L	55 ³ µg/L
Metals and Metalloids	Total (unfiltered) concentrations	Dissolved (filtered) concentrations
Arsenic (As)	0.5 ² mg/L	13 ³ µg/L
Cadmium (Cd)	0.01 ² mg/L	0.2 ³ µg/L
Chromium (Cr)	1 ² mg/L	1 ³ µg/L
Cobalt (Co)	1 ² mg/L	2.8 ³ µg/L
Copper (Cu)	1 ² mg/L	1.4 ³ µg/L
Lead (Pb)	0.1 ² mg/L	3.4 ³ µg/L
Nickel (Ni)	1 ² mg/L	11 ³ µg/L
Uranium (U)	0.2 ² mg/L	8.0 µg/L
Zinc (Zn)	20 ² mg/L	8 ³ µg/L
Non-metals		
Cyanide (WAD)	For interpretation purposes.	For interpretation purposes.
Cyanide (Total)	1 (mg/L)	7.0 ⁴ (µg/L)

1. Detail to be provided by the environmental authority holder to the administering authority with submission of the REMP report by 1 May 2015

2. Numbers based on ANZECC & ARM CANZ (2000) Livestock Drinking Water Guidelines.

3. Numbers based on ANZECC & ARM CANZ (2000) freshwater (95% level of protection) slightly-to-moderately disturbed ecosystems.

4. Number based on Cyanide Management guideline October 2008.

Note: All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Exceedances apply where results for dissolved metal/metalloids concentrations exceed trigger levels. Contaminant limits apply for metal/metalloids if total results exceed limits.

Note: Hardness Modified Trigger Values (HMTV) may be performed in accordance with ANZECC 2000 methodology.

- (C2-3) With the exception of high flow releases permitted under condition C4-3 of this environmental authority, the release of contaminants to waters must not exceed the contaminant limits for each quality characteristic stated in Schedule C – Table 2 (Contaminant Release Trigger Levels and Limits).
- (C2-4) If quality characteristics of the release exceed any of the trigger levels specified in Schedule C – Table 2 (Contaminant Release Trigger Levels and Limits) during a release event, the environmental authority holder must complete an investigation in accordance with the ANZECC and ARMCANZ (2000) methodology into the potential for environmental harm and provide a written report to the administering authority within three months detailing:
- (a) details of the investigations carried out.
 - (b) details of the environmental impacts observed; and
 - (c) actions taken to prevent environmental harm.

Note: An exceedance of pH relates to a value below the minimum pH or above the maximum pH levels identified in Schedule C – Table 2 (Contaminant Release Trigger Levels and Limits).

Note: Investigations may be undertaken to develop impact-based limits in accordance with ANZECC methodology (ANZECC guidelines – Chapter 3.5.1).

Stream Flow Monitoring

- (C3-1) The environmental authority holder must install, operate, and maintain a stream flow gauging station to determine and record stream flows with respect to each release point, as specified in Schedule C – Table 3 (Contaminant Release During Flow Events).
- (C3-2) With the exception of high flow releases permitted under condition C4-3 of this environmental authority, the release of contaminants to waters must only take place during periods of natural flow events specified as the minimum flow in Schedule C – Table 3 (Contaminant Release During Flow Events) and at the contaminant release point(s) specified in Schedule C – Table 1 (Release Points).

Schedule C – Table 3 (Contaminant Release During Flow Events)

Receiving water description	Release Point	Gauging station description	Eastern (GDA2020)	Northern (GDA2020)	Minimum Flow in Receiving Water Required for a Release Event	Release limit
Puddler Creek	Mt Hope Dam Bypass	PCC	425013	7753134	As specified in condition (C4-1)	As specified in Schedule C - Table 4 (Release Limits for High Flow Releases)
	Settlement Dam Bypass					
Puddler Creek	Southern Tailings Storage Facility Southwest Sump	PCC	425013	7753134	As specified in condition (C4-1)	Continuous (minimum daily)
	Southern Tailings Storage Facility Southeast Sump					
	Southern Tailings Storage Facility West Sump					
	Settlement Dam					
	Settlement Dam Sump					
	Supergene Dam					
	Supergene Dam Sump					

Receiving water description	Release Point	Gauging station description	Eastern (GDA2020)	Northern (GDA2020)	Minimum Flow in Receiving Water Required for a Release Event	Release limit
	Mt Hope Extension Dam					
	Mt Hope Dam					
	Western Scats Sump					
Two Mile Creek	Mt Mawe Dam	RSSTMC	426458	7755356		
Clarke Creek	Plum Tree Creek Dam	RSSCC	424359	7760144		
	Old Northern Tailings Storage Facility West Sump					
	New Northern Tailings Storage Facility West Sump					
	New Northern Tailings Storage Facility North Sump					
	Raw Water Dam					
	Raw Water Dam Sump					

Receiving water description	Release Point	Gauging station description	Eastern (GDA2020)	Northern (GDA2020)	Minimum Flow in Receiving Water Required for a Release Event	Release limit
	Old Northern Tailings Storage Facility North Sump					
	Old Northern Tailings Storage Facility East Sump					

Note: The volume of flow can be determined by height of water or flow. The actual flow must be a quantifiable measure, e.g.: $\geq 5\text{m}^3/\text{sec}$

- (C4-1) With the exception of high flow releases permitted under condition C4-3 of this environmental authority, at the time of release from the authorised release points specified in Schedule C – Table 3 (Contaminant Release During Flow Events) the water flow volume in the respective receiving water must be at least twenty times the volume at which respective contaminated waters are released.
- (C4-2) The daily quantity of contaminants released from each release point specified in Schedule C – Table 1 (Release Points) must be measured and recorded.

High Flow By-Pass

- (C4-3) The high flow release of mine affected water from the Mt Hope and Settlement Dam Bypass identified Schedule C – Table 1 (Release Points), to receiving waters must not:
- (a) exceed the contaminant limits stated in Schedule C – Table 10 (Receiving Waters Contaminant Limits) at the receiving water monitoring points in Schedule C – Table 7 (Receiving Water Reference Sites and Downstream Monitoring); and
 - (b) exceed the release limits at the spillway stated in Schedule C - Table 4 (Release Limits for High Flow Releases).

- (C4-4) An estimate of the daily quantity of contaminants released from each release point must be based on available measured data recorded at the release points in Schedule C - Table 1 (Contaminant Release Points).
- (C4-5) The release of contaminants directly or indirectly to waters:
- a) must not produce any visible discolouration of receiving waters; nor
 - b) must not produce any slick or other visible or odorous evidence of oil, grease, or petrochemicals; nor
 - c) contain visible floating oil, grease, scum, litter, or other objectionable matter
- (C4-6) Releases to waters must be undertaken so as to minimise erosion of the bed and banks of the receiving waters or cause a material build-up of sediment in such waters.

Schedule C - Table 4 (Release Limits for High Flow Releases)

Quality Characteristic	Release limit for high flow
Physicochemical	
Electrical Conductivity ($\mu\text{S}/\text{cm}$)	5000 ¹
pH (pH units)	5.0 (minimum) 9.0 (maximum)

1. Numbers based on ANZECC (2000) Table 3.3.9, Lowland Rivers.

Notification of Release Event

- (C5-1) The environmental authority holder must notify the administering authority of a release event (no later than twenty-four hours after having commenced releasing contaminated water to the receiving environment). Notification must include the submission of written verification to the administering authority of the following information:
- (a) release commencement date/time.
 - (b) expected release cessation date/time.
 - (c) release point(s).
 - (d) release volume and contaminant load (estimated).
 - (e) receiving water(s) including the natural flow rate; and
 - (f) any details (including available data) regarding likely impacts on the receiving water(s).
- (C5-2) The environmental authority holder must notify the administering authority within twenty-four hours after cessation of a release as notified under condition (C5-1) and within twenty business days provide the following information in writing:
- (a) release cessation date/time.
 - (b) natural flow volume in receiving water.

- (c) volume of water released.
- (d) details regarding the compliance of the release with the conditions of Schedule C in this environmental authority (i.e., contaminant limits, natural flow, discharge volume).
- (e) all in-situ water quality monitoring results; and
- (f) any other matters pertinent to the release.

Onsite Water Storages

- (C6-1) Water storages stated in Schedule C – Table 5 (Onsite Water Storage Monitoring Locations) must be monitored for the water quality characteristics specified in Schedule C -Table 6 (Onsite Water Storage Contaminant Limits) at the monitoring locations and at the monitoring frequency specified in Schedule C – Table 5 (Onsite Water Storage Monitoring Locations).

Schedule C – Table 5 (Onsite Water Storage Monitoring Locations)

Water Storage Description	Easting (GDA2020)	Northing (GDA2020)	Monitoring Location	Frequency of Monitoring
Plum Tree Creek Dam	422834	7757052	Plum Tree Creek Dam	Annually
Old Northern Tailings Storage Facility West Sump	423264	7757203	Old Northern Tailings Storage Facility West Sump	Annually
New Northern Tailings Storage Facility West Sump	423062	7758128	New Northern Tailings Storage Facility West Sump	Annually
Southern Tailings Storage Facility Southwest Sump	423564	7753800	Southern Tailings Storage Facility Southwest Sump	Annually
Settlement Dam	422912	7754897	Settlement Dam	Annually
Settlement Dam Sump	422844	7754737	Settlement Dam Sump	Annually

Water Storage Description	Easting (GDA2020)	Northing (GDA2020)	Monitoring Location	Frequency of Monitoring
Supergene Dam	422962	7755753	Supergene Dam	Annually
Supergene Sump	42220	7755604	Supergene Dam Sump	Annually
Western Scats Sump	422748	7756202	Western Scats Sump	Annually
Mt Hope Extension Dam	425257	7754628	Mt Hope Extension Dam	Annually
Mt Hope Dam	424475	7754520	Mt Hope Dam	Annually
Mt Mawe Dam	425715	7755574	Mt Mawe Dam	Annually
Mt Mawe Dam Sump	425798	7755570	Mt Mawe Dam Sump	Annually
New Northern Tailings Storage Facility North Sump	423468	7758576	New Northern Tailings Storage Facility North Sump	Annually
Raw Water Dam	424540	7757229	Raw Water Dam	Annually
Raw Water Dam Sump	424680	7757332	Raw Water Dam Sump	Annually
Old Northern Tailings Storage Facility East Sump	423928	7757407	Old Northern Tailings Storage Facility East Sump	Annually
Upper Plum Tree Creek Dam	422763	7756890	Upper Plum Tree Creek Dam	Annually
Old Northern Tailings Storage Facility North Sump	423657	7757432	Old Northern Tailings Storage Facility North Sump	Annually

Water Storage Description	Easting (GDA2020)	Northing (GDA2020)	Monitoring Location	Frequency of Monitoring
Southern Tailings Storage Facility Southeast Sump	424330	7754078	Southern Tailings Storage Facility Southeast Sump	Annually
Southern Tailings Storage Facility West Sump	423536	7754322	Southern Tailings Storage Facility West Sump	Annually

(C6-2) In the event that waters storages defined in Schedule C – Table 5 (Onsite Water Storage Monitoring Locations) exceed the contaminant limits defined in Schedule C -Table 6 (Onsite Water Storage Contaminant Limits) the environmental authority holder must implement measures to prevent access to waters by all livestock and minimise access by native fauna.

Schedule C – Table 6 (Onsite Water Storage Contaminant Limits)

Parameter ³	Unit	Test Value	Contaminant Limit (mg/L)
pH	pH unit	Range	Greater than 4, less than 9 ²
Temperature	°C	For interpretation purposes	For interpretation purposes
Dissolved Oxygen (DO)	mg/L and percent saturation	For interpretation purposes	For interpretation purposes
EC	µS/cm	For interpretation purposes	For interpretation purposes
Total Dissolved Solids (TDS)	mg/L	Maximum	4000 ⁵
Sulphate	mg/L	Maximum	1000 ¹
Aluminium	mg/L	Maximum	5 ¹
Arsenic	mg/L	Maximum	0.5 ¹
Cadmium	mg/L	Maximum	0.01 ¹
Chromium	mg/L	Maximum	1 ¹
Cobalt	mg/L	Maximum	1 ¹
Copper	mg/L	Maximum	1 ¹
Lead	mg/L	Maximum	0.1 ¹

Parameter ³	Unit	Test Value	Contaminant Limit (mg/L)
Nickel	mg/L	Maximum	1 ¹
Uranium	mg/L	Maximum	0.2
Zinc	mg/L	Maximum	20 ¹
WAD Cyanide	mg/L	Maximum	50 ⁴
Total Cyanide	mg/L	Maximum	For interpretation purposes

1. Contaminant limit based on ANZECC (2000) stock water quality guidelines.
2. Page 4.2-15 of ANZECC (2000) "Soil and animal health will not generally be affected by water with pH in the range of 4–9".
3. All metals and metalloids must be measured as total (unfiltered).
4. Recognised limit for no impact on wildlife (pp11, Donato et al. 2007, Commonwealth of Australia, Leading Practice Sustainable Development Program for the Mining Industry – Cyanide Management Handbook, May 2008).
5. TDS of 4000 mg/L indicator of 5970 µS/cm EC.

Receiving Waters Monitoring

- (C7-1) Receiving waters must be monitored at the locations specified in Schedule C – Table 7 (Receiving Water and Downstream Monitoring Points) for each quality characteristic and at the frequency stated in Schedule C – Table 9 (Receiving Waters Contaminant Trigger Levels) and Schedule C – Table 10 (Receiving Waters Contaminant Limits).

Schedule C – Table 7 (Receiving Water and Downstream Monitoring Points)

Monitoring point	Easting (GDA2020)	Northing (GDA2020)	Contaminant Source and Location	Receiving waters description	Monitoring frequency
Surface water					
PCC	425008	7753124	Plant Area, Northern Waste Rock Dump, ROM Stockpile, Heap Leach and Low-Grade Stockpile	Puddler Creek Crossing	Event based sampling of release or flow events: One sample must be taken within 12 hours of a release event or flow event commencing subject to safe access. A second sample must be taken between 12 and 24 hours after the release event or flow event commences subject to safe access. ² Where a release event has a duration of 24 hours or greater, samples must be taken
SW101 (new)	425189	7759616	New Northern Tailings Storage Facility & Old Northern Tailings Facility	Schreibers Creek	
SW104 (new)	426308	7753661	Eastern Waste Rock Dump	One Mile Creek	

Permit
Environmental authority EPML00863713

Monitoring point	Easting (GDA2020)	Northing (GDA2020)	Contaminant Source and Location	Receiving waters description	Monitoring frequency
RSSCC	424353	7760187	New Northern Tailings Storage Facility	Clarke Creek – Northern Boundary	daily for one week, and once a week thereafter until release or flow event ceases. ²
RSSTMC	426477	7755357	Eastern Waste Rock Dump	Two Mile Creek – Eastern Boundary	
RSSPC (new)	425951	7753060	Southern Tailings Facility	Puddler Creek – Southern Boundary	
Surface Water - For interpretation purposes only					
SW102	422896	7757365	Scats Stockpile	Plumtree Creek	Event based sampling of release or flow events:
SW105	422907	7758079	New Northern Tailings Storage Facility & Old Northern Tailings Facility	Clark Creek	One sample must be taken within 12 hours of a release event or flow event commencing subject to safe access. A second sample must be taken between 12 and 24 hours after the release event or flow event commences subject to safe access. ²
SW106	423574	7753670			
SW108	423604	7753657	Southern Tailings Facility	Puddler Creek	
SW109	424511	7753670			
SW110	423114	7754705	Plant Area, Northern Waste Rock Dump, ROM Stockpile, Heap Leach and Low-Grade Stockpile	Puddler Creek	Where a release event has a duration of 24 hours or greater, samples must be taken daily for one week, and once a week thereafter until release or flow event ceases. ²
SW107	422688	7754504			
SW103	422743	7755148			

1. Data to be used for interpretation purposes only.

2. Where release(s) or flow event(s) occur simultaneously only one (1) set of samples are required to be taken.

Schedule C – Table 8 (Receiving Stream Sediment Monitoring Points)

Monitoring point	Easting (GDA2020)	Northing (GDA2020)	Contaminant Source and Location	Receiving waters description
SED 1 (new) (SW101 (new))	425189	7759608	New Northern Tailings Storage Facility & Old Northern Tailings Storage Facility	Clark Creek, Schreibers Creek
SED 4 (new) (SW104 (new))	426308	7753661	Eastern Waste Rock Dump	One Mile Creek
SED 5 (SW47)	423150	7753278	Puddler Creek background	Puddler Creek
SED 6 (new) (RSSPC (new))	425951	7753060	Southern Tailings Storage Facility	Puddler Creek – Southern Boundary
SED 9 (RSSTMC)	426477	7755357	Eastern Waste Rock Dump	Two Mile Creek – Eastern Boundary
SED 8 (RSSCC)	424353	7760187	New Northern Tailings Storage Facility	Clarke Creek – Northern Boundary
Receiving Stream Sediment - For interpretation purposes only				
SED 2 (SW102)	422896	7757365	Scats Stockpile	Plumtree Creek
SED 3 (SW103)	422743	7755146	Plant Area, Northern Waste Rock Dump, ROM Stockpile, Heap Leach and Low-Grade Stockpile	Puddler Creek
SED 7 (SWCC1)	422471	7759447	Clarke Creek background	Clarke Creek

Schedule C – Table 9 (Receiving Waters Contaminant Trigger Levels)

Quality Characteristic ¹	Trigger Level (µg/L)	Monitoring Frequency
pH (pH units)	TBA (minimum) ⁷ TBA (maximum) ⁷	Event based sampling of release or flow events: One sample must be taken within 12 hours of a release event or flow event commencing subject to safe access. A second sample must be taken between 12 and 24 hours after the release event or flow event commences subject to safe access.⁸ Where a release event has a duration of 24 hours or greater, samples must be taken daily for one week, and once a week thereafter until release or flow event ceases.⁸
EC (µS/cm)	TBA ⁷	
Sulphate	TBA ⁷	
Turbidity (NTU)	15 ²	
Suspended Solids	TBA ⁷	
Temperature (°C)	For interpretation purposes	
Dissolved Oxygen (DO)	For interpretation purposes	
Aluminium (total)	For interpretation purposes	
Aluminium (dissolved)	55 ²	
Arsenic ⁵	13 ²	
Cadmium	0.2 ²	
Chromium ⁶	1 ²	

Quality Characteristic ¹	Trigger Level (µg/L)	Monitoring Frequency
Cobalt	2.8 ³	
Copper	1.4 ²	
Iron	300 ²	
Lead	3.4 ²	
Manganese	1900 ²	
Molybdenum	34 ²	
Nickel	11 ²	
Selenium	11 ²	
Uranium	8.0	
Zinc	8 ²	
Hardness	For interpretation purposes only.	
Major Cations and Anions	For interpretation purposes only.	
Unionised Cyanide (as CN) ⁹	7.0 ²	
Cyanide (Free) ⁹	For interpretation purposes	
Cyanide (WAD)	For interpretation purposes.	
Cyanide (Total)	For interpretation purposes.	

¹ All metals and metalloids must be measured as dissolved (filtered) concentrations.

² For aquatic ecosystem protection, based on ANZECC 2000, Table 3.4.1, 95% ecosystem protection.

³ Reference sites as specified in Schedule C – Table 7 (Receiving Water Reference Sites and Downstream Monitoring Points).

- 4 The final trigger level is based on twenty-four consecutive samples (calculated in accordance with ANZECC 2000 (18 at a minimum)).
- 5 Speciated arsenic concentrations for As (III) and As (V) only required if 13 µg/L is exceeded - note that the sample bottle requirements for As (total species) and As (speciated) may differ.
- 6 Speciated chromium concentrations for Cr (III) and Cr (VI) only required if 1.0 µg/L is exceeded – note that the sample bottle requirements for Cr (total species) and Cr (speciated) may differ.
- 7 Detail to be provided by the environmental authority holder to the administering authority with submission of the REMP report by 1 May 2015
- 8 Where release(s) or flow event(s) occur simultaneously only one set of samples are required to be taken.
- 9 The unionised cyanide calculation is not required when free cyanide is less than the unionised cyanide limit.

NOTES

- (a) Where release(s) or flow event(s) occur simultaneously only one set of samples are required to be taken.
- (b) All dissolved (filtered) samples must be obtained from field filtered grab samples.
- (c) Hardness Modified Trigger Values (HMTV) may be performed in accordance with ANZECC 2000 methodology.

Schedule C – Table 10 (Receiving Waters Contaminant Limits)

Quality Characteristic ¹	Contaminant Limit (mg/L)	Monitoring Frequency
pH (pH units)	TBA (minimum) ¹⁴ TBA (maximum) ¹⁴	Event based sampling of release or flow events: One sample must be taken within 12 hours of a release event or flow event commencing subject to safe access. A second sample must be taken between 12 and 24 hours after the release event or flow event commences subject to safe access. ² Where a release event has a duration of 24 hours or greater, samples must be taken daily for one week, and once a week thereafter until release or flow event ceases. ²
EC (µS/cm)	TBA ¹⁴	
Sulphate	1000 ¹⁰	
Turbidity (NTU)	TBA ¹⁴	
Suspended Solids	TBA ¹⁴	
Aluminium (total)	For interpretation purposes	
Aluminium (dissolved)	5 ¹⁰	
Arsenic ¹¹	0.5 ¹⁰	
Cadmium	0.01 ¹⁰	
Chromium ¹²	1 ¹⁰	

Quality Characteristic ¹	Contaminant Limit (mg/L)	Monitoring Frequency
Cobalt	1 ¹⁰	
Copper	1 ¹⁰	
Lead	0.1 ¹⁰	
Molybdenum	0.15 ¹⁰	
Nickel	1 ¹⁰	
Selenium	0.02 ¹⁰	
Uranium	0.2 ¹⁰	
Zinc	20 ¹⁰	
Hardness	For interpretation purposes only.	
Major Cations and Anions	For interpretation purposes only.	
Unionised Cyanide (as CN) ¹⁵	N/A	
Cyanide (Free) ¹⁵	0.22	
Cyanide (WAD)	For interpretation purposes.	
Cyanide (Total)	For interpretation purposes.	

¹ All metals and metalloids must be measured as total (unfiltered) concentrations.

² Where release(s) or flow event(s) occur simultaneously only one set of samples are required to be taken.

³ Based on administering authority information resulting from the review of water quality in the Fitzroy basin.

- 4 Reference sites are defined in Schedule C – Table 6 (Receiving Water Reference Sites and Downstream Monitoring Points).
- 5 The initial contaminant limit is based on a single sampling event and is the value of the reference value obtained at the time of a release plus 10% and applies until sufficient data is acquired to develop interim limits.
- 6 Percentiles are calculated using ANZECC (2000) methodology (section 7.4.4.1).
- 7 Based on results from the Receiving Environment Monitoring Program.
- 8 The interim contaminant limit is based on the results of between 8 and 17 consecutive samples obtained from the reference locations (calculated in accordance with ANZECC 2000) and applies until sufficient data is acquired to develop final limits.
- 9 The final contaminant limit is based on twenty-four consecutive samples obtained from the reference locations (calculated in accordance with ANZECC 2000) (18 at a minimum).
- 10 Contaminant limits based on ANZECC (2000) stock water quality guidelines.
- 11 Speciated arsenic concentrations for As (III) and As (V) only required if 13 µg/L is exceeded - note that the sample bottle requirements for As (total species) and As (speciated) may differ.
- 12 Speciated chromium concentrations for Cr (III) and Cr (VI) only required if 1.0 µg/L is exceeded – note that the sample bottle requirements for Cr (total species) and Cr (speciated) may differ.
- 13 Based on the Mt Leyshon – Review of background water parameters by Schlumberger Water Services - 4 April 2013.
- 14 Detail to be provided by the environmental authority holder to the administering authority with submission of the REMP report by 1 May 2015.
- 15 The unionised Cyanide calculation is not required when free cyanide is less than the unionised cyanide limit.

NOTES

- (a) Grab sampling is the preferred method for sample collection.

- (C7-2) If quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in Schedule C – Table 9 (Receiving Waters Contaminant Trigger Levels), the environmental authority holder must complete an investigation in accordance with the ANZECC and ARMCANZ 2000 methodology, into the potential for environmental harm and provide a written report to the administering authority within three months, outlining:
- (a) details of the investigations carried out.
 - (b) details of the environmental impacts observed; and
 - (c) actions taken to prevent environmental harm.

Note: Investigations may be undertaken to develop impact-based limits in accordance with ANZECC methodology (ANZECC guidelines – Chapter 3.5.1).

- (C7-3) The release of contaminants must not result in an exceedance of the contaminant limits stated in Schedule C – Table 10 (Receiving Waters Contaminant Limits).

Note: Investigations may be undertaken to develop impact-based limits in accordance with ANZECC methodology (ANZECC guidelines – Chapter 3.5.1).

Receiving Environment Monitoring Program

- (C8-1) A Receiving Environment Monitoring Program (REMP) must be developed, maintained and implemented to monitor and record the effects of the release of contaminants on the receiving environment periodically and whilst contaminants are being released from the licensed place with the aim of identifying and describing the extent of any adverse impacts on local environmental values and to monitor any changes in the receiving water (including groundwater). A copy of the REMP and any update or variation of the REMP must be provided to the administering authority prior to its implementation and due consideration given to any comments made on the REMP by the administering authority.
- (C8-2) The REMP must address (but not necessarily be limited to) the following:
- (a) description of potentially affected receiving groundwaters and surface waters including key communities and reference water quality and sediment characteristics based on accurate and reliable monitoring data that takes into consideration any temporal variation (e.g., seasonality).
 - (b) description of applicable environmental values and water quality objectives to be achieved (i.e., as scheduled pursuant to the *Environmental Protection (Water and Wetland Biodiversity) Policy 2019*).
 - (c) any relevant reports prepared by other governmental or professional research organisations that relate to the receiving environment to which the REMP applies.
 - (d) water and sediment quality targets within the receiving environment to be achieved, and clarification of contaminant concentrations or level indicating adverse environmental impacts during the REMP.

- (e) monitoring for any potential adverse environmental impacts caused by a release.
 - (f) monitoring of stream flow and hydrology.
 - (g) monitoring of toxicants that must consider the indicators specified in Schedule C – Table 2 (Contaminant Release Trigger Levels and Limits) to assess the extent of the compliance of concentrations with water quality objectives and/or the ANZECC and ARMCANZ (2000) Guidelines for slightly to moderately disturbed ecosystems.
 - (h) monitoring of physical and chemical parameters including as a minimum those specified in Schedule C – Table 2 (Contaminant Release Trigger Levels and Limits) (in addition to dissolved oxygen saturation and temperature).
 - (i) monitoring biological indicators (for macroinvertebrates in accordance with the administering authority's monitoring and sampling manual (AusRivAS Methodology) and metals/metalloids in sediments (in accordance with ANZECC and ARMCANZ (2000), BATLEY (A guide to the Application of the ANZECC/ARMCANZ Water Quality Guidelines in the Minerals Industry) and/or the most recent version of AS5667.1 *Guidance on Sampling of Bottom Sediments*) for permanent, semi-permanent water holes and water storages.
 - (j) the locations of monitoring points (including the locations of reference/upstream and downstream potentially impacted sites for each release point). Reference sites must comply with the following criteria:
 - (i) be from the same bio-geographic and climatic region.
 - (ii) have similar geology, soil types and topography.
 - (iii) contain a range of habitats similar to those at the potentially impacted sites.
 - (iv) have a similar flow regime; and
 - (v) not be so close to the potentially impacted sites that any disturbance at the potentially impacted sites also results in a change at the reference site.
 - (k) the frequency or scheduling of sampling and analysis that is sufficient to determine water quality objectives and to derive site specific reference values within two years (depending on wet season flows) in accordance with the *Queensland Water Quality Guidelines*. For ephemeral streams, this should include periods of flow irrespective of mine or other release.
 - (l) specify sampling and analysis methods and quality assurance and control.
 - (m) any historical datasets to be relied upon.
 - (n) description of the statistical basis on which conclusions are drawn; and
 - (o) any spatial and temporal controls to exclude potential confounding factors.
- (C8-3) A report outlining the findings of the REMP including all monitoring results and interpretations in accordance with condition (C8-2) must be prepared and submitted in writing to the administering authority by 1 May 2015 and thereafter once every twelve months. The report must include an assessment of reference water quality, any assimilative capacity for those contaminants monitored and the suitability of current release limits to protect downstream environmental values.

Stream Sediment Monitoring

- (C9-1) Sediment quality of receiving waters must be monitored once a year (at the end of the wet season) at the monitoring locations defined in Schedule C – Table 8 (Receiving Stream Sediment Monitoring Points) and for the parameters defined in Schedule C – Table 11 (Stream Sediment Trigger Levels and Contaminant Limits).

Note: 1M HCL digestion and <2mm fraction is required for sample analysis conducted in accordance with ANZECC methodology.

- (C9-2) If the quality characteristics of sediments exceed any of the trigger levels specified in Schedule C – Table 11 (Stream Sediment Trigger Levels and Contaminant Limits), the environmental authority holder must complete an investigation in accordance with the ANZECC and ARMCANZ (2000) methodology, into the potential for environmental harm and provide a written report to the administering authority within four months, outlining:
- (a) details of the investigations carried out.
 - (b) details of the environmental impacts observed; and
 - (c) actions taken to prevent environmental harm.

Note: Investigations may be undertaken to develop impact-based limits in accordance with ANZECC methodology (ANZECC guidelines – Chapter 3.5.1).

- (C9-3) The release of contaminants must not result in an exceedance of the sediment contaminant limits stated in Schedule C – Table 11 (Stream Sediment Trigger Levels and Contaminant Limits).
- (C9-4) All stream sediment sampling must be undertaken in accordance with the most recent version of Australian Standard AS 5667.12 *Guidance on Sampling of Bottom Sediments*.

Schedule C – Table 11 (Stream Sediment Trigger Levels and Contaminant Limits)

Parameter	Unit	Contaminant Limit	Trigger Level
Arsenic	mg/kg	70 ²	20 ¹
Cadmium	mg/kg	10 ²	1.52
Cobalt	mg/kg	100 ⁶	50 ⁵
Copper	mg/kg	270 ²	65 ²
Lead	mg/kg	220 ²	50 ²
Manganese	mg/kg	1500 ⁶	TBA ⁶
Mercury	mg/kg	1	0.15 ²
Nickel	mg/kg	52 ²	21 ²
Uranium	mg/kg	For interpretation purposes only.	For interpretation purposes only.

Parameter	Unit	Contaminant Limit	Trigger Level
Zinc	mg/kg	410 ²	200 ¹
Total Cyanide	mg/kg	50 ⁴	25 ³
Particle size distribution on all samples for interpretation purposes			

- 1 ANZECC & ARMICANZ (2000) Interim Sediment Quality Guidelines – low values based on total sediments
- 2 ANZECC (2000) Interim Sediment Quality Guidelines – high values based on total sediments
- 3 The 25mg/kg is based on half of DME, 1993. Guidelines for Assessment and Management of Land Contamination. Dept of Mineral and Energy Draft Technical Guidelines for Environmental Management for Mining in Qld
- 4 The 50mg/kg is based on the DME, 1993. Guidelines for Assessment and Management of Land Contamination. Dept of Mineral and Energy Draft Technical Guidelines for Environmental Management for Mining in Qld.
- 5 Dutch B (Indicative value for further investigation) from Moen, J.E.T., Cornet, J.P and Evers, C.W.A (1986) Soil protection and remedial actions: criteria for decision making and standardisation of requirements, in Assink, J.W and van den Brink, W.M (1986) *Contaminated Soils, First International TNO Conference on Contaminated Soil 11-15 November 1985*.
- 6 National Environmental Protection Council, Health Investigation Levels - Exposure setting A

Water Management Plan

- (C10-1) A water management plan must be developed, maintained, and implemented which provides for the proper and effective management of the actual and potential environmental impacts resulting from the mining activity and to ensure compliance with the conditions of this environmental authority.
- (C10-2) The water management plan must be developed and must include at least the following components:
- a) contaminant source study.
 - b) site water balance and model.
 - c) water management system.
 - d) saline drainage prevention and management measures.
 - e) acid rock drainage prevention and management measures.
 - f) emergency and contingency planning; and
 - g) monitoring and review.
- (C10-3) The environmental authority holder must undertake a review of the water management plan before 1 November each year to ensure that proper and effective measures, practices, or procedures are in place so that the mine is operated in accordance with the conditions of this environmental authority and that environmental harm is prevented or minimised.

Site Water Balance

- (C11-1) The environmental authority holder must develop and maintain a site-specific operational site water balance model.

- (C11-2) The water balance model must be:
- (a) reflective of on ground site conditions.
 - (b) run prior to the wet season.
 - (c) promptly after each rainfall event greater than one-hundred millimetres within a twenty-four hour period within the relevant surface water containment area.
 - (d) with documentation of inputs and outputs from each run being stored and retrievable for a minimum period of one year.
 - (e) performed in response to rainfall to be undertaken by an appropriately qualified person; and
 - (f) assessed using the operational simulation water balance model using a minimum of 100 years of historical rainfall data.

Erosion and Sediment Control

- (C12-1) An erosion and sediment control plan must be developed, maintained, and implemented, by an appropriately qualified person and implemented for all stages of the mining activity on the licensed place to prevent or minimise erosion and the release of sediment to receiving waters and the contamination of stormwater.
- (C12-2) The erosion and sediment control plan must provide for at least the following functions:
- (a) prevent or minimise the contamination of receiving waters and stormwater.
 - (b) diverting uncontaminated stormwater run-off around areas disturbed by the mining activity or where contaminants or wastes are stored or handled.
 - (c) contaminated stormwater runoff, incident rainfall and leachate are collected; and treated, reused, or released in accordance with the conditions of this environmental authority.
 - (d) roofing or minimising the size of areas where contaminants or wastes are stored or handled.
 - (e) erosion and sediment control structures are placed to minimise erosion of disturbed areas and prevent the contamination of any waters.
 - (f) procedures to ensure that erosion and sediment control structures are maintained, and adequate storage is available in sediment dams in accordance with design criteria; and
 - (g) training of staff that will be responsible for maintenance and operations of sediment and erosion control structures.
- (C12-3) Releases to waters must be undertaken so as not to cause erosion of the bed and banks of the receiving waters or cause a material build-up of sediment in such waters.
- (C12-4) Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment and contamination of storm water.

Groundwater Monitoring Program

- (C13-1) The environmental authority holder must develop, maintain and implement a groundwater monitoring program that must include:
- (a) groundwater monitoring bore locations
 - (b) justification for the location of the proposed groundwater monitoring locations, including, but not limited to:
 - (i) sufficient background/reference monitoring sites, that are unaffected by the mining activity authorised under this environmental authority to allow scientifically justifiable conclusions on the level of impact from the mining activity.
 - (ii) natural/un-impacted flow assessment of all watercourses affected by mining activity; and
 - (iii) sufficient number of monitoring bores to enable early detection of any groundwater contamination.
 - (c) monitoring of both shallow and deep groundwater and includes an adequate number of monitoring bores which provides sufficient spatial coverage to enable scientifically justifiable conclusions in relation to potential environmental impacts from the mining activity.
 - (d) provision for development of baseline groundwater quality, groundwater flow direction and rate and hydraulic conductivity. In addition, consideration must be given to how these parameters may change during the life of the mining project.
 - (e) characterisation of the potential impacts to the local groundwater system arising from the mining activity.
 - (f) representative groundwater samples for the aquifers being sampled.
 - (g) bore construction details; and findings from any resistivity studies undertaken at the licensed place
- (C13-2) The groundwater monitoring program specified in condition (C13-1) must be independently certified by an appropriately qualified person.
- (C13-3) The Groundwater Monitoring Program must be reviewed at least once a year before 1 October to ensure that proper and effective measures, practices, or procedures are in place so that the mine is operated in accordance with the conditions of this environmental authority and that environmental harm is prevented or minimised.

Monitoring bore construction, maintenance, and decommissioning

- (C14-1) Groundwater monitoring bores must be constructed, maintained, and decommissioned in accordance with methods prescribed in the latest edition of the manual titled *Minimum Construction Requirements for Water Bores in Australia*.

- (C14-2) Oil-based drilling fluids, oil-based additives, synthetic based drilling fluids or synthetic based additives must not be used in the construction of groundwater monitoring bores.
- (C14-3) Current Material Safety Data Sheets for all substances used for the drilling of groundwater monitoring bores must be made available to the administering authority promptly upon request.
- (C14-4) Remedial measures must be taken immediately if the environmental authority holder becomes aware that either monitoring bore construction, maintenance or decommissioning have resulted in a change in groundwater quality, groundwater levels or have caused the interconnection of aquifers.

Groundwater monitoring

- (C15-1) Groundwater quality and level must be monitored at the locations and frequencies defined in Schedule C – Table 12 (Groundwater Monitoring Locations and Frequency) for quality characteristics identified in Schedule C – Table 13 (Groundwater contaminant and trigger limits).

Schedule C – Table 12 (Groundwater Monitoring Locations and Frequency)

Monitoring Point	Easting (GDA2020)	Northing (GDA2020)	Collar Elevation ¹ (mAHD)	Monitoring Frequency
Background Bores				
NMLMB23	422080	7759758	309.29	Quarterly Sampling
NMLMB51	422255	7755021	343.41	
Interpretation Bores				
MLM28	425206	7754640	333.58	Annual Sampling (end dry season)
NMLMB1	422921	7759165	302.88	
NMLMB15D	425808	7755643	330.30	Quarterly depth to groundwater
NMLMB20	422756	7757194	338.86	
NMLMB22	422898	7757126	339.47	
NMLMB3	423543	7753738	326.76	
NMLMB3S	423546	7753737	327.31	
NMLMB32	424566	7757944	329.37	
NMLMB40	423186	7754768	345.41	
NMLMB47D	423155	7758371	315.29	
NMLMB2	423645	7759804	300.18	
Compliance Bores				
NMLMB5	426237	7753717	313.66	Quarterly Sampling
NMLMB7	422413	7758512	315.43	
NMLMB18	422066	7756532	358.83	Quarterly depth to groundwater
NMLMB28	425071	7759098	306.70	
NMLMB34	426681	7755250	316.01	
NMLMB38	424515	7753451	322.66	
NMLMB39	423624	7753333	328.03	

1. Must be measured to the nearest 5cm from the top of the bore casing.

Schedule C – Table 13 (Groundwater contaminant and trigger limits)

Quality Characteristic ⁶	Contaminant release limit	Trigger Levels
	(for metals based on total metal concentrations)	(for metals based on filtered samples)
Electrical conductivity	TBA ⁸ (µS/cm)	TBA ⁸ (µS/cm)
pH (pH Unit)	TBA ⁸ (minimum)	TBA ⁸ (minimum)
	TBA ⁸ (maximum)	TBA ⁸ (maximum)
Dissolved Oxygen (DO)	For interpretation purposes	For interpretation purposes
Sulphate (SO ₄ ²⁻)	1000 ⁵ (mg/L)	TBA ⁸
Aluminium	5 ⁴ (mg/L)	55 ¹ (µg/L)
Arsenic ²	0.5 ⁴ (mg/L)	13 ¹ (µg/L)
Cadmium	0.01 ⁴ (mg/L)	0.2 ¹ (µg/L)
Chromium ³	1 ⁴ (mg/L)	1 (µg/L)
Cobalt	1 ⁴ (mg/L)	2.8 ¹ (µg/L)
Copper	1 ⁴ (mg/L)	1.4 ¹ (µg/L)
Lead	0.1 ⁴ (mg/L)	3.4 ¹ (µg/L)
Nickel	1 ⁴ (mg/L)	11 ¹ (µg/L)
Zinc	20 ⁴ (mg/L)	8 ¹ (µg/L)
Cyanide (Free)	0.22 ⁷ (mg/L)	7.0 ¹ (µg/L)
Cyanide (WAD)	For interpretation purposes.	For interpretation purposes.

- 1 Default trigger values – from ANZECC/ARMCANZ (2000) trigger values for aquatic ecosystems indicative of slightly-to-moderately disturbed tropical Australian Lowland River ecosystems Tables 3.3.4 and Table 3.4.1 (*high reliability* trigger values) and *moderate* or *low* reliability trigger values (Section 8.3) if no value available in Table 3.4.1.
- 2 Speciated arsenic concentrations for As (III) and As (V) only required if 13 µg/L is exceeded - note that the sample bottle requirements for As (total species) and As (speciated) may differ.
- 3 Speciated chromium concentrations for Cr (III) and Cr (VI) only required if 1.0 µg/L is exceeded – note that the sample bottle requirements for Cr (total species) and Cr (speciated) may differ.
- 4 Contaminant limits based on ANZECC (2000) stock water quality guidelines.
- 5 Based on EHP information resulting from the review of water quality in the Fitzroy Basin.
- 6 All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered) concentrations.
- 7 International Cyanide Management Code (ICMI 2006).
- 8 Detail to be provided by the environmental authority holder to the administering authority with submission of the REMP report by 1 May 2015.

NOTES

- (a) Grab sampling is the preferred method for sample collection.
- (b) All dissolved (filtered) samples must be obtained from field filtered grab samples.
- (c) Hardness Modified Trigger Values (HMTV) may be performed in accordance with ANZECC 2000 methodology.

(C15-2) If quality characteristics of groundwater from compliance bores identified in Schedule C – Table 12 (Groundwater Monitoring Locations and Frequency) exceed any of the trigger levels stated in Schedule C – Table 13 (Groundwater contaminant and trigger limits), the environmental authority holder must complete an investigation in accordance with the ANZECC and ARM CANZ 2000, into the potential for environmental harm and provide a written report to the administering authority within three months, outlining:

- (a) details of the investigations carried out.
- (b) details of environmental impacts observed; and
- (c) actions taken to prevent environmental harm.

Note: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with clause (b) of this condition, then no further reporting is required for subsequent trigger events for that quality characteristic within the three-month investigation period.

Note: Investigations may be undertaken to develop impact-based limits in accordance with ANZECC methodology (ANZECC guidelines – Chapter 3.5.1).

(C15-3) Results of monitoring of groundwater from compliance bores identified in Schedule C – Table 12 (Groundwater Monitoring Locations and Frequency), must not exceed any of the limits defined in Schedule C – Table 13 (Groundwater contaminant and trigger limits).

Annual Groundwater Monitoring Report

(C16-1) The environmental authority holder must complete an annual groundwater monitoring report by 1 February each year and submit this report to the administering authority. The report be prepared by an appropriately qualified person and must address the following requirements as a minimum:

- (a) analyses of groundwater chemistry and hydrogeological data for all groundwater monitoring bores required in condition (C15-2)
- (b) identify exceedance of any contaminant trigger levels or limits listed in Schedule C – Table 13 (Groundwater contaminant and trigger limits).
- (c) discuss effectiveness of the current groundwater monitoring regime and any improvements that could be made to ensure early detection of impacts to groundwater.
- (d) detail proposed actions and timeframes to undertake further investigation of potential environmental impacts for any exceedance identified.
- (e) detail proposed mitigation measures for any detected impact to groundwater resulting from the mining activity.
- (f) changes in groundwater levels plotted as a function of time to identify seasonal patterns and possible draw-down effects.
- (g) groundwater elevation contours and flow direction; and

- (h) interpretation and discussion of exceedance of any contaminant trigger levels or limits listed in Schedule C – Table 13 (Groundwater contaminant and trigger limits) and the implications for compliance with this environmental authority.

- (C16-2) The method of sampling of groundwater must comply with that set out in the latest edition of the Administering Authority's Water Quality Sampling Manual.

Saline, acid, and metalliferous drainage

- (C17-1) The environmental authority holder must ensure proper and effective measures are taken to avoid or otherwise minimise the generation and/or release of saline, acid and/or metalliferous mine drainage as a result of the mining activity.

END OF CONDITIONS FOR SCHEDULE C

Schedule D – Noise and Vibration

Noise nuisance

- (D1-1) Noise from the mining activity must not cause an environmental nuisance, at any sensitive or commercial place.

END OF CONDITIONS FOR SCHEDULE D

Schedule E – Waste

Waste Management Program

- (E1-1) A waste management program in accordance with Part 5 of the *Environmental Protection (Waste Management) Policy 2000* must be developed, implemented, and maintained for all mining activities. The waste management program must be submitted to the administering authority on request. The program must include:
- (a) a description of the mining activities that may generate waste.
 - (b) waste management control strategies including.
 - (i) recording of the types and amounts of wastes generated by the mining activities.
 - (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 hazardous wastes.
 - (d) a program for reusing, recycling, or disposing of all wastes.
 - (e) how the waste will be dealt with in accordance with the waste 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).
 - (f) 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.
 - (g) procedures for dealing with accidents, spills, and other incidents that may impact on waste management.
 - (h) details of any accredited management system employed, or planned to be employed, to deal with the waste.
 - (i) how often the performance of the waste management practices will be assessed.
 - (j) the indicators or other criteria on which the performance of the waste management practices will be assessed; and
 - (k) staff training and induction to the waste management program.

Off Site Movement of Regulated Wastes

- (E2-1) Where regulated waste is removed from the licensed place (other than by a release as permitted under another schedule of this environmental authority), the environmental authority holder must ensure that:

- (a) the removal and transport of such wastes, where it constitutes an environmentally relevant activity under the *Environmental Protection Regulation 2019*, is carried out by a person licensed for carrying out this activity under the *Environmental Protection Act 1994*.
- (b) records are kept of the following:
 - (i) the date, quantity and type of waste removed.
 - (ii) name of the regulated waste transporter 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.

- (E2-2) Regulated waste awaiting removal may be temporarily stored on site.
- (E2-3) Each container of regulated waste stored awaiting movement off-site must be clearly marked to identify the contents.

Notification of Improper Disposal of Regulated Waste

- (E3-1) If the environmental authority holder becomes aware that a person has removed regulated waste from the licensed place and disposed of the regulated waste in a manner which is not authorised by this environmental authority or improper or unlawful, then the environmental authority holder must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.
- (E3-2) Regulated waste generated by maintenance of plant and equipment and absorbent materials used to clean up spills must only be disposed of at a facility whose operator is permitted to accept such waste in accordance with the requirements of the *Environmental Protection Act 1994*.

Other Wastes

- (E4-1) The only wastes that may be disposed of on site are those authorised under this environmental authority.

General waste disposal

- (E5-1) All waste (other than mined waste rock and tailings or their derivatives) produced as part of the mining operation must be transported to the Charters Towers licensed waste disposal facility or another lawful facility and disposed of correctly at a minimum on a monthly basis.
- (E5-2) The environmental authority holder shall not cause, allow, or permit any waste generated outside the mine to be received at the mine for storage, treatment, processing, or disposal.

Tailings Management

- (E6-1) Tailings must be managed in accordance with procedures. These procedures must be provided to the administering authority on request and include provisions for:
- (a) Containment of tailings in accordance with design plans for each storage facility.
 - (b) The management of seepage and leachates both during operation and post closure.
 - (c) The control of fugitive emissions to air.

Scats Disposal

- (E6-1) Scats material is authorised to be disposed of in the void and must be managed in accordance with procedures. These procedures must be provided to the administering authority on request and include provisions for:
- (a) Containment and management of scats to comply with the conditions of the Environmental Authority.
 - (b) The management of seepage and leachates at all times.
 - (c) Prevention of emissions to air.

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Land**General**

- (F1-1) Contaminants that will or may cause environmental harm must not be directly or indirectly released to land except as permitted under this environmental authority.
- (F1-2) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillages must be cleaned up using dry methods that minimise the release of wastes, contaminants or materials to any stormwater drainage system, roadside gutter, or waters.

Topsoil

- (F2-1) Topsoil and subsoil stockpiles must be managed to ensure stability and minimise the release of contaminants. Measures must include:
- (a) vegetating stockpiles.
 - (b) minimising the height of stockpiles: and
 - (c) re-using stockpiles as soon as possible.

Pest management

- (F3-1) In carrying out the mining activities the environmental authority holder must develop, maintain, and implement an effective pest management program that includes but is not limited to the following:
- (a) identification of pest species and infestation areas.
 - (b) prevents and/or minimises the introduction and/or spread of pests; and
 - (c) control and management of pest outbreaks as a result of mining activities including measures to ensure that all vehicle movements are controlled to prevent the spread of declared weeds; and
 - (d) strategies to prevent introduction of declared weeds to the mine site and surrounding areas.
- (F3-2) A copy of the pest management program must be made available to the administering authority on request.

Mining Void Management

- (F4-1) Mining voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the void itself, and subject to any other condition within this environmental authority.
- (F4-2) Mining voids must be managed during the operational phase by consideration of the following:
- (a) limiting sulphide exposures in void walls; and
 - (b) capping of sulphide exposures in void base; and
 - (c) limiting period of exposure of sulphides in void walls and base to oxidising conditions; and

- (d) managing catchment into the void; and
- (e) geo-technical stability of final void.

Storage and Handling of Flammable and Combustible Liquids

- (F5-1) All explosives, hazardous chemicals, corrosive substances, toxic substances, gases, dangerous goods, flammable, and combustible liquids must be stored and handled in accordance with the relevant Australian Standard where such is available.
- (F5-2) Notwithstanding the requirements of any Australian Standard, any liquids stored on site that have the potential to cause environmental harm must be stored in or serviced by an effective containment system that is impervious to the materials stored and managed to prevent the release of liquids to waters or land. Where no relevant Australian Standard is available, the following must be applied:
 - (a) storage tanks must be bunded so that the capacity and construction of the bund is sufficient to contain at least 110% of a single storage tank or 100% of the largest storage tank plus 10% of the second largest storage tank in multiple storage areas; and
 - (b) All chemical product drum storages must be bunded so that the capacity of the bund is sufficient to contain at least 100% of the maximum design storage volume within the bund.
- (F5-3) All containment systems for chemicals and flammable or combustible liquids must be designed to minimise rainfall collection within the system.
- (F5-4) Spillage of any contaminant must be contained and rectified to prevent environmental harm.

END OF CONDITIONS FOR SCHEDULE F

Schedule G – Community

Complaint response

- (G1-1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed, and actions taken. This information must be made available for inspection by the administering authority on request.

Complaints and Community

- (G2-1) Records must be kept of all environmental complaints received about the mining activities including the following details:
- (a) name, address and contact number for complainant (if not available record - not identified).
 - (b) time and date of complaint.
 - (c) reasons for the complaint.
 - (d) investigations undertaken.
 - (e) conclusions formed.
 - (f) actions taken to resolve complaint.
 - (g) any abatement measures implemented; and
 - (h) person responsible for resolving the complaint.
- (G2-2) Information required in (G2-1) must be available for inspection by the administering authority on request.
- (G2-3) When requested by the administering authority, the environmental authority holder must undertake relevant specified monitoring within a timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental harm. The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures implemented must be provided to the administering authority within fourteen days of completion of the investigation.
- (G2-4) The environmental authority holder must establish, promote, and maintain easily accessible lines of communication between residents, relevant stakeholders, and landowners to ensure that social impacts are identified and managed.

END OF CONDITIONS FOR SCHEDULE G

Schedule H – Dams

Assessment of Hazard Category

- (H1-1) 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 (EM635)* at the following times:
- (a) prior to the design and construction of the structure, if it is not an existing structure; or
 - (b) if it is an existing structure, prior to the adoption of this schedule; or
 - (c) prior to any change in its purpose or the nature of its stored contents.
- (H1-2) 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.
- (H1-3) 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 (EM635)*.

Design and Construction of a Regulated Structure

- (H2-1) Conditions (H2-2) to (H2-6) inclusive do not apply to existing structures.
- (H2-2) 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 (EM635)*.
- (H2-3) Construction of a regulated structure is prohibited unless the environmental authority holder has submitted a consequence category assessment report and certification to the administering authority has been certified by a suitably qualified and experienced person for the design and design plan and the associated operating procedures in compliance with the relevant condition of this authority.
- (H2-4) 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 (EM635)* and must be recorded in the Regulated Dams/Levees register.
- (H2-5) Regulated structures must:
- (a) be designed and constructed in accordance with and conform to the requirements of the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635)*.
 - (b) be designed and constructed with due consideration given to ensuring that the design integrity would not be compromised on account of:
 - (i) floodwaters from entering the regulated dam from any watercourse or drainage line; and

- (ii) wall failure due to erosion by floodwaters arising from any watercourse or drainage line.
 - (c) have the floor and sides of the dam designed and constructed to prevent or minimise the passage of the wetting front and any entrained contaminants through either the floor or sides of the dam during the operational life of the dam and for any period of decommissioning and rehabilitation of the dam.
- (H2-6) 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.

Operation of a regulated structure

- (H3-1) Operation of a regulated structure, except for an existing structure, is prohibited unless the environmental authority holder has submitted to the administering authority:
- (a) one paper copy and one electronic copy of the design plan and certification of the 'design plan' in accordance with condition (H2-3), and
 - (b) a set of 'as constructed' drawings and specifications, and
 - (c) certification of those 'as constructed drawings and specifications' in accordance with condition (H2-6), and
 - (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 environmental authority holder has entered the details required under this authority, into a Register of Regulated Dams; and
 - (g) there is a current operational plan for the regulated structures.
- (H3-2) 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 environmental authority 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.

- (H3-3) Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitated, in a manner that is consistent with the current operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings.

Mandatory Reporting Level

- (H4-1) Conditions (H4-2) to (H4-5) inclusive only apply to Regulated Structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
- (H4-2) 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.
- (H4-3) The environmental authority holder must, as soon as practical and within forty-eight hours of becoming aware, notify the administering authority when the level of the contents of a regulated dam reaches the MRL.
- (H4-4) The environmental authority 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.
- (H4-5) The environmental authority holder must record any changes to the MRL in the Register of Regulated Structures.

Design Storage Allowance

- (H5-1) The environmental authority 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.
- (H5-2) 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).
- (H5-3) The environmental authority 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

- (H6-1) Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.
- (H6-2) 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 recommended actions to ensure the integrity of the regulated structure.

- (H6-3) 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 (EM635)*.
- (H6-4) The environmental authority holder must:
- (a) Within 20 business days of receipt of the annual inspection report, provide to the administering authority:
 - (i) The recommendations section of the annual inspection report; and
 - (ii) If applicable, any actions being taken in response to those recommendations; and
 - (b) If, following receipt of the recommendations and (if applicable) actions, the administering authority requests a full copy of the annual inspection report from the environmental authority holder, provide this to the administering authority within 10 business days of receipt of the request.

Note: Please note that for some model conditions, such as model conditions for dams associated with a resource activity - non mining activity, the notification requirements may be located in a separate part of the conditions of an environmental authority (e.g., under notification requirement conditions).

Transfer arrangements

- (H7-1) The environmental authority 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 transfer of this authority.

Register of Regulated Dams

- (H9-1) A Register of Regulated Dams must be established and maintained by the environmental authority holder for each regulated dam.
- (H9-2) The environmental authority holder must provisionally enter the required information in the Register of Regulated Dams when a design plan for a regulated dam is submitted to the administering authority.
- (H9-3) The environmental authority holder must make a final entry of the required information in the Register of Regulated Dams once compliance with condition (H3-1) and (H3-2) has been achieved.
- (H9-4) The environmental authority holder must ensure that the information contained in the Register of Regulated Dams is current and complete on any given day.
- (H9-5) All entries in the Register of Regulated Dams must be approved by the chief executive officer for the environmental authority holder, or their delegate, as being accurate and correct.

- (H9-6) The environmental authority holder must, at the same time as providing the annual return, supply to the administering authority a copy of the records contained in the Register of Regulated Dams, in the electronic format required by the administering authority.

Transitional arrangements

- (H10-1) All existing structures that have not been assessed in accordance with either the Manual or the former Manual for Assessing Hazard Categories and Hydraulic Performance of Dams must be assessed and certified in accordance with the Manual within 6 months of amendment of the authority adopting this schedule.
- (H10-2) All existing structures specified in Schedule H - Table 1 (Transitional hydraulic performance requirements for existing structures) must subsequently comply with the timetable for any further assessments in accordance with the Manual, depending on the consequence category for each existing structure assessed in the most recent previous certification for that structure.
- (H10-3) Schedule H - Table 1 (Transitional hydraulic performance requirements for existing structures) ceases to apply for a structure once any of the following events has occurred:
- (a) It has been brought into compliance with the hydraulic performance criteria applicable to the structure under the Manual; or
 - (b) It has been decommissioned; or
 - (c) It has been certified as no longer being assessed as a regulated structure.
- (H10-4) Certification of the transitional assessment required by (H10-1) and (H10-2) (as applicable) must be provided to the administering authority within 6 months of amendment of the authority adopting this schedule.

Schedule H – Table 1 (Transitional hydraulic performance requirements for existing structures)

Transition period required for existing structures to achieve the requirements of the <i>Manual for Assessing Consequence Categories and Hydraulic Performance of Dams</i>			
Compliance with criteria	High	Significant	Low
>90% and a history of good compliance performance in last 5 years	No transition required	No transition required	No transitional conditions apply. Review consequence assessment every 7 years.
>70%-≤90%	Within 7 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases	Within 10 years, unless otherwise agreed with the administering authority, based on no history of	No transitional conditions apply. Review consequence assessment every 7 years.

		unauthorised releases.	
>50%-≤70%	Within 5 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 7 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Review consequence assessment every 7 years.
≤50%	Within 5 years or as per compliance requirements (e.g., TEP timing)	Within 5 years or as per compliance requirements (e.g., TEP timing)	Review consequence assessment every 5 years.

END OF CONDITIONS FOR SCHEDULE H

Schedule I: Definitions

“annual exceedance probability or AEP” the probability that at least one event in excess of a particular magnitude will occur in any given year.

“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*.

“background” means the average of samples taken prior to the commencement of mining from the same waterway that the current sample has been taken.

“certification” means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by this manual, 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’.

“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.

“competent person” means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

“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.

“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 and **associated works**. 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 plan” is the documentation required to describe the physical dimensions of the dam, the materials, and standards to be used for construction of the dam, and the criteria to be used for operating the dam and includes a plan that manages an integrated containment system. The documents must include all investigation and design reports, drawings, and specifications sufficient to hand to a contractor for construction, and planned decommissioning and rehabilitation outcomes; so as to address all hazard scenarios that would be identified by a properly conducted hazard assessment for the structure. Documentation must be such that a ‘suitable qualified and experience person’ could conduct an independent review without seeking further information from the designer

“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 Resource Management, 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.

“environmental authority holder” means the holder of this environmental authority.

“flow event” means a flow of water when measured at monitoring points listed in Schedule C – Table 7 (Receiving Water and Downstream Monitoring Points)

“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.

“hazardous waste” means any substance, whether liquid, solid or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair or endanger health.

“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*.

“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*.

“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.

“low hazard dam” means any dam that is not a high or significant hazard category as assessed using the *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams*.

“infrastructure” means water storage 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 landowner.

“land” in the “land schedule” of this document means land excluding waters and the atmosphere.

“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.

“mandatory reporting level” means the volume below the spillway crest, equivalent to the lower of the AEP, 72-hour storm or the AEP wave allowance (AEP is the annual exceedance probability).

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

“NATA” means National Association of Testing Authorities, Australia

“noxious” means harmful or injurious to health or physical wellbeing, other than trivial harm.

“NTU” means nephelometric turbidity units

“offensive” means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

“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.

“protected area” means - a protected area under the *Nature Conservation Act 1992*; or

- a marine park under the *Marine Parks Act 1992*; or
- a World Heritage Area.

“receiving environment” means all groundwater, surface water, land, and sediments that are not disturbed areas authorised by this environmental authority.

“receiving waters” means all groundwater and surface water that are not disturbed areas authorised by this environmental authority.

“reference site” (or analogue site) may reflect the original location, adjacent area, or another area where rehabilitation success has been completed for a similar biodiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

“regulated dam” means any dam in the significant or high hazard category as assessed using the *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams* published by the administering authority.

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

“release event” means a release from a release point listed in Schedule C- Table 1 (Release Points).

“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.

“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 employee’s accommodation or public roads.

“spillway” means passage or outlet from the dam through which surplus water flows.

“suitably qualified and experienced person” in relation to dams means a person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the *Professional Engineers Act 2002*, or at the relevant time holds a 'deemed registration' within the meaning of the *Mutual Recognition (Queensland) Act 1992*; and has knowledge, suitable experience and demonstrated expertise in relevant fields, as set out below:

- a) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry, and environmental impact of dams; and
- b) a total of five years of suitable experience and demonstrated expertise in the geomechanics of dams with particular emphasis on stability, geology, and geochemistry, and
- c) a total of five years of suitable experience and demonstrated expertise each, in three of the following categories:
 - i. investigation and design of dams.
 - ii. Construction, operation, and maintenance of dams.
 - iii. hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology.

- iv. hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes.
- v. hydrogeology with particular reference to seepage, groundwater.
- vi. solute transport processes and monitoring thereof.
- vii. dam safety.

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

“trivial harm” means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than \$5,000.

“watercourse” has the same meaning given in the *Water Act 2000*

“waters” includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea) or any part thereof.

“water release event” means release of any waters that are or maybe contaminated by the mining activity.

“water year” means the 12-month period from 1 July to 30 June.

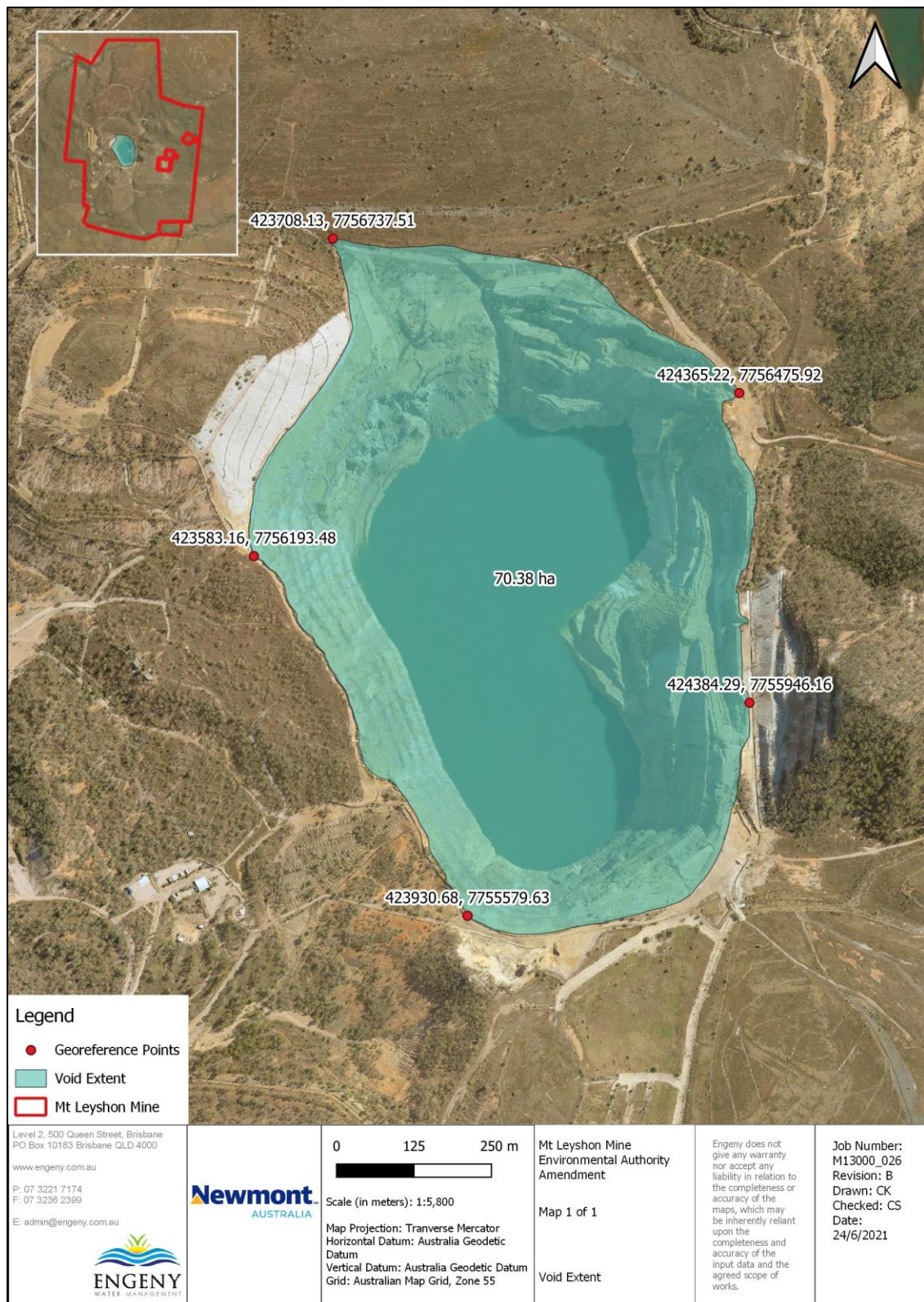
“wet season” means the time of year, covering one or more months, when most of the average annual rainfall in a region occurs. For the purposes of DSA determination this time of year is deemed to extend from 1 November in one year to 30 May in the following year inclusive.

END OF SCHEDULE I

Figure 1. Release Points



Figure 2. Void Extent



END OF SCHEDULE J

END OF ENVIRONMENTAL AUTHORITY