Permit[1]

Environmental Protection Act 1994

Environmental authority EPML00550413

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

Permit[1] number: EPML00550413

Environmental authority takes effect from 29 April 2015.

The anniversary date of this environmental authority is 15 March each year.

An annual return and the payment of the annual fee will be due each year on this day.

Environmental authority holders

Name	Registered address
Thalanga Copper Mines Pty Ltd	44 Martin Place SYDNEY NSW 2000
BML Holdings Pty Ltd	34A Alexander Street BURNIE TAS 7320

Environmentally relevant activity and location details

Environmentally relevant activity	Locations
Mining - ML copper ore - 17	ML1571, ML1734, ML1739 and ML10028

Additional information for applicants

Environmentally relevant activities

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

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

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

Contaminated land

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.

Transitional environmental program

A transitional environmental program (TEP) relates to this environmental authority and is currently in force until 30 September 2016. The holder of this environmental authority is also the holder of the TEP. The documents forming the approved TEP are:

- The application document titled "*Draft Transitional Environmental Program Highway Reward Mine dated 22 July 2013*" and received by the Administering Authority on 6 August 2013; and
- Certificate of approval MAN17020 as issued to The Mt Windsor Joint Venture Partners of Thalanga Copper Mines Pty Ltd and BML Holdings Pty Ltd on 27 August 2013.

In accordance with section 349 of the EP Act, the holder of an approval for a TEP must achieve full compliance with the EP Act for the matters dealt with by the TEP at the end of the period over which the TEP is carried out. Furthermore, in accordance with section 432 of the EP Act, it is an offence to contravene a requirement of the TEP.

Signature	Date
	29/4/2015

Hamish Butler
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
PO Box 7230
CAIRNS QLD 4870
Phone: (07) 4222 5334
Fax: (07) 4222 5070

Obligations under the *Environmental Protection Act 1994*

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

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

Conditions of environmental authority

Location:

Highway Reward Project

(Lot 3376 on Plan PH2278 County of Davenport, Parish of Bletchington 30km SSW of Charters Towers)

ML1571; ML1734; ML1739 and ML10028

Relevant activity/ies:

The environmentally relevant activity(ies) conducted at the locations as described above must be conducted in accordance with the following site specific conditions of approval.

This Environmental Authority incorporates the following schedules:

Schedule		**Issue**
Schedule A	-	General
Schedule B	-	Air
Schedule C	-	Water
Schedule D	-	Noise and Vibration
Schedule E	-	Waste
Schedule F	-	Land
Schedule G	-	Community
Schedule H	-	Hazardous Dams
Schedule I	-	Definitions
Schedule J	-	Maps / Plans

Schedule A – General

Financial Assurance

(A1-1) Provide a financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this environmental authority.

(A1-2) The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

Maintenance of Measures, Plant and Equipment

(A2-1) The 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.

Monitoring

(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) Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.

Storage and Handling of Flammable and Combustible Liquids

(A4-1) Spillage of all flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with Section 5.9 of AS 1940 - Storage and Handling of Flammable and Combustible Liquids of 1993.

Definitions

(A5-1) Words and phrases used throughout this Environmental Authority (EA) are defined in Schedule I – Definitions. Where a definition for a term used in this EA is sought and the term is not defined within this EA, the definitions in the *Environmental Protection Act 1994*, its Regulations and Environmental Protection Policies must be used.

Notification

(A6-1) Notify the administering authority as soon as practicable when the release of contaminants is not in accordance with the conditions of this authority or any event where environmental harm may be threatened.

(A6-2) Written advice of the following information must be provided within 14 days following any event as identified in Condition A6-1:

a) the location of the event;

b) the time of the event;

c) the time the holder of this authority became aware of the event;

d) the suspected cause of the event;

e) a description of the resulting effects of the event;

f) actions taken to mitigate any environmental harm and or environmental nuisance caused by the event;

g) proposed actions to prevent a recurrence of the event.

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 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 150 micrograms per cubic metre over a 24 hour averaging time, at a sensitive place downwind of the operational land, when monitored in accordance with:

- 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
- 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 exceedence 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.

Odour nuisance

(B2-1) Subject to condition (B2-2), the release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the mining activity must not cause an environmental nuisance at any sensitive place.

(B2-2) When requested by the administering authority, odour 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.

(B2-3) If monitoring indicates Condition (B2-1) is not being met then the environmental authority holder must:

a) address the complaint including the use of appropriate dispute resolution if required; or

b) immediately implement odour abatement measures so that emissions of odour from the activity do not result in further environmental nuisance.

END OF CONDITIONS FOR SCHEDULE B

HB

Schedule C - Water

Release to waters

(C1-1) Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Schedule C - Table 1 and Schedule J – Map 1 and comply with the contaminant limits defined in Schedule C - Table 2.

Schedule C - Table 1 (Receiving water monitoring locations and frequency)

Monitoring point	Easting (GDA 94 Zone 55)	Northing (GDA 94 Zone 55)	Monitoring frequency
SW1	418173	7748192	Event
SW2	417983	7746815	Event
SW3	416551	7748657	Event
SW4	415753	7747061	Event
SW5	416588	7747467	Event
SW6	416691	7748531	Event

Event is defined as: a flow event of sufficient magnitude to allow for collection of a sample of the receiving water at a monitoring point.

Schedule C - Table 2 (Receiving water contaminant limits)

Parameter	Units	Limit type	Contaminant trigger levels
pH		Acceptable range	6 - 9
Total Dissolved Solids	mg/L	Maximum	4000
Sulfate	mg/L	Maximum	1000[2]
Copper	mg/L	Maximum	1[1]
Molybdenum	mg/L	Maximum	0.15[1]
Arsenic	mg/L	Maximum	0.5[1]
Selenium (Total)	mg/L	Maximum	0.02[1]

Parameter	Units	Limit type	Contaminant trigger levels
Mercury	mg/L	Maximum	0.002[1]
Lead	mg/L	Maximum	0.1[1]
Zinc	mg/L	Maximum	20[1]
Cyanide (WAD)	mg/L	Maximum	0.01
Cadmium	mg/L	Maximum	0.01[1]

[1] These limits are based upon the ANZECC 2000 limits for livestock drinking water, and the concentrations therefore relate to total unfiltered concentrations in relation to metals. (See section 4.3.4 of the Guidelines.)

[2] Measured as the total concentration of sulfate.

(C1-2) Contaminants from the Pit, the ROM pad and the Tailings Storage Facility must not be released to any waters or the bed and banks of any waters.

Stream sediment contaminant levels

(C2-1) All reasonable and practicable erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.

(C2-2) The bed of the receiving waters, affected by the release of process water and storm water contaminated by the mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 3 and Schedule J – Map 2.

Schedule C - Table 3 (Receiving stream sediment monitoring locations and frequency)

Monitoring point	Easting (GDA 94 Zone 55)	Northing (GDA 94 Zone 55)	Monitoring frequency
SS1	418188	7748255	Bi-Annually[1]
SS2	417937	7746693	Bi-Annually[1]
SS3	418293	7745825	Bi-Annually[1]
SS4	416553	7748662	Bi-Annually[1]
SS5	415776	7747063	Bi-Annually[1]
SS6	414930	7746299	Bi-Annually[1]
SS7	416588	7747467	Bi-Annually[1]

[1] Sediments must be collected in October and April each year.

(C2-3) Subject to Condition (C2-2), if the stream sediment contaminant trigger levels defined in Schedule **C** - Table 4 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 4 (Receiving stream sediment contaminant trigger levels)

Monitoring point	Parameter	Units	Contaminant trigger levels[1]
SS1	Cadmium	mg/kg (ppm)	0.25
	Copper	mg/kg (ppm)	31
	Lead	mg/kg (ppm)	117
	Zinc	mg/kg (ppm)	208
SS2	Cadmium	mg/kg (ppm)	1.6
	Copper	mg/kg (ppm)	67
	Lead	mg/kg (ppm)	121
	Zinc	mg/kg (ppm)	185
SS3	Cadmium	mg/kg (ppm)	1.7
	Copper	mg/kg (ppm)	41
	Lead	mg/kg (ppm)	112
	Zinc	mg/kg (ppm)	143
SS4	Cadmium	mg/kg (ppm)	0.25
	Copper	mg/kg (ppm)	18
	Lead	mg/kg (ppm)	15
	Zinc	mg/kg (ppm)	36
SS5	Cadmium	mg/kg (ppm)	3.2
	Copper	mg/kg (ppm)	681.6
	Lead	mg/kg (ppm)	30.4
	Zinc	mg/kg (ppm)	240
SS6	Cadmium	mg/kg (ppm)	0.8
	Copper	mg/kg (ppm)	113
	Lead	mg/kg (ppm)	31
	Zinc	mg/kg (ppm)	85
SS7	Cadmium	mg/kg (ppm)	1.6

Monitoring point	Parameter	Units	Contaminant trigger levels[1]
	Copper	mg/kg (ppm)	824
	Lead	mg/kg (ppm)	60.8
	Zinc	mg/kg (ppm)	203.2

[1] These values relate to total, unfiltered concentrations.

(C2-4) Subject to Condition (C2-2), stream sediment contaminant limits must not exceed the contaminant limits defined in Schedule C -Table 5.

Schedule C - Table 5 (Receiving stream sediment contaminant limits)

Parameter	Units	Units	Contaminant limits[1]
SS1	Cadmium	mg/kg (ppm)	0.31
	Copper	mg/kg (ppm)	38.7
	Lead	mg/kg (ppm)	146.2
	Zinc	mg/kg (ppm)	260
SS2	Cadmium	mg/kg (ppm)	2.0
	Copper	mg/kg (ppm)	83.7
	Lead	mg/kg (ppm)	151.2
	Zinc	mg/kg (ppm)	231.2
SS3	Cadmium	mg/kg (ppm)	2.12
	Copper	mg/kg (ppm)	51.2
	Lead	mg/kg (ppm)	140
	Zinc	mg/kg (ppm)	178.7
SS4	Cadmium	mg/kg (ppm)	0.31
	Copper	mg/kg (ppm)	22.5
	Lead	mg/kg (ppm)	18.7
	Zinc	mg/kg (ppm)	45.0
SS5	Cadmium	mg/kg (ppm)	4
	Copper	mg/kg (ppm)	852
	Lead	mg/kg (ppm)	38
	Zinc	mg/kg (ppm)	300

Parameter	Units	Units	Contaminant limits[1]
SS6	Cadmium	mg/kg (ppm)	1.0
	Copper	mg/kg (ppm)	141.2
	Lead	mg/kg (ppm)	38.7
	Zinc	mg/kg (ppm)	106.2
SS7	Cadmium	mg/kg (ppm)	2
	Copper	mg/kg (ppm)	1030
	Lead	mg/kg (ppm)	76
	Zinc	mg/kg (ppm)	254

[1] These values relate to total, unfiltered concentrations.

(C2-5) All stream sediment sampling must be undertaken in accordance with AS 5667.12 Guidance on Sampling of Bottom Sediments of 1998 or more recent editions as they become available.

Sewage Effluent

(C3-1) Treated sewage effluent may only be discharged to the evaporation trenches on site. Effluent may not be used for dust suppression or irrigation, nor discharged to land.

HB

Groundwater

(C4-1) Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 6 and Schedule J – Map 3.

Schedule C - Table 6 (Groundwater monitoring locations and frequency)

Monitoring point	Easting (GDA 94 Zone 55)	Northing (GDA 94 Zone 55)	Monitoring frequency
GW4	416628	7748229	Quarterly
MW3	417360	7748503	Quarterly
MW4	417789	7747381	Quarterly
MW5	417843	7746921	Quarterly
MW6	417613	7746806	Quarterly
MW7	417261	7746848	Quarterly
MW8	416841	7746895	Quarterly
MW9	416605	7747037	Quarterly
MW11	416880	7747323	Quarterly
MW12	417106	7747490	Quarterly
MW14	416420	7747709	Quarterly
MW15	416095	7747013	Quarterly
MW Entry	416533	7747209	Quarterly

(C4-2) The trigger levels defined in Schedule C - Table 7 must not be exceeded when measured at the monitoring point listed in Schedule C – Table 6. If the groundwater contaminant trigger levels are exceeded, then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 7 (Groundwater contaminant trigger levels)

Parameter	Units	Limit type	Contaminant trigger levels
pH		Acceptable range	6 - 9
Total Dissolved Solids	mg/L	Maximum	4000
Sulfate	mg/L	Maximum	1000[2]
Copper	mg/L	Maximum	1[1]
Molybdenum	mg/L	Maximum	0.15[1]
Arsenic	mg/L	Maximum	0.5[1]
Selenium (Total)	mg/L	Maximum	0.02[1]
Mercury	mg/L	Maximum	0.002[1]
Lead	mg/L	Maximum	0.1[1]
Zinc	mg/L	Maximum	20[1]
Cyanide (WAD)	mg/L	Maximum	0.1
Cadmium	mg/L	Maximum	0.01[1]

[1] These levels are based upon the ANZECC 2000 limits for livestock drinking water, and the concentrations therefore relate to total unfiltered concentrations in relation to metals. (See section 4.3.4 of the Guidelines.)

[2] Measured as the total concentration of sulfate.

(C4-4) Groundwater levels must be monitored and groundwater draw down fluctuations in excess of 2m per year, not resulting from the pumping of licensed bores, must be notified within 14 days to the administering authority following completion of monitoring.

(C4-5) 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.

NB

Acid rock drainage and leachate management

(C5-1) Subject to the release limits defined in Schedule - C, all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater or water course.

(C5-2) Seepage and leachate captured in the seepage monitoring well installed at the base of the Waste Rock Dump must be monitored monthly for the first 12 months after installation and quarterly thereafter. Results of the analysis of the samples are to be provided to the administering authority as they become available. Annual reporting must include an analysis of any trends or patterns in the contaminant levels and flow rates of the seepage.

END OF CONDITIONS FOR SCHEDULE C

Schedule D - Noise and Vibration

Noise nuisance

(D1-1) Subject to Conditions (D1-2) and (D1-3) noise from the mining activity must not cause an environmental nuisance, at any sensitive or commercial place.

(D1-2) When requested by the administering authority, noise 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 or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

(D1-3) If the environmental authority holder can provide evidence through monitoring that the limits defined in Schedule D - Table 1 and 2 inclusive, are not being exceeded then the holder is not in breach of Condition (D1-1). Monitoring must include:

a) $L_{A,\ max\ adj,\ T}$

b) the level and frequency of occurrence of impulsive or tonal noise;

c) atmospheric conditions including wind speed and direction; and

d) location, date and time of recording.

(D1-4) If monitoring indicates exceedence of the limits in Schedule D - Table 1 and 2, then the environmental authority holder must:

a) address the complaint including the use of appropriate dispute resolution if required; or

b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.

HS

(D1-5) The method of measurement and reporting of noise levels must comply with the latest edition of the Administering Authority's Noise Measurement Manual.

Schedule D - Table 1 (Noise limits)

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a Noise sensitive place					
L_{A10}, adj, 10 mins	45	40	30	45	40	30
L_{A1}, adj, 10 mins	50	45	35	50	45	35
	Noise measured at a Commercial place					
L_{A10}, adj, 10 mins	50	45	35	50	45	30
L_{A1}, adj, 10 mins	55	50	40	55	50	40

NOTE: The method of measurement and reporting of noise levels must comply with the latest editions of the Administering Authority's Noise Manuals.

Schedule D - Table 2 (Airblast Overpressure Level)

Location	Monday to Friday 7 am - 6 pm Saturday, Sunday, and public holidays 9am - 6 pm
Sensitive place	Air blast overpressure level (linear peak.); 115dB
Commercial place	Air blast overpressure level (linear peak.); 115dB

Vibration nuisance

(D2-1) Subject to Conditions (D2-2) and (D2-3) vibration from the mining activity must not cause an environmental nuisance, at any sensitive place.

(D2-2) When requested by the administering authority, vibration 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.

(D2-3) If the environmental authority holder can provide evidence through monitoring that the limits defined in Schedule D - Table 3 are not being exceeded then the holder is not in breach of (D2-1). Monitoring must include:

a) location of the blast(s) within the mining area (including which bench level); and

b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and

c) location, date and time of recording.

(D2-4) If monitoring indicates exceedence of the relevant limits in Schedule D - Table 3, then the environmental authority holder must:

a) address the complaint including the use of appropriate dispute resolution if required; or

b) immediately implement vibration abatement measures so that vibration from the activity does not result in further environmental nuisance.

Schedule D - Table 3 (Vibration limits)

Location	Vibration measured at a sensitive place
	Monday to Friday 7am - 6pm
	Saturday, Sunday, and public holidays 9am - 6pm
Sensitive place	25mm/s peak particle velocity for vibrations of more than 35Hz 10mm/s peak particle velocity for vibrations equal to or less than 35Hz
Commercial place	25mm/s peak particle velocity for vibrations of more than 35Hz 10mm/s peak particle velocity for vibrations equal to or less than 35Hz

END OF CONDITIONS FOR SCHEDULE D

Schedule E - Waste

Storage of tyres

(E1-1) Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options - should be stockpiled in volumes less than 3m in height and 200m^2 in area and at least 10m from any other tyre storage area.

(E1-2) All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.

Disposal of tyres

(E2-1) Where practicable, scrap tyres resulting from the mining activities can be disposed of in underground stopes provided this practice does not cause an unacceptable fire risk or compromise mine safety.

(E2-2) Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.

(E2-3) Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Land

Rehabilitation landform criteria

(F1-1) All areas significantly disturbed by mining activities identified in Schedule F – Table 1 must be rehabilitated to the final land description as defined in Schedule F – Table 2.

Schedule F - Table 1 (Final Land Use and Rehabilitation Approval Schedule)

Tenure ID (Mining Lease Number)	Disturbance type	Projective surface area (ha)	Post-mine land description	Post mine land suitability classification
1734	Open Pit	19	Residual void	Residual void
	Waste Rock dumps	83	Light grazing, disturbed native habitat	Grazing VIII
	ROM	3	Light grazing, disturbed native habitat	Grazing VIII
	Borrow pits	8	Light grazing, disturbed native habitat	Grazing VIII
	Wetland	1.5	Light grazing, disturbed native habitat	Grazing VIII
	Landfill	0.5	Light grazing, disturbed native habitat	Grazing VIII

Tenure ID (Mining Lease Number)	Disturbance type	Projective surface area (ha)	Post-mine land description	Post mine land suitability classification
	Office/Contractor facilities	3	Light grazing, disturbed native habitat	Grazing VIII
	Roads/tracks	4	Light grazing, disturbed native habitat	Grazing VIII
1739	Waste Rock dumps	55	Light grazing, disturbed native habitat	Grazing VIII
	Creek diversion	1	Light grazing, disturbed native habitat	Grazing VIII
	Roads/tracks	2	Light grazing, disturbed native habitat	Grazing VIII
	Borrow pits	7	Light grazing, disturbed native habitat	Grazing VIII
	Old Water Storage Dam	TBA	Light grazing, disturbed native habitat	Grazing VIII
10028	Open pit	2.0	Residual void	Residual void
1571	Open pit	13	Residual void	Residual void
	Old tailings dam	5.5	Light grazing, disturbed native habitat	Grazing VIII
	Core yard	0.5	Light grazing, disturbed native habitat	Grazing VIII

Schedule F – Table 2 – Rehabilitation analogue sites

Number	Identification	Topography	Easting (GDA 94 Zone 55)	Northing (GDA 94 Zone 55)
1	AO1	Flat	416776	7746869
2	AO2	Flat	417481	7746795
3	AO3	Flat	418056	7746733
4	AO4	Flat	417583	7748532
5	AO5	Flat	417973	7748551
6	AO6	Flat	418173	7748275
7	AO7	Flat	418165	7747279
8	AO8	Flat	418201	7746911
9	AO9	Slope	418690	7746963
10	RMP10	Flat	417234	7748515
11	RMP11	Flat	418296	7748047
12	AO10	Flat	418635	7746989
13	AO11	Slope	418749	7747392
14	AO12	Slope	418743	7747440
15	AO13	Slope	418810	7747677

(F1-2) Progressive rehabilitation must commence when areas become available within the operational land.

Grazing pasture outcome

(F2-1) Areas which are to be rehabilitated to grazing pasture must comply with the following outcomes;

a) generate a self sustaining vegetation with projective cover, species composition and species distribution similar to the relevant analogue site(s); and

b) all areas disturbed by mining activities must be rehabilitated to a stable landform.

Residual void outcome

(F3-1) Residual 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 residual void itself, and subject to any other condition within this environmental authority.

Infrastructure

(F4-1) All infrastructure, constructed by or for the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining land owner / holder.

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.

END OF CONDITIONS FOR SCHEDULE G

Schedule H – Hazardous Dams

Decommissioning of Dam - Objective

(H1-1) Dams containing hazardous waste must not be abandoned, must be decommissioned to a situation where water can no longer be stored in the dams and the dams and their contained waste(s) are stable, where after the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of this Environmental Authority.

Decommissioning of Dam – Documentation and Compliance

(H2-1) Decommissioning activities for dams must be documented in detail in the plan of operations under which the activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the dam, the detailed documentation is considered to be an amendment to the design plan and must be submitted as an amendment to the design plan required by the Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste.

END OF CONDITIONS FOR SCHEDULE H

Schedule I - Definitions

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete (same as completion criteria).

"airblast overpressure" means energy transmitted from the blast site within the atmosphere in the form of pressure waves. The maximum excess pressure in this wave, above ambient pressure is the peak airblast overpressure measured in decibels linear (dB).

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

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

"blasting" means the use of explosive materials to fracture-

- rock, coal and other minerals for later recovery; or
- structural components or other items to facilitate removal from a site or for reuse.

"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.

"environmental authority holder" means the holder of this environmental authority.

"$L_{A\ 10,\ adj,\ 10\ mins}$" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10-minute measurement period, using Fast response.

"$L_{A\ 1,\ adj,\ 10\ mins}$" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10-minute measurement period, using Fast response

"$L_{A,\ max\ adj,\ T}$" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

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

"land capability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land suitability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land use" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

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

"median value" in relation to groundwater monitoring for this licence, means the middle observation of the observations made for that specific bore during the last 12 months, when the observations are ranked in magnitude.

"noxious" means harmful or injurious to health or physical well being, other than trivial harm.

"non-standard" means a mining operation that if in the opinion of the administering authority does not have a low risk of serious environmental harm and the activities can not comply with the criteria for standard mining

activities prescribed in schedule 1A of the Environmental Protection Regulation 1998. The standard mining activity trigger criteria are as follows;

- the mining activities do not or will not cause more than 10 ha of land to be significantly disturbed at any one time;
- the mining activities do not or will not cause more than 5 ha of land to be significantly disturbed at any one time;
  - (a) in a riverine area;
  - (b) because of mine workings;
- the mining activities are not or will not be carried out in, or within 2 km of a category A Environmentally Sensitive Area;
- the mining activities are not or will not be carried out in, or within 1 km of a category B environmentally sensitive area;
- the mining activities do not include a level 1 environmentally relevant activity
- no more than 20 persons are carrying out or will, at any one time, carry out the mining activities;

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

"peak particle velocity (ppv)" means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mms-1).

"protected area" means

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 2004*; or
- a World Heritage Area

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are ongoing.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"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.

"residual void" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"self sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"significant disturbance" – includes land

(a) if it is contaminated land; or

(b) it has been disturbed and human intervention is needed to rehabilitate it.

  i. to a state required under the relevant environmental authority; or

  ii. if the environmental authority does not require the land to be rehabilitated to a particular state –

to its state immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a suitability statement has not been issued.

However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- by agreement with the administering authority, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the administering authority;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

"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 2004* or a World Heritage Area; or
- a public park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes which is not part of the mining activity and does not include employees accommodation or public roads.

"stable" means geotechnical stability of the rehabilitated landform where instability related to the excessive settlement and subsidence caused by consolidation / settlement of the wastes deposited, and sliding / slumping

instability has ceased.

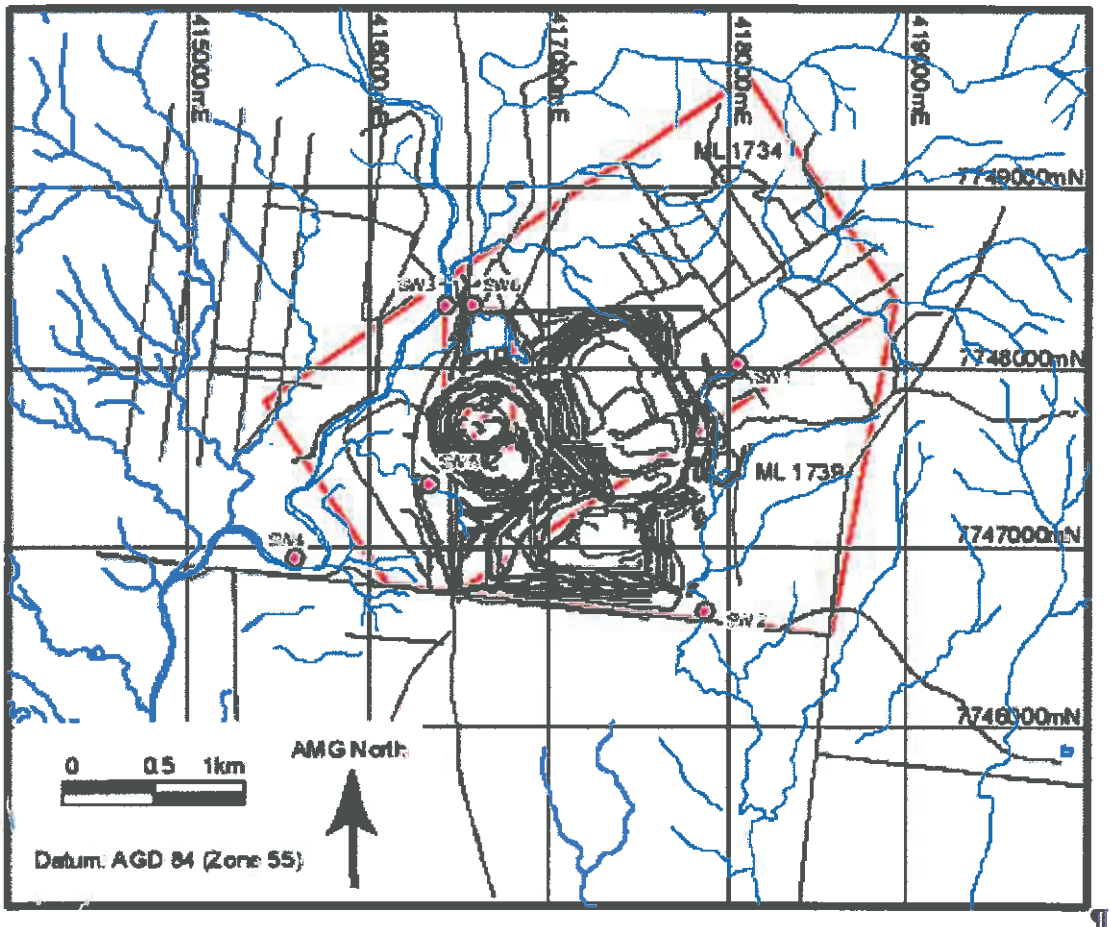
"trivial harm" means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than $5,000.

"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.

END OF CONDITIONS FOR SCHEDULE I

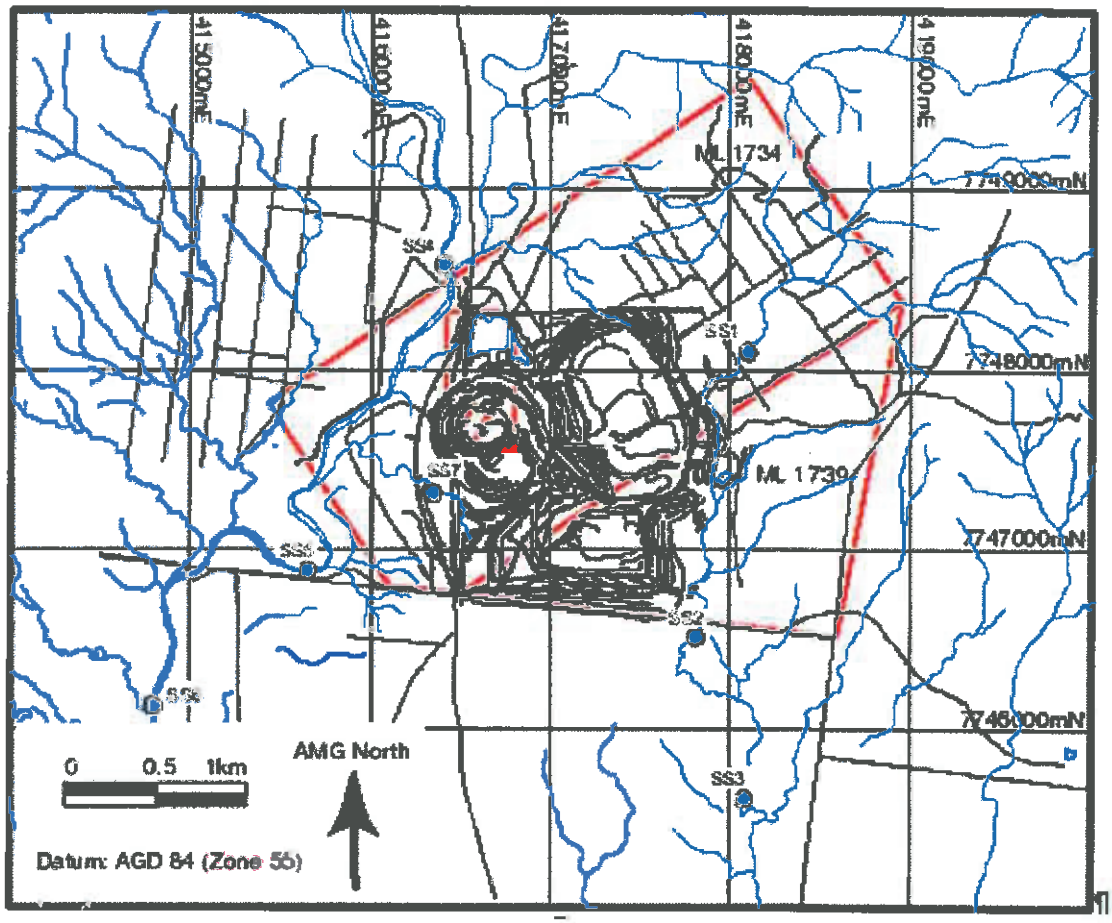
Schedule J - Maps / Plans

Schedule J Map 1 – Receiving water sampling locations



HB

Schedule J Map 2 – Stream sediment sampling locations



Schedule J Map 3 – Groundwater monitoring bore locations

END OF CONDITIONS FOR SCHEDULE J

END OF ENVIRONMENTAL AUTHORITY