

Permit

Environmental Protection Act 1994

Environmental authority EPML00563313

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

Environmental authority number: EPML00563313

Environmental authority takes effect on 18 June 2024

The anniversary date of this environmental authority is the 8 April. The payment of the annual fee will be due each year on this day.

Environmental authority holder(s)

Name(s)	Registered address
New Wilkie Energy Pty Limited	1245 Macalister Wilkie Creek Road Macalister QLD 4406

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Resource Activity, Schedule 3 – 13: Mining black coal	ML5908, ML50208, ML50214, ML50215, ML50276 and ML55004
Ancillary Activity, Schedule 2 – 8, Chemical storage, (3): storing more than 500m ³ of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c).	ML5908, ML50208, ML50214, ML50215, ML50276 and ML55004
Ancillary Activity, Schedule 2 – 15, Fuel burning: using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour.	ML5908, ML50208, ML50214, ML50215, ML50276 and ML55004
Ancillary Activity, Schedule 2 – 31, Mineral processing, (2): processing, in a year, the following quantities of mineral products, other than coke—, (b): more than 100,000t.	ML5908, ML50208, ML50214, ML50215, ML50276 and ML55004



Ancillary Activity, Schedule 2 – 50, Mineral and bulk material handling, (1): loading or unloading 100t or more of minerals in a day, other than loading or unloading mentioned in item 3, or storing 50,000t or more of minerals—, (b): at another place.	ML5908, ML50208, ML50214, ML50215, ML50276 and ML55004
Ancillary Activity, Schedule 2 – 60, Waste disposal, (1): operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a)— (a) less than 50,000t.	ML5908, ML50208, ML50214, ML50215, ML50276 and ML55004
Ancillary Activity, Schedule 2 - 63, Sewage treatment, (1): operating sewage treatment works, other than no-release works, with a total daily peak design capacity of— (a) 21 to 100EP— i) if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme.	ML5908, ML50208, ML50214, ML50215, ML50276 and ML55004

Additional information for applicants

Environmentally relevant activities

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

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

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

Contaminated land

It is a requirement of the EP Act that an owner or occupier of 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'.

Environmental authority EPML00563313 – Wilkie Creek Coal Mine

Take effect

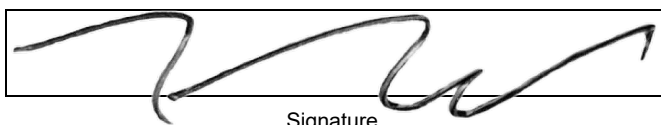
Please note that, in accordance with section 200 of the EP Act, an EA has effect:

- 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- one 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.

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



Signature

18 June 2024

Date

Ben Byrd
Delegate of the administering authority
Environmental Protection Act 1994

Date Issued: 18 June 2024

Enquiries:
Business Centre (Coal)
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Obligations under the *Environmental Protection Act 1994*

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

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

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 Natural Resources, Mines and Energy (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

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval. This environmental authority consists of the following Schedules and Appendices:

- Schedule A: General,
- Schedule B: Air,
- Schedule C: Noise and Vibration,
- Schedule D: Water,
- Schedule E: Waste,
- Schedule F: Land,
- Schedule G: Dams, and
- Appendices

Schedule A - General	
Condition number	Condition
A1	This environmental authority does not authorise environmental harm unless a condition contained within this authority explicitly authorises that harm. Where there is no condition or the environmental authority is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.
A2	Maintenance of measures, plant and equipment The holder of this environmental authority must: (a) Install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; (b) Maintain such measures, plant and equipment in a proper and efficient condition; (c) Operate such measures, plant and equipment in a proper and efficient manner; and (d) Ensure that all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are calibrated, and appropriately operated and maintained.
A3	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 by the mining activities.

A4	Monitoring Any management or monitoring plans, systems or programs required to be developed and implemented by a condition of this environmental authority must be reviewed for effectiveness in minimising the likelihood of environmental harm on an annual basis and amended promptly if required. NOTE: <i>Necessary action to address environmental harm may include submitting a program notice (section 350 of the EP Act) and/or applying for an amendment to the environmental authority. The administering authority will consider the standard criteria and other relevant legislation requirements when assessing such applications. This condition does not remove the need to notify the administering authority of any serious or material harm under section 320 of the EP Act.</i>
A5	Except where specifically noted in another condition of this environmental authority, any monitoring records or reports required under this environmental authority must be maintained and be readily accessible at the place to which this environmental authority relates for a period of not less than seven (7) years.
A6	Upon request from the administering authority, supply monitoring records and reports in the form and by the means requested by the administering authority within fourteen (14) days.
A7	Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.
A8	Storage and Handling of Flammable and Combustible Liquids 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).
A9	All petroleum product storages must be designed, constructed and maintained in accordance with <i>AS 1940 - Storage and Handling of Flammable and Combustible Liquids</i>.
A10	The base and walls of all bunded areas must be maintained free from gaps or cracks that may result in the loss of containment.
A11	Emergency Response/Contingency An emergency response/contingency plan must be developed and implemented to respond to emergency events and incidents.

A12	The emergency response/contingency plan required under Condition A11 must 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 restore 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 respond; (h) Timely and accurate reporting of the circumstance and nature of incidents to the administering authority in accordance with Conditions A13 to A15. (i) Procedures for accessing monitoring points during incidents; and (j) Procedures to notify potentially affected persons who may be affected by the event within twenty-four (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; and (iv) The potential impacts to environmental values caused by the release.
A13	Notification of Emergencies, Incidents and Exceptions Notify the administering authority as soon as possible (no later than twenty-four (24) hours) after becoming aware of any emergency or incident resulting in, or having the potential to cause, unlawful environmental harm or breach of condition of this authority concerning releases of contaminants to the environment by telephone or facsimile.

A14	The notification prescribed under Condition A13 must include, but not be limited to, the following: (a) The environmental authority number and name of the holder; (b) The name and telephone number of the designated contact person; (c) The location of the emergency or incident; (d) The date and time of the incident; (e) The time the holder of the environmental authority became aware of the incident; (f) The estimated quantity and type of substances involved in the incident; (g) The actual or potential cause of the incident; (h) A description of the nature and effects of the incident including environmental risks, any risks to public health or livestock; (i) Any sampling conducted or proposed, relevant to the emergency or incident; (j) Immediate actions taken to prevent or mitigate any further environmental harm caused by the release; and (k) What notification of persons who may be affected by the event has occurred/is being undertaken.
A15	Within fourteen (14) days following a notification made under Condition A13 relating to an emergency or incident, or receipt of monitoring results, whichever is the latter, 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; and (c) Proposed actions to prevent a recurrence of the emergency or incident.
A16	Complaints Record all environmental complaints received about the mining activities including the following details: (a) Name, address, and contact number for complainant; (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.

A17	When requested by the administering authority, undertake relevant specified monitoring 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 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 (14) days of completion of the investigation, or receipt of monitoring results, whichever is the latter.
A18	Community Liaison In consultation with the administering authority, cooperate with and participate in any community environmental liaison committee established in respect of either the site specifically, or the estate where the site is located.

Schedule B - Air	
Condition number	Condition
B1	The release of noxious or offensive odour or any other airborne contaminant resulting from the mining activities must not cause environmental harm at any sensitive place or commercial place unless specifically authorised through this environmental authority.
B2	Dust Nuisance 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 fourteen (14) days to the administering authority following completion of monitoring.
B3	Ensure that dust generated by the mining activities does not cause any of the following criteria to be exceeded at any sensitive or commercial place: (a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with the most recent version of Australian Standard <i>AS3580.10.1 Methods for sampling and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric method</i>. (b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with the most recent version of Australian Standard <i>AS3580.9.6 Determination of suspended particulate matter – PM (sub) 10 high volume sampler with size-selective inlet – Gravimetric method</i>.
B4	If monitoring indicates the limits in Condition B3 have been exceeded, then the environmental authority holder must as soon as practicable implement dust abatement measures so that emissions of dust generated by the mining activities cease to exceed the limits in Condition B3 and do not result in further environmental nuisance.
B5	The environmental authority holder must implement and maintain dust control procedures that incorporate a program for continuous improvement for the management of dust resulting from the mining activities.
B6	Preparation of bulk material for transport The holder of this environmental authority must secure loads (e.g. ore/concentrate) prior to transporting materials off site to minimise emissions or spillage of any material from vehicles or other transport infrastructure.
B7	In the event of a complaint about light from any mining activity that, after investigation, is in the opinion of an authorised person causing a nuisance at a sensitive place, the administering authority may request the holder to take appropriate action to mitigate the nuisance, and the holder must take appropriate action (e.g. by screening or directing the light away from residence or public roads) within any reasonable time set by the administering authority.

Schedule C - Noise and Vibration	
Condition number	Condition
C1	Noise from any mining activity must not cause environmental harm at any sensitive place or commercial place.
C2	In the event of a complaint made to the administering authority (which is neither frivolous or vexatious) about noise generated in carrying out the licensed activity and the noise is considered by the administering authority to be an unreasonable noise, the holder of this environmental authority must take action to ensure that it is no longer an unreasonable noise.
C3	Noise Monitoring Noise is not considered to be environmental harm in accordance with Condition C1 if monitoring shows that noise does not exceed the following levels at the time periods specified in Table C1 (Noise Limits).

Table C1: Noise limits

Sensitive Place						
Noise level dB(A) measured as:	Monday to Saturday			Sundays and Public Holidays		
	7am to 6pm	6pm to 10pm	10pm to 7am	9am to 6pm	6pm to 10pm	10pm to 9am
L_{Aeq} , adj, 15 mins ¹	50	45	40	50	45	40
L_{A1} , adj, 15 mins ²	55	50	45	55	50	45

¹ An average noise level over 15 minutes defined as the level of a notional sound which over 15 minutes would deliver the same A-weighted sound energy as the actual fluctuating sound.

² The A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 15 minute measurement period, using fast response.

NOTE: In the event that measured bg (**L_{A90}**, adj, 15 mins) is less than 25 dB(A), then 25 dB(A) can be substituted for the measured background level.

C4	When requested by the administering authority, noise monitoring and recording must be undertaken within a timeframe nominated by the administering authority to investigate any complaint of environmental nuisance at any sensitive place or commercial place and the results must be provided to the administering authority within fourteen (14) days following completion of monitoring.
C5	Noise monitoring and recording must include the following descriptor characteristics and matters: (a) $L_{AN,T}$ (where N equals the statistical levels of 1, 10 and 90 percentiles and T = 15 mins); (b) Background noise $L_{A90,T}$; (c) The level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to statistical levels; (d) Atmospheric conditions including temperature, relative humidity and wind speed and directions; (e) Effects due to any extraneous factors such as traffic noise; (f) Location, date and time of monitoring; (g) If the complaint concerns low frequency noise, Max $L_{pLIN,T}$; (h) If the complaint concerns low frequency noise, one third octave band measurements in dB(LIN) for centre frequencies in the 10 – 200 Hz range; and (i) L_{Aeq} means the time-average A-weighted sound pressure level over any 15 min measurement period.
C6	The method of measurement and reporting of noise levels must comply with the most recent edition of the administering authorities Noise Measurement Manual or the most recent version of <i>AS1055 Acoustics – Description and measurement of environmental noise</i> .
C7	Air Blast and Ground Vibration Ensure that blasting does not cause the limits for peak particle velocity and air blast overpressure in Table C2 (Blasting noise limits) to be exceeded.

Table C2: Blasting noise limits

Blasting noise limits	Sensitive place limits	
	7am to 6pm	6pm to 7am
Airblast overpressure	115 dB (Linear) Peak for nine (9) out of ten (10) consecutive blasts initiated and not greater than 120 dB (Linear) Peak at any time	No blasting
Ground vibration peak particle velocity	5mm/second peak particle velocity for nine (9) out of ten (10) consecutive blasts and not greater than 10 mm/second peak particle velocity at any time	No blasting

C8	The environmental authority holder must monitor every blast undertaken on the site at the nearest sensitive place.
C9	If blast monitoring detects non-compliance with Table C2 (Blasting noise limits) the environmental authority holder must take steps to ensure compliance is achieved by subsequent blasts.
C10	When requested by the administering authority, vibration and airblast overpressure monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous or vexatious or based on mistaken belief in the opinion of an authorised officer) of environmental nuisance at any sensitive or commercial place and the results must be notified within fourteen (14) days to the administering authority following completion of monitoring.
C11	Airblast overpressure monitoring must include the following descriptors, characteristics and conditions: (a) location of the blast(s) within the mining area (including which bench level); (b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and (c) location, date and time of recording.
C12	The method of measurement and reporting of airblast overpressure levels must comply with Appendix J of the most recent version of Australian Standard AS 2187.2-2006.
C13	The method of measurement and reporting of vibration levels must comply with the latest edition of the administering authority's <i>Noise Measurement Manual</i> (ESR/2016/2195).

Schedule D - Water	
Condition number	Condition
D1	Contaminants that will, or have the potential to, cause environmental harm must not be released to any waters except as permitted under the conditions of this environmental authority.
D2	Contaminant Release to Waters The release of mine affected water to waters must only occur from the release points specified in Table D1 (Mine affected water Release Points, Source and Receiving Waters) .
D3	The release of mine affected water to waters in accordance with Condition D2 must not exceed the release limits stated in Table D2 (Mine Affected Water Release Limits) when measured at the monitoring points specified in Table D1 (Mine Affected Water Release Points, Source and Receiving Waters) for each quality characteristic.

Table D1 (Mine Affected Water Release Points, Source and Receiving Waters)

Release Point	Latitude (GDA94)	Longitude (GDA94)	Mine Affected Water Source and Location, and Description of Release Point	Monitoring Point Description	Receiving Waters Description
RP 2 (A Pit)	27°03'50.0520776"	150°58'26.7594631"	A pit discharge	Wilkie Creek Upstream - A Pit	Wilkie Creek
RP 1 (D Pit)	27°01'23.3656548"	150°57'32.7274247"	D Pit discharge (Adjacent Storage Area C release point)	Wilkie Creek Downstream	Wilkie Creek
RP 3 (Storage area C)	27° 01'23.3656548"	150° 57' 32.7274247"	Storage Area C	Wilkie Creek Downstream C Pit	Wilkie Creek
RP4 (E Pit)	27° 02' 57.9773031"	150° 55' 59.9210556"	E Pit Discharge	Back Creek Downstream E Pit	Back Creek

Table D2 (Mine Affected Water Release Limits)

Quality Characteristic	Release Limit	Monitoring Frequency
Electrical conductivity ($\mu\text{S}/\text{cm}$)	1000	Daily during release (the first sample must be taken within 2 hours of commencement of release)
pH (pH units)	6.5 (minimum) to 9.0 (maximum)	Daily during release (the first sample must be taken within 2 hours of commencement of release)
Total Suspended Solids (mg/L)	310	Daily during release (the first sample must be taken within 2 hours of commencement of release)
Sodium Adsorption Ratio (SAR)	8 (Maximum)	Daily during release (the first sample must be taken within 2 hours of commencement of release)

D4	The release of mine affected water to waters from the release points must be monitored at the locations specified in Table D1 (Mine Affected Water Release Points, Source and Receiving Waters) for each quality characteristics and at the frequency specified in Table D2 (Mine Affected Water Release Limits) and Table D3 (Release Contaminant Trigger Investigation Levels). NOTE: <i>The administering authority will take into consideration any extenuating circumstances prior to determining an appropriate enforcement response in the event Condition D4 is contravened due to a temporary lack of safe or practical access. The administering authority expects the environmental authority holder to take all reasonable and practicable measures to maintain safe and practical access to designated monitoring locations.</i>
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Table D3 (Release Contaminant Trigger Investigation Levels)

Quality Characteristic	Trigger Levels (µg/L)	Comment on Trigger Level	Monitoring Frequency
Arsenic	13 µg/L	For 95% species protection for SMD aquatic ecosystem protection, based on ANZECC 2000	Commencement of release (within two (2) hours of the commencement) and thereafter weekly during release
Boron	370 µg/L	For 95% species protection for SMD aquatic ecosystem protection, based on ANZECC 2000	
Copper	1.4 µg/L	For 95% species protection for SMD aquatic ecosystem protection, based on ANZECC 2000	
Zinc	8 µg/L	For 95% species protection for SMD aquatic ecosystem protection, based on ANZECC 2000	
Fluoride (Total)	2000 µg/L	Protection of livestock and short term irrigation guideline	
Petroleum hydrocarbons (C6-C9)	20		
Petroleum hydrocarbons (C10-C36)	100		
B, Co, Mn, Mo, Se, Ag, U, V, F, NH ₃ , NO ₃ ,	Nil trigger value ³		

NOTE:

1. All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Trigger levels for metal/metalloids apply if dissolved results exceed trigger.
2. SMD refers to slightly–moderately disturbed systems under ANZECC 2000.
3. The quality characteristics required to be monitored as per Table 3 can be reviewed once the results of two years monitoring data is available, or if sufficient data is available to adequately demonstrate negligible environmental risk, and it may be determined that a reduced monitoring frequency is appropriate or that certain quality characteristics can be removed from Table 3 by amendment.

D5	If quality characteristics of the release exceed any of the trigger levels specified in Table D3 (Release Contaminant Trigger Investigation Levels) during a release event, the environmental authority holder must compare the downstream results in the receiving waters to the trigger values specified in Table D3 (Release Contaminant Trigger Investigation Levels) and: (1) Where the trigger values are not exceeded then no action is to be taken; or (2) Where the downstream results exceed the trigger values specified in Table 3 for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites and; (a) If the result is less than the background monitoring site data, then no action is to be taken; or (b) If the result is greater than the background monitoring site data, complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: (i) Details of the investigations carried out; and (ii) Actions taken to prevent environmental harm. NOTE: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with Condition D5 2(b) of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.
D6	If an exceedance in accordance with Condition D5(2)(b) is identified, the holder of this environmental authority must notify the administering authority within fourteen (14) days of receiving the result.
D7	Mine Affected Water Release Events Despite any other condition of this environmental authority, the release of mine affected water to waters in accordance with Condition D2 must only occur during period of natural flow in Wilkie Creek and Back Creek.
D8	The environmental authority holder must monitor and keep records of: (a) The flow in Wilkie Creek at the site access road crossing as measured by a staff gauge placed in stream at least twice during a release in accordance with Condition D2; and (b) The flow in Back Creek at a point upstream of E Pit release point at least twice during a release in accordance with Condition D2.
D9	The daily quantity of mine affected water released from each release point must be measured and recorded at the monitoring points in Table D1 (Mine Affected Water Release Points, Source and Receiving Waters).
D10	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.

D11	Notification of Release Event The environmental authority holder must notify the administering authority as soon as practicable but no later than twenty-four (24) hours after commencing to release mine affected water to the receiving environment. Notification must include the submission of written advice 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 (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).
D12	The environmental authority holder must notify the administering authority as soon as practicable (nominally within twenty-four (24) hours after cessation of a release event) of the cessation of a release notified under Condition D11 and within 28 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 this environmental authority (i.e. contamination limits, natural flow, discharge volume); (e) all in-situ water quality monitoring results; and (f) any other matters pertinent to the water release event. NOTE: Successive or intermittent releases occurring within twenty-four (24) hours of the cessation of any individual release can be considered part of a single release event and do not require individual notification for the purpose of compliance with Conditions D11 and D12, provided the relevant details of the release are included within the notification provided in accordance with Conditions D11 and D12.
D13	Notification of Release Event Exceedance If the release limits defined in Table D2 (Mine Affected Water Release Limits) are exceeded, the holder of the environmental authority must notify the administering authority within twenty-four (24) hours of receiving the results.

D14	The environmental authority holder must, within twenty-eight (28) days of a release that exceeds the conditions of this authority, provide a report to the administering authority detailing: (a) the reason for the release; (b) the location of the release; (c) all water quality monitoring results; (d) any general observations; (e) all calculations; and (f) any other matters pertinent to the water release event.
D15	Receiving Environment Monitoring and Contaminant Trigger Levels The quality of the receiving waters must be monitored at the locations specified in Table D5 (Receiving Water Upstream Background Sites and Down Stream Monitoring Points) for each of the quality characteristic and frequency stated in Table D6 (Receiving Waters Contaminant Trigger Levels).

Table D5 (Receiving Water Upstream Background Sites and Down Stream Monitoring Points)

Monitoring Points	Receiving Waters Location Description	Latitude (decimal degree, GDA94)	Longitude (decimal degree, GDA94)
Upstream Background Monitoring Points			
Wilkie Creek Upstream Monitoring Point	Wilkie Creek 455 metres upstream of RPRP2	S 27 ° 04' 01.319"	E 150 ° 58' 37.539"
Back Creek Upstream Monitoring Point	Back Creek 900 metres upstream of RP4	S 27 ° 03' 25.224"	E 150 ° 55' 48.099"
Downstream Monitoring Points			
Wilkie Creek Downstream Monitoring Point	Wilkie Creek 1670 metres downstream of RP 1	S 27 ° 01' 17.899"	E 150 ° 57' 28.312"
Back Creek Downstream Monitoring Point	Back Creek 1600 metres downstream of RP4	S 27 ° 02' 08.322"	E 150 ° 56' 16.903"

Table D6 (Receiving Waters Contaminant Trigger Levels)

Quality Characteristic	Trigger Level	Monitoring Frequency
pH	6.5 – 8.5	Commencement of release (within six (6) hours of the commencement) and thereafter weekly during release
Electrical Conductivity (µS/cm)	1,000	
Total Suspended solids (mg/L)	850	
Sulfate (SO ₄ ²⁻) (mg/L)	250	

D16	If quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in Table D6 (Receiving Waters Contaminant Trigger Levels) during a release event the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and: (1) Where the downstream result is the same or a lower value than the upstream value for the quality characteristic then no action is to be taken; or (2) Where the downstream results exceed the upstream results complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: (a) Details of the investigations carried out; and (b) Actions taken to prevent environmental harm. NOTE: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with Condition D16 of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.
D17	Water Reuse Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party for the purpose of: (a) Supplying stock water subject to compliance with the quality release limits specified in Table D7 (Stock Water Release Limits); or (b) Supplying irrigation water subject to compliance with quality release limits in Table 8 (Irrigation Water Release Limits); or (c) Supplying water for industrial usage, construction and/or road maintenance in accordance with the conditions of this environmental authority.

Table D7 (Stock Water Release Limits)

Quality characteristic	Units	Minimum	Maximum
pH	pH units	6.5	8.5
Electrical Conductivity	µS/cm	N/A	4000

Table D8 (Irrigation Water Release Limits)

Quality characteristic	Units	Minimum	Maximum
pH	pH units	6.5	8.5
Electrical Conductivity	µS/cm	N/A	3000

D18	Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as dams or tanks, for the purpose of supplying water. The volume, pH and electrical conductivity of water transferred must be monitored and recorded.
D19	If the responsibility for mine affected water is given or transferred to another person in accordance with Conditions D17 or D18: (a) the responsibility for the mine affected water must only be given or transferred in accordance with a written agreement (the third party agreement); and (b) the third party agreement must include a commitment from the person utilising the mine affected water to use it in such a way as to prevent environmental harm or public health incidents and specifically make the persons aware of the General Environmental Duty (GED) under section 319 of the <i>Environmental Protection Act 1994</i>, environmental sustainability of the water disposal and protection of environmental values of waters; and (c) the third party agreement must be signed by both parties to the agreement.
D20	Water General All determinations of water quality and biological monitoring 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 Monitoring and Sampling Manual published by the Department of Environment, Science and Innovation, or its successor. NOTE: <i>Condition D20 requires the Monitoring and Sampling Manual to be followed and where it is not followed because of exceptional circumstances this should be explained and reported with the results.</i> (c) collected from the monitoring locations identified within this environmental authority, within 6 hours of each other where possible; (d) carried out on representative samples; and (e) analysed at a laboratory accredited (e.g. NATA) for the method of analysis being used.
D21	Water Management Plan A Water Management Plan must be developed and implemented that 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.

D22	The Water Management Plan must implement methods to: (a) Identify the environmental values of the receiving waters including Wilkie Creek and water quality objectives and how they will be protected; (b) Manage site water quality and quantity during the three (3) phases of mining: development, operation and decommissioning and include a site water balance; (c) Incorporate a risk management approach to how changing levels of flood, drought and water quality risks may be addressed, but not so as to interfere with adequate provision on site for storage of contaminated stormwater, not so as to interfere with the operation of any other conditions in this environmental authority; (d) Provide adequate immunity to flooding of pits, water entry to dams and erosion damage to dams and other control structures, to appropriate probability levels during operations and following decommissioning and rehabilitation; (e) Develop and implement a system for emergency spills or discharges including procedures to minimise extent and duration of release, staff training, investigation and reporting procedures; (f) Manage the environmental impacts of any uncontrolled release of wastewater to the environment so that any impacts are minimised; (g) Separate water from undisturbed areas and water from disturbed areas and manage recycling; (h) Safeguard against the potential for soil erosion and acid drainage; and (i) Provide details of operational monitoring and monitoring of hydrological processes including associated performance indicators.
D23	A copy of the Water Management Plan and any subsequent amendment of the Water Management Plan must be kept at the place to which this environmental authority relates and be available for examination by Emergency Services Personnel or an authorised person on request.

D24	Back Creek and Wilkie Creek Surface Water Monitoring Program The holder of this environmental authority must develop and implement a Surface Water Monitoring Program. The Surface Water Monitoring Program must: (a) be carried out by a person possessing appropriate qualifications and experience in the field of surface water monitoring program design to be able to competently make recommendations about these matters; (b) record the quality of the surface water at the monitoring locations specified in Table D5 (Receiving Water Upstream Background Sites and Down Stream Monitoring Points) and be undertaken for, dissolved oxygen saturation, temperature and all water quality parameters listed in Table D2 (Mine Affected Water Release Limits) and Table D3 (Release Contaminant Trigger Investigation Levels); (c) include a sufficient number of monitoring locations both up and downstream to establish background water quality in sections of Back Creek; (d) determine potential environmental harm within the predicted zone of influence arising from mining activities; (e) provide representative water sampling from Back Creek and Wilkie Creek carried out with sufficient regularity and spatial and temporal replication to make statistically valid conclusions about the water quality; and (f) must consider the relevant methodology and water quality criteria developed by the Australian and New Zealand Environment and Conservation Council (ANZECC) and the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) in the <i>Australian Guidelines for Water Quality Monitoring and Reporting 2000</i> and <i>Australian and New Zealand Guidelines of Fresh and Marine Water Quality 2000</i>.
D25	A record of the results of the surface water monitoring program under Condition D24 , including background water quality monitoring must be kept and forwarded to the administering authority on request.
D26	Groundwater Contaminants including mine-affected waters must not be contained or released such that they find their way into aquifers.
D27	Any draw down of groundwater must not adversely impact on other lawful users of groundwater.
D28	Groundwater Monitoring A groundwater monitoring program must be designed and implemented by an appropriately qualified person to detect changes in groundwater level and composition in aquifers potentially affected by mining activities.
D29	Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in Table D9 (Groundwater monitoring locations and frequency) .

Table D9: Groundwater monitoring locations and frequency

Monitoring Point	Easting (m)	Northing (m)	Aquifer	Surface RL (m)	Water Level Frequency	Water Quality Frequency
Bore 5	E 150° 58'	S 27° 02'	Alluvial	318.0	Monthly	6 Monthly
Bore 6	E 150° 57'	S 27° 02'	Alluvial	330.10	Monthly	6 Monthly
P01	E 150° 57'	S 27° 02'	Coal	320.46	Monthly	6 Monthly
P02	E 150° 58'	S 27° 03'	Coal	323.52	Monthly	6 Monthly
P03	E 150° 58'	S 27° 03'	Coal	320.8	Monthly	6 Monthly
P04	E 150° 58'	S 27° 04'	Coal	321.9	Monthly	6 Monthly
P05	E 150° 58'	S 27° 04'	Coal	325.8	Monthly	6 Monthly
P06	E 150° 56'	S 27° 02'	Coal	327.2	Monthly	6 Monthly
P07	E 150° 56'	S 27° 03'	Coal	331.4	Monthly	6 Monthly

D30	Conduct monitoring and keep records of groundwater quality for bores in Table D9 (Groundwater monitoring locations and frequency) . All determinations of groundwater quality must be conducted for the water quality characteristics pH, EC, TDS, Ca, Mg, Na, K, Cl, SO ₄ , HCO ₃ , and at the minimum frequency stated in Table D9 (Groundwater monitoring locations and frequency) .
D31	A record of the results of monitoring conducted under Condition D30 must be kept and forwarded to the administering authority on request.
D32	An annual review of the water quality data should be undertaken by a person with appropriate experience in interpretation of groundwater chemistry data and if the review indicates the potential deterioration in water quality due to mining, the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within three (3) months of receiving the analysis results.
D33	The method of sampling of groundwater must comply with that set out in the latest edition of the administering authority's Monitoring and Sampling Manual.
D34	Stormwater and Water Sediment Controls Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion, the release of sediment and contamination of stormwater.
D35	Erosion control and sediment control structures must be maintained at all times and repaired or replaced as required after significant rainfall events.

D36	In the event that a release from any dam is necessary the release must be managed in such a manner that prevents or minimises erosion of any watercourse or other areas affected or potentially affected by the release.
D37	Acid Rock Drainage and Leachate Management Subject to the release limits defined in Schedule D , all reasonable and practicable measures must be implemented to prevent hazardous leachate being released or likely to be released as a result of the activity to any groundwater or water course.

Schedule E - Waste	
Condition number	Condition
E1	Waste Management Plan A Waste Management Plan must be implemented and maintained for the site. The Waste Management Plan must include: (a) a description of the mining activities that may generate waste; (b) waste management control strategies including: (i) 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 hazardous 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>i.e.</i> 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; (h) details of any accredited management system employed, or planned to be employed, to deal with waste; (i) how often the performance of the waste management program will be assessed; (j) the indicators or other criteria on which the performance of the waste management program will be assessed; and (k) staff training and induction to the waste management program.
E2	Waste Disposal All general and regulated waste (other than authorised under Condition E3) must be removed from the site to a facility that is lawfully able to accept the waste under the <i>Environmental Protection Act 1994</i>.

E3	The only waste that can be disposed of on site includes: (a) Waste rock; (b) Tailings; (c) Tyres; and (d) Demolition and construction wastes.
E4	Unless otherwise permitted by the conditions of this environmental authority, waste, other than green waste, must not be burnt or taken off site and burnt.
E5	Regulated Waste Regulated waste, other than that authorised to be disposed of on-site under this environmental authority, must only be removed and transported from the site by a person who holds a current authority to transport such wastes to a facility that is lawfully able to accept the waste under the <i>Environmental Protection Act 1994</i> .
E6	Regulated waste generated in the mining activity can be temporarily stored on site awaiting removal provided it is stored to ensure there is minimal risk of causing fire or contamination to land or waters.
E7	Each container of regulated waste stored awaiting movement off-site must be clearly marked to identify the contents.
E8	Tyre storage and disposal Waste tyres generated from mining activities may be disposed of on site in non-acid forming waste rock dumps or underground stopes.
E9	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.
E10	Tyres stored awaiting disposal or transport for take-back and recycling or waste-to-energy options – must be stockpiled in volumes less than 3m in height and 200m ² and at least 10m from any other tyre storage area.
E11	Fire prevention measures must be implemented including the removal of all combustible materials including grass and vegetation, from within a 10m radius of any tyre storage area.

E12	Tailings disposal Tailings must be managed in accordance with the conditions of this environmental authority, operational recommendations in the accepted certified design plan for each tailings containment and in accordance with the principles of tailings management guideline. Provision must be made for: (a) placement and containment of tailings; (b) stormwater drainage, erosion and adequate external storage for contact waters; (c) the management of seepage and leachates both during operation and post closure; (d) a program of progressive sampling and characterisation to identify acid producing potential and metal concentrations of tailings; (e) decommissioning and rehabilitation strategy; and (f) monitoring of rehabilitation, research and/or trials to verify the requirements and methods for decommissioning and final rehabilitation of tailings, including the prevention and management of acid mine drainage, erosion minimisation and establishment of vegetation cover.
E13	Waste must not be burned or allowed to be burned on the licensed site unless by approval of the administering authority.
E14	Inert demolition and construction waste disposal Inert demolition waste must only be disposed of into the waste disposal area of E-Pit of ML50276 and identified in Appendices: Map 1 – ML50276 In-Pit Disposal Area.
E15	Only demolition and construction waste will be disposed of in the in-pit disposal area.
E16	Deposited waste must be covered as soon as practicable to limit stormwater infiltration, prevent exposure of waste and prevent issues arising from vectors and pest species.
E17	All reasonable and practicable measures must be taken to contain litter within the waste operations area, and retrieve litter released.
E18	A register of the waste deposited must be maintained by the authority holder and made available for inspection by the administering authority upon request. The register must contain: (a) the type of waste received; (b) the quantity of waste received; (c) the date received; and (d) the disposal location (GPS coordinates and depth of disposal).

Schedule F - Land	
Condition number	Condition
F1	Wilkie Creek – Buffer Zone An undisturbed buffer zone of at least 35 metres in width is to be maintained between: (a) the high banks of Wilkie Creek and the eastern edge of the bund wall of A Pit (ML50215); (b) the high banks of Wilkie Creek and the boundary of operations of D Pit North (ML50214); and (c) the high banks of Back Creek and the boundary of E Pit (ML60276).
F2	General Other than as authorised under this environmental authority, contaminants must not be released to land in a manner which constitutes environmental nuisance, or material or serious environmental harm.
F3	Any spillage of wastes, contaminants or other materials must be cleaned up promptly. 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.
F4	A qualified spotter/catcher is to be engaged to work ahead of site clearing works at the commencement of vegetation clearing activity.
F5	General Treated sewage effluent is authorised to be irrigated to land when undertaken in accordance with Condition F7 and subject to Condition F6.
F6	The only treated effluent authorised to be irrigated on-site is from septic units servicing the administration building and mining workshop.

F7	Treated sewage effluent must only be irrigated in accordance with the following requirements: (a) efficient application of effluent utilising best practice methods; (b) control of sodicity in the soil; (c) minimal degradation of soil structure; (d) control build-up of nutrients and heavy metals in the soil and subsoil from effluent and other sources; (e) prevention of subterranean flows of effluent to waters; (f) prevention of impacts on the groundwater resource through infiltration; (g) prevention of the run-off of effluent or seepage from disposal areas by limitation of application rates and the use of structures such as bunds and catch dams; (h) prevention of surface ponding; (i) prevention of spray drift or overspray from effluent disposal areas; (j) prevention of damage to native vegetation; (k) provide prominent signage, in areas irrigated with effluent and which are accessible to the general public, advising that effluent should not be consumed or used; (l) maximise health and safety protection in relation to effluent handling and irrigation; and (m) identify the irrigation areas.
F8	When circumstances prevent the irrigation or beneficial reuse of treated sewage effluent such as during or following rain events, waters must be directed to wet weather storage or alternative measures must be taken to store/lawfully dispose of effluent.
F9	Rehabilitation Progressive rehabilitation must commence within twelve (12) months of when areas become available and consistent with the conditions of this environmental authority and operational recommendations in certified design plans.
F10	All land subject to mining activities must be rehabilitated to: (a) a stable landform and with a self-sustaining vegetation cover and species that reflects the approved final land use (as per Table F2 Final Landform design, land-use and rehabilitation Approval Schedule); (b) a safe landform, which is non-polluting, geo-chemically and geo-technically stable; (c) ensure that the maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance by mining activities; and (d) ensure that the water quality of any residual void or water bodies constructed by mining activities meets criteria for subsequent uses and does not have potential to cause environmental harm.

F11	Maintenance of rehabilitated areas must take place to ensure and demonstrate: (a) stability of landforms; (b) erosion control measures remain effective; (c) stormwater runoff and seepage from rehabilitated areas does not negatively affect the environmental values of any waters; and (d) plants show healthy growth and recruitment is occurring; and rehabilitated areas are managed with respect to declared pest plants.
F12	Topsoil and subsoils must be stripped and stockpiled ahead of mining to a depth determined from soil surveys to ensure that useable soil resources are preserved for rehabilitation.
F13	When topsoil is stored in stockpiles it should be in a manner that ensures stability. Measures must include: (a) vegetating stockpiles; and (b) minimising the height of stockpiles; and (c) re-using stockpiles as soon as possible.
F14	Rehabilitation Landform Criteria The holder of this environmental authority must complete a Final Land Use and Rehabilitation investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Table F2 (Final Landform design, land-use and rehabilitation Approval Schedule) and landform design criteria in Table F3 (Residual Void Design) by 28 February 2020. The report must include, but is not limited to the following: (a) a description of rehabilitation management techniques incorporating works and monitoring programs and timetables; (b) indicators for success, including evidence that water remaining in final voids intended for stock watering and irrigation will meet the requirements of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality; and (c) keeping of appropriate records of rehabilitation measures implemented including taking of photographs demonstrative of rehabilitation achieved and the preparation of annual rehabilitations progress reports. A summary of the annual rehabilitation progress report must be submitted to the administering authority with each annual return.
F15	All areas disturbed by mining activities must be rehabilitated to the final land description as defined in Table F2 (Final Landform design, land-use and rehabilitation Approval Schedule).
F16	ML50276 open cut pit voids must be protected against inundation and erosion damage from flooding to AEP 0.0003 (1 in 3,000).
F17	All final voids must be protected against inundation and erosion damage from a “probable maximum flood” level based on the Bureau of Meteorology’s “probable maximum precipitation” forecast for the locality.
F18	The A Pit within ML50215, as highlighted in Appendices: Map 2 – Pre Disturbance Landform, must be such that the landform is returned to a state that reflects the pre-disturbance landform.

Table F2 - Final Landform design, land-use and rehabilitation Approval Schedule

Tenure ID	Disturbance type	Surface Area (ha)	Slope range (%)	Post-mine land use description	Post mine land capability/suitability classification
ML50208 ML5908 ML50214 ML50215 ML50276	Infrastructure	35	<10	Light grazing	3
	Haul Roads	30	<10	Light grazing	4
	Final void	49	Competent rock <214% (70 degrees) Incompetent material <100% (45 degrees)	Water storage/Fauna Habitat	5
	Topsoil Stripped	20	<10	Fauna Habitat	3
	Dams	30	<30	Water storage	5
	Spoil area	450	<18	Fauna habitat/light gazing	4

F19	Decommissioning of Tailings Dams Tailings dams must be decommissioned with a final cover system which effectively: (a) creates a stable landform; (b) minimises infiltration of water into the tailings dam; and (c) minimises the likelihood of any erosion occurring to either the final cover system, dumped spoil material or deposited tailings.
F20	The decommissioning of tailings dams must be consistent with the conditions of this environmental authority and operational recommendations in certified design plans.
F21	The final cover system must include an upper layer of earthen material that is capable of sustaining plant growth.
F22	Areas that are to be progressively rehabilitated must comply with, but not be limited to, the following outcomes: (a) All areas disturbed by mining activities must be rehabilitated to the landform design criteria defined in the Final Land Use and Rehabilitation Plan required by Condition F14 and F15. (b) The final landforms must be stable with erosion rates comparable to analogue sites to allow for sediment control by planting species suitable to the final land use.
F23	Riparian areas along the boundary of ML50215 and ML50276 are to be revegetated to a width of at least fifty (50) metres from the high bank of Wilkie Creek and Back Creek using species endemic to the riparian zone.

F24	Residual Void Outcome Residual voids must comply with the following outcomes: (a) 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. (b) Residual voids must comply with Table F3 (Residual Void Design).
F25	A geo-technical assessment and associated report by a qualified professional who is a member of a credible external accreditation body, must be undertaken for all voids once they have been classified as a final void and prior to lease relinquishment, proposing acceptance criteria to meet the outcomes in Condition F15 and landform design criteria in Table F3 (Residual Void Design). The assessment and associated report must investigate final void geo-technical stability and make recommendations for management for constructing safety barriers on high walls prior to lease relinquishment to restrict human and animal access. The geo-technical assessment report must be made available to the administering authority upon request.

Table F3: Residual Void Design

Residual Void Identification	Void wall – competent rock max slope (%)	Void wall – incompetent rock max slope (%)	Void maximum surface area (ha)
Final Void Pits B Pit South, Pit #3 and E Pit	214% (70 degrees)	100% (45 degree)	49

F26	Pest Management In carrying out the mining activities the holder of this environmental authority must develop 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; (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.
F27	A copy of the pest management program must be made available to the administering authority on request.

F28	Rehabilitation Monitoring Program The holder of this environmental authority must appoint a person possessing appropriate qualifications and experience in the field of mine site rehabilitation, to develop a rehabilitation monitoring program for implementation on commencement of any rehabilitation pursuant to Condition F14.
F29	The holder of this environmental authority must conduct rehabilitation monitoring in accordance with the program developed in Condition F28 on at least a yearly basis which must include sufficient spatial and temporal replication to enable scientifically justifiable conclusions as established under the rehabilitation program or other methodology to the satisfaction of the administering authority.
F30	Verification of rehabilitation success is to be carried for each domain. Monitoring must be carried out for each domain at a minimum sampling intensity of 1:15,000 and must include sufficient replication to enable statistical analysis of results at an acceptable power.
F31	Progressive Rehabilitation Certification of progressive rehabilitation was granted on 8 February 2019 in the area depicted in Appendices: Map 3 – Wilkie Creek Mine Progressive Certification Application Area of Part of ML50215 (total area 86.67 hectares).

Schedule G - Dams	
Condition number	Condition
G1	The holder of this environmental authority must ensure that each dam is designed, constructed, operated and maintained in accordance with accepted engineering standards and is fit for the purpose for which it is intended.
G2	The hazard category of each dam must be assessed by a suitably qualified and experienced person at least once per year, based on documented evidence sufficient to define or confirm the current nature and extent of environmental consequences for potential failure of that dam.
G3	Where the hazard category of a dam is assessed as significant or high, the holder of the environmental authority must act immediately to ensure: (a) The administering authority is advised of the current details of that dam within ten (10) business days, including: (i) The assessed hazard category of that dam; (ii) Sufficient points of latitude and longitude in the current Australian geodetic datum to form a perimeter around that dam and its associated works; (iii) The maximum surface area, maximum volume, maximum depth of that dam; and (b) That dam meets the hydraulic performance required of the assessed hazard category within twelve months of that assessment.
G4	The condition of dams must be monitored for early signs of loss of structural or hydraulic integrity, based on the advice of a suitably qualified and experienced person. The methods of monitoring and frequency of monitoring shall be as assessed by that suitably qualified and experienced person, based on the hazard category and particular circumstances of each dam.
G5	In the event of early signs of loss of structural or hydraulic integrity, the holder of this environmental authority must immediately take action to prevent or minimise any actual or potential environmental harm, and report in writing any findings and actions taken to the administering authority within twenty (20) business days of that event.
G6	On cessation of operation of any dam, that dam must be maintained so as to avoid environmental harm until that dam is decommissioned.
G7	Prior to the cessation of the environmentally relevant activity, each dam must be decommissioned such that it either: (a) Becomes a stable landform, that no longer contains flowable substances; or (b) Is approved or authorised under relevant legislation for a beneficial use; or (c) Is a void authorised by the administering authority to remain after decommissioning; and (d) Is compliant with the rehabilitation requirements of this environmental authority.

G8	Regulated Dams - Location and Basic Specifications The following regulated dams must be wholly located within the control points defined in Table G1 (Location of Regulated Dams) .
G9	The following regulated dams must be consistent with the basic details in Table G2 (Basic Details of Regulated Dams) .
G10	The following regulated dams must meet the hydraulic performance criteria specified in Table G3 (Hydraulic Performance of Regulated Dams) .

Table G1: Location of Regulated Dams

Name of Regulated Dam ⁽¹⁾	Latitude (GDA 94)	Longitude (GDA 94)
Storage Area A and Storage Area B	S 27°02'45.301 S 27°02'34.879 S 27°02'20.319 S 27°02'33.525"	E 150°57'03.979 E 150°56'51.142 E 150°57'08.641 E 150°57'34.273"
West Tailings Dam	S 27°03'19.27616" S 27°03'27.72696" S 27°03'23.41991" S 27°03'11.48655" S 27°03'10.75054"	E 150°57'13.32328" E 150°57'26.95988" E 150°57'33.97905" E 150°57'35.54156" E 150°57'21.35251"
West Tailings Dam #2	S 27°03'19.81726" S 27°03'28.37481" S 27°03'39.76722" S 27°03'39.53549" S 27°03'27.4029"	E 150°57'12.55139" E 150°57'24.58932" E 150°57'21.55214" E 150°57'6.12822" E 150°57'7.37837"
North Tailings Dam	S 27°02'56.65787" S 27°03'4.46485" S 27°02'58.9803" S 27°02'48.53284" S 27°02'46.71685"	E 150°57'34.58489" E 150°57'45.77725" E 150°57'51.7981" E 150°57'52.3291" E 150°57'44.83443"
East Tailings Dam	S 27°03'27.87628" S 27°03'29.52047" S 27°03'12.6866" S 27°03'15.11021" S 27°03'22.63215"	E 150°57'44.41623" E 150°57'55.63996" E 150°57'59.58446" E 150°57'53.004" E 150°57'45.50393"
West Tailings Dam #3	S 27°03'53.4831739" S 27°03'48.8001707" S 27°04'01.4103205" S 27°04'14.0537980"	E 150°57'12.9437120" E 150°57'29.6271737" E 150°57'28.6192953" E 150°57'16.1076463"

Table G2: Basic Details of Regulated Dams

Name of Regulated dam	Hazard Category	Maximum surface area of dam (ha)	Maximum volume of dam (m3)	Maximum depth of dam (m)	Use of dam
Storage Area A and Storage Area B	Significant	51.8	1546	7.8	To store water for use in CHPP and other mine activities
North Tailings Dam	Significant	12	Unknown	60	All tailings dams store fine reject material and process residue
East Tailings Dam	Significant	11	1849	60	
West Tailings Dam	Significant	18	1840	60	
West Tailings Dam # 2	Significant	18	2900	60	
West Tailings Dam # 3	Significant	22	6724	44	

Table G3: Hydraulic Performance of Regulated Dams

Name of Regulated dam	Spillway Capacity AEP	Design Storage Allowance AEP	Mandatory Reporting Level AEP
Storage Area A and Storage Area B	AEP 0.001	AEP 0.05, 4 month wet season	AEP 0.01, 72 hour event
West Tailings Dam #1, #2 & #3, East Tailings Dam, North Tailings Dam	AEP 0.001	AEP 0.05, 4 month wet season	AEP 0.01, 72 hour event

NOTE: AEP means Annual Exceedance Probability – being the probability that at least one event as specified will occur in a particular year.

- * Calculations are to be carried out in accordance with the Site Water Management Guideline in the Technical Guidelines for Environmental Management of Exploration and Mining in Queensland (DME 1995).
- ** The design storage allowance on 1st November of each year for any regulated dam constructed within the operational land must be sufficient to contain the run-off from the critical wet period - plus the volume of any other inputs to the storage facility during that critical wet period, as part of operations. Such inputs could be tailings, contaminated site waters, process waters, and any other materials.
- *** The critical storm has a duration that produces the peak discharge for the catchment.
- **** The level below spillway crest that can accommodate runoff from a 72-hour storm at the specified AEP, or the wave allowance at the specified AEP - whichever level is lower.

G11	Future regulated dams must be constructed in accordance with a certified design plan that has been submitted to the administering authority, and such that the resulting dam will deliver the performance stated in that submitted design plan and that dam is compliant in all respects with this environmental authority.
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G12	Construction of a regulated dam must not be commenced unless: (a) The licensee has submitted to the administering authority two (2) copies of a design plan, together with the certification of a suitably qualified and experienced person that the design of the regulated dam will deliver the performance stated in that submitted design plan and that dam is compliant in all respects with this environmental authority, and (b) At least twenty (20) business days has passed since the receipt of those documents, or the administering authority notifies the licensee that a design plan and certification has been submitted for that dam.
G13	When construction of any regulated dam is complete and prior to commencing operation of that dam, the licensee must submit to the administering authority two copies of a set of 'as constructed' drawings, together with the certification of a suitably qualified and experienced person that the dam 'as constructed' will deliver the performance stated in that submitted design plan and that dam is compliant in all respects with this environmental authority.
G14	An operational plan must be kept current for each regulated dam.
G15	Where an operational plan covers decommissioning and rehabilitation, those operations are to be consistent with the design plan for the dam and the rehabilitation requirements of this environmental authority.
G16	The licensee must notify the administering authority as soon as possible, but within twenty-four (24) hours , of the level in any regulated dam reaching the mandatory reporting level (MRL); and must immediately act to prevent or minimize any actual or potential environmental harm.
G17	Each regulated dam must be inspected annually by a suitably qualified and experienced person.
G18	At each annual inspection, the condition and adequacy of each regulated dam must be assessed for dam safety and against the necessary structural, geotechnical and hydraulic performance criteria.
G19	At each annual inspection, if a mandatory reporting level is required, it must be determined and marked on each regulated dam.
G20	A final assessment of adequacy of available storage in each regulated dam must be based on a dam level observed within the month of October and result in an estimate of the level in that dam as at 1 November .
G21	For each annual inspection, two copies of a report on the condition and adequacy of each regulated dam, certified by the suitably qualified and experienced person and including any recommended actions to be taken to ensure the integrity of each regulated dam; must be provided to the administering authority by 1 December .
G22	The licensee must, within one week of receipt of the annual inspection report, consider the report and its recommendations; and as soon as possible, but within one month of receipt of the annual inspection report, formulate and implement actions to ensure that each regulated dam safely performs its intended functions.

END OF CONDITIONS

Definitions

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

“acid rock drainage” means any contaminated discharge emanating from a mining activity formed through a series of chemical and biological reactions when geological strata is disturbed and exposed to oxygen and moisture as a result of mining activity.

“acceptance criteria” means the measures by which actions implemented are deemed to be complete. The acceptance criteria indicate the success of the decommissioning and rehabilitation outcomes or remediation of areas which have been significantly disturbed by the environmentally relevant activities. Acceptance criteria may include information regarding:

- (a) stability of final land forms in terms of settlement, erosion, weathering, pondage and drainage;
- (b) control of geochemical and contaminant transport processes;
- (c) quality of runoff waters and potential impact on receiving environment;
- (d) vegetation establishment, survival and succession;
- (e) vegetation productivity, sustained growth and structure development;
- (f) fauna colonisation and habitat development;
- (g) ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;
- (h) microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;
- (i) effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;
- (j) resilience of vegetation to disease, insect attack, drought and fire;
- (k) vegetation water use and effects on ground water levels and catchment yields.

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

“AEP” means the Annual Exceedance Probability, which is the probability that at least one event in excess of a particular magnitude will occur in any given year.

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

“assessment”, “assessed” or “assess” 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 at any time:

- (a) exactly what has been assessed and the precise nature of that assessment;
- (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.

“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*.

“beneficial use” in respect of dams means that the current or proposed owner of the land on which a dam stands, has found a use for that dam that is:

- (a) of benefit to that owner in that it adds real value to their business or to the general community,
- (b) in accordance with relevant provisions of the *Environmental Protection Act 1994*,
- (c) sustainable by virtue of written undertakings given by that owner to maintain that dam, and
- (d) the transfer and use have been approved or authorised under any relevant legislation.

“blasting” means the use of explosive materials to fracture-

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

“certification” or “certified” by a suitably qualified and experienced person in relation to a design plan or an annual report regarding dams, 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 at any time:

- (a) exactly what is being certified and the precise nature of that certification.
- (b) the relevant legislative, regulatory and technical criteria on which the certification has been based;
- (c) the relevant data and facts on which the certification 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 certification has been based using the relevant data and facts, and the relevant criteria.

“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 purposes of preparing a design plan.

“Construction and demolition waste” non-putrescible waste arising from construction or demolition activity; has the potential for resource recovery. It may include materials such as brick, timber, concrete and steel.

“construction and demolition waste” means non-putrescible waste arising from construction or demolition activity; has the potential for resource recovery. It may include materials such as brick, timber, concrete, piping and steel.

“contaminate” means to render impure by contact or mixture.

“contaminated” means the substance has come into contact with a contaminant.

“contaminant” can be:

- (a) a gas, liquid or solid; or
- (b) an odour; or
- (c) an organism (whether alive or dead), including a virus; or
- (d) energy, including noise, heat, radioactivity and electromagnetic radiation; or
- (e) a combination of contaminants.

“control measure” means any action or activity that can be used to prevent or eliminate a hazard or reduce it to an acceptable level.

“dam” means a land-based structure or a void that is designed to contain, divert or control flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void and associated works. However; a dam does *not* mean a fabricated or manufactured tank or container designed to a recognised standard, *nor* does a dam mean a land-based structure where that structure is designed to an Australian Standard. In case there is any doubt, a levee (dyke or bund) is a dam, but (for example) a bund designed for spill containment to AS1940 is *not* a dam.

“declared pest plant” means a plant that has been declared under the *Land Protection (Pest and Stock Route Management) Act 2002* or any legislation amending the same or in substitution therefor.

“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. The documents must include all investigation and design reports, plans 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 the minimum storage required in a dam at 1 November each year in order to meet the hydraulic performance requirements.

“disturbance” means if an area

- (a) is contaminated land; or
- (b) has been disturbed and human intervention is needed to rehabilitate it.

Disturbance includes:

- (a) areas where soil has been compacted, removed, covered, exposed or stockpiled;
- (b) areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil);
- (c) areas where land use suitability or capability has been diminished;
- (d) areas within a watercourse, waterway, wetland or lake where mining project activities occur;

- (e) areas submerged by tailings or hazardous contaminant storage and dam walls in all cases; or
- (f) 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 has ceased; or areas where land has been contaminated.

“effluent” treated waste water discharged from sewage treatment plants.

“environmental authority” means an environmental authority granted in relation to an environmentally relevant activity under the *Environmental Protection Act 1994*.

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

“environmentally relevant activity” means an environmentally relevant activity as defined under section 18 of the *Environmental Protection Act 1994*.

“flowable substance” means matter or a mixture of materials which can flow under any conditions potentially affecting that substance. Constituents of a flowable substance can include water, other liquids fluids or solids, or a mixture that includes water and any other liquids fluids or solids either in solution or suspension.

“foreseeable future” is the period used for assessing the total probability of an event occurring. Permanent structures and ecological sustainability should be expected to still exist at the end of a 150 year foreseeable future with an acceptable probability of failure before that time.

“green waste” means cleared vegetation from the mining lease.

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

“hazard category” means a category, either low significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the *Site Water Management Technical Guideline for Environmental Management of Exploration and Mining in Queensland* (DME 1995).

“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 current version of the *Site Water Management Technical Guideline for Environmental Management of Exploration and Mining in Queensland* (DME 1995).

“infrastructure” means water storage dams, roads and tracks, buildings and other structures built for the purpose and duration of the conduct the environmentally relevant activities, but does not include other facilities required for the long term management of the impact of those activities or the protection of potential resources. Such other facilities include dams other than water storage dams, waste dumps, voids, or stockpiles and assets, that have been decommissioned, rehabilitated, and lawfully recognised as being subject to subsequent transfer with ownership of the land.

“ $L_{A,10,adj,10\text{ mins}}$ ” 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.

“ $L_{A,1,adj,15\text{ mins}}$ ” means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 15-minute measurement period, using Fast response

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

“ $L_{Ar,1\text{hour}}$ ” means the rating level measured over any one hour period, defined as:

$$L_{Ar,1\text{hour}} = L_{Aeq,1\text{hour}} + K_1 + K_2, \text{ where}$$

“**K₁**” means the tone adjustment applicable to any one hour measurement period, and

“**K₂**” means the impulse adjustment applicable to any one-hour measurement period.

“**L_{Aeq,15 min}**” means the time-average A-weighted sound pressure level over any one 15 minute measurement period.

“**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.

“**levee**” means an embankment that is designed only to provide 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.

“**licensee**” means:

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

“**mandatory reporting level**” or “**MRL**” means a warning and reporting level determined in accordance with the current version of the *Site Water Management Technical Guideline for Environmental Management of Exploration and Mining in Queensland* (DME 1995).

“**operational plan**” means a document that amongst other things sets out procedures and criteria to be used for operating a dam during a particular time period.

“**mine affected water**” means the following types of water:

- (a) pit water, tailings dam water, processing plant water;
- (b) water contaminated by a mining activity which would have been an environmentally relevant activity under Schedule 2 of the *Environmental Protection Regulation 2019* if it had not formed part of the mining activity;
- (c) rainfall runoff which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated, excluding rainfall runoff discharging through release points associated with erosion and sediment control structures that have been installed in accordance with the standards and requirements of an Erosion and Sediment Control Plan to manage runoff containing sediment only, provided that this water has not been mixed with pit water, tailings dam water, processing plant water or workshop water;
- (d) groundwater which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated;
- (e) groundwater from the mine’s dewatering activities;
- (f) a mix of mine affected water (under any of paragraphs (a) - (e)) and other water.

“natural flow” means the flow of water through waters caused by nature.

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

“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) a protected area under the *Nature Conservation Act 1992*; or
- (b) a marine park under the *Marine Parks Act 2004*; or
- (c) a World Heritage Area.

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

“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.

“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.

“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.

“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.

“regulated dam” means any dam in the significant or high hazard category as assessed using the current version of the *Site Water Management Technical Guideline for Environmental Management of Exploration and Mining in Queensland* (DME 1995).

“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.

“sensitive place” means;

- (a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- (b) a motel, hotel or hostel; or
- (c) an educational institution; or
- (d) a medical centre or hospital; or
- (e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- (f) a public park or gardens; or
- (g) 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.

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

“stable” in relation to land, means land form dimensions are and will remain within tolerable limits now and in the foreseeable future. Issues to be properly considered in regard to whether or not the landform is stable include geotechnical stability, settlement and consolidation allowances, bearing capacity (trafficability), erosion resistance and geochemical stability with respect to seepage, leachate and related contaminant generation.

“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:
 - investigation and design of dams.
 - construction, operation and maintenance of dams.
 - hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology.
 - hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes.
 - hydrogeology with particular reference to seepage, groundwater.
 - solute transport processes and monitoring thereof.
 - dam safety.

“tolerable limits” means a range of parameters regarded as being sufficient to meet the objective of protecting relevant environmental values. For example, a range of settlement for a tailings capping, rather than a single value, could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation.

“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.

“void” means any constructed, open excavation in the ground.

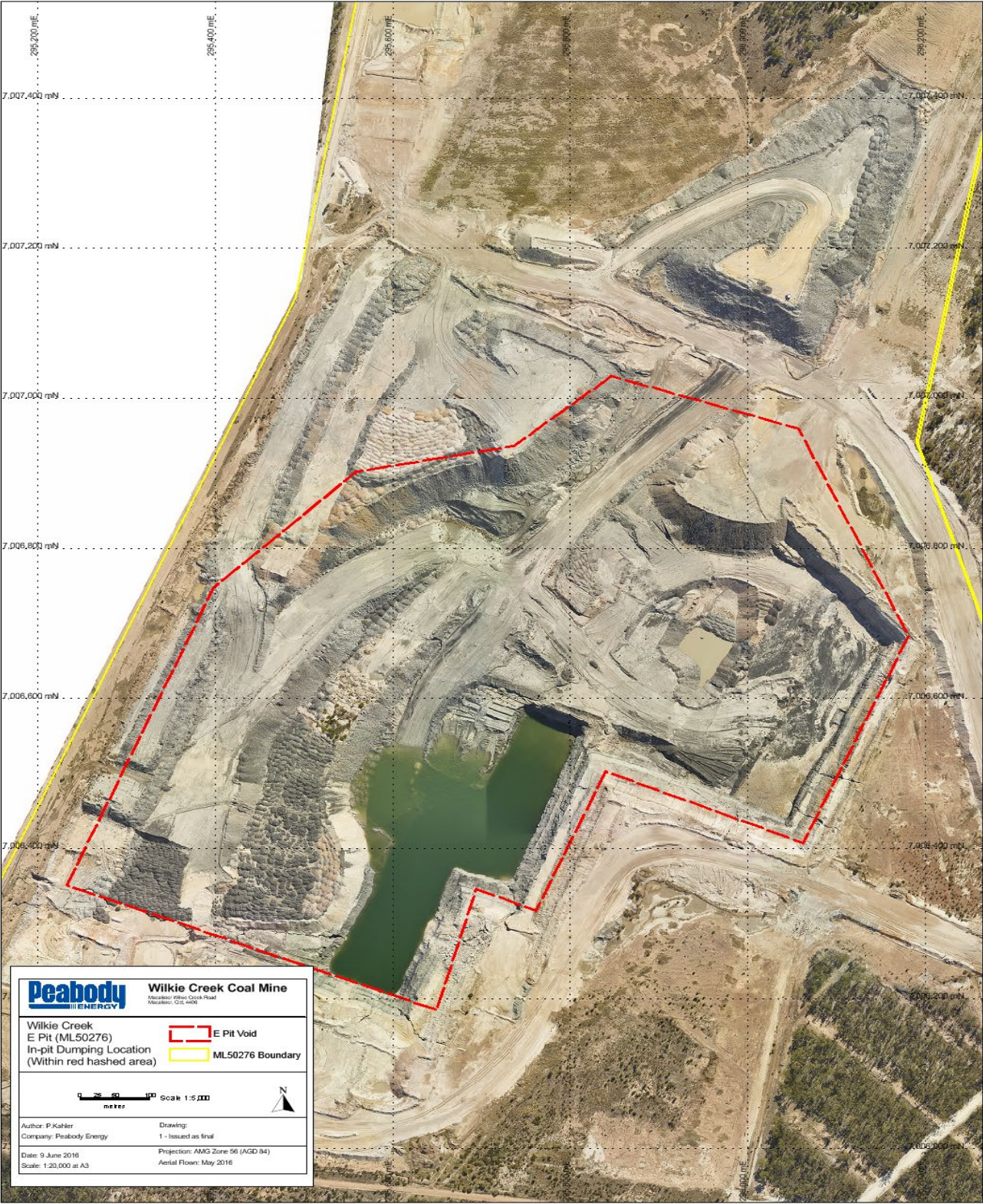
“waste” as defined in section 13 of the *Environmental Protection Act 1994*.

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

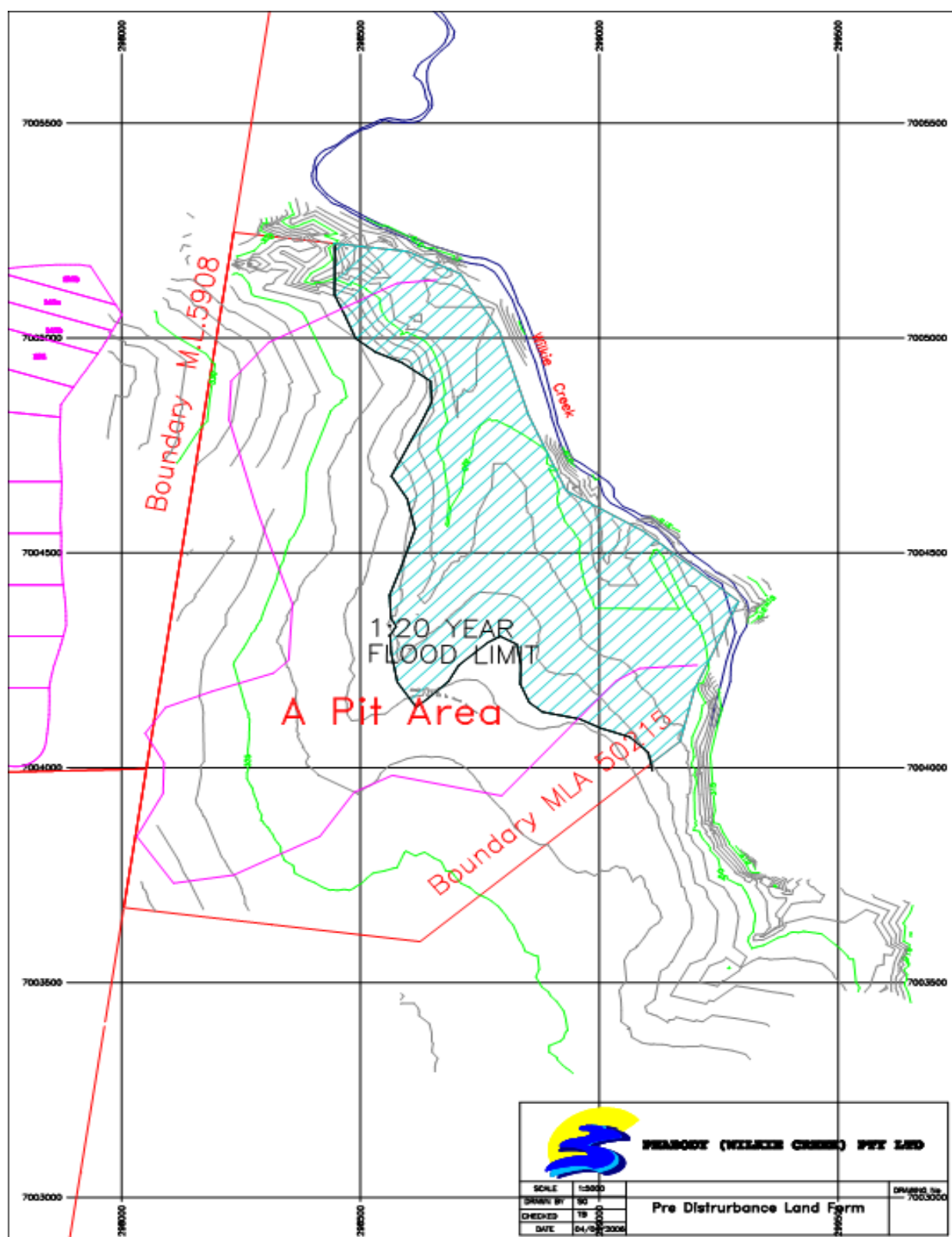
END OF DEFINITIONS

Appendices

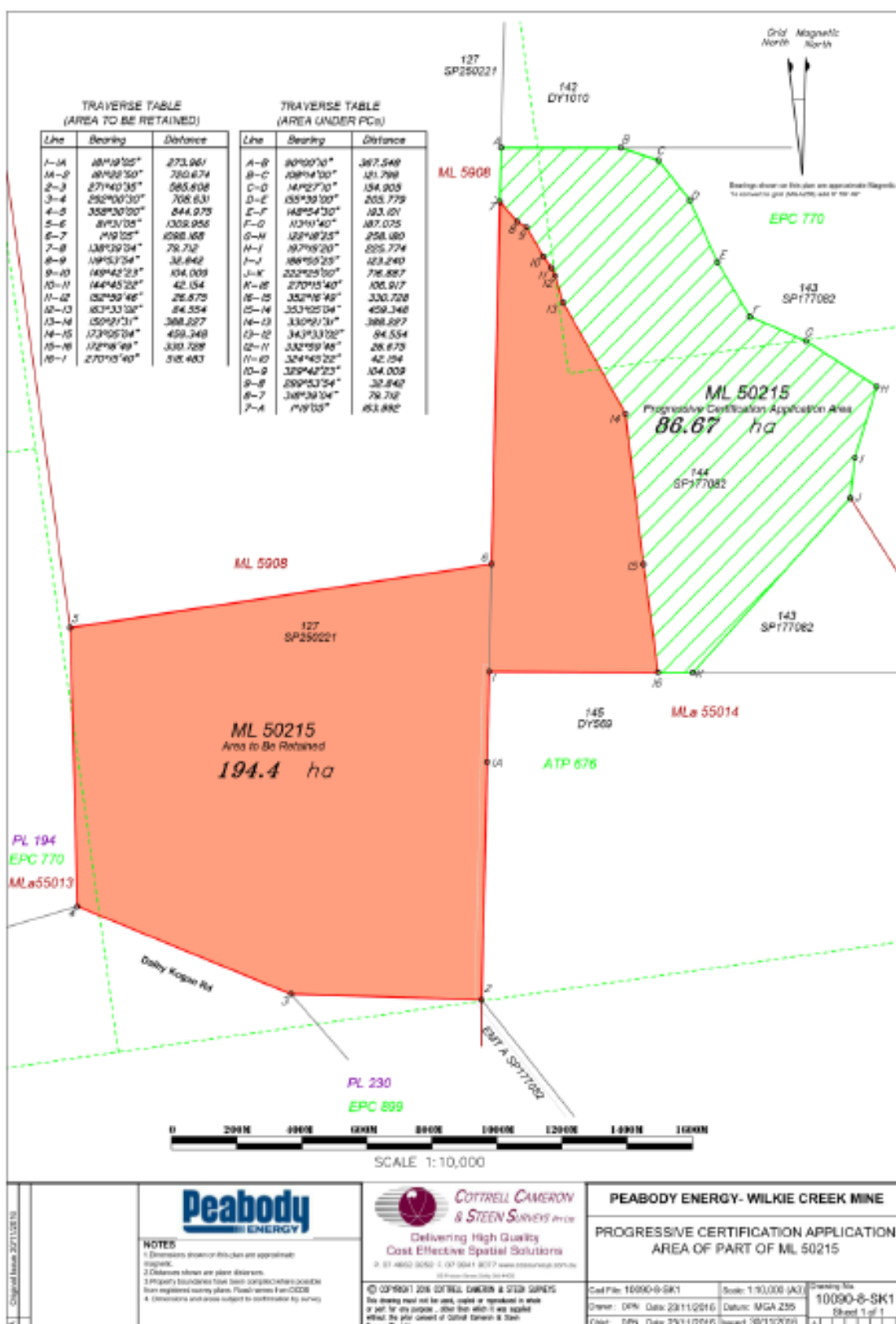
Map 1 – ML50276 In-Pit Disposal Area



Map 2 – Pre Disturbance Landform



Map 3 – Wilkie Creek Mine Progressive Certification Application Area of Part of ML50215



END OF ENVIRONMENTAL AUTHORITY