

Permit

Environmental Protection Act 1994

Environmental authority EPML00136213

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

Environmental authority number: EPML00136213

Environmental authority takes effect on 05 April 2019

Environmental authority holder(s)

Name(s)	Registered address
SIBELCO AUSTRALIA LIMITED	Level 16 111 Pacific Highway NORTH SYDNEY NSW 2060

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Resource Activity, Schedule 2A, 21: A mining activity that is an ineligible ERA, other than a mining activity mentioned in items 9 to 20	ML50237
Resource Activity, Schedule 2A, 21: A mining activity that is an ineligible ERA, other than a mining activity mentioned in items 9 to 20	ML50239
Resource Activity, Schedule 2A, 21: A mining activity that is an ineligible ERA, other than a mining activity mentioned in items 9 to 20	ML50238
Resource Activity, Schedule 2A, 21: A mining activity that is an ineligible ERA, other than a mining activity mentioned in items 9 to 20	ML50236
Prescribed ERA, ERA 16 - Extraction and Screening, 2: Extracting, other than by dredging, in a year, the following quantity of material, (b) more than 100,000t but not more than 1,000,000t	Lot 178/M34534
Prescribed ERA, ERA 16 - Extraction and Screening, 2: Extracting, other than by dredging, in a year, the following quantity of material, (b) more than 100,000t but not more than 1,000,000t	Lot 106/ML623
Prescribed ERA, ERA 16 - Extraction and Screening, 2: Extracting, other than by dredging, in a year, the following quantity of material, (b) more than 100,000t but not more than 1,000,000t	Lot 2/RP36822

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Environmentally relevant activity/activities	Location(s)
Prescribed ERA, ERA 16 - Extraction and Screening, 2: Extracting, other than by dredging, in a year, the following quantity of material, (b) more than 100,000t but not more than 1,000,000t	Lot 1291/M34534
Prescribed ERA, ERA 16 - Extraction and Screening, 2: Extracting, other than by dredging, in a year, the following quantity of material, (b) more than 100,000t but not more than 1,000,000t	Lot 5/SP236094
Prescribed ERA, ERA 16 - Extraction and Screening, 2: Extracting, other than by dredging, in a year, the following quantity of material, (b) more than 100,000t but not more than 1,000,000t	Lot 1219/M34519
Prescribed ERA, ERA 16 - Extraction and Screening, 3: Screening, in a year, the following quantity of material, (b) more than 100,000t but not more than 1,000,000t	Lot 5/SP236094
Prescribed ERA, ERA 16 - Extraction and Screening, 3: Screening, in a year, the following quantity of material, (b) more than 100,000t but not more than 1,000,000t	Lot 1219/M34519
Resource Activity, Schedule 2A, 21: A mining activity that is an ineligible ERA, other than a mining activity mentioned in items 9 to 20	ML50083
Resource Activity, Schedule 2A, 21: A mining activity that is an ineligible ERA, other than a mining activity mentioned in items 9 to 20	ML50146

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:

Environmental authority

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

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

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

Take effect

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

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

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

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

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.

Filiz Tansley
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

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Date issued: 05 April 2019

Environmental authority

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)

This approval incorporates the following Schedules:

- Schedule A – General
- Schedule B – Air
- Schedule C – Water
- Schedule D – Noise and Vibration
- Schedule E – Waste
- Schedule F – Land
- Schedule G – Community
- Schedule H – Definitions

Agency interest: Special Condition

- S1 **Scale of the activity:** The activities associated with this approval on Lot 1219 Plan M34519 are to be conducted only within the land identified as "quarry pit footprint" in Figure - ERA 16 Sibelco Warwick (Regional Ecosystems) dated 2013/02/12 (Attachment 1) and within the co-ordinates identified on this figure and listed below.

GPS Quarry pit footprint	Easting	Northing	Datum	Zone
Point 1	413534	6858367	GDA 94	MGA Zone 56
Point 2	413467	6858428		
Point 3	413477	6858492		
Point 4	413574	6858580		
Point 5	413653	6858584		
Point 6	413763	6858508		
Point 7	413700	6858437		
Point 8	413623	6858453		

Note: For Lot 5 Plan SP236094 this permit allows the extraction and processing of limestone as aggregate within the land bounded by two mining leases (ML 50236 and ML 50239).

Schedule A – General

- A1 **Definitions:** Words and phrases used throughout this EA are defined in Schedule H - Definitions. Where a definition for a term used in this EA is sought and the term is not defined within this EA, the definitions in the Environmental Protection Act 1994, its Regulations and Environmental Protection Policies must be used.

- A2 **Financial assurance:** Provide a financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this environmental authority.

NOTE: The calculation of financial assurance for condition (A2) must be in accordance with Guideline 17 and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest Total Rehabilitation Cost calculated for any year of the Plan of Operations and calculated using the formula: (Financial Assurance = Highest Total Annual Rehabilitation Cost x Percentage Required)

- A3 The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

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

A4 Maintenance of measures, plant and equipment:

The environmental authority holder must ensure:

- That all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed;
- That such measures, plant and equipment are maintained in a proper condition; and
- That such measures, plant and equipment are operated in a proper manner.

A5 Monitoring: Record, compile and keep for a minimum of five years all monitoring results required by this environmental authority and make available for inspection all or any of these records upon request by the administering authority.

A6 Where monitoring is a requirement of this approval, ensure that a competent person(s) conducts all monitoring.

A7 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) and maintained in accordance with Section 5.9 of AS 1940 - Storage and Handling of Flammable and Combustible Liquids of 2004.

A8 The base and walls of all bunded areas must be constructed with a material impervious to its contents and be maintained free from gaps or cracks that may result in the loss of containment.

Schedule B - Air

B1 Dust nuisance: Subject to Conditions (B2) and (B3) the release of dust or particulate matter or both resulting from the activity must not cause an environmental nuisance, at any sensitive or commercial place.

B2 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 or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

B3 If the holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of (B1):

- (a) Dust deposition of 120 milligrams per square meter per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method of 2003; and/or
- (b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometer (μm) (PM10) suspended in the atmosphere of 150 micrograms per cubic meter over a 24 hour averaging time, at a sensitive place down wind of the

operational land, when monitored in accordance with:

- Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method, when monitored in accordance with AS 3580.9.6 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM (sub) 10 high volume sampler with size-selective inlet - Gravimetric method of 2003; or
- Any alternative method of sampling PM 10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

NOTE: You must propose which monitoring method is appropriate in accordance with condition (B3) (a) or (b) or both.

- B4 If monitoring indicates exceedance of the relevant limits in Condition (B3), then the environmental authority holder must:
- (a) Address the complaint including the use of appropriate dispute resolution if required; or
 - (b) Immediately implement dust abatement measures so the emissions of dust from the activity do not result in further environmental nuisance.
- B5 Dust emissions from activities must be suppressed by the use of water or by any other suitable manner to prevent a dust nuisance at a sensitive place.
- B6 All reasonable and practicable measures must be taken to ensure effective dust suppression equipment is installed and maintained at any potential source of dust on the processing plant.
- B7 Temporary roads used for material haulage must be watered or treated in any other suitable manner, to minimise wind-blown and/or traffic generated dust.
- B8 Rehabilitation must be carried out in such a manner as to minimise releases of wind-blown dust and erosion.
- B9 **Odour Nuisance:** The release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the activity must not cause an environmental nuisance at any sensitive or commercial place.

Schedule C - Water

C1 Release to waters:

- (a) **With respect to ERA 16-(2c) Extractive, 16-(2b) Extractive, 16-(3b) Screening:** Contaminants must not be released from the boundary to any waters or the bed banks of any waters other than authorised by this schedule.
- (b) **With respect to Schedule 2A 21 Mining Activities:** Contaminants must not be released from the boundary of the mining lease(s) to any waters or the bed and banks of any waters other than authorised by this schedule.

C2

(a) **With respect to ERA 16-(2c) Extractive, 16-(2b) Extractive, 16-(3b) Screening:**

Notwithstanding condition C1(a), in the event of a significant rainfall event (i.e. a 1:10 year rainfall event) that may cause any sediment dam(s) and/or water supply dam(s) to overtop, the holder of this approval is authorised to release treated/settled stormwater, supply water and sediment dam water to drainage lines in accordance with the contaminant release limits defined in Schedule C - Table 1.

- (b) **With respect to Schedule 2A 21 Mining Activities:** Notwithstanding condition C1(b), in the event of a significant rainfall event (i.e. a 1:100 year rainfall event) that may cause any sediment dam(s) and/or water supply dam(s) to overtop, the holder of this environmental authority is authorised to release treated/settled stormwater, supply water and sediment dam water to drainage lines in the catchment of Lord John Creek (including Lucky Valley Gully and Frenchman Gully) in accordance with the contaminant release limits defined in schedule C-Table 1.

Schedule C - Table 1 (Contaminant release limits)

Parameter	Units	Minimum	Maximum
pH	-	6.0	9.0
Electrical conductivity	µS/cm	-	1500

C3 (a) **With respect to ERA 16-(2c) Extractive, 16-(2b) Extractive, 16-(3b) Screening:**

Any release must be managed in accordance with the Unimin Australia Limited *Warwick Limestone Deposit Site Water Management Plan* (September 2008) or subsequent amendment.

- (b) **With respect to Schedule 2A 21 Mining Activities:** With respect to condition (C2)(b), the release must be managed in accordance with the Site Water Management and Monitoring Plan in a manner that will ensure the contaminant release limits specified in Schedule C - Table 1 are not exceeded.

C4 **Erosion and sediment control:** Erosion protection measures and sediment controls must be provided and maintained to effectively minimise the likelihood of erosion and release of sediments from the site and be maintained during site clearing, construction, mining operations and rehabilitation. Such measures should include diversion drainage works and sedimentation traps and dams.

C5 Erosion control and sediment control structures must be maintained at all times and repaired or replaced as required after rainfall events.

C6 **Groundwater:** All reasonable and practicable measures must be taken to prevent the contamination of groundwater.

C7 Contaminants must not be directly or indirectly released to any groundwater as a result of mining activities.

C8 Any draw down of groundwater must not impact on the users of groundwater.

C9 **Site Water Management and Monitoring Plan:**

- (a) **With respect to ERA 16-(2c) Extractive, 16-(2b) Extractive, 16-(3b) Screening:** The holder of this approval must implement the Unimin Warwick Limestone Deposit Site Water

Management Plan (September 2008) or subsequent amendment.

- (b) **With respect to Schedule 2A 21 Mining Activities:** The holder of this environmental authority must develop and implement a Site Water Management and Monitoring Plan, within twelve (12) months of the date this environmental authority takes effect, for the site.

C10 The Site Water Management Plan 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) identify the environmental values of the licensed place and water quality objectives (i.e. ANZECC trigger levels for stock water) by monitoring locations (i.e. sediment dams) on the site for water quality characteristics (including total dissolved solids mg/l, total suspended solids mg/l, and pH) and identify any potential receiving waters in the event of an uncontrolled release that will be protected;
- (c) provide representative water sampling, in consideration of the availability of water on the site, carried out with sufficient regularity and spatial and temporal replication to make statistically valid conclusions about the water quality on the site;
- (d) give considerations to relevant methodology and water quality criteria by the Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand in Australian Guidelines for Water Quality Monitoring and Reporting 2000 and "Australian and New Zealand Guidelines of Fresh and Marine Water Quality 2000";
- (e) determine potential environmental harm within the predicted zone of influence arising from mining activities;
- (f) incorporate a risk management approach to how changing levels of flood, drought and water quality risks should be addressed e.g. increasing the lip of sediments ponds to increase capacity;
- (g) Determine measures to manage and/or recycle storm water discharges to minimise stormwater contaminated from the mining activities reaching any surrounding watercourses;
- (h) 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;
- (i) manage the environmental impacts of any uncontrolled release of wastewater to the environment so that any impacts are minimised e.g. improving sediment control measures and/or separating clean water from undisturbed areas and water from disturbed areas;
- (j) manage site water quality and quantity during the (3) phases of mining: development, operation and decommission;
- (k) safeguard against the potential for soil erosion;
- (l) provide details of operational monitoring and monitoring of hydrological processes including associated performance indicators.

C11 With respect to condition (C9)(b), the holder of this environmental authority must submit to the administering authority a draft of the Site Water Management and Monitoring Plan as soon as practicable following the date of issue of the environmental authority for comment prior to implementation of the plan.

C12 A copy of the Site Water Management Plan and any subsequent amendment of the Site Water Management Plan must be kept at the place to which this approval relates and be

available for examination by Emergency Services Personnel or an authorised person on request.

C13 A record of the results of the surface water-monitoring conducted, including background water quality monitoring, must be kept and forwarded to the administering authority on request.

C14 **Water Storage:** Sediment collection and water supply dams must be designed and maintained to prevent overtopping in accordance with Schedule C - Table 2 and to facilitate the settlement of suspended solids in stormwater contaminated by approved activities.

Schedule C - Table 2 (Storage Design - all mining leases unless specified otherwise)

Storage Type	Design Wet Period Storage (4 month wet season)	Spillway Critical design Storm*
Sediment Dams Any new sediment dams	1:10	>1:10
Water Supply Dams (Two (2) on ML50146) Any new water supply dams	1:50	>1:50

**the critical storm has a duration that produces the peak discharge for the catchment*

C15 The base and walls of the sediment dams must be constructed, installed and maintained:
(a) to minimise the likelihood of effluent through the bed or banks of the dam to any waters (including groundwater);
(b) to ensure the stability of the dams construction; and
(c) to maintain a minimum freeboard of 0.5m.

C16 (a) **With respect to ERA 16-(2c) Extractive, 16-(2b) Extractive, 16-(3b) Screening:** Water and/or stormwater collected in excavation pits must be utilised (i.e. for dust suppression) and/or redirected to the sediment dam(s) and/or water supply dam(s) on the mine site as soon as practicable after accumulation in the pits.
(b) **With respect to Schedule 2A 21 Mining Activities:** Water and/or stormwater collected in excavation pits one - three (1-3) on mining lease 50083 must be utilised (i.e. for dust suppression) and/or redirected to the sediment dam(s) and/or water supply dam(s) on the mine site as soon practicable after accumulation in the pits.

END OF CONDITIONS FOR SCHEDULE C

Schedule D - Noise and vibration

D1 **Noise Nuisance:** Subject to Conditions (D2) and (D3) noise from the mining activity must not cause an environmental nuisance, at any sensitive place.

D2 When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken

belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

- D3 If the environmental holder can provide evidence through monitoring that the limits defined in Schedule D - Table 1 are not being exceeded then the holder is not in breach of Condition (D1). Monitoring must include:
- (a) $L_{A, \max \text{ adj. } T}$; and
 - (b) the level and frequency of occurrence of impulsive or tonal noise; and
 - (c) atmospheric conditions including wind speed and direction; and
 - (d) location, date and time of recording.
- D4 If monitoring indicates exceedance of the limits in Schedule D - Table 1 and 2, then the holder must:
- (a) address the complaint including the use of appropriate dispute resolution if required; or
 - (b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.
- D5 The method of measurement and reporting of noise levels must comply with the latest edition of the Department of Environment and Resource Management's Noise Measurement Manual.

Schedule D - Table 1 (Noise Limits)

Noise Level dB(A) measured as	Monday to Saturday			Sundays and Public Holidays		
	7am – 6pm	6pm – 10pm	10pm – 7am	9am – 6pm	6pm – 10pm	10pm – 9am
	Noise measured at a 'Noise sensitive place'					
L_{Aeq} , adj, 15 mins	45	40	40	45	40	40
L_{Amax} , adj, T	50	45	45	50	45	45

Note: The method of measurement and reporting of noise levels must comply with the latest edition of the Department Noise Manuals

- D6 **Blasting:** The instantaneous sound pressure level when measured at a noise sensitive or commercial place must not exceed those levels in Schedule D - Table 2.
- D7 Blasting is to be carried out only between 7am and 5pm Monday to Friday and 9am to 1pm on Saturdays.

Schedule D - Table 2 (Airblast Overpressure Level)

Location	Monday to Friday 7am to 5.00pm Saturdays 9am – 1pm	Remainder of Saturdays, Sundays and Public Holidays
Sensitive or commercial place	Air blast overpressure level of 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.	Blasting not permitted

Note: The method of measurement and reporting of over pressure levels must comply with the latest edition of the Departmental vibration and air blast overpressure monitoring guideline.

- D8 **Vibration nuisance:** Subject to Conditions (D9) and (D10) vibration from the activity must not cause an environmental nuisance, at any sensitive or commercial place.

- D9 When requested by the administering authority vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- D10 If the holder can provide evidence through monitoring that the limits defined in Schedule D - Table 3 are not being exceeded then the holder is not in breach of (D8). Monitoring must include:
- (a) location of the blast(s) within the activity area (including which bench level); and
 - (b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and
 - (c) location, date and time of recording.
- D11 If monitoring indicates exceedance of the relevant limits in Schedule D - Table 3, then the holder must:
- (a) address the complaint including the use of appropriate dispute resolution if required; or
 - (b) immediately implement vibration abatement measures so that vibration from the activity does not result in further environmental nuisance.

Schedule D – Table 3 (Vibration Limits)

Location	Vibration Measured	
	Monday to Friday 7am to 5.00pm Saturdays 9am – 1pm	Remainder of Saturdays, Sundays and Public Holidays
Sensitive or commercial place	5mm/s peak particle velocity for nine (9) out of ten (10) consecutive blasts and not greater than 10mm/s peak particle velocity at any time	Blasting not permitted.

Note: The method of measurement and reporting of vibration levels must comply with the latest edition of the Departmental vibration and air blast overpressure monitoring guideline.

Schedule E – Waste

- E1 **Waste Management:** The handling and disposal of all waste produced on site is to be conducted using methods to avoid contamination of land and surface and groundwater.
- E2 Waste must be managed in accordance with the principles of the waste management hierarchy (i.e. waste avoidance, waste re-use, waste recycling, energy recovery from waste and waste disposal).
- E3 The environmental authority holder must remediate any contaminated land resulting from mining activities within the mine site prior to the surrender of any relevant mining lease.
- E4 **Storage of tyres:** Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options should be stockpiled in volumes less than 3m in height and 200m² in area and at least 10m from any other tyre storage area.
- E5 All reasonable and practicable fire prevention measures must be implemented, including

removal of grass and other materials within a 10m radius of the scrap tyre storage area.

- E6 **Disposal of tyres:** Where practicable, scrap tyres resulting from the mining activities can be disposed of in underground stopes provided this practice does not cause an unacceptable fire risk or compromise mine safety.
- E7 Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.
- E8 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.
- E9 **Emergency Response / Contingency Plan:**
- (a) **With respect to ERA 16-(2c) Extractive, 16-(2b) Extractive, 16-(3b) Screening:** The holder of this approval must implement the Unimin **Warwick Limestone Deposit Emergency Response / Contingency Plan** to manage the environmental impacts of uncontrolled release of contaminants to the environment.
 - (b) **With respect to Schedule 2A 21 Mining Activities:** The holder of this environmental authority must develop and implement an Emergency Response / Contingency Plan, within six (6) months of the date this environmental authority takes effect, to manage the environmental impacts of uncontrolled release of contaminants to the environment.
- E10 The Emergency Response / Contingency Plan must address at least the following matters:
- (a) response procedures to be implemented to reduce the likelihood of any release of contaminants to the environment;
 - (b) response procedures to prevent any further release or if such is not practicable, minimise the extent and duration of any release to the greatest practicable extent;
 - (c) the practices and procedures to be employed to restore the environment, or if such is not practicable, mitigate any environmental impacts of the release;
 - (d) a description of the resources to be used in response to a release;
 - (e) the training of staff that will be called upon to respond to a release;
 - (f) procedures to investigate the cause of any release, and where necessary, implement remedial actions to reduce the likelihood of recurrence of a similar event;
 - (g) the provision and availability of documented procedures to staff attending any release to enable them to effectively respond; and
 - (h) timely and accurate reporting of the circumstance and nature of release events to the administering authority.
- E11 A copy of the Emergency Response / Contingency Plan and any subsequent amendment of the Emergency Response / Contingency Plan must be kept at the place to which this activity relates and be available for examination by Emergency Services Personnel or an authorised person on request.

Schedule F - Land

F1 **Rehabilitation landform criteria:**

- (1) **With respect to ERA 16-(2c) Extractive, 16-(2b) Extractive, 16-(3b) Screening:** The holder of this approval must implement the Unimin Australia **Limited Limestone Deposit Final Land Use and Rehabilitation Plan** to ensure that all area disturbed by activities will be suitably rehabilitated.

(2) **With respect to Schedule 2A 21 Mining Activities:** The holder of this environmental authority must develop and implement a Final Land Use and Rehabilitation Plan, within twelve (12) months of the date this environmental authority takes effect, to ensure that all areas disturbed by mining activities will be suitably rehabilitated in accordance with Schedule F Tables 1-4. The Plan 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; and
- (c) keeping of appropriate records or 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.

Note: The Final Land Use and Rehabilitation Plan is to be managed through the Plan of Operations.

F2 Progressive rehabilitation must commence when areas become available within the operational land.

F3 All areas disturbed by mining activities must be rehabilitated to the final land description as defined in Schedule F - Table 1 - 6.

Schedule F – Table 1 (Final Land Use and Rehabilitation Approval Schedule for ML50236)

Tenure ID	Disturbance type	Surface area (ha)	Post Mine land description	Post mine land (capability / suitability) classification #	Slope range (degrees °)
ML50236	Main Pit Void	0.00	-	-	-
	Waste Dump	1.62	Re-contoured for drainage, Land not suitable for cultivations but well suited to pasture improvement	vi	Min of 20° Max of 30°
	Sediment Dams	0.00	-	-	-
	Road and Tracks	0.00	-	-	-
	Topsoil	0.00	-	-	-

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

Schedule F – Table 2 (Final Land Use and Rehabilitation Approval Schedule for ML50238)

Tenure ID	Disturbance type	Surface area (ha)	Post Mine land description	Post mine land (capability / suitability) classification #	Slope range (degrees o)
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ML50238	Main Pit Void	1.50	Water storage / Grazing	vi	70°
	Waste Dump	1.00	Re-contoured for drainage, Land not suitable for cultivations but well suited to pasture improvement	vi	Min of 20° Max of 30°
	Sediment Dams and Stormwater Control	0.50	Re-contoured for drainage. Land not suitable for cultivations but well suited to pasture improvement.	vi	Max 10°
	Mobile Crushing ROM and Product Stockpiles	2.60	Re-contoured for drainage, Land not suitable for cultivations but well suited to pasture improvement	vi	Max 10°
	Road and Tracks	2.50	Re-contoured for drainage, Land not suitable for cultivations but well suited to pasture improvement	vi	Max of 10°
	Topsoil	1.00	Respread as required	vi	Max of 10°

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

Schedule F – Table 3 (Final Land Use and Rehabilitation Approval Schedule for ML50237)

Tenure ID	Disturbance type	Surface area (ha)	Post Mine land description	Post mine land (capability / suitability) classification #	Slope range (degrees °)
ML50237	Main Pit Void	11.50	Water storage / Grazing	vi	70°
	Waste Dump	14.50	Re-contoured for drainage, Land not suitable for cultivations but well suited to pasture improvement	vi	Min of 20° Max of 30°
	Sediment Dams and	3.50	Remain as Stock Dams	viii	20°

	Stormwater Control				
	Road and Tracks	5.65	Roads to remain as farm access tracks	vi	Max of 10°
	Topsoil	5.00	Respread as required	vi	Max of 10°
	Mobile Crushing ROM and Product Stockpiles	6.60	All infrastructure to be removed and area re-contoured for drainage. Land not suitable for cultivations but well suited to pasture improvement.	vi	Max 10 °
	Crib Hut and Parking	1.00	All infrastructure to be removed and area re-contoured for drainage. Land not suitable for cultivations but well suited to pasture improvement.	vi	Max 10 °

A# "land capability" as defined in the DME 1995 Technical Guideline for the Environmental management of Exploration and Mining in Queensland.

Schedule F – Table 4 (Final Land Use and Rehabilitation Approval Schedule for ML50239)

Tenure ID	Disturbance type	Surface area (ha)	Post Mine land description	Post mine land (capability / suitability) classification #	Slope range (degrees °)
ML50239	Main Pit Void	0.38	Water storage / Grazing	vi	70°
	Waste Dump	1.74	General Grazing Land	vi	Min of 20° Max of 30°
	Sediment Dams	0.54	Remain as Stock Dams	viii	20°
	Road and Tracks	0.00	-	-	-
	Topsoil	0.00	-	-	-

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

Schedule F – Table 5 (Final Land Use and Rehabilitation Approval Schedule for ML50083)

Tenure ID	Disturbance type	Surface area (ha)	Post Mine land description	Post mine land (capability / suitability) classification #	Slope range (degrees °)
ML50083	Western Open Pit	5.00	Water Storage	viii	70 °
	Eastern Open Pit	5.00	Backfilled to RL 524	vi	70 °
	Waste Dump	5.00	General Grazing Land	vi	30 °
	Sediment Dams and Stormwater Control	1.01	Remain as Stock Dams	viii	30 °
	ROM Pad and Stockpiles	1.50	All will be removed	vi	Max of 10 °
	Roads and Tracks	1.50	Some tracks to remain as farm access tracks	vi	Max of 10 °
	Topsoil	0.33	Respread as required	vi	Max of 10 °

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

Schedule F – Table 6 (Final Land Use and Rehabilitation Approval Schedule for ML50146)

Tenure ID	Disturbance type	Surface area (ha)	Post Mine land description	Post mine land (capability / suitability) classification #	Slope range (degrees °)
ML50146	Open Pit	2.50	Land not suitable for cultivation but well suited to pasture improvement	vi	70 °
	Waste Dump	4.50	Re-contoured for drainage. Land not suitable for cultivation but well suited to pasture improvement	vi	Min of 20° Max of 30°
	ROM Pad and Stockpiles	10.00	All will be removed or rehabilitated	vi	Max 10 °

Roads and Tracks	3.15	Some tracks to remain as farm access tracks	vi	Max 10 °
Sediment and Stormwater Control	2.00	Remain as Stock Dams	viii	Max 20 °
Fixed Plant	1.24	All not required by land holder will be removed	vi	Max 10 °
Office/Maintenance Buildings	0.50	All not required by land holder will be removed	vi	Max 10 °
Topsoil	1.50	Respread as required	vi	Max of 10 °

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

F4 **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; and
- (b) residual voids must comply with Schedule F - Table 7.

F5 The environmental authority holder must complete an investigation into residual voids and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in (F3) and landform design criteria in Schedule F - Table 7, two (2) years prior to the relinquishment of any lease associated with this environmental authority.

Schedule F – Table 7 (Residual Void Design)

Void Identification	Void wall – competent rock max slope (degrees °)	Void wall – incompetent rock max slope (degrees °)	Void maximum surface area (ha)
ML50239 East/West	70 °	38 °	0.38
ML50238 Phoenix	70 °	38 °	1.50
ML50237 Phoenix	70 °	38 °	11.50
ML50146 Aspal	70 °	38 °	2.50
ML50083 East Pit	70 °	38 °	1.49
ML50083 West Pit	70 °	38 °	2.56

Impacts to Prescribed Environmental Matters

- F6 Significant residual impacts to prescribed environmental matters, are not authorised under this environmental authority or the *Environmental Offsets Act 2014* unless the impact(s) is specified in Schedule C – Table 8 (Significant residual impacts to prescribed environmental matters) and all information required for Schedule C - Table 8 (Significant residual impacts to prescribed environmental matters) has been provided to the administering authority.

Schedule F – Table 8 (Significant residual impacts to prescribed environmental matters)

Prescribed environmental matter	Location of impact	Maximum extent of impact
Regulated Vegetation – Of Concern (Category B) RE11.9.9/11.9.13	ML50146	1.80ha ¹
Regulated Vegetation – Of Concern (Category B) RE11.9.9/11.9.13	ML50237	4.41ha ¹
Regulated Vegetation – Of Concern (Category B) RE11.9.9/11.9.13	ML50238	1.82ha ¹
Regulated Vegetation – essential Habitat	ML50146	TBA ²
Regulated Vegetation – essential Habitat	ML50237	TBA ²
Regulated Vegetation – intersecting a watercourse	ML50237	0.7km ¹
Regulated Vegetation – Intersecting a watercourse	ML50238	0.04km ¹

¹The activities associated with this environmental authority are to be conducted only within the areas identified as Figure3 – MSES Features on Proposed Mine Plan dated February 2019 (Attachment 2).

²TBA means to be agreed at least four (4) months prior to the commencement of impacts to prescribed environmental matters.

- F7 Records demonstrating that each impact to a prescribed environmental matter not listed in Schedule F – Table 8 (Significant residual impacts to prescribed environmental matters) did not, or is not likely to, result in a significant residual impact to that matter must be:
- a) Completed by an appropriately qualified person; and
 - b) kept for the life of the environmental authority.
- F8 An environmental offset made in accordance with the *Environmental Offsets Act 2014* and *Queensland Environmental Offsets Policy*, as amended from time to time, must be

undertaken for the maximum extent of impact to each prescribed environmental matter authorised in Schedule F – Table 8 (Significant residual impacts to prescribed environmental matters), unless a lesser extent of the impact has been approved in accordance with condition F11.

- F9 Prior to the commencement of any impacts to a prescribed environmental matter for which an environmental offset is required by condition F8, a report completed by an appropriately qualified person that contains an analysis of the estimated maximum extent of impact to each prescribed environmental matter must be provided to the administering authority.
- F10 The report required by condition F9 must be approved by the administering authority before the notice of election, if applicable, is given to the administering authority.
- F11 The notice of election for the environmental offset required by condition F10, if applicable, must be provided to the administering authority no less than three months before the proposed commencement of the significant residual impacts for which the environmental offset is required.

Schedule G – Community

- G1 **Complaint response:** All complaints must be recorded including details of complainant, reasons for the release of contaminants not in accordance, or reasonably expected to be not in accordance with the condition of the approval, the holder of the environmental authority must notify the administering authority of the release by telephone or facsimile.
- G2 **Notification of Emergencies and Incidents:** As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this approval, the holder of this environmental authority must notify the administering authority of the release by telephone or facsimile.
- G3 The notification of emergencies or incidents as required by condition (G2) must include but not be limited to the following:
- (a) the holder of the approval;
 - (b) the location of the emergency or incident;
 - (c) the number of the approval;
 - (d) the name and telephone number of the designated contact person;
 - (e) the time of the release;
 - (f) the time the holder of the approval became aware of the release;
 - (g) the suspected cause of the release;
 - (h) the environmental harm and or environmental nuisance caused, threatened, or suspected to be caused by the release; and
 - (i) actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- G4 Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of the approval must provide written advice of the information supplied in accordance with condition (G3) in addition to:
- (a) proposed actions to prevent a recurrence of the emergency or incident;
 - (b) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance; and
 - (c) the results of any environmental monitoring performed.

Schedule H - Definitions

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

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly been disturbed by the mining activities. Acceptance criteria may include information regarding:

- vegetation establishment, survival and succession;
- vegetation productivity, sustained growth and structure development;
- fauna colonisation and habitat development;
- 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;
- microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;
- effects of various establishment treatments such as deep ripping, topsoil handling, seeding and
- fertiliser application on vegetation growth and development;
- resilience of vegetation to disease, insect attack, drought and fire;
- vegetation water use and effects on ground water levels and catchment yields.

"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.

"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 relating to the subject matter using the relevant protocols, standards, methods or literature.

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

"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.

"commercial place" means a work place used as 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.

"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.

"dam" means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

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

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

"LA 10, adj, 15 min," means the A-weighted sound pressure level, (*adjusted for tonal character and impulsiveness of the sound*) exceeded for 10% of any 15-minute measurement period, using Fast response.

"LA 1, adj, 16 min," 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

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

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

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

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

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

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

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

- (a) clay if mined for use for its ceramic properties, kaolin and bentonite;
- (b) foundry sand;
- (c) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil therefrom;
- (d) limestone if mined for use for its chemical properties;
- (e) marble;
- (f) mineral oil or gas extracted or produced from shale or coal by in situ processes;
- (g) peat;
- (h) salt including brine;
- (i) shale from which mineral oil may be extracted or produced;
- (j) silica, including silica sand, if mined for use for its chemical properties;
- (k) rock mined in block or slab form for building or monumental purposes; but does not include-
- (l) living matter;
- (m) petroleum within the meaning of the Petroleum Act 1923;
- (n) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form;
- (o) water.

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

"non-standard" means a mining operation that if in the opinion of the administering authority does not have a low risk of serious environmental harm and the activities can not comply with the criteria for standard mining activities prescribed in schedule 1A of the Environmental Protection Regulation 1998. The standard mining activity trigger criteria are as follows;

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

activities;

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

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

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

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

"protected area" means - a protected area under the Nature Conservation Act 1992; or
- a marine park under the Marine Parks Act 1992; or
- a World Heritage Area.

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

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

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

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

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

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

"sensitive place" means;

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical center or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens,

"significant disturbance" - includes land

- (a) if it is contaminated land; or
- (b) it has been disturbed and human intervention is needed to rehabilitate it.
 - i. to a state required under the relevant environmental authority; or
 - ii. if the environmental authority does not require the land to be rehabilitated to a particular state - to its state immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation /-- AMPERSAN --/ topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc.) which is to be removed after mining activities have

- ceased; or
- areas where land has been contaminated and a suitability statement has not been issued.

However, the following areas are not included:

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

"significant residual impact" has the meaning in section 8 *Environmental Offsets Act 2014*.

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

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

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

"watercourse" - Means a river, creek or stream in which water flows permanently or intermittently in a visibly defined channel (natural, artificial or artificially improved) with:

- (a) continuous bed and banks;
- (b) an extended period of flow for some months after rain ceases, and
- (c) an adequacy of flow that sustains basic ecological processes and maintains biodiversity,

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

END OF CONDITIONS



