

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

Permit¹ number: EPPR00519313

Environmental authority takes effect 5 February 2015

The anniversary date for this environmental authority is 8 February.

Environmental authority holder(s)

Name	Registered address
Vale Coal Exploration Pty Ltd	Level 11, 100 Creek Street BRISBANE CITY QLD 4000

Environmentally relevant activity and location details

Environmentally relevant activity	Location(s)
Mining - Mineral Development - Site Specific	MDL384

Additional information for applicants

Environmentally relevant activities

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

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

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

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



Contaminated land

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



Signature

Justin Cagney
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

5/2/2015

Date

Enquiries:
Business Centre (Coal)
Department of Environment and Heritage
Protection
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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); and
- Offence to place contaminant where environmental harm or nuisance may be caused (section 443).

Conditions of environmental authority

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

Agency interest: General	
Condition number	Condition
A1	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.
A2	The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely. <i>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.</i>
A3	The conditions of this environmental authority are in force until surrender of the authority is accepted pursuant to the <i>Environmental Protection Act 1994</i> . The conditions apply unless an amendment is approved pursuant to the <i>Environmental Protection Act 1994</i> .
A4	Maintenance of measures, plant and equipment The environmental authority holder must ensure: a) that all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed; b) that such measures, plant and equipment are maintained in a proper condition; and c) that such measures, plant and equipment are operated in a proper manner.

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A5	Monitoring Record, compile and keep for a minimum of five (5) 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 environmental authority, ensure that a competent person(s) conducts all monitoring.
A7	All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval must be calibrated, and appropriately operated and maintained.
A8	Storage and handling of flammable and combustible liquids All flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the current version of <i>AS 1940 - Storage and Handling of Flammable and Combustible Liquids</i>.
A9	Spillage of all flammable and combustible liquids must be controlled in a manner that prevents environmental harm.
A10	Storage and handling of chemicals All chemicals must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the current version of the relevant Australian Standard.
A11	Spillage of all chemicals must be controlled in a manner that prevents environmental harm.
A12	Spill kits An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the activity must be kept at the site.
A13	Notification of emergencies and incidents All reasonable actions are to be taken to minimise environmental harm, or the risk thereof, resulting from any emergency, incident or circumstances not in accordance with the conditions of this environmental authority.
A14	The environmental authority holder must notify the administering authority as soon as reasonably practicable after becoming aware of any emergency or incident resulting in the release of contaminants, or which threatens the release of contaminants, not authorised to be caused under this environmental authority.



A15	The notification in Condition A13 must include, but not be limited, to the following: a) the environmental authority number and name of 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 release; e) the time the holder of the environmental authority became aware of the release; f) the estimated quantity and type of substance released; g) the suspected cause of the release; h) a description of the effects of the release including environmental harm and/or environmental nuisance caused, threatened, or suspected to be caused by the release; i) any sampling conducted or proposed, relevant to the emergency or incident; and j) immediate actions taken to prevent any further release and mitigate any environmental harm and/or environmental nuisance caused by the release.
A16	Not more than fourteen (14) days following the initial notification of an emergency or incident, further written advice must be provided to the administering authority, including the following: a) results and interpretation of any samples taken and analysed; b) outcomes of actions taken at the time to prevent or minimise environmental harm or environmental nuisance; and c) proposed actions to prevent a recurrence of the emergency or incident.
A17	Definitions Words and phrases used throughout this EA are defined the Definitions section. 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 <i>Environmental Protection Act 1994</i>, its Regulations and Environmental Protection Policies must be used.

Agency interest: Air	
Condition number	Condition
B1	Dust nuisance Subject to Conditions B2 and B3 the release of dust or particulate matter or both resulting from the mining 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 fourteen (14) days to the administering authority following completion of monitoring.
B3	If the environmental authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of Condition B1: a) dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with <i>AS 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulates - Deposited matter - Gravimetric method of 1991</i>; and b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a sensitive or commercial place downwind of the operational land, when monitored in accordance with: i. particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method, when monitored in accordance with <i>AS 3580.9.6 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM (sub) 10 high volume sampler with size-selective inlet - Gravimetric method of 1990</i>; or ii. any alternative method of sampling PM10, which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority. <i>NOTE: You must propose which monitoring method is appropriate in accordance with Condition B3 (a) or (b) or both.</i>
B4	If monitoring indicates exceedence 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 that emissions of dust from the activity do not result in further environmental nuisance.
B5	The environmental authority holder must take all actions necessary to secure loads prior to transporting materials off site to minimise emissions or spillage of any material from vehicles or other transport infrastructure.



Agency interest: Water	
Condition number	Condition
C1	Contaminants must not be released directly or indirectly to any waters other than in accordance with the contaminant release requirements, conditions and limits in this environmental authority.
C2	Release of contaminants to waters must only occur at the release points specified in Table 1 Release points (water) and identified in Figure A Ellensfield Project Bulk Sample Pit Release Dam and Monitoring Locations .
C3	The only contaminants that may be released to waters at the release points are the waste waters from the sources specified in Table 1 Release points (water) , in compliance with the contaminant release limits, specified in Table 2 Release of contaminants (water) .
C4	Monitoring of contaminants released from the release point listed in Table 1 Release points (water) must be carried out at the monitoring location and for the frequency specified in Table 2 Release of contaminants (water) and in accordance with the methods prescribed in the latest edition of the Environment Protection Agency's <i>Water Quality Sampling Manual</i> .

Table 1 Release points (water)

Release Point and Identifier	Description of Waste Water Releases	Description of Receiving Waters	Release Point Location (GDA94)
Discharge Point 1 – Sediment Dam	Stormwater Runoff from Operational Areas	Bullock Creek	619 283 E 7 596 623 N

Table 2 Release of contaminants (water)

Release point & Monitoring location	Contaminant	Unit	Contaminant limit	Limit type	Monitoring frequency
Discharge Point 1 – Sediment Dam to Bullock Creek	Electrical Conductivity	µS/cm	1500	maximum	Daily during discharge
	pH	pH unit	6.5 to 8.5	range	Daily during discharge
	Suspended Solids	mg/L	Background* plus 10%	maximum	Daily during discharge
	Dissolved Oxygen	mg/L	6	minimum	Daily during discharge
	Total Petroleum Hydrocarbons (TPH)	mg/L	15	maximum	Daily during discharge

*Background to be measured at Bullock Creek Upstream (621 085.1 E, 7 597 490.9 N) daily during discharge event.

C5	Authorised releases of storm water contaminated by mining activities to Bullock Creek in accordance with Conditions C2, C3 and C4 shall be only during periods of natural flow events. The duration of a natural flow event shall not be extended as a consequence of the mine water release.
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C6	The daily volume of waste water released must be determined or estimated by an effective method, for example a calibrated flow meter, and records kept of such determinations and estimates.
C7	Release of contaminants to waters must not produce in the receiving waters, any slick or other visible or odorous evidence of oil, grease or petrochemicals nor contain visible floating oil, grease, scum, litter or other objectionable matter nor have any other properties nor contain any organisms or other contaminants in concentrations that are capable of causing environmental harm.
C8	Sewage Treatment Sewage effluent must only be directed to the sewage effluent holding tank.
C9	Sewage effluent must not be released to land, waters or the bed or banks of any waters.
C10	Water and stormwater management A water management, erosion and sediment control plan must be prepared and implemented prior to commencement of activities on MDL384 and must include a site water balance indicating sources and quality of water for mineral development activities use as well as identifying methods to: a) manage recycling, reuse and treatment; b) manage contaminants; c) manage stormwater and on site water flows; d) develop and implement a system for emergency spills or discharges; e) separate clean water from undisturbed areas and water from disturbed areas; f) separate and process hydrocarbons and wash down water from other surface water sources; g) design and monitor sediment detention structures; h) design and monitor mine water dams; i) manage off site water releases and minimise sediments and salinity releases; j) ensure protection of the environmental values of the receiving waters downstream as it relates to the activity; k) incorporate a risk management approach to how changing levels of floods, drought and water quality risks should be addressed; l) minimize the potential for soil and spoil erosion, soil contamination and acid rock drainage, particularly with regard to first flush flows following rainfall events; and m) review and monitor the water management system, hydrological processes performance indicators and sediment retention pond capacities.



Agency interest: Noise	
Condition number	Condition
D1	Noise Nuisance Subject to Conditions D2 and D3 noise from the mining activity must not cause an environmental nuisance, at any sensitive or commercial 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 fourteen (14) days to the administering authority following completion of monitoring.
D3	Noise monitoring must include the following descriptors, characteristics and conditions: a) $L_{A, \max \text{ adj}, T}$; and b) the level and frequency of occurrence of impulsive or tonal noise; c) location of the blast(s) within the mining area (including which bench level); d) atmospheric conditions including temperature, relative humidity, wind speed and direction; and e) location, date and time of recording.
D4	If monitoring indicates exceedence of the limits in Table 3 Noise limits and Table 4 Air blast overpressure level then the environmental authority holder must: a) address the complaint including the use of appropriate dispute resolution if required; or b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.
D5	The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's <i>Noise Measurement Manual</i>.



Table 3 Noise limits

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a 'Noise sensitive place'					
L _{A10} , adj, 10 mins	b/g+5	b/g+5	b/g+3	b/g+5	b/g+5	b/g+0
L _{A1} , adj, 10 mins	b/g+10	b/g+10	b/g+5	b/g+10	b/g+10	b/g+5
	Noise measured at a 'Commercial place'					
L _{A10} , adj, 10 mins	b/g+10	b/g+10	b/g+5	b/g+10	b/g+10	b/g+5
L _{A1} , adj, 10 mins	b/g+15	b/g+15	b/g+10	b/g+15	b/g+15	b/g+10

NOTE: Background = b/g

Table 4 Air blast Overpressure Level

Location	Monday to Friday & Saturdays 7 am - 6 pm Sundays & Public Holidays 9am - 6pm No blasting to occur 6pm - 7am
Sensitive or commercial place.	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.

D6	Vibration nuisance Subject to Conditions D7 and D8 vibration from the mining activity must not cause an environmental nuisance, at any sensitive or commercial place.
D7	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 fourteen (14) days to the administering authority following completion of monitoring.
D8	Noise monitoring must include the following descriptors, characteristics and conditions: a) location of the blast(s) within the mining area (including which bench level); and b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and c) location, date and time of recording.



D9	If monitoring indicates exceedence of the relevant limits in Table 5 Vibration limits , then the environmental authority holder must: a) address the complaint including the use of appropriate dispute resolution if required; or b) immediately implement vibration abatement measures so that vibration from the activity does not result in further environmental nuisance.
D10	The method of measurement and reporting of vibration levels must comply with the latest edition of the Environmental Protection Agency's Noise and vibration from blasting guideline.

Table 5 Vibration limits

Location	Vibration measured
	Monday to Friday & Saturdays 7 am - 6 pm Sundays & Public Holidays 9am - 6pm No blasting to occur 6pm - 7am
Sensitive or commercial place	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.

Agency interest: Waste	
Condition number	Condition
E1	All waste (other than mined rock or its derivatives) 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> .
E2	Regulated waste 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> .

Agency interest: Land	
Condition number	Condition
F1	All areas significantly disturbed by the mineral development activities must be rehabilitated to a stable landform with a self-sustaining vegetation cover in accordance with Table 6 Final Land Use and Rehabilitation and Table 7 Landform Design Criteria .
F2	Progressive rehabilitation must commence within six (6) months of operations ceasing within an area.



F3	A Rehabilitation Management Plan must be prepared and implemented within one (1) month of date of grant of this environmental authority, for the activities on MDL384 and must include: a) proposed acceptance criteria to meet the outcomes in Table 6 Final Land Use and Rehabilitation and Table 7 Landform Design Criteria; b) a description of end of mine landform design and post mining land uses across the mine; c) details of the rehabilitation methods to be applied; d) the success criteria for rehabilitated land; e) identify the reference sites to be used to develop the rehabilitation success criteria; f) detailed future rehabilitation actions to be completed; g) landform design criteria including end of mineral development design; h) details on how landform design will be consistent and integrated with the surrounding topography; i) a description of rehabilitation monitoring and maintenance requirements to be applied to all areas of disturbance; j) a cost benefit analysis/triple bottom line assessment of the proposed final landform design criteria and alternatives; and k) the identification of potential problems and how they will be addressed.
F4	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.
F5	Endangered Regional Ecosystems and riparian vegetation No clearing of Endangered Regional Ecosystems, identified in Figure A Ellensfield Project Bulk Sample Pit Release Dam and Monitoring Locations, is permitted to occur as part of the bulk sampling activities within MDL384.
F6	A buffer of at least 50 meters must be maintained between bulk sampling activities and riparian vegetation occurring along existing watercourses within or directly adjacent to MDL384.
F7	Exploration Activities Exploration activities must be undertaken in accordance with the standard conditions contained in the <i>Code of Environmental Compliance for Exploration and Mineral Development Projects</i> (January 2001) except Condition 13 which is replaced by Condition F8 of this environmental authority.
F8	Exploration drilling is permitted to occur within 500m of mapped Endangered Regional Ecosystems occurring within MDL384.



Table 6 Final Land Use and Rehabilitation

Disturbance Type	Disturbance area (ha)	Pre-mine land description	Post-mine land suitability description	Pre-mine land suitability classification	Post-mine land suitability classification	Reference site identification
Elevated landforms (Spoil Dump, ROM)	8.5	Cattle grazing on cleared and partially cleared land. Native pastures and improved pasture species are established.	Self-sustaining recreated landscape that is populated with native species.	Land Suitability Classification Class 2, 3 and 4.	Self-sustaining recreated landscape that is populated with native species.	To be determined in accordance with Condition L3.
Void	2.8	Cattle grazing on cleared and partially cleared land. Native pastures and improved pasture species are established.	Water filled void	Land Suitability Classification Class 2, 3 & 4.	Water filled void.	Not applicable. Rehabilitated land will have unique features.
Disturbed by Infrastructure (including roads) however remains at approximate original contour.	3.7	Cattle grazing on cleared and partially cleared land. Native pastures and improved pasture species are established.	Self-sustaining native vegetation.	Land Suitability Classification Class 2, 3 and 4.	Self-sustaining recreated landscape that is populated with native species.	To be determined in accordance with Condition L3.

[Signature]

Table 7 Landform Design Criteria

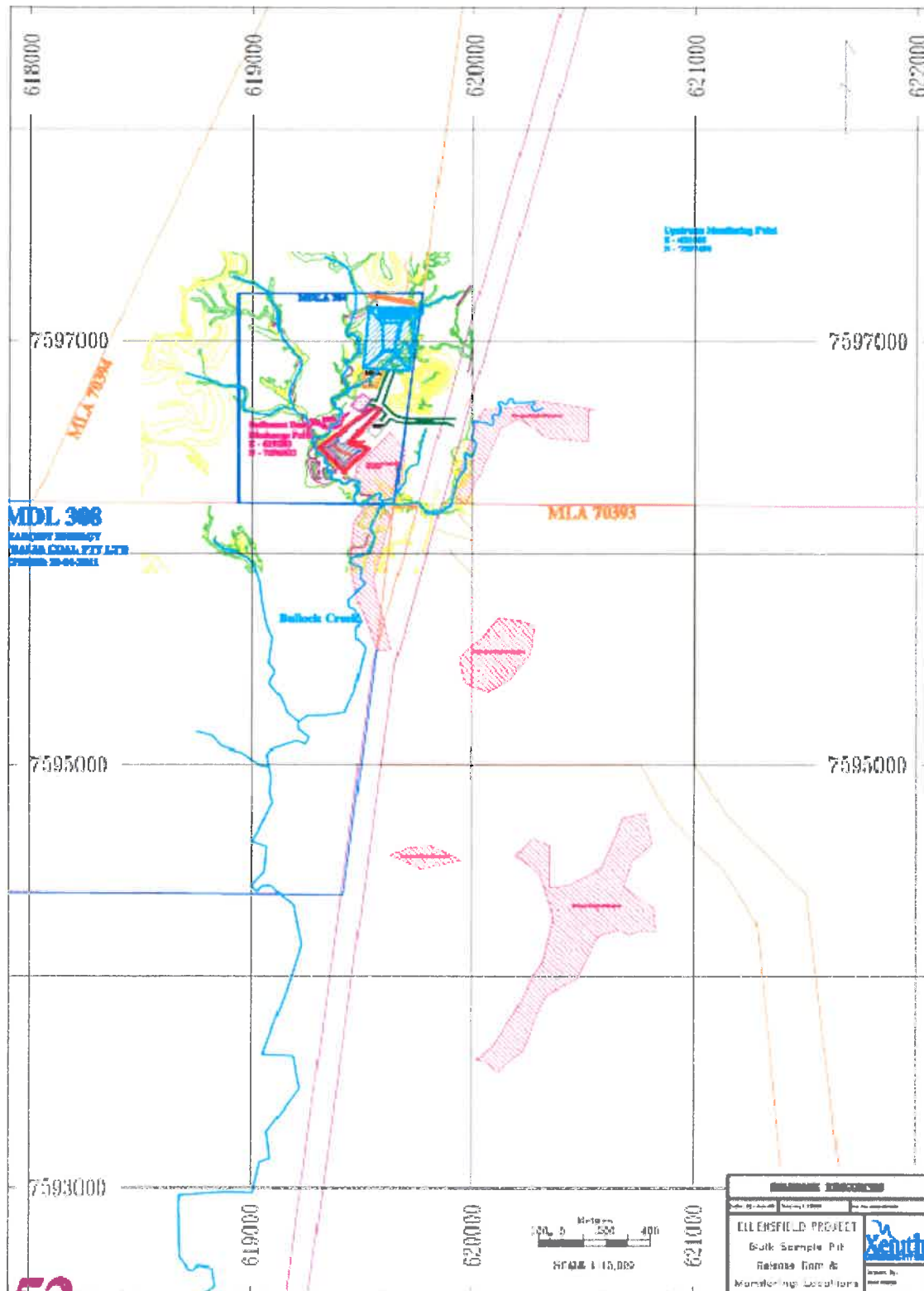
Disturbance Type	Maximum Slope Range	Vertical Height (m) Range	Maximum Length (m) Range	Projective Surface Area (ha)
Elevated Landforms (Spoil Dumps)	10-15%	<30	289	8.5
Infrastructure Areas	<5%	Consistent with contours of surrounding undisturbed area.	22	3.7
Void	-	20-65	115	2.8

F9	Infrastructure All buildings, structures, mining equipment and plant erected and/or used for the mining activities must be removed from the site prior to surrender, accept where agreed in writing by the administering authority, landowner and the Minister administering the <i>Mineral Resources Act 1989</i>.
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Agency interest: Community	
Condition number	Condition
G1	Complaint Response All complaints received must be recorded, including details of complaint, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.



Figure A Ellensfield Project Bulk Sample Pit Release Dam and Monitoring Locations



Definitions

Words and phrases used throughout this licence are defined below except where identified in the EP Act or subordinate legislation. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

“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.

“administering authority” means the Environmental Protection Agency or its successor.

“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 (dBL).

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

“ANZECC” means the Australian and New Zealand Guidelines for Fresh Marine Water Quality 2000

“authority” means environmental authority (mining activities) under the *Environmental Protection Act 1994*.

“bed and banks” for a waters, river, creek, stream, lake, lagoon, pond, swamp, wetland or dam means land over which the water of the waters, lake, lagoon, pond, swamp, wetland or dam normally flows or that is normally covered by the water, whether permanently or intermittently; but does not include land adjoining or adjacent to the bed and banks that is from time to time covered by floodwater.

“biosolids” means the treated and stabilised solids from sewage.

“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.

“bunded” means within bunding consistent with Australian Standard 1940.

“chemical” means –

- a) an agricultural chemical product or veterinary chemical product within the meaning of the *Agricultural and Veterinary Chemicals Code Act 1994* (Commonwealth); or
- b) a dangerous good under the dangerous goods code; or



- c) a lead hazardous substance within the meaning of the *Workplace Health and Safety Regulation 1997*; or
- d) a drug or poison in the Standard for the Uniform Scheduling of Drugs and Poisons prepared by the Australian Health Ministers' Advisory Council and published by the Commonwealth; or
- e) any substance used as, or intended for use as –
 - i) a pesticide, insecticide, fungicide, herbicide, rodenticide, nematocide, miticide, fumigant or related product; or
 - ii) a surface active agent, including, for example, soap or related detergent; or
 - iii) a paint solvent, pigment, dye, printing ink, industrial polish, adhesive, sealant, food additive, bleach, sanitiser, disinfectant, or biocide; or
 - iv) a fertiliser for agricultural, horticultural or garden use; or
- f) a substance used for, or intended for use for –
 - i) mineral processing or treatment of metal, pulp and paper, textile, timber, water or wastewater; or
 - ii) manufacture of plastic or synthetic rubber.

“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.

“construction” includes building a new dam and modifying or lifting an existing dam.

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

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

“contaminant” A 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.

“cover material” means any soil or rock suitable as a germination medium or landform armouring.

“dam” means a land-based structure or a void that is designed to contain, divert or control flowable substances - including any substances that are thereby contained, diverted or controlled by that land-based structure or void; but does *not* mean a fabricated or manufactured tank or container designed to a recognised standard. In case there is any doubt, a levee dyke or bund is a dam.

“domestic waste” means waste, other than domestic clean-up waste, green waste, recyclable waste, interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of domestic premises.

“dwelling” means any of the following structures or vehicles that is principally used as a residence –

- a) a house, unit, motel, nursing home or other building or part of a building; or
- b) a caravan, mobile home or other vehicle or structure on land; or



c) a water craft in a marina.

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

“end of pipe” means the location at which water is released to waters or land.

“environmental authority” means an environmental authority under Chapter 5 of 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* and listed under Schedule 1 of the *Environmental Protection Regulation 1998*.

“financial assurance” means a security required under the Environmental Protection Act 1994 by the Administering Authority to cover the cost of rehabilitation or remediation of disturbed land or to secure compliance with the environmental authority.

“floodwater” means water overflowing, or that has overflowed, from waters, river, creek, stream, lake, pond, wetland or dam onto or over riparian land that is not submerged when the watercourse or lake flows between or is contained within its bed and banks.

“flowable substance” means matter or a mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended solids.

“general waste” means waste other than regulated waste.

“hazardous waste” means a substance, whether liquid, solid or gaseous that, if improperly treated, stored, disposed of or otherwise managed, is likely to cause environmental harm.

“hazard” in relation to a dam as defined in this environmental authority, 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.

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

“ $L_{A\ 10, \text{adj}, 10 \text{ mins}}$ ” 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.

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

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

“lake” includes –

- a) lagoon, swamp or other natural collection of water, whether permanent or intermittent; and
- b) the bed and banks and any other element confining or containing the water.

“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.

“landfill” means land used as a waste disposal site for lawfully putting solid waste on the land.

“mg/L” means milligrams per litre.

“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.

“mine water” means process water and contaminated storm water.

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

“nature” includes:

- a) ecosystems and their constituent parts; and
- b) all natural and physical resources; and
- c) natural dynamic processes.

“noxious” means harmful or injurious to health or physical wellbeing.

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



“operational land” means the land associated with the project for which this environmental authority has been issued.

“palletised” means stored on a movable platform on which batteries are placed for storage or transportation.

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

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

- a marine park under the *Marine Parks Act 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.

“process water” means water used or produced during the mineral development activities.

“recycled water” means appropriately treated effluent and urban stormwater suitable for further use.

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

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

“regulated waste” means non-domestic waste mentioned in schedule 7 of the *Environmental Protection Regulation 1998* (whether or not it has been treated or immobilised), and includes –

- a) for an element – any chemical compound containing the element; and
- b) anything that has contained the waste.

“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.

“sewage” means the used water of person's to be treated at a sewage treatment plant.



“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 / settlement of the wastes deposited, and sliding / slumping instability has ceased.

“storm water” means all surface water runoff from rainfall.

“trackable waste” means a waste or combination of waste stated in Schedule 1 of the *Environmental Protection (Waste Management) Regulation 2000*.

“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.

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

“waste management hierarchy” has the meaning given by the *Environmental Protection (Waste Management) Policy 2000*.

“waste management principles” has the meaning given by the *Environmental Protection (Waste Management) Policy 2000*.

“water” means –

- a) water in waters or spring;
- b) underground water;
- c) overland flow water; or
- d) water that has been collected in a dam.

“waste water” means used water from the activity, process water or contaminated storm water.

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

“waters” includes –

- a) river, creek, stream in which water flows permanently or intermittently either:
 - i) in a natural channel, whether artificially improved or not; or
 - ii) in an artificial channel that has changed the course of the river, creek or stream; or
- b) lake, lagoon, pond, swamp, wetland, dam; or
- c) unconfined surface water; or
- d) storm water channel, storm water drain, roadside gutter; or
- e) bed and banks and any other element of a river, creek, stream, lake, lagoon, pond, swamp, wetland, storm water channel, storm water drain, roadside gutter or dam confining or containing water; or
- f) groundwater; or
- g) non-tidal or tidal waters (including the sea); or
- h) any part thereof.

“µg/L” means micrograms per litre

“µs.cm⁻¹” means microsiemens per centimetre

END OF PERMIT



