

Permit

Environmental Protection Act 1994

Environmental Authority

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

Environmental authority number: EPML00659513

Environmental authority takes effect on 19 December 2025.

Environmental authority holder(s)

Name(s)	Registered address
Bowen Basin Coal Pty Ltd	Level 7, 12 Creek Street, BRISBANE QLD 4000

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 13 – Mining black coal	ML70331
Ancillary 08 – Chemical Storage 3: Storing more than 500 cubic metres of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	ML70477 ML70528
Ancillary 16 – Extraction and Screening 2: Extracting, other than by dredging, in a year, the following quantity of material (a) 5,000t to 100,000t	
Ancillary 31 – Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	
Ancillary 33 – Crushing, milling, grinding or screening Crushing, grinding, milling or screening more than 5000t of material in a year	
Ancillary 38 – Surface Coating 2: Coating, painting or powder coating, using, in a year, more than 100t of surface coating materials	
Ancillary 56 – Regulated Waste Storage: Receiving and storing regulated waste	
Ancillary 60 – Waste disposal 1: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a) (a) less than 50,000t	

Ancillary 63 – Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-i) more than 100 but not more than 1500EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme.	
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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).

Mobile and temporary activities

If you operate a mobile and temporary environmentally relevant activity (ERA), other than regulated waste transport, you are required to maintain a work diary. You must:

- use the approved form for a work diary (ESR/2015/1696);
- keep the work diary records for 2 years after the last entry;
- inform the administering authority within 7 days of the work diary being lost or stolen;
- record the information required in the work diary for each location within 1 day of leaving the location.

Contaminated land

It is a requirement of the EP Act that an owner or occupier of land give written notice to the administering authority if they become aware of the following:

- the presence of, or happening of an event involving, a hazardous contaminant on the land that is causing, or is reasonably likely to cause, serious or material environmental harm (notice must be given within 24 hours); or
- if the land is contaminated land – a change in the condition of the land that is causing, or is reasonably likely to cause, serious or material environmental harm (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 land (notice must be given within 20 business days).

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.

The anniversary day of this environmental authority is the same day each year as the effective date. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

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

EBurgess

Signature

19 December 2025

Date

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

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Obligations under the *Environmental Protection Act 1994*

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

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

Other permits required

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

Obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

Matters of national environmental significance (MNES) are regulated under the Commonwealth EPBC Act rather than under state legislation. You may need to submit a referral if your project potentially impacts any matters protected under the EPBC Act. For more information on self-assessments, and referral and assessment processes please visit the Department of Climate Change, Energy, the Environment and Water webpage, <https://www.dcceew.gov.au/environment/epbc/advice>.

Obligations under the *Aboriginal Cultural Heritage Act 2003* and *Torres Strait Islander Cultural Heritage Act 2003* (the Cultural Heritage Acts)

The Cultural Heritage Acts require anyone who carries out a land-use activity to exercise a duty of care. This 'duty of care' means land users must take all reasonable and practicable measures to ensure their activity does not harm Aboriginal or Torres Strait Islander cultural heritage, and applies to any activity where Aboriginal or Torres Strait Islander cultural heritage is located. For more information on your obligations under this legislation, please visit the Department of Women, Aboriginal and Torres Strait Islander Partnerships and Multiculturalism webpage at, <https://www.dwatsipm.qld.gov.au/>.

Conditions of environmental authority

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

Schedule A	General
Schedule B	Air
Schedule C	Water
Schedule K	Enhanced Releases
Schedule D	Groundwater
Schedule E	Sewage Treatment
Schedule F	Acoustic
Schedule G	Land
Schedule H	Waste
Schedule I	Regulated Structures
Schedule J	Watercourse Diversions

Definitions

Attachment 1: Authorised Disturbance Footprint

Attachment 2: Authorised Release Points and Receiving Water Monitoring Locations

Attachment 3: Groundwater Bore Monitoring Locations

Attachment 4: Location of authorised significant impact to RE11.3.25 and RE11.3.27

Attachment 5: Location of authorised significant impact to squatter pigeon

Attachment 6: Location of authorised impact to short-beaked echidna

Attachment 7: Approximate location of gas drainage pilot program

Schedule A: General	
Condition number	Condition
A1	This environmental authority authorises environmental harm referred to in the conditions. Where there is no condition or this environmental authority is silent on a matter, the lack of a condition or silence does not authorise environmental harm.
A2	Scope of approval The environmental authority holder is approved for a maximum coal extraction rate of twelve (12) million tonnes per annum (Mtpa) of run-of-mine (ROM) coal in accordance with the conditions of this environmental authority.
A3	In carrying out the mining activity authorised by this environmental authority, the holder of this environmental authority must comply with Attachment 1: Authorised Disturbance Footprint attached to this environmental authority.
A4	The holder of this environmental authority must: (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; (b) maintain such measures, plant and equipment in a proper and efficient condition; (c) operate such measures, plant and equipment in a proper and efficient manner; and (d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.
A5	Monitoring Except where specified otherwise in another condition of this environmental authority, all monitoring records or reports required by this environmental authority must be kept for a period of not less than five (5) years .
A6	Monitoring and determinations required under any condition of this environmental authority must be conducted by an appropriately qualified person.
A7	Management Plan, Monitoring programs and Reports Management plans, monitoring programs and reports required under any condition of this environmental authority must be developed by an appropriately qualified person.
A8	Upon request from the administering authority, copies of monitoring results, records, registers, monitoring programs, management plans and reports required by the conditions of this environmental authority must be made available and provided to the administering authority within: (a) ten (10) business days; or (b) an alternative timeframe agreed between the administering authority and the environmental authority holder.

A9	Risk Management The holder of this environmental authority must develop and implement a risk management system for mining activities which mirrors the content requirement of the 'Standard for Risk Management (ISO31000:2009)', or the latest edition of an Australian standard for risk management, to the extent relevant to environmental management, by 20 November 2015.
A10	Notification of Emergencies, Incidents and Exceptions The holder of this environmental authority must notify the administering authority by written notification within twenty-four (24) hours, 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 environmental authority.
A11	Within ten (10) business days following the initial notification of any emergency or incident, or receipt of monitoring results, whichever is the latter, further written advice must be provided to the administering authority, including the following: (a) results and interpretation of any samples taken and analysed; (b) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm; and (c) proposed actions to prevent a recurrence of the emergency or incident.
A12	Complaints The holder of this environmental authority must record all environmental complaints received about the mining activities including: (a) name, address and contact number for of the complainant; (b) time and date of complaint; (c) reasons for the complaint; (d) investigations undertaken; (e) conclusion formed; (f) actions taken to resolve the complaint; (g) any abatement measures implemented; and (h) person responsible for resolving the complaint.
A13	Where a condition of this environmental authority requires compliance with a standard, policy or guideline published externally to this environmental authority and the standard is amended or changed subsequent to the issue of this environmental authority, the holder of this environmental authority must: (a) comply with the amended or changed standard, policy or guideline within two years of the amendment or change being made, unless a different period is specified in the amended standard or relevant legislation, or where the amendment or change relates specifically to regulated structures referred to in Conditions I1 and I36, the time specified in that condition; and (b) until compliance with the amended or changed standards, policy or guideline is achieved, continue to remain in compliance with the corresponding provision that was current immediately prior to the relevant amendment or change.

A14	Toll washing Third-party coal is authorised to be received, stockpiled and processed at the licenced place, provided the following are completed for each third-party coal source: (a) A geochemical assessment in accordance with condition A17; (b) A record of the geochemical properties of all third-party coal received at the licenced place; and (c) A record of the quantity (tonnes) of all third-party coal received at the licenced place.
A15	The maximum total quantity of coal permitted to be received, stockpiled and processed at the licenced place in accordance with condition A14 must remain within the approved coal extraction rate in condition A2 .
A16	The holder must notify the administering authority in writing on the day that activities authorised under condition A14 commence.
A17	The geochemical assessment required by condition A14 must: (a) Be completed and recorded by an appropriately qualified person; (b) Be based on a representative number of samples of third-party coal reject, as determined by an appropriately qualified person; (c) Conclude whether the geochemical properties of the third-party coal reject materials are substantially similar to the geochemical properties of the coal rejects authorised to be mined from the licenced place; and (d) Identify all contaminants introduced to the licenced place by the third-party coal.
A18	Where the geochemical assessment required by conditions A14(a) and A17 identifies that the geochemical properties of third-party coal reject are not substantially similar to the geochemical properties of the coal reject authorised to be mined from the licenced place, the environmental authority holder must: (a) Ensure rejects are disposed at the originating third-party coal mine; or (b) Develop and implement a third-party specific rejects management and disposal plan prior to processing the relevant third-party coal that: (i) Details the additional or different risks associated with the third-party coal rejects; and (ii) Controls the risks to environmental values from A18(b)(i) such that reflect the risks associated with coal mined from the licenced place.
A19	Gas Drainage Pilot Program The holder of this environmental authority is authorised to establish a gas drainage pilot program located within the area indicated on Attachment 7: Approximate location of gas drainage pilot program, within the authorised disturbance footprint of ML70528 and ML70331.
A20	The gas drainage pilot program authorised in condition A19 may be conducted for a maximum duration of five (5) years from commencement of the activities.

A21	The holder must notify the administering authority in writing on the day that activities authorised under condition A19 commence.
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Schedule B: Air	
Condition number	Condition
B1	Dust and Particulate Matter Monitoring The environmental authority holder shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the dust and particulate matter emissions generated by the mining activities do not cause exceedances of the following levels when measure at any sensitive or commercial place: (a) dust deposition of 120 milligrams per square metre per day, averaged over 1 month, when monitored in accordance with the most relevant version of 'Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric method'. (b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM₁₀) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, for no more than 5 exceedances [Note 1] recorded each year, when monitored in accordance with the most recent version of either: (i) 'Australian Standards AS3580.9.6 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM₁₀ high volume sampler with size-selective inlet – Gravimetric method'; or (ii) 'Australian Standards AS3580.9.9 methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM₁₀ low volume sampler – Gravimetric method'. (c) a concentration of particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a one (1) year averaging time, when monitored in accordance with the most recent version of 'AS/NZ3580.9.3:2003 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – Total suspended particulate matter (TSP) – High volume sampler gravimetric method'. <i>[Note 1]: The five exceedances for the PM₁₀ standard were introduced to account for the impact of bushfires, dust storms and fuel reduction for fire management purposes. The five exceedances are in essence arbitrary in that the number was chose as it is difficult to determine exactly the number of times these events may happen in any one year. More than five exceedances as a result of one or more of these events would not be considered to be a breach of condition.</i>
B2	The release of dust and or particulate matter in accordance with the conditions of this environmental authority must not cause nuisance to any nuisance sensitive place or commercial place.

B3	Emissions - Gas drainage pilot program The holder of this environmental authority must seek to flare all waste gas generated as a result of the gas drainage pilot program authorised under condition A19. Management of flaring activity must: (a) adopt an automated ignition system; (b) ensure a flame is visible at all times when the gas is being flared; (c) minimise visible smoke emissions as far as practicable; and (d) ensure methane leakage is minimized through measures such as a periodic leak detection and repair program.
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Schedule C: Water	
Condition number	Condition
C1	Contaminants that will, or have the potential to, cause environmental harm must not be released directly or indirectly to any waters as a result of the authorised mining activities, except as permitted under the conditions of this environmental authority.
C2	Unless otherwise permitted under Schedule K of this environmental authority, the release of mine affected water to waters must only occur from the release points specified in Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters and depicted in Attachment 2: Authorised Release Points and Receiving Water Monitoring Locations attached to this environmental authority.
C3	The release of mine affected water to internal water management infrastructure that is installed and operated in accordance with a water management plan that complies with Condition C27 to C29 inclusive is permitted.
C4	Conditions C5, C9, C10, C11, C17, C19 and C20 do not apply when releasing mine affected water under enhanced contaminated release conditions specified in Schedule K, at release points specified in Condition K1 .
C5	The release of mine affected water to waters in accordance with Condition C2 must not exceed the release limits started in Table C2 – Mine Affected Water Release Limits when measured at the monitoring points specified in Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters for each quality characteristic.
C6	The release of mine affected water to waters from the release points must be monitored at the locations specified in Table C1 Mine Affected Water Release Points, Sources and Receiving Water for each quality characteristics and at the frequency specified in Table C2 – Mine Affected Water Release Limits and Table C3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants. <i>Note: The administering authority will take into consideration any extenuating circumstances prior to determining an appropriate enforcement response in the event Condition C7 is contravened due to a temporary lack of safe or practicable access. The administering authority expects the environmental authority holder to take all reasonable and practicable measures to maintain safe and practical access to designated monitoring locations.</i>

Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters

Release Point (RP)	Latitude (decimal degree, GDA94)	Longitude (decimal degree, GDA94)	Mine Affected Water Source and Location	Monitoring Point	Receiving Waters Description
RP1	-22.4305	148.4433	Mine Area	Pipe or drain	Unnamed gully and Isaac River
RP2	-22.4377	148.4482	Mine Area	Pipe or drain	Unnamed gully and Isaac River
RP3	-22.4621	148.4638	Mine Area	Pipe or drain	Unnamed gully and Isaac River
RP4	-22.4289	148.3886	Mixed Mine Water (pumped to release point)	Pipe or drain	Phillips Creek
RP5	-22.3905	148.4319	Mixed Mine Water (pumped to release point)	Pipe or drain	Phillips Creek
RP6	-22.4362	148.3845	Mixed Mine Water (pumped to release point)	Pipe or drain	Phillips Creek
RP7	-22.4436	148.3846	Mixed Mine Water (pumped to release point)	Pipe or drain	Phillips Creek
RP8	-22.3636	148.4502	Mixed Mine Water Release	Pipe or drain	Phillips Creek
RP9	-22.4125	148.4603	Mixed Mine Water Release	Pipe or drain	Unnamed gully and Isaac River
RP10	-22.3954	148.4097	Mixed Mine Water Release	Pipe or drain	Unnamed gully and Isaac River

Table C2 – Mine Affected Water Release Limits

Quality Characteristic	Release Limits	Monitoring Frequency	Comment
Electrical conductivity (µS/cm)	Release limits specified in Table C4 for variable flow criteria.	Daily during release (the first sample must be taken within 2 hours of commencement of release)	
pH (pH Unit)	6.5 (minimum) 9.0 (maximum)	Daily during release (the first sample must be taken within 2 hours of commencement of release)	
Turbidity (NTU)	N/A	Daily during release [Note 1] (first sample within 2 hours of commencement of release)	Turbidity is required to assess ecosystems impacts and can provide instantaneous results.
Suspended Solids (mg/L)	1,500	Daily during release [Note 1] (first sample within 2 hours of commencement of release)	Suspended solids are required to measure the performance of sediment and erosion control measures.
Sulfate (mg/L)	Release limits specified in Table C4 for variable flow criteria	Daily during release (first sample within 2 hours of commencement of release)	

Note: Limit for suspended solids can be omitted if turbidity limit is included. Limit for turbidity not required if suspended solids limit included. Both indicators should be measured in all cases.

Table C3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants

Quality Characteristic	Trigger Levels (µg/L)	Comment on Trigger Level	Monitoring Frequency
Aluminium	55	For aquatic ecosystem protection, based on SMD guideline	Commencement of release and thereafter weekly during release
Arsenic	13	For aquatic ecosystem protection, based on SMD guideline	
Cadmium	0.2	For aquatic ecosystem protection, based on SMD guideline	
Chromium	1	For aquatic ecosystem protection, based on SMD guideline	
Copper	2	For aquatic ecosystem protection, based on LOR for ICPMS	
Iron	300	For aquatic ecosystem protection, based on low reliability guideline	
Lead	4	For aquatic ecosystem protection, based on SMD guideline	
Mercury	0.2	For aquatic ecosystem protection, based on LOR for CV FIMS	
Nickel	11	For aquatic ecosystem protection, based on SMD guideline	
Zinc	8	For aquatic ecosystem protection, based on SMD guideline	
Boron	370	For aquatic ecosystem protection, based on SMD guideline	
Cobalt	90	For aquatic ecosystem protection, based on low reliability guideline	
Manganese	1900	For aquatic ecosystem protection, based on SMD guideline	
Molybdenum	34	For aquatic ecosystem protection, based on low reliability guideline	
Selenium	10	For aquatic ecosystem protection, based on LOR for ICPMS	
Silver	1	For aquatic ecosystem protection, based on LOR for ICPMS	
Uranium	1	For aquatic ecosystem protection, based on LOR for ICPMS	
Vanadium	10	For aquatic ecosystem protection, based on LOR for ICPMS	

Quality Characteristic	Trigger Levels (µg/L)	Comment on Trigger Level	Monitoring Frequency
Ammonia	900	For aquatic ecosystem protection, based on SMD guideline	
Nitrate	1100	For aquatic ecosystem protection, based on ambient Qld WQ Guidelines (2006) for TN	
Petroleum hydrocarbons (C6-C9)	20	For aquatic ecosystem protection, based on LOR	
Petroleum hydrocarbons (C10-C36)	100	For aquatic ecosystem protection, based on LOR	
Fluoride (total)	2000	Protection of livestock and short term irrigation guideline	
Sodium (mg/L)	180	Australian Drinking Water Guidelines. Trigger may require amendment if future advice from Queensland Health becomes available	

Notes: 1. All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Trigger levels for metal/metalloids apply if dissolved results exceed trigger.

2. The quality characteristics required to be monitored as per **Table C3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants** can be reviewed once the results of two years monitoring data is available, or if sufficient data is available to adequately demonstrate negligible environmental risk, and it may be determined that a reduced monitoring frequency is appropriate or that certain quality characteristics can be removed from **Table C3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants** by amendment.

3. SMD – slightly moderately disturbed level of protection, guideline refers ANZECC and ARMCANZ (2000).

4. LOR – typical reporting for method stated. ICPMS/CV FIMS – analytical method required to achieve LOR.

C7	If quality characteristics of the release exceed any of the trigger levels specified in Table C3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants during a release event, the environmental authority holder must compare the downstream results in the receiving waters to the trigger values specified in Table C3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants and: (a) where the trigger values are not exceeded then no action is to be taken; or (b) where the downstream results exceed the trigger values specified Table C3 – Release Contaminant Trigger Investigation Levels, Potential Contaminants for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites and (i) if the result is less than the background monitoring site data, then no action is to be taken; or (ii) if the result is greater than the background monitoring site data, complete an investigation into the potential for environmental harm and provide a written report to the administering authority within ninety (90) days of receiving the result, outlining 1. details of the investigations carried out; and 2. actions taken to prevent environmental harm. <i>Note: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with C7 (b)(ii) of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.</i>
C8	If an exceedance in accordance with Condition C7 (b)(ii) is identified, the holder of the environmental authority must notify the administering authority via WaTERS within twenty-four (24) hours of receiving the result.
C9	Mine Affected Water Release Events The holder must ensure a stream flow gauging station/s is installed, operated and maintained to determine and record stream flows at the locations and flow recording frequency specified in Table C4 – Mine Affected Water Release During Flow Events.
C10	The release of mine affected water to waters in accordance with Condition C2, must only take place in accordance with the receiving water flow criteria for discharge specified in Table C4 – Mine Affected Water Release During Flow Events for the release point(s) specified in Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters.
C11	The release of mine affected water to waters in accordance with Condition C2 must not exceed the release limits stated in Table – C4 Mine Affected Water Release During Flow Events when measured at the monitoring points specified in Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters for each quality characteristic.

Table C4 – Mine Affected Water Release During Flow Events

Receiving Waters/ Stream	Release Point (RP)	Gauging Station	Gauging Station Latitude (decimal degree, GDA94)	Gauging Station Longitude (decimal degree, GDA94)	Receiving Water Flow Recording Frequency	Receiving Water Flow Criteria for Discharge (m ³ /s)	Maximum Release Rate (for all combined RP flows)	Electrical Conductivity Release Limits
Isaac River	RP1, RP2, RP3, and RP9.	Isaac at Deverill (DNRN Gauging Station #130410 A)	-22.1726	148.3822	Continuous (minimum daily)	≥37.5 cubic meters/sec	0.5 cubic meters/sec	Electrical conductivity: <1,500 µS/cm (Maximum, based on protection of aquatic ecosystems) Sulfate: <300mg/L
Phillips Creek	RP4, RP5, RP6, RP7, RP8, and RP10	Isaac at Deverill (DERM Gauging Station #130410 A)	-22.1726	148.3822	Continuous (minimum daily)	Low/No Flow – 28 days after natural flow events that exceed 7.5 cubic meters/sec at Isaac at Deverill	0.5 cubic meters/sec	Electrical conductivity: <720 µS/cm Sulfate: <300mg/L
Phillips Creek	RP4, RP5, RP6, RP7, RP8, and RP10	Isaac at Deverill (DERM Gauging Station #130410 A)	-22.1726	148.3822	Continuous (minimum daily)	Medium Flow ≥7.5 cubic meters/sec in the Isaac River	<0.610 cubic meters/sec	Electrical conductivity: 1,500 µS/cm Sulfate: <600mg/L
Phillips Creek	RP4, RP5, RP6, RP7, RP8, and RP10	Isaac at Deverill (DERM Gauging Station #130410 A)	-22.1726	148.3822	Continuous (minimum daily)	Medium Flow ≥ 7.5 cubic meters/sec in the Isaac River	<0.223 cubic meters/sec	Electrical conductivity: <3,500 µS/cm Sulfate: <1,200mg/L
Phillips Creek	RP4, RP5, RP6, RP7, RP8, and RP10	Isaac at Deverill (DERM Gauging Station #130410 A)	-22.1726	148.3822	Continuous (minimum daily)	High Flow ≥1.0 cubic meters/sec at Phillips Creek Gauging Station AND ≥ 37.5 cubic meters/sec in the Isaac River	<0.684 cubic meters/sec	Electrical conductivity: <5,500 µS/cm Sulfate: <1,400mg/L

C12	The daily quantity of mine affected water released from each release point must be measured and recorded.
C13	Releases to waters must be undertaken so as not to cause erosion of the bed and banks of the receiving waters, or cause a material build-up of sediment in such waters.
C14	Notification of Release Event The environmental authority holder must notify the administering authority via WaTERS as soon as practicable and no later than twenty-four (24) hours after commencing to release mine affected water to the receiving environment. Notification must include the submission of written advice to the administering authority of the following information: (a) release commencement date/time; (b) expected release cessation date/time; (c) release point/s; (d) release volume (estimated); (e) receiving water/s including the natural flow rate; and (f) any details (including available data) regarding likely impacts on the receiving water(s).
C15	The environmental authority holder must notify the administering authority via WaTERS as soon as practicable within twenty-four (24) hours after cessation of a release notified under Condition C14. The cessation notification must include the submission of written advice to the administering authority of the following information: (a) release cessation date and time; and (b) total volume of water released.
C16	The environmental authority holder must notify the administering authority within twenty-eight (28) days provide the following information in writing via WaTERS: (a) release commencement and cessation dates and time; (b) natural flow rate in receiving water; (c) volume of water released; (d) details regarding the compliance of the release with the conditions of this environmental authority (i.e. contaminant limits, natural flow, discharge volume); (e) all continuous and in-situ water quality monitoring results (including laboratory analyses); and (f) any other matters pertinent to the water release event.
C17	Notification of Release Event Exceedance If the release limits defined in Table C2 – Mine Affected Water Release Limits are exceeded, the holder of the environmental authority must notify the administering authority within twenty-four (24) hours of receiving the results.

C18	The environmental authority holder must, within twenty-eight (28) days of a release exceeds the conditions of this authority, provide a report to the administering authority via WaTERS detailing: (a) the reason for the release; (b) the location of the release; (c) all water quality monitoring results; (d) any general observations; (e) all calculations; and (f) any other matters pertinent to the water release event.
C19	Receiving environment monitoring and contaminant trigger levels The quality of the receiving waters must be monitored at the locations specified in Table C6 – Receiving Water Upstream Background Sites and Downstream Monitoring Points for each quality characteristic and at the monitoring frequency stated in Table C5 – Receiving Waters Contaminant Trigger Levels.
C20	If quality characteristics of the receiving water at Phillips Creek, Isaac River and Carfax Gully monitoring points exceed any of the trigger levels specified in Table C5 – Receiving Waters Contaminant Trigger Levels during a release event the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and: (a) where the downstream result is the same or a lower value than the upstream value for the quality characteristic then no action is to be taken; or (b) where the downstream results exceed the upstream results complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: (i) details of the investigations carried out; and (ii) actions taken to prevent environmental harm. <i>Note: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with C20 (b) of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.</i>
C21	Receiving Environmental Monitoring Program (REMP) The environmental authority holder must develop and implement a Receiving Environmental Monitoring Program (REMP) to monitor, identify and describe any adverse impacts to surface water environmental values, quality and flows due to the authorised mining activity. This must include monitoring the effects of the mine on the receiving environment periodically (under natural flow conditions) and while mine affected water is being discharged from the site. For the purposes of the REMP, the receiving environment is Phillips Creek and the Isaac River within 15km downstream of the release points. The REMP should encompass any sensitive receiving waters or environmental values downstream of the authorised mining activity that will potentially be directly affected by an authorised release of mine affected water.
C22	A REMP Design Document that addresses the requirements of the REMP must be prepared and made available to the administering authority upon request.

Table C5 – Receiving Waters Contaminant Trigger Levels

Quality Characteristic	Trigger Level	Monitoring Frequency
pH (pH units)	6.5 – 8.0	Daily during the release ¹
Electrical Conductivity (µS/cm)	1,000	
Suspended solids (mg/L)	1,500	
Sulfate (SO ₄ ²⁻) (mg/L)	300	
Sodium (mg/L)	180	

¹Samples shall not be collected where temporary access to monitoring points presents a serious health and safety risk. However, the administering authority expects the environmental authority holder to take all reasonable and practicable measures to maintain safe and practical access to designated monitoring locations.

Table C6 – Receiving Water Upstream Background Sites and Downstream Monitoring Points

Monitoring Points	Receiving Waters Location Description	Latitude (GDA94)	Longitude (GDA94)
Upstream Background Monitoring Points^{1, 3}			
MP1	Downs Creek at Mine Access and Golden Mile Road intersection	-22.5413	148.4091
MP2	Phillips Creek	-22.4502	148.3784
Downstream Monitoring Points²			
MP3	Isaac River	-22.3559	148.4941
MP4	Phillips Creek	-22.3820	148.4479
MP5	Isaac River	-22.4514	148.5611
MP6	Carfax Gully	-22.4549	148.5398

Notes:

¹The upstream monitoring point should be within 5km of the release point.

² The downstream point should not be greater than 5km from the release point.

³ The data from the background monitoring points must not be used where they are affected by releases from other mines.

C23	A report outlining the findings of the REMP, including all monitoring results and interpretations must be prepared annually and made available on request to the administering authority. This must include an assessment of background reference water quality, the condition of downstream water quality compared against water quality objectives, and the suitability of current discharge limits to protect downstream environmental values.
C24	Water Reuse Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party (with the consent of the third party).
C25	Annual Water Monitoring Reporting The following information must be recorded in relation to all water monitoring required under the conditions of this environmental authority and submitted to the administering authority via WaTERS: (a) the date on which the sample was taken; (b) the time at which the sample was taken; (c) the monitoring point at which the sample was taken; (d) the measured or estimated daily quantity of mine affected water released from all release points; (e) the release flow rate at the time of sampling for each release point; (f) the results of all monitoring and details of any exceedances of the conditions of this environmental authority; and (g) water quality monitoring data must be provided to the administering authority in the specified electronic format upon request.

C26	Temporary Interference with Waterways Temporarily destroying native vegetation, excavating, or placing fill in a watercourse, lake or spring necessary for, and associated with, mining activities must be undertaken in accordance with Department of Regional Development, Manufacturing and Water (or its successor) Guideline – Riverine protection permit exemption requirements.
C27	Water Management Plan A Water Management Plan must be developed and implemented for the duration of mining activities, and at a minimum include the following: (a) provide for effective management of actual and potential environmental impacts resulting from water management associated with the mining activity carried out under this environmental authority; and (b) be developed in accordance with the administering authority's guideline Application requirements for activities with impacts to water ESR/2015/1837) and include: (i) a study of the source of contaminants; (ii) a water balance model for the site; (iii) a water management system for the site; (iv) measures to manage and prevent saline drainage; (v) measures to manage and prevent acid rock drainage; (vi) contingency procedures for emergencies; and (vii) a program for monitoring and review of the effectiveness of the water management plan.
C28	Stormwater and water sediment controls An Erosion and Sediment Control Plan must be developed implemented for all stages of the mining activities on the site to minimise erosion and the release of sediment to receiving waters and contamination of stormwater.
C29	Stormwater, other than mine affected water, is permitted to be released to waters from: (a) erosion and sediment control structures that are installed and operated in accordance with the Erosion and Sediment Control Plan required by Condition C28; and (b) water management infrastructure that is installed and operated, in accordance with a Water Management Plan that complies with Condition C29, for the purpose of ensuring water does not become mine affected water.

Schedule K: Enhanced Releases	
Condition number	Condition
K1	Enhanced Contaminant Release The enhanced release of mine affected water must only occur from release points RP4, RP5, RP6, RP7 and RP10, as specified in Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters and depicted in Attachment 1: Authorised Disturbance Footprint attached to this environmental authority.
K2	Enhanced Contaminant Release – Control of Contaminant Releases The enhanced release of mine affected water in accordance with Condition K1, must have release control mechanisms. Release control mechanisms must be: (a) Fitted at release points RP4, RP5, RP6, RP7 and RP10, as specified in Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters and depicted in Attachment 1: Authorised attached to this environmental authority, prior to the commencement of an enhanced release at that point; (b) Capable of immediately ceasing the discharge of mine water; and (c) Able to reduce or stop the release when: (i) Downstream electrical conductivity (EC) approaches the limit specified in Table K1 – Receiving Waters contaminant Trigger Levels; or (ii) The administering authority issues a cease release order.
K3	Enhanced Monitoring The enhanced release of mine affected water in accordance with Condition K1, must be able to be monitored via real-time telemetry (minimum hourly) for flow rate, EC and pH at: (a) The release points RP4, RP5, RP6, RP7 and RP10 as specified in Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters prior to commencement of release at that point; and (b) At MP2 and MP4 as specified in Table C6 – Receiving Water Upstream Background Sites and Downstream Monitoring Points of this environmental authority.
K4	All continuous environmental monitoring systems required by this environmental authority must have an instrument availability during release events of at least 80% except for the continuous monitoring of release points RP4, RP5, RP6, RP7 and RP10 as specified in Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters which must have an instrument availability of at least 90%.

K5	Contaminant Release Events The enhanced release of mine affected water in accordance with Condition K1 may commence when the receiving water flow criteria for commencement of a release as specified in Table K2 – Enhanced Containment Release Limits is met, and must not exceed the release limits stated in Table K2 – Enhanced Contaminant Release Limits when measured at the monitoring points RP4, RP5, RP6, RP7 and RP10 as specified in Table C1 – Mine Affected Water Release Points, Sources and Receiving Waters.
K6	The enhanced release of mine affected water to waters in accordance with Condition K1 must cease when the limit stated in Table K3 – Receiving Water Cease Release Limit is exceeded when measured at MP4 as specified in Table C6 – Receiving Water Monitoring Points.
K7	Notification of release event exceedance If the limits defined in Table K2 – Enhanced Contaminated Release Limits are exceeded, the holder of the environmental authority must: (a) Notify the administering authority via WaTERS within twenty-four (24) hours of receiving the results; and (b) Provide a report within twenty-eight (28) days in accordance with Condition C18.

Table K1 – Receiving Waters Contaminant Trigger Levels

Quality Characteristic	Trigger Level	Monitoring Frequency
EC (µS/cm)	1,800	Real-time monitoring of pH, EC and flow at MP4 during active release to Phillips Creek. At other sites where real-time monitoring is not available, grab sampling daily during active release as soon as possible after commencement of release, when safe access permits (during daylight hours only).
pH (pH units)	6.5 – 9.0	
Suspended solids (mg/L)	1,500	Daily during release (first sample within two hours of commencement of release)
Sulfate (SO ₄ ²⁻) (mg/L)	300	
Sodium (mg/L)	180	

Table K2 – Enhanced Contaminant Release Limits

Quality Characteristic	Maximum Release rate (for all combined RP flows)	Receiving Water Flow Criteria for Commencement of Release	Enhanced Release Limit	Monitoring Frequency
EC ($\mu\text{S}/\text{cm}$)	2.5 cubic meters/sec	Flow at Isaac at Deverill (DNRM Gauging Station #130410A) >1.0 cubic meters/sec	8,000	Continuous (minimum hourly)
pH (pH Units)	2.5 cubic meters/sec	Flow at Isaac at Deverill (DNRM Gauging Station #130410A) >1.0 cubic meters/sec	6.5 – 9.0	
Sulfate (mg/L)	2.5 cubic meters/sec	Flow at Isaac at Deverill (DNRM Gauging Station #130410A) >1.0 cubic meters/sec	1,689 ¹	Daily during release (first sample within two hours of commencement of release)
Turbidity (NTU)	2.5 cubic meters/sec	Flow at Isaac at Deverill (DNRM Gauging Station #130410A) >1.0 cubic meters/sec	NA ²	
Suspended Solids (mg/L)	2.5 cubic meters/sec	Flow at Isaac at Deverill (DNRM Gauging Station #130410A) >1.0 cubic meters/sec	1,500	

¹Sulfate trigger determined from site specific mine water storage data of 8,000 $\mu\text{S}/\text{cm}$ EC using EC:Sulfate ratio

²Limit for suspended solids can be omitted if turbidity limit is included. Limit for turbidity not required if suspended solids limit is included. Both indicators should be measures in all cases.

Table K3 – Receiving Water Cease Release Limit at Downstream Points

Contaminant Limit EC (microsiemens/cm) Phillips Creek	Monitoring Frequency
2,000	Real-time monitoring of pH, EC, and flow at MP4 during active release to Phillips Creek. At other sites where real-time monitoring is not available daily grab sampling during release as soon as possible after commencement of active release, when safe access permits (during daylight hours only).

K8	Receiving environment monitoring and contaminant trigger levels The quality of the receiving waters must be monitored at the locations specified in Table C6 – Receiving Water Upstream Background Sites and Downstream Monitoring Points for each quality characteristic and at the monitoring frequency stated in Table K1 – Receiving Waters Containment Trigger Levels.
K9	If quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in Table K1 – Receiving Waters Contaminant Trigger Levels during a release event, the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and: (a) where the downstream result is the same or a lower value than the upstream value for the quality characteristic, then no action is to be taken; or (b) where the downstream results exceed the upstream results, complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: (i) details of the investigations carried out; and (ii) actions taken to prevent environmental harm. <i>Note: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with K9 (b) of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.</i>
K10	If an exceedance in accordance with Condition 9 (b) is identified, the holder of the authority must notify the administering authority within fourteen (14) days of receiving the result.

K11	Release notification – potentially affected stakeholders The environmental authority holder must notify all potentially affected stakeholders on commencement (within two (2) hours or another time frame as agreed to in writing with the relevant potentially affected stakeholder) of releasing mine affected water in accordance with Schedule K to the receiving environment. Notification must be in the form agreed to by the potentially affected stakeholder. Notification must include the following information unless otherwise agreed to by the potentially affected stakeholder: (a) Release commencement date/time; (b) Release location (release point/s); (c) Release rate; (d) Receiving waters for the release; (e) Receiving water flow rate; (f) Water quality of the release including salinity and pH; and (g) Estimated duration of the release.
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K12	Enhanced Contaminant Release – Annual Reporting The environmental authority holder must provide the administering authority an annual independent assessment of the effectiveness of the on-site water management practices, to be submitted by 31 August each year. This assessment must be undertaken by an appropriately qualified person that is independent of the environmental authority holder and must demonstrate the continued effectiveness of on-site water management to the extent that is practicable including: (1) Control of mine-affected water generation: (a) Minimisation of disturbance within rehabilitated or undisturbed areas; (b) Minimisation of raw water imports for mining processes; (c) Prioritised re-use of mine-affected water where practicable, particularly in high water usage processes such as coal beneficiation; and (d) Effective irrigation, evaporation and re-use of treated sewage effluent to prevent it from entering mine-affected water storages. (2) Separation of mine-affected and non-mine-affected catchments on site: (a) Mine-affected water catchments are being effectively reduced by the environmental authority holder's implemented rehabilitation program; (b) Mine design should allow for runoff from successfully rehabilitated disturbed areas to be shed from site without being retained in the mine-affected water system; and (c) Rehabilitation completion criteria should include water quality limits to define successfully rehabilitated (i.e. non mine-affected) catchments. For example, water quality is an indicator that an area has been successfully rehabilitated and is no longer generating mine affected water. (3) Details of any progressive rehabilitation that demonstrates mine-affected water catchments are being effectively reduced by the environmental authority holder's implemented rehabilitation program.
K13	If the administering authority determines that the annual assessment report does not demonstrate the continued effectiveness of the on-site water management practices in accordance with Condition K12, the administering authority will: (1) revoke the enhanced contaminant release conditions; and (2) notify the EA holder in writing within ten (10) business days of making the decision. Note: This does not exclude other enforcement actions under the Department of Environment and Science Enforcement Guidelines.
K14	If, subject to Condition K13 the enhanced contaminant release conditions are revoked, then the contaminant release limit for electrical conductivity and sulfate will revert to the pre-existing limits as detailed in Table C2 – Mine Affected Water Release Limits.

Schedule D: Groundwater	
Condition number	Condition
D1	The holder of this environmental authority must not release contaminants, directly or indirectly, to groundwater.
D2	Assessment Criteria for Compliance Bores The assessment criteria for compliance bores specified in Table D1 – Groundwater Monitoring Locations and Frequency includes: (a) a trigger event is defined as a single exceedance of the criteria defined in Table D2 – Groundwater Quality Triggers and Limits; and (b) A limit exceedance is defined as three (3) consecutive exceedances of the criteria specified in Table D2 – Groundwater Quality Triggers and Limits.
D3	Groundwater quality of compliance and reference bores must be monitored at the locations and frequencies defined in Table D1 – Groundwater Monitoring Locations and Frequency and Attachment 3: Groundwater Bore Monitoring Locations for quality characteristics identified in Table D2 – Groundwater Quality Triggers and Limits .
D4	Water quality criteria, specified in Table D2 – Groundwater Quality Triggers and Limits , may be updated by an amendment application submitted to the administering authority, following the collection of additional baseline monitoring data prior to the commencement of overburden removal within ML70528.
D5	Groundwater level must be monitored at the locations and frequencies defined in Table D1 – Groundwater Monitoring Locations and Frequency and Attachment 3: Groundwater Bore Monitoring Locations .
D6	Results of monitoring of groundwater from compliance bores identified in Table D1 – Groundwater Monitoring Locations and Frequency , must not exceed any of the limits defined in Table D2 – Groundwater Quality Triggers and Limits on three (3) consecutive occasions.
D7	If the limits specified in Table D2 – Groundwater Quality Triggers and Limits are exceeded at the compliance bores on three (3) consecutive occasions, the holder of the environmental authority must notify the administering authority via WaTERS within twenty-four (24) hours of receiving the results.

Table D1 – Groundwater Monitoring Locations and Frequency

Monitoring Bore ¹	Aquifer	Longitude easting	Latitude northing	Surface RL	Monitoring frequency – Groundwater quality
Reference bores – for interpretational purposes only					
1238_MB1	Tertiary	148.46472	-22.39313	165.52	Quarterly
1238_MB2	Vermont Seam (Permian Rangal Coal measures)				
2372-MB1	Tertiary	148.43380	-22.36393	166.91	
2372-MB2	Rewan Group				
2372-MB3	Vermont Seam (Permian Rangal Coal measures)				
2393-MB1	Tertiary	148.41638	-22.39085	173.24	
2393-MB2	Leichhardt Seam (Permian Rangal Coal measures)				
2393-MB3	Vermont Lower Seam (Permian Rangal Coal measures)				
2394-MB1	Tertiary	148.40867	-22.39165	173.96	
2394-MB2	Rewan Group				
West_MB1	Tertiary	148.38925	-22.41921	184	
West_MB2	Permian Rangal Coal Measures				
Water Quality Compliance Bores					
2371W-MB1	Tertiary Sediments	148.39160	-22.40097	178.92	Quarterly
2375-MB2	Vermont Seam (Permian Rangal Coal measures)	148.43910	-22.38323	168.36	
2226-MB2	Rewan Group	148.39158	-22.40094	178.84	
2226-MB3	Leichhardt Seam (Permian Rangal Coal measures)				
2218-MB2	Rewan Group	148.41479	-22.39349	173.29	

2218-MB3	Leichhardt Seam (Permian Rangal Coal measures)				
Water Level Monitoring Bores²					
2226-VWP	Rewan Group, Permian coal measures	148.39158	-22.40094	178.84	Quarterly
2183-VWP	Permian Rangal Coal Measures	148.40084	-22.41524	185.16	
2218-VWP	Rewan Group, Permian Rangal Coal Measures	148.41479	-22.39349	173.29	
2372-VWP	Permian Rangal Coal Measures	148.43380	-22.36393	166.91	
2375W-VWP	Permian Rangal Coal Measures	148.43910	-22.38323	168.36	
1235C-VWP	Permian Rangal Coal Measures	148.45635	-22.39943	170.81	
2369W-MB1	Tertiary Clay/Sand	148.41477	-22.39350	173.4	
2370W-MB1	Tertiary Sand/Sandy Clay	148.43907	-22.38311	168.30	

¹If any of the monitoring bores in **Table D1 – Groundwater Monitoring Locations and Frequency** become unfit for purpose, as a result of advancing mining activities, the environmental authority holder must submit proposed replacement bores to the administering authority for approval and inclusion in **Table D1 – Groundwater Monitoring Locations and Frequency**.

² Groundwater level monitoring only.

Table D2 – Groundwater Quality Triggers and Limits

Parameter	Groundwater unit – Triggers and Limits		
	Tertiary	Rewan	Permian
Physical parameters/sulfate			
pH (pH units) (field)	5.13 – 7.24	5.13 – 7.24	5.13 – 7.24
Electrical Conductivity (EC) (µS/cm) (field)	40,712	30,944	30,581
Sulfate (mg/L)	1,942 All bores other than 2371W-MB1	1,270	756
	4,180 Bore 2371W-MB1		
Metals/metalloids (mg/L) (dissolved, by ICP-MS/FIMS)			
Aluminium	0.055	0.055	0.055
Chromium	0.006	0.001	0.001
Cobalt	0.016	0.044	0.007
Copper	0.013	0.005	0.055
Manganese	1.9	1.9	1.9
Molybdenum	0.034	0.034	0.034
Nickel	0.02	0.022	0.011
Selenium	0.01	0.01	0.01
Zinc	0.08	0.04	0.017
Major Ions (mg/L)			
Calcium	For interpretational purposes only		
Chloride	For interpretational purposes only		
Potassium	For interpretational purposes only		
Magnesium	For interpretational purposes only		
Sodium	For interpretational purposes only		
Bicarbonate	For interpretational purposes only		

Table D3 – Groundwater Level Monitoring

Monitoring location	Aquifer	Water Level Trigger ¹
2226-VWP	Rewan Group	5m/year
2183-VWP	Permian Coal Measures	5m/year
2218-VWP	Rewan Group	5m/year
2372R-VWP	Permian Coal Measures	5m/year
2375W-VWP	Permian Coal Measures	5m/year
1235C-VWP	Permian Coal Measures	5m/year
2369W-MB1	Tertiary Clay/Sand	2m/year
2370W-MB1	Tertiary Clay/Sandy Clay	2m/year

¹ Water level triggers have been derived from Section 362 of the Water Act 2000.

D8	Trigger Investigation If monitoring results from water quality compliance bores or water level bores specified in Table D1 – Groundwater Monitoring Locations and Frequency, exceed any of the limits specified in Table D2 – Groundwater Quality Triggers and Limits or Table D3 – Groundwater Level Monitoring, the holder of the environmental authority must complete an investigation within fourteen (14) days of detection to determine if the exceedance is a result of: (a) mining activities authorised under this environmental authority; (b) natural variation; or (c) neighbouring land use resulting in groundwater impacts.
D9	The holder of this environmental authority must notify the administering authority via WaTERS and provide a report of the investigation to the administering authority via WaTERS within twenty-eight (28) days of completion of the investigation under Condition D8.
D10	If the investigation under Condition D8 determined that the exceedance was the result of mining authorised under this environmental authority, then investigations must be undertaken by the holder of this environmental authority to establish whether environmental harm has occurred or may occur.
D11	If an investigation undertaken in accordance with Condition D10 determines that environmental harm has or may occur, the holder of this environmental authority must: (a) implement immediate measures to reduce the potential for environmental harm; and (b) develop long-term mitigation measures to address any existing groundwater contamination and prevent recurrence of groundwater contamination.

D12	The holder of this environmental authority must provide details of the measures implemented to reduce the potential for environmental harm as well as the long-term mitigation measures to the administering authority within twenty-eight (28) days after completing the investigation under Condition D10 .
D13	Bore Construction, Maintenance and Management The construction, maintenance and management of groundwater bores (including groundwater monitoring bores) must be undertaken in a manner that prevents or minimises impacts to the environment and ensures the integrity of the bores to obtain accurate monitoring.

Schedule E: Sewage Treatment	
Condition number	Condition
E1	The only contaminant permitted to be released to land is treated sewage effluent in compliance with the release limits and monitoring frequency states in Table E1 – Contaminant Release Limits to Land .
E2	Treated sewage effluent may only be released to land in accordance with the conditions of this approval at the following locations: (a) within areas approved for treated effluent disposal; and (b) other land for the purpose of dust suppression and/or fire-fighting.
E3	The application of treated effluent to land must be carried out in a manner such that: (a) vegetation is not damaged; (b) there is no surface ponding of treated effluent; and (c) there is no run-off of effluent.
E4	If areas irrigated with effluent are accessible to employees or the general public, prominent signage must be provided advising that effluent is present and care should be taken to avoid consuming or otherwise coming into unprotected contact with effluent.
E5	The daily volume of effluent release to land must be measured and records kept of the volumes of effluent released.
E6	When circumstances prevent the irrigation or beneficial reuse of treated sewage effluent such as during or following rain events, waters must be directed to a wet weather storage or alternative measure must be taken to store/lawfully dispose of effluent.
E7	Treated sewage effluent must only be supplied to another person or organisation that has a written plan detailing how the user of the treated sewage effluent will comply with their general environmental duty under section 319 of the Environmental Protection Act 1994 whilst using the treated sewage effluent. <i>Note: the supply of treated wastewater for re-use is regulated under the Water Supply (Safety and Reliability) Act 2008.</i>

Table E1 – Contaminant Release Limits to Land

Quality Characteristics	Release Limit	Units	Limit Type	Monitoring Frequency
5 day Biochemical oxygen demands (BOD5)	20	mg/L	80 th percentile	Quarterly
pH	6.5 – 8.5	pH units	Range	Quarterly
Free Chlorine Residual	1	mg/L	Maximum	Quarterly
Thermotolerant Coliforms	1000	CFU/100ml	Maximum	Quarterly
Total Phosphorus	20	mg/L	Maximum	Quarterly
Total Nitrogen	60	mg/L	Maximum	Quarterly

Schedule F: Acoustic	
Condition number	Condition
F1	The holder of this environmental authority must ensure that noise generated by the mining activities does not cause the criteria in Table F1 – Noise Limits to be exceeded at a sensitive place or commercial place.
F2	Airblast Overpressure Nuisance The holder of this environmental authority must ensure that blasting does not cause the limits for peak particle velocity and air blast overpressure in Table F2 – Blasting Noise Limits to be exceeded at a sensitive place or commercial place.
F3	Monitoring and Reporting Noise monitoring and recording must include the following descriptor characteristics and matters: (a) LAN,T (where N equals the statistical levels of 1, 10 and 90 and T = 15 mins); (b) background noise LA90; (c) the level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to statistical levels; (d) atmospheric conditions including temperature, relative humidity and wind speed and directions; (e) effects due to any extraneous factors such as traffic noise; (f) location, date and time of monitoring; and (g) if the complaint concerns low frequency noise, Max LpLIN,T and one third octave band measurements in dB(LIN) for centre frequencies in the 10-200Hz range.
F4	The holder of this environmental authority must develop and implement a blast monitoring program to monitor compliance with Table F2 – Blasting Noise Limits .

Table F1 – Noise Limits

Sensitive Place						
Noise level dB(A) measured as:	Monday to Saturday			Sundays and Public Holidays		
	7am to 6pm	6pm to 10pm	10pm to 7am	9am to 6pm	6pm to 10pm	10pm to 9am
L_{Aeq} , adj, 15 mins	40	40	35	40	40	35
L_{A1} , adj, 15 mins	45	45	40	45	45	40
Commercial Place						
Noise level dB(A) measured as:	Monday to Saturday			Sundays and Public Holidays		
	7am to 6pm	6pm to 10pm	10pm to 7am	9am to 6pm	6pm to 10pm	10pm to 9am
L_{Aeq} , adj, 15 mins	45	45	40	45	45	40

Notes:

1. In the event that measured bg (LA90, adj, 15mins) is less than 30 dB(A), then 30 dB(A) can be substituted for the measured background level.
2. bg = background noise level (LA90, adj, 15mins) measured over 3-5 days at the nearest sensitive receptor.
3. If the project is unable to meet the noise limits as calculated above alternative limits may be calculated using the processes outlined in the "Planning for Noise Control" guideline.

Table F2 – Blasting Noise Limits

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

Schedule G: Land	
Condition number	Condition
G1	Surrender The holder must meet the conditions and the rehabilitation milestones under the PRCP schedule prior to the surrender of the environmental authority.
G2	Biodiversity Offsets Impacts to prescribed environmental matters as a result of carrying out the activity must only occur within the maximum extents stated in Table G1 – Authorised Impacts to Prescribed Environmental Matters.
G3	An environmental offset must be delivered for each impact specified in Table G1 – Authorised Impacts to Prescribed Environmental Matters as requiring an environmental offset.
G4	Prior to the commencement of any impacts to a prescribed environmental matter for which an environmental offset is required by Condition G3, an analysis of the anticipated maximum extent of impact to each prescribed environmental matter must be provided to the administering authority: (a) for the forthcoming stage – the estimated significant residual impacts to each prescribed environmental matter; and (b) for the previous stage, if applicable – the actual significant residual impacts to each prescribed environmental matter, to date.
G5	The analysis of impacts required by Condition G4 must be approved by the administering authority before the notice of election is given to the administering authority.
G6	The notice of election must be provided to the administering authority no less than three (3) months before the proposed commencement of impact to the prescribed environmental matters.
G7	Within six (6) months from the completion of the final stage of the project, a report completed by an appropriately qualified person, that includes the following matters must be provided to the administering authority: (a) an analysis of the actual impacts on prescribed environmental matters resulting from the final stage; and (b) if applicable, a notice of election to address any outstanding offset debits for the authorised impacts.

Table G1 – Authorised Impacts to Prescribed Environmental Matters

Matters of state environmental significance		Maximum extent of impact	Significant Impact	Environmental offset required
Regulated Vegetation				
RE occurring within defined distance of defining banks of a relevant watercourse	RE 11.3.25	28.4ha ^a	Yes	Yes
RE intersecting an area shown as a wetland on the vegetation management wetlands map	RE 11.3.27	3.9ha ^a	Yes	Yes
Protected Wildlife Habitat				
Vulnerable species	Squatter pigeon (<i>Geophaps scripta scripta</i>)	39.2ha ^b	Yes	Yes
Special least concern species	Short-beaked echidna (<i>Tachyglossus aculeatus</i>)	30.9ha ^c	No**	No**

Note: Table G1 – Authorised impacts to prescribed environmental matters refers to mining activities within ML70528 only.

** impacts to short-beaked Echidna associated with the Phillips Creek diversion realignment and associated levee and pit extension on ML70528.

^a authorised impact extent provided in Attachment 4: Location of authorised significant impact to RE11.3.25 and RE11.3.27

^b authorised impact extent provided in Attachment 5: Location of authorised significant impact to squatter pigeon

^c authorised impact extent provided in Attachment 6: Location of authorised impact to short-beaked echidna

Schedule H: Waste	
Condition number	Condition
H1	Unless otherwise permitted by the conditions of this environmental authority or with prior approval from the administering authority and in accordance with a relevant standard operating procedure, waste must not be burnt.
H2	Tailings Disposal Tailings must be managed in accordance with procedures contained within a Tailings Disposal Plan and the currently approved PRCP Schedule, which must be developed and implemented for all stages of the authorised mining activities. The Tailings Disposal Plan must include provisions for: (a) containment of tailings; (b) the management of seepage and leachates both during operations and the foreseeable future; (c) the control of fugitive emissions to air; (d) a program of progressive sampling and characterisation to identify acid producing potential and metal concentrations of tailings; (e) maintaining records of the relative locations of any other waste stored within the tailings; (f) rehabilitation strategy; and (g) monitoring of rehabilitation, research and/or trials to verify the requirements and methods for decommissioning and final rehabilitation of tailings, including the prevention and management of acid mine drainage, erosion minimisation and establishment of vegetation cover.
H3	Toll washing reject disposal Coal rejects from the toll washing authorised by condition A14 is permitted to be disposed of at the licenced place subject to the requirements of condition A18 and in accordance with the Tailings Disposal Plan required by condition H2.
H4	Prior to the commencement of toll washing, the holder is required to amend the Tailings Disposal Plan required by condition H2 to include toll washing rejects.

Schedule I – Regulated Structures	
Condition number	Condition
I1	Assessment of Consequence Category The consequence category of any structure must be assessed by a suitably qualified and experience person in accordance with the 'Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)' or its successor at the following times: (a) prior to the design and construction of the structure, if it is not an existing structure; or (b) prior to any change in its purpose or the nature of its stored contents.
I2	A consequence assessment report and certification must be prepared for any structure assessed and the report may include a consequence assessment for more than one structure.
I3	Certification must be provided by the suitably qualified and experienced person who undertook the assessment, in the form set out in the most recent version of the 'Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)' or its successor.
I4	Design and Construction of a Regulated Structure Conditions I5 to I9 inclusive do not apply to existing structures. <i>Note: Construction of a dam includes modification of an existing dam – refer to the Definition schedule of this environmental authority.</i>
I5	All regulated structures must be designed by, and constructed under the supervision of a suitably qualified and experienced person in accordance with the requirements of the most recent version of the 'Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)' or its successor. <i>Note: Certification of design and construction may be undertaken by different persons.</i>
I6	Construction of a regulated structure is prohibited unless: (a) the holder has submitted a consequence category assessment report and certification to the administering authority; and (b) certification for the design, design plan and the associated operating procedures has been certified by a suitably qualified and experienced person in compliance with the relevant condition of this authority.
I7	Certification must be provided by the suitably qualified and experienced person who oversees the preparation of the design plan in the form set out in the most recent version of the 'Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)' or its successor and must be recorded in the Register of Regulated Structures.

18	Regulated structures must: (a) be designed and constructed in accordance with and conform to the requirements of the most recent version of the 'Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)' or its successor; (b) be designed and constructed with due consideration given to ensuring that the design integrity would not be compromised on account of: (i) floodwater from entering the regulated dam from any watercourse or drainage line; and (ii) wall failure due to erosion by floodwaters arising from any watercourse or drainage line. (c) for regulated dams that are dams associated with a 'failure to contain – seepage': have the floor and sides of the dam designed and constructed to prevent or minimise the passage of the wetting front and any entrained contaminants through either the floor or sides of the dam during the operational life of the dam and for any period of decommissioning and rehabilitation of the dam.
19	Certification by the suitably qualified and experienced person who supervises the construction must be submitted to the administering authority on the completion of construction of the regulated structure, and state that: (a) the 'as constructed' drawings and specifications meet the original intent of the design plan for that regulated structure; and (b) construction of the regulated structure is in accordance with the design plan.
110	Operation of a Regulated Structure Operation of a regulated structure, except for an existing structure, is prohibited unless: (a) the holder has submitted to the administering authority: (i) one electronic copy of the design plan and certification of the 'design plan' in accordance with Condition 16, and (ii) a set of 'as constructed' drawings and specifications, and (iii) certification of those 'as constructed drawings and specifications' in accordance with Condition 19, and (iv) where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the design storage allowance (DSA) volume across the system, a copy of the certified system design plan. (v) the requirements of this authority relating to the construction of the regulated structure have been met; (vi) the holder has entered the details required under this authority, into a Register of Regulated Dams; and (vii) there is a current operational plan for the regulated structures.

I11	For existing structures that are regulated structures: (a) where the existing structure that is a regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system, the holder must submit to the administering authority within twelve (12) months of the commencement of this condition a copy of the certified system, design plan including that structure; and (b) there must be a current operational plan for the existing structures.
I12	Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitated, in a manner that is consistent with the current operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings.
I13	Mandatory Reporting Level Conditions I14 to I17 inclusive only apply to regulated structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
I14	The Mandatory Reporting Level (the MRL) must be marked on a regulated dam in such a way that during routine inspections of that dam, it is clearly observable.
I15	The holder must, as soon as practical and within forty-eight (48) hours of becoming aware, notify the administering authority when the level of the contents of a regulated dam reaches the MRL.
I16	The holder must, immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised discharge from the regulated dam.
I17	The holder must record any changes to the MRL in the Register of Regulated Structures.
I18	Design Storage Allowance The holder must assess the performance of each regulated dam or linked containment system over the preceding November to May period based on actual observations of the available storage in each regulated dam or linked containment system taken prior to 1 July of each year.
I19	By 1 November of each year , storage capacity must be available in each regulated dam (or network of linked containment systems with a shared DSA volume), to meet the DSA volume for the dam (or network of linked containment systems).
I20	The holder must, as soon as possible and within forty-eight (48) hours of becoming aware that the regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year , notify the administering authority.
I21	The holder must, immediately on becoming aware that a regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year , act to prevent the occurrence of any unauthorised discharge from the regulated dam or linked containment systems.

I22	Annual Inspection Report Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.
I23	At each annual inspection, the condition and adequacy of all components of the regulated structure must be assessed and a suitably qualified and experience person must prepare an annual inspection report containing details of the assessment and include recommended actions to ensure the integrity of the regulated structure.
I24	The suitably qualified and experienced person who prepared the annual inspection report must certify the report in accordance with the most recent version of the 'Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)' or its successor.
I25	The holder must within twenty (20) business days of receipt of the annual inspection report, provide to the administering authority: (a) the recommendations section of the annual inspection report; and (b) if applicable, any actions being taken in response to those recommendations; and (c) if, following receipt of the recommendations and (if applicable) actions, the administering authority requests a full copy of the annual inspection report from the holder, provide this to the administering authority within ten (10) business days of receipt of the request.
I26	Transfer Arrangements The holder must provide a copy of any reports, documentation and certifications prepared under this authority, including but not limited to any Register of Regulated Structures, consequence assessment, design plan and other supporting documentation, to a new holder on transfer of this authority.
I27	Register of Regulated Structures A Register of Regulated Structures must be established and maintained by the holder for each regulated dam.
I28	The holder must provisionally enter the required information in the Register of Regulated Structures when a design plan for a regulated dam is submitted to the administering authority.
I29	The holder must make a final entry of the required information in the Register of Regulated Structures once compliance with Conditions I10 and I11 has been achieved.
I30	The holder must ensure that the information contained in the Register of Regulated Structures is current and complete on any given day.
I31	All entries in the Register of Regulated Structures must be approved by the chief executive officer for the holder of this authority, or their delegate, as being accurate and correct.
I32	The holder must, at the same time as providing the annual return, supply to the administering authority a copy of the records contained in the Register of Regulated Structures, in the electronic format required by the administering authority.

I33	Transitional Arrangements All existing structures that have not been assessed in accordance with either the Manual of the former Manual for Assessing Hazard Categories and Hydraulic Performance of Dams must be assessed and certified in accordance with the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635) by 20 February 2016.
I34	All existing structures must subsequently comply with the timetable for any further assessments in accordance with the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635) specified in Table I1 – Transitional requirements for Existing Structures, depending on the consequence category for each existing structure assessed in the most recent previous certification for that structure.
I35	Table I1 – Transitional Requirements for Existing Structures ceases to apply for a structure once any of the following events has occurred: (a) it has been brought into compliance with the hydraulic performance criteria applicable to the structure under the Manual; or (b) it has been decommissioned; or (c) it has been certified as no longer being assessed as a regulated structure.
I36	Certification of the transitional assessment required by Conditions I33 and I34 (as applicable) must be provided to the administering authority 20 February 2016.

Table I1 – Transitional Requirements for Existing Structures

Transition period required for existing structures to achieve the requirements of the Manual for Assessing Consequence Categories and Hydraulic Performance of Dams (EM635)			
Compliance with Criteria	High	Significant	Low
>90% and a history of good compliance performance in last 5 years	No transition required	No transition required	No transitional conditions apply. Review consequence assessment every 7 years.
>70% – ≤90%	Within 7 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 10 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	No transitional conditions apply. Review consequence assessment every 7 years.
>50 – ≤70%	Within 5 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 7 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Review consequence assessment every 7 years.
≤50%	Within 5 years of as per compliance requirements (e.g. TEP timing)	Within 5 years or as per compliance requirements (e.g. TEP timing)	Review consequence assessment every 5 years.

Schedule J: Watercourse Diversions	
Condition number	Condition
J1	Watercourse diversions Watercourse diversions must be designed, constructed and maintained in accordance with the associated Water Licence/s.

Definitions

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

'80th percentile' is not more than one fifth, of the measured values are to exceed the stated release limit for the limit period. For example, no more than eight (8) for any ten (10) consecutive samples for the long term period.

'the Act' means the Environmental Protection Act 1994.

'administering authority' is the agency that administers the environmental authority provisions under the *Environmental Protection Act 1994*.

'affected person' is someone whose drinking water can potentially be impacted as a result of discharges from a dam or their life or property can be put at risk due to dwellings or workplaces being in the path of a dam break flood.

'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).

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

'annual inspection report' means an assessment prepared by a suitably qualified and experienced person containing details of the assessment against the most recent consequence assessment report and design plan (or system design plan);

- a) against recommendations contained in previous annual inspections reports;
- b) against recognised dam safety deficiency indicators;
- c) for changes in circumstances potentially leading to a change in consequence category;
- d) for conformance with the conditions of this authority;
- e) for conformance with the 'as constructed' drawings;
- f) for the adequacy of the available storage in each regulated dam, based on an actual observation or observations taken after **31 May** each year but prior to **1 November** of that year, of accumulated sediment, state of the containment barrier and the level of liquids in the dam (or network of linked containment systems); and
- g) for evidence of conformance with the current operational plan.

'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.

'assessed or assessment' by a suitably qualified and experienced person in relation to a consequence assessment of a dam or regulated structure, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in the declaration, all of the following aspects are addressed and are sufficient to allow an independent audit of the assessment:

- a) exactly what has been assessed and the precise nature of that determination;
- b) the relevant legislative, regulatory and technical criteria on which the assessment has been based;
- c) the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- d) the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

‘associated works’ in relation to a dam or regulated structure, means:

- a) operations of any kind and all things constructed, erected or installed for that dam; and
- b) any land used for those operations.

‘authority’ means an environmental authority or a development approval.

‘background’ with reference to the water schedule means the average of samples taken prior to the commencement of mining from the same waterway that the current sample has been taken.

‘blasting’ means the use of explosive materials to fracture:

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

‘certification’ means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by the most recent version of the ‘Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)’ or its successor, including design plans, ‘as constructed’ drawings and specifications, construction, operation or an annual report regarding regulated structures, undertaken in accordance with the Board of Professional Engineers of Queensland Policy Certification by RPEQs (ID: 1.4 (2A)).

‘certified’ with respect to watercourse diversions, means assessed and approved by a suitably qualified and experienced person. In relation to ‘as constructed’ drawings and specifications, the certification must be by the suitably qualified person who supervised the construction of the watercourse diversion, or re-establishment of the watercourse.

‘certification, certifying or certified’ have a corresponding meaning as ‘certification’.

‘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 Australian Code for the Transport of Dangerous Goods by Road and Rail approved by the Australian Transport Council; 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
 - v) a substance used for, or intended for use for mineral processing or treatment of metal, pulp and paper, textile, timber, water or wastewater; or
 - vi) manufacture of plastic or synthetic rubber.

‘commercial place’ means a workplace 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.

‘consequence’ in relation to a structure as defined, means the potential for environmental harm resulting from the collapse or failure of the structure to perform its primary purpose of containing, diverting or controlling flowable substances.

‘consequence category’ means a category, either low, significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the most recent version of the ‘Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)’ or its successor.

‘construction or constructed’ in relation to a regulated structure includes building a new regulated structure and lifting or otherwise modifying an existing regulated structure, but does not include investigations and testing necessary for the purpose of preparing a design plan.

‘CSG water’ means underground water brought to the surface of the earth or moved underground in connection with exploring for or producing coal seam gas.

‘daily peak design capacity’ for sewage treatment works, has the meaning in Schedule 2, section 63(4) of the Environmental Protection Regulation 2008 as the higher equivalent person (EP) for the works calculated using each of the formulae found in the definition for EP.

‘dam’ means a land-based structure or a void that contains, diverts or controls flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void and associated works.

‘dam crest volume’ means the volume of material (liquids and/or solids) that could be within the walls of a dam at any time when the upper level of that material is at the crest level of that dam. That is, the instantaneous maximum volume within the walls, without regard to flows entering or leaving (e.g. via spillway).

‘design plan’ is a document setting out how all identified consequence scenarios are addressed in the planned design and operation of a regulated structure.

‘design storage allowance’ or **‘DSA’** means an available volume, estimated in accordance with the most recent version of the ‘Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)’ or its successor published by the administering authority, must be provided in a dam as at **1 November** each year in order to prevent a discharge from that dam to an annual exceedance probability (AEP) specified in that manual.

‘designer’ for the purposes of a regulated structure, means the certifier of the design plan for the regulated dam.

Disturbance of land includes:

- a) compacting, removing, covering, exposing or stockpiling of earth
- b) removal or destruction of vegetation or topsoil or both to an extent where the land has been made susceptible to erosion;
- c) carrying out mining within a watercourse, waterway, wetland or lake;
- d) the submersion of areas by tailings or hazardous contaminant storage and dam/structure walls;
- e) temporary infrastructure, including any infrastructure (roads, tracks, bridges, culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after the mining activity has ceased; or
- f) releasing of contaminants into the soil, or underlying geological strata.

However, the following areas are not included when calculating areas of ‘disturbance’:

- a) areas off lease (e.g. roads or tracks which provide access to the mining lease);
- b) areas previously disturbed which have achieved the rehabilitation outcomes;
- c) by agreement with the administering authority, areas previously disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- d) areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc.) which is to be left by agreement with the landowner; or
- e) disturbance that pre-existed the grant of the tenure.

‘document’ has the meaning in the *Acts Interpretation Act 1954* and means:

- a) any paper or other material on which there is writing; and
- b) any paper or other material on which there are marks; and
- c) figures, symbols or perforations having a meaning for a person qualified to interpret them; and
- d) any disc, tape or other article or any material from which sounds, images, writings or messages are capable of being produced or reproduced (with or without the aid of another article or device).

‘EC’ means electrical conductivity.

‘emergency action plan’ means documentation forming part of the operational plan held by the holder or a nominated responsible officer, that identifies emergency conditions that sets out procedures and actions that will be followed and taken by the dam owner and operating personnel in the event of an emergency. The actions are to minimise the risk and consequences of failure, and ensure timely warning to affected persons and the implementation of protection measures. The plan must require dam owners to annually review and update contact information where required.

‘enhanced release’ means a release of mine affected water from release points RP4, RP5, RP6, RP7 OR RP10 in accordance with Schedule K.

‘environmental authority’ means this environmental authority.

‘environmental harm’ has the meaning in section 14 of the *Environmental Protection Act 1994* and means any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.

‘environmental nuisance’ has the meaning in section 15 of the *Environmental Protection Act 1994* and means unreasonable interference or likely interference with an environmental value caused by –

- a) aerosols, fumes, light, noise, odour, particles or smoke; or
- b) an unhealthy, offensive or unsightly condition because of contamination; or
- c) another way prescribed by regulation.

‘environmental offset’ has the meaning of section 7 of the *Environmental Offsets Act 2014*.

‘equilibrium’: a state where ‘balance’ is achieved despite changing variables.

‘equivalent person or EP’ has the meaning under section 3 of the Planning Guidelines For Water Supply and Sewerage, 2005, published by the Queensland Government. It is calculated in accordance with Schedule 2, Section 63(4) of the Environmental Protection Regulation 2008 where:

- a) $EP = V/200$ where V is the volume, in litres, of the average dry weather flow of sewage that can be treated at the works in a day; or
- b) $EP = M/2.5$ where M is the mass, in grams, of phosphorous in the influent that the works are designed to treat as the inlet load in a day.

‘existing authority’ has the meaning in section 94 of the *Environmental Offsets Act 2014*.

‘existing structure’ means a structure that was in existence prior to (insert date of EA the adoption of this schedule of conditions under the authority) meets any or both of the following, a structure:

- a) with a design that is in accordance with the version 5.0 of Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933) and that is considerably in progress; and
- b) that is under considerable construction or that is constructed.

‘extreme storm storage’ – means a storm storage allowance determined in accordance with the criteria in the most recent version of the ‘Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)’ or its successor published by the administering authority.

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

‘functional design’ is a document that contains ‘conceptual’ information about the design, operation and revegetation criteria of a watercourse diversion that addresses the outcomes stated in the model conditions and any conditions on the environmental authority relating to the diversion. The document should include, but not be limited to:

- a) geomorphic and vegetation assessment of the existing watercourse;
- b) hydrologic conditions of the existing watercourse;
- c) the proposed watercourse diversion route; and
- d) results from hydrologic, hydraulic and sediment transportation modelling used in the design of the diversion.

‘GDA’ means Geocentric Datum of Australia.

‘holder’, for a mining tenement, means a holder of the tenement under the *Mineral Resources Act 1989*, and the holder of the associated environmental authority under the *Environmental Protection Act 1994*.

‘hydraulic performance’ means the capacity of a regulated dam to contain or safely pass flowable substances based on the design criteria specified for the relevant consequence category in the most recent version of the ‘Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)’ or its successor.

‘infrastructure’ means water storage dams, levees, roads and tracks, buildings and other structures built for the purpose of the mining activity.

‘L_{A1, Adj, 15min}’ means the A-weighted sound pressure level, adjusted for tonal character, that which is exceeded for 1% of any 15 minute period.

‘L_{A90}’ means the A-weighted sound pressure level that has been exceeded for 90% of the sample period.

‘L_{Aeq, Adj 15min}’ means the A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within any 15 minute period has the same square sound pressure as a sound level that varies with time.

‘land’ in the ‘land schedule’ of this document means land excluding waters and the atmosphere, that is, the term has a different meaning from the term as defined in the *Environmental Protection Act 1994*. For the purposes of the *Acts Interpretation Act 1954*, it is expressly noted that the term ‘land’ in this environmental authority relates to physical land and not to interests in land.

‘land use’ means the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

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

‘levee’ means an embankment that only provides for the containment and diversion of stormwater or flood flows from a contributing catchment, or containment and diversion of flowable materials resulting from releases from other works, during the progress of those stormwater or flood flows or those releases; and does not store any significant volume of water or flowable substances at any other times.

‘licensed place’ means the mining activities carried out at the mining tenements detailed in page 1 of this environmental authority.

‘low consequence dam’ means any dam that is not a high or significant hazard category as assessed using the most recent version of the ‘Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)’ or its successor.

‘m’ means metres.

‘mandatory reporting level’ or **‘MRL’** means a warning and reporting level determined in accordance with the criteria in the most recent version of the ‘Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)’ or its successor published by the administering authority.

‘maximum extent of impact’ means the total, cumulative, residual extent and duration of impact to a prescribed environmental matter that will occur over a project’s life after all reasonable avoidance and reasonable on-site mitigation measures have been, or will be, undertaken.

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

‘mining activity’ or **‘mining activities’** means exploration, construction, mining operation, rehabilitation and monitoring activities on the mining tenures stated in Environmentally Relevant Activity and location details of this environmental authority.

‘mine affected water’:

- a) means the following types of water:
 - i) pit water, tailings dam water, processing plant water;
 - ii) water contaminated by a mining activity which would have been an environmentally relevant activity under Schedule 2 of the Environmental Protection Regulation 2008 if it had not formed part of the mining activity;
 - iii) rainfall runoff which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated, excluding rainfall runoff discharging through release points associated with erosion and sediment control structures that have been installed in accordance with the standards and requirements of an Erosion and Sediment Control Plan to manage such runoff, provided that this water has not been mixed with pit water, tailings dam water, processing plant water or workshop water;
 - iv) groundwater which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated;
 - v) groundwater from the mine’s dewatering activities;
 - vi) a mix of mine affected water (under any of paragraphs i) – v) and other water; and
 - vii) CSG water extracted as part of the gas drainage pilot program authorised by condition **A19**.
- b) does not include surface water runoff which, to the extent that it has been in contact with areas disturbed by mining activities that have not yet been completely rehabilitated, has only been in contact with:
 - i) land that has been rehabilitated to a stable landform and either capped or revegetated in accordance with the acceptance criteria set out in the environmental authority but only still awaiting maintenance and monitoring of the rehabilitation over a specified period of time to demonstrate rehabilitation success; or
 - ii) land that has partially been rehabilitated and monitoring demonstrates the relevant part of the landform with which the water has been in contact does not cause environmental harm to waters or groundwater, for example:
 - 1) areas that have been capped and have monitoring data demonstrating hazardous material adequately contained with the site;
 - 2) evidence provided through monitoring that the relevant surface water would have met the water quality parameters for mine affected water release limits in this environmental authority, if those parameters had been applicable to the surface water runoff, or

iii) both.

‘minimise’ is to reduce to the smallest possible amount or degree.

‘modification’ or **‘modifying’** (see definition of ‘construction’).

‘natural flow’ means the flow of water through waters caused by nature.

‘notice of election’ has the meaning in section 18(2) *Environmental Offsets Act 2014*.

‘operational plan’ includes:

- a) normal operating procedures and rules (including clear documentation and definition of process inputs in the DSA allowance); and
- b) contingency and emergency action plans including operating procedures designed to avoid and/or minimise environmental impacts including threats to human life resulting from any overtopping or loss of structural integrity of the regulated structure.

‘peak particle velocity’ or **‘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 (mm/s).

‘permanent watercourse diversion’ is a man-made structure that incorporates the geomorphologic, hydraulic, hydrologic and ecological components of a local watercourse and is designed, constructed, operated and maintained according to an engineering standard that ultimately achieves a self-sustaining watercourse able to function without features or characteristics that rely on ongoing maintenance or that impose a financial or other burden on the proponent, government or the community.

‘pre-existing watercourse’ is the section of a watercourse from which the flow of water will be diverted as a result of the construction and operation of a watercourse diversion.

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

‘protected area’ means – a protected area under the *Nature Conservation Act 1992*, or

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

‘receiving environment’ in relation to an activity that causes or may cause environmental harm, means the part of the environment to which the harm is, or may be, caused. The receiving environment includes (but is not limited to):

- a) a watercourse;
- b) groundwater; and
- c) an area of land that is not specified in Schedule # - Table # (Authorised activities) of this environmental authority.

‘receiving waters’ means the waters into which this environmental authority authorises releases of mine affected water.

‘regional ecosystem’ has the meaning in the Methodology for Surveying and Mapping of Regional Ecosystems and Vegetation Communities in Queensland (Version 3.2 August 2012) and means a vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil. Regional ecosystems of Queensland were originally described in Sattler and Williams (1999). The Regional Ecosystem Description Database (Queensland Herbarium 2013) is maintained by Queensland Herbarium and contains the current descriptions of regional ecosystems.

‘Register of Regulated Structures’ includes:

- a) date of entry in the register;

- b) name of the dam, its purpose and intended/actual contents;
- c) the consequence category of the dam as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures* (EM635);
- d) date, names, and reference for the design plan plus dates, names, and reference numbers of all document(s) lodged as part of a design plan for the dam;
- e) name and qualifications of the suitably qualified and experienced person who certified the design plan and 'as constructed' drawings;
- f) for the regulated dam, other than in relation to any levees –
 - i) the dimensions (metres) and surface area (hectares) of the dam measured at the footprint of the dam;
 - ii) coordinates (latitude and longitude in GDA94) within five metres at any point from the outside of the dam including its storage area;
 - iii) dam crest volume (megalitres);
 - iv) spillway crest level (metres AHD);
 - v) maximum operating levels (metres AHD);
 - vi) storage rating table of stored volume versus level (metres AHD);
 - vii) design storage allowance (megalitres) and associated level of the dam (metres AHD); and
 - viii) mandatory reporting level (metres AHD).
- g) the design plan title and reference relevant to the dam;
- h) the date construction was certified as compliant with the design plan;
- i) the name and details of the suitably qualified and experienced person who certified that the constructed dam was compliant with the design plan;
- j) details of the composition and construction of any liner;
- k) the system for the detection of any leakage through the floor and sides of the dam;
- l) dates when the regulated dam underwent an annual inspection for structural and operational adequacy, and to ascertain the available storage volume for 1 November of any year;
- m) dates when recommendations and actions arising from the annual inspection were provided to the administering authority; and
- n) dam water quality as obtained from any monitoring required under this authority as at 1 November of each year.

'regulated dam' means any dam in the significant or high hazard category as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures* (EM635) published by the administering authority.

'regulated structure' includes land-based containment structures, levees, bunds and voids, but not a tank or container designed and constructed to an Australian Standard that deals with strength and structural integrity.

'rehabilitation' means the process of reshaping and revegetating land to restore it to a stable landform.

'release event' means a surface water discharge from mine affected water storages or contaminated areas on the licenced place.

'reporting limit' means the lowest concentration that can be reliably measured with specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes, the reporting limit is selected as the lowest non-zero standard in the calibration curve. Results that fall below the reporting limit will be reported as "less than" the value of the reporting limit. The reporting limit is also referred to as the practical quantification limit or the limit of quantification. For polycyclic aromatic hydrocarbons, the reporting limit must be based on super-ultra trace methods and, depending on the specific polycyclic aromatic hydrocarbon, will range between 0.005µg/L–0.02µg/L.

'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.

'revegetation' is the re-establishment of vegetation¹ of a species and density of cover similar to surrounding undisturbed areas or the landform that existed before mining activities on soil surfaces associated with the

construction or rehabilitation of a watercourse diversion.

‘RL’ means reduced level, relative to mean sea level as distinct from depths to water.

‘run of mine ore’ refers to mined coal, excluding waste and dilution.

‘self-sustaining’ means not requiring on-going intervention and maintenance to maintain functional riverine processes and characteristics.

‘sensitive place’ means:

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

Note: The definition of ‘sensitive place’ and ‘commercial place’ is based on Schedule 1 of EPP Noise. That is, a sensitive place is inside or outside on a dwelling, library and educational institution, childcare or kindergarten, school or playground, hospital, surgery or other medical institution, commercial and retail activity, protected area or an area identified under a conservation plan under Nature Conservation Act 1992 as a critical habitat or an area of major interest, marine park under Marine Parks Act 2004, park or garden that is outside of the mining lease and open to the public for the use other than for sport or organised entertainment. A commercial place is inside or outside a commercial or retail activity.

A mining camp (i.e., accommodation and ancillary facilities for mine employees or contractors or both, associated with the mine the subject of the environmental authority) is not a sensitive place for that mine or mining project, whether or not the mining camp is located within a mining tenement that is part of the mining project the subject of the environmental authority. For example, the mining camp might be located on neighbouring land owned or leased by the same company as one of the holders of the environmental authority for the mining project, or a related company. Accommodation for mine employees or contractors is a sensitive place if the land is held by a mining company or related company, and if occupation is restricted to the employees, contractors and their families for the particular mine or mines which are held by the same company or related company.

For example, a township (occupied by the mine employees, contractors and their families for multiple mines that are held by different companies) would be a sensitive place, even if part or all of the township is constructed on land owned by one or more of the companies.

‘significant residual impact’ has the meaning in section 8 of the *Environmental Offsets Act 2014*.

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

‘strategic environmental areas’ has the meaning in section 11(1) of the *Regional Planning Interest Act 2014*.

‘structure’ means dam or levee.

‘suitably qualified and experienced person’ in relation to regulated structures means a person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the *Professional Engineers Act 2002*, and has demonstrated competency and relevant experience:

- a) For regulated dams, an RPEQ who is a civil engineer with the required qualifications in dam safety and dam design.
- b) For regulated levees, an RPEQ who is a civil engineer with the required qualifications in the design of flood protection embankments.

Note: It is permissible that a suitably qualified and experienced person obtain subsidiary certification from an RPEQ who has demonstrated competence and relevant experience in either geomechanics, hydraulic design or engineering hydrology.

‘suitably qualified and experienced person’ in relation to watercourse diversions means a person who is a RPEQ under the provisions of the *Professional Engineers Act 2002*, who has an **appropriate level of expertise** in the structures, geomechanics, hydrology, hydraulics and environmental impact of watercourse diversions.

An **appropriate level of expertise** includes:

- a) demonstrable competency, experience and expertise in:
 - i) investigation, design or construction of watercourses diversions;
 - ii) operation and maintenance of watercourse diversions;
 - iii) geomechanics with particular emphasis on channel equilibrium, geology and geochemistry;
 - iv) hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology;
 - v) hydraulics with particular reference to sediment transport and deposition and erosion control;
 - vi) hydrogeology with particular reference to seepage and groundwater;
 - vii) solute transport processes and monitoring thereof; or
- b) sufficient knowledge and experience to certify that where the **suitably qualified and experienced person** has relied on advice and information provided by other **persons with relevant expertise**:
 - i) they consider it reasonable to rely on that advice and information; and
 - ii) the expert providing the advice and information has knowledge, competency, suitable experience and demonstrated expertise in the matters related to watercourse diversions.

Persons with relevant expertise include:

- a) Geomorphologist: person who has demonstrated competency and relevant experience in stream geomorphology and watercourse diversions;
- b) Geotechnical Expert: person who has demonstrated competency and relevant experience in geotechnical assessment of soil characteristics suitable for watercourse diversions;
- c) Vegetation Expert: person who has demonstrated competency and relevant experience in the identification, role and function of vegetation with watercourses and adjoining floodplains, and has demonstrated competency and relevant experience in revegetation of watercourse diversions and adjoining floodplains;
- d) Groundwater Expert: person who has demonstrated competency and relevant experience in groundwater systems;
- e) Surface Water Expert: person who has demonstrated competency and relevant experience in hydrology;
- f) Engineer: person who is a RPEQ under the provisions of the *Professional Engineers Act 2002* or has similar qualifications under a respected professional registration association, and has demonstrated competency and relevant experience in design and construction of watercourse diversions;
- g) Soils Expert: person who has demonstrated competency and relevant experience in soil classification including the physical, chemical and hydrologic analysis of soil.

‘system design plan’ means a plan that manages an integrated containment system that shares the required DSA and/or ESS volume across the integrated containment system.

‘temporary watercourse diversion’ is a man-made structure that may incorporate geomorphologic, hydraulic, hydrologic and ecological components of a local watercourse and is designed, constructed, operated and maintained to an engineering standard that ensures the diversion does not compromise the equilibrium and performance of the diversion and adjoining watercourses. A temporary diversion is replaced by a permanent diversion, or the re-establishment of the pre-existing watercourse, within the timeframe specified in the design plan.

‘µS/cm’ means micro siemens per centimetre.

‘void’ means any constructed, open excavation in the ground.

‘waste’ is defined under section 13 of the *Environmental Protection Act 1994*.

‘water’ is defined under Schedule 4 of the *Water Act 2000*.

‘watercourse’ has the same meaning given in section 5 of the *Water Act 2000*.

‘watercourse diversion’ is a man-made structure that diverts or interferes with the course of flow within a watercourse, but that does not impound water.

‘water year’ means the **twelve (12) month** period from **1 July** to **30 June**.

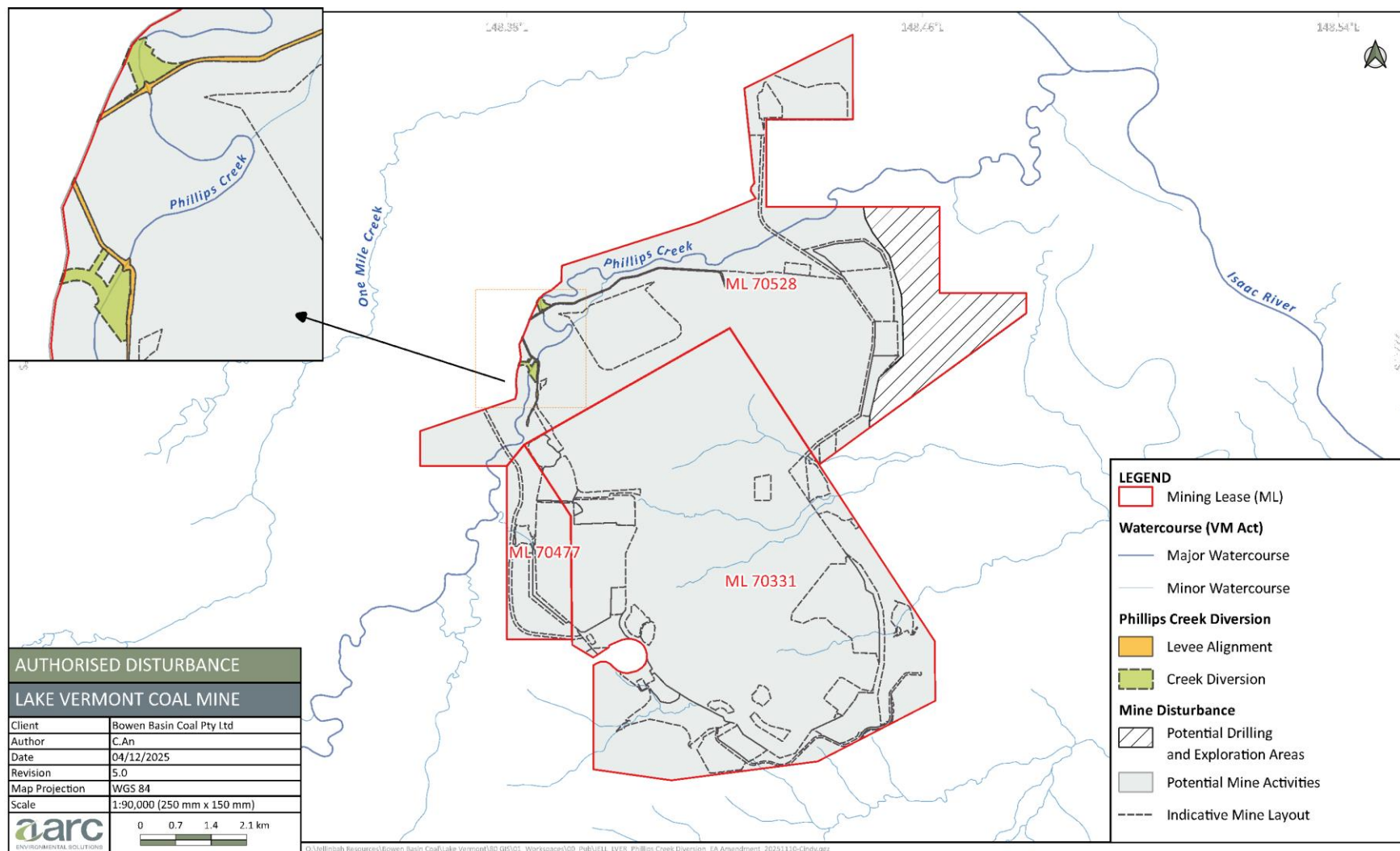
‘waters’ includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined natural or artificial watercourses, bed and banks of any waters, dams, non-tidal or tidal waters (including the sea), storm water channel, storm water drain, and groundwater and any part thereof.

‘WaTERS’ means the Water Tracking and Electronic Reporting System (WaTERS) used for tracking of regulated activities in Queensland that involve water releases to the environment.

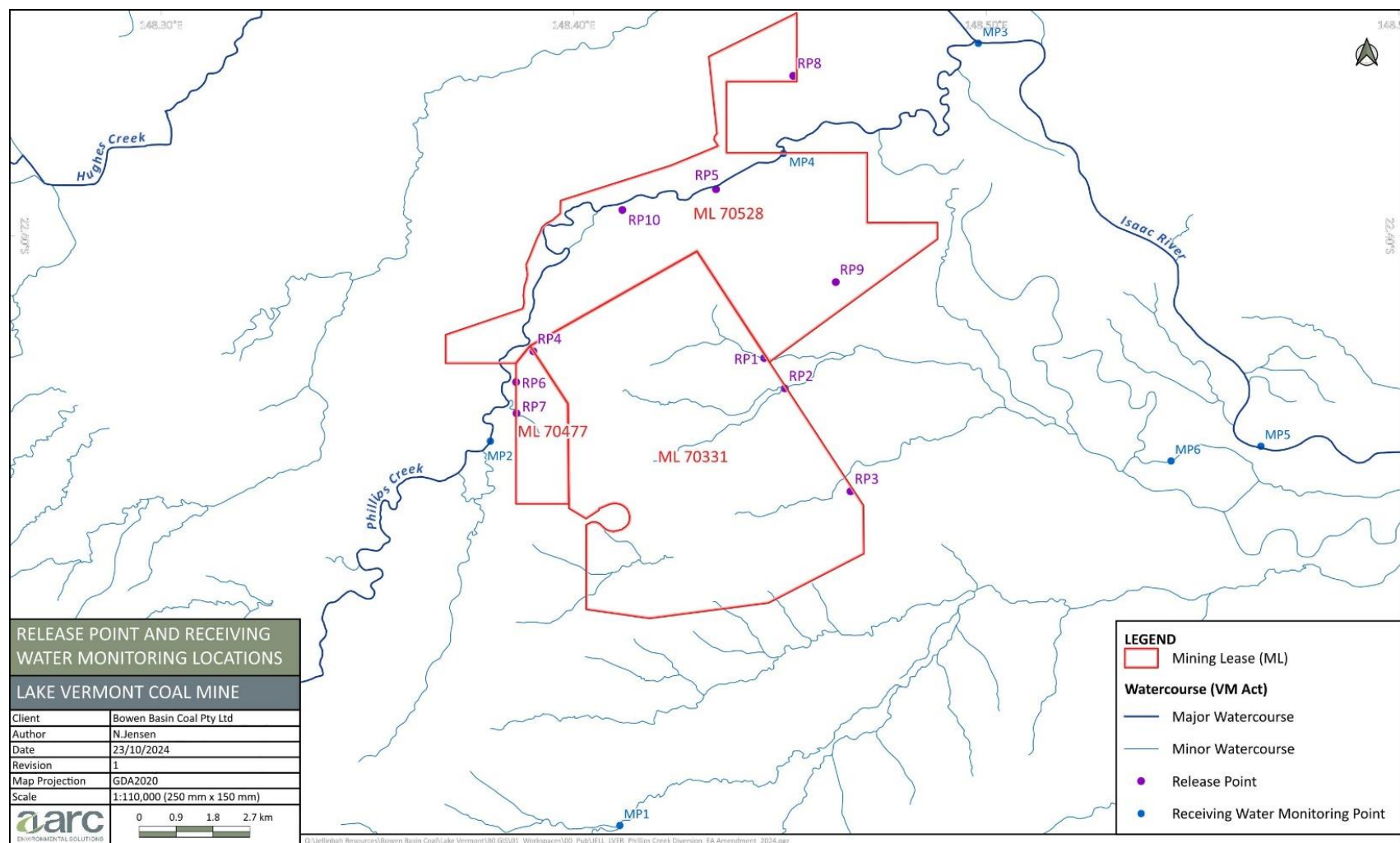
‘water quality’ means the chemical, physical and biological condition of water.

‘wet season’ means the time of year, covering one or more months, when most of the average annual rainfall in a region occurs. For the purposes of DSA determination this time of year is deemed to extend from **1 November** in one year to **31 May** in the following year inclusive.

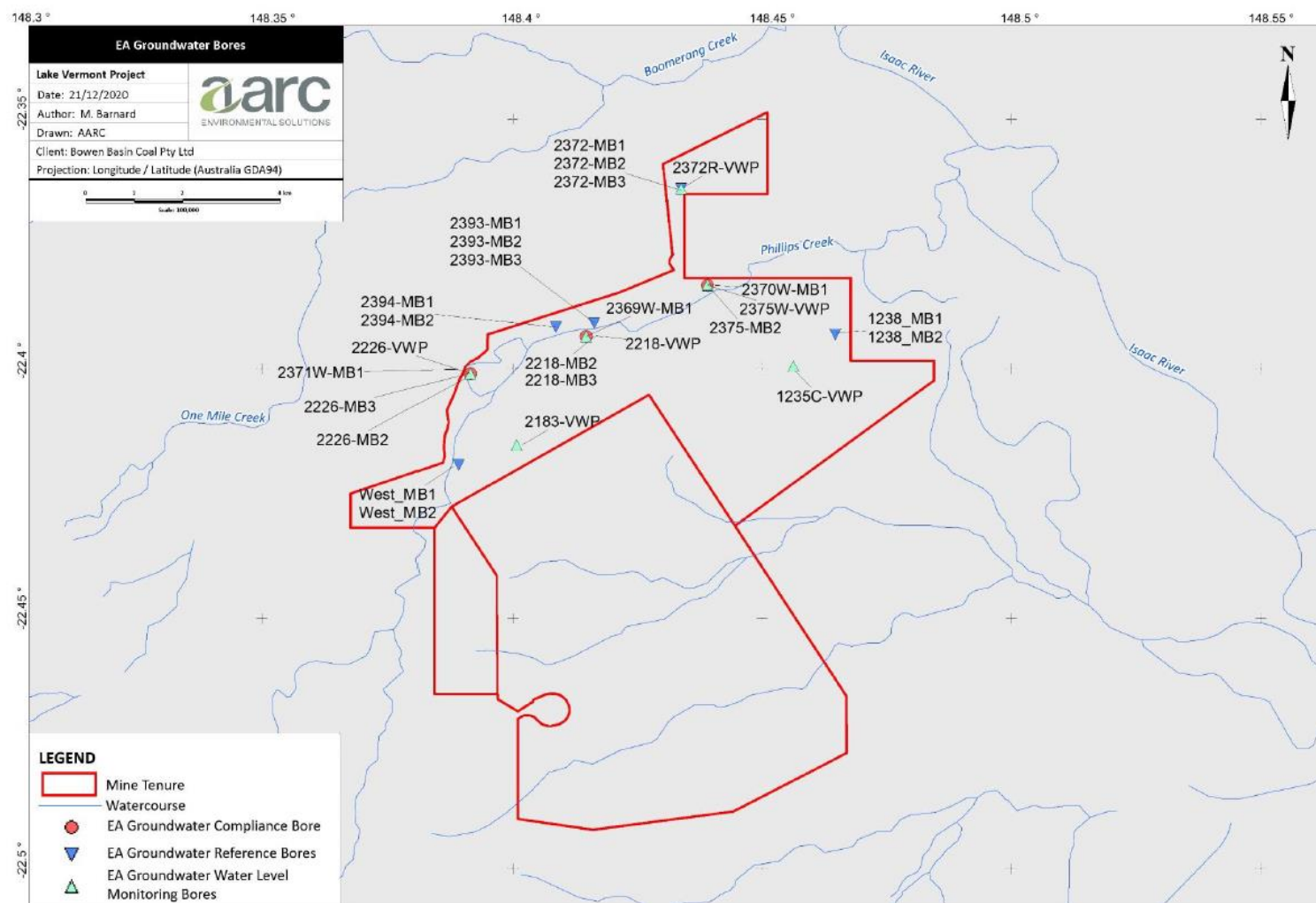
Attachment 1: Authorised Disturbance Footprint



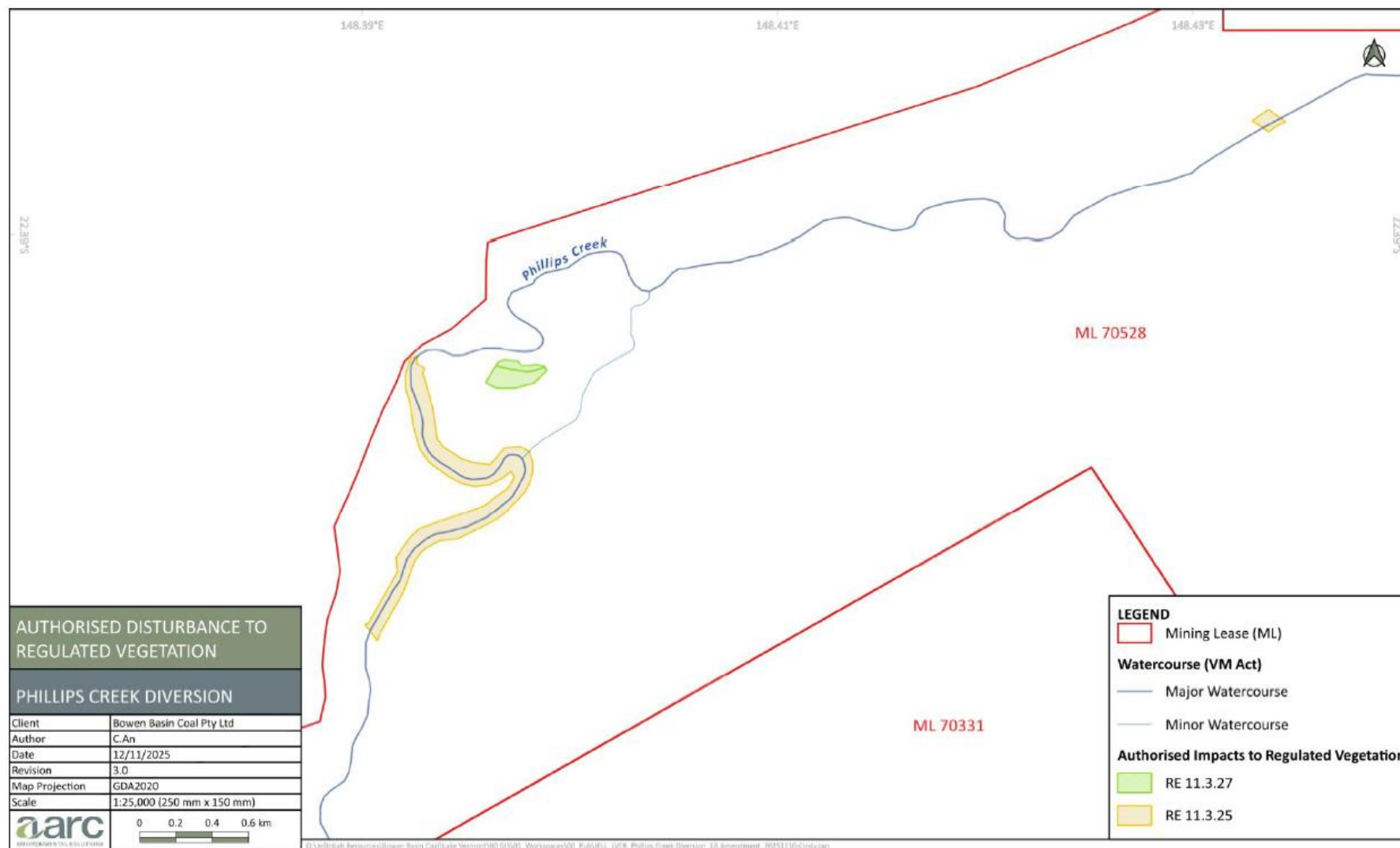
Attachment 2: Authorised Release Points and Receiving Water Monitoring Locations



Attachment 3: Groundwater Bore Monitoring Locations



Attachment 4: Location of authorised significant impact to RE11.3.25 and RE11.3.27



AUTHORISED IMPACTS TO SQUATTER PIGEON HABITAT

PHILLIPS CREEK DIVERSION

Client	Bowen Basin Coal Pty Ltd
Author	C.An
Date	12/11/2025
Revision	2.0
Map Projection	GDA2020
Scale	1:25,000 (250 mm x 150 mm)

LEGEND

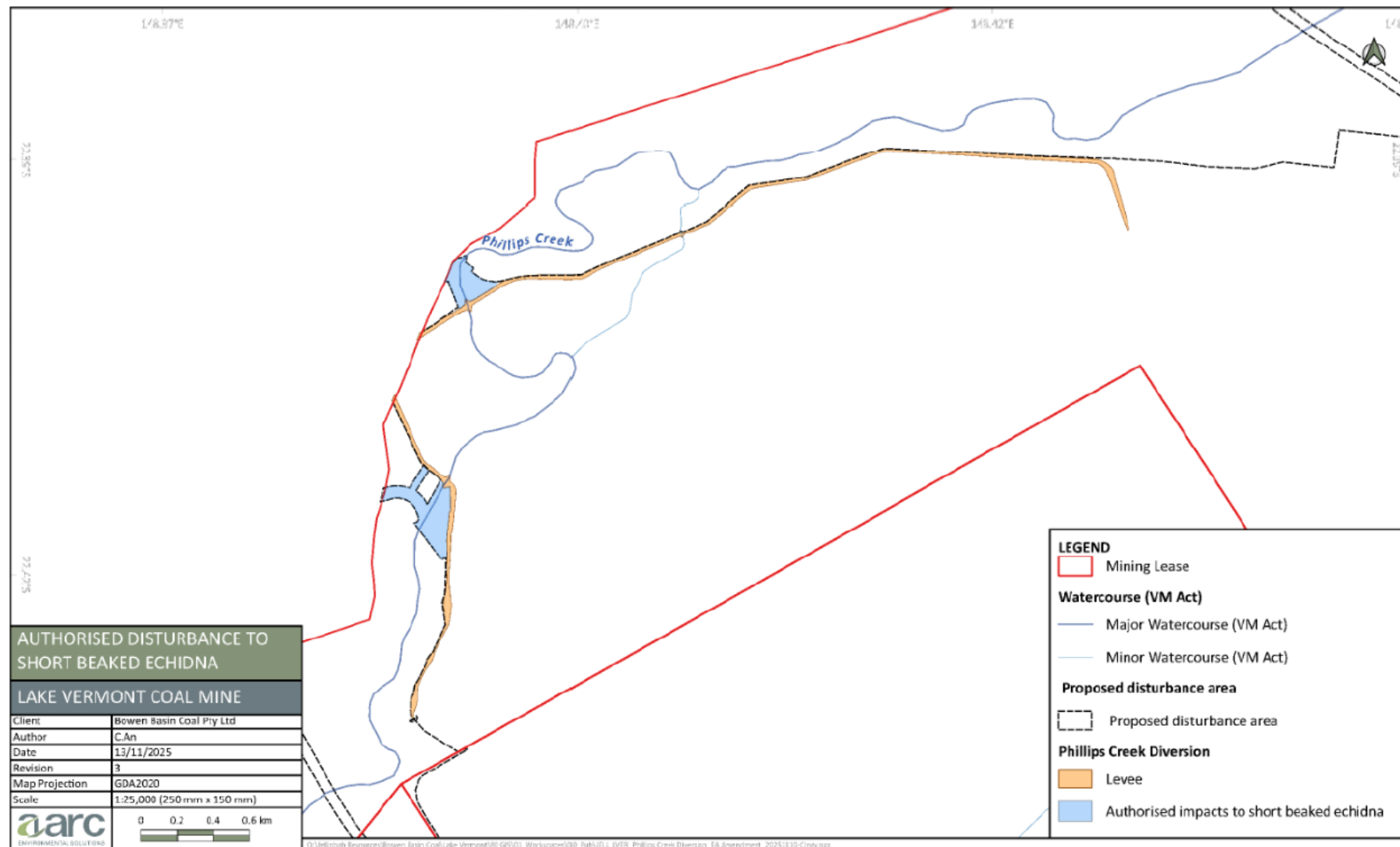
- Mining Lease
- Watercourse (VM Act)
 - Major Watercourse
 - Minor Watercourse
- Authorised Impacts to Protected Habitat
 - Squatter pigeon

0 0.2 0.4 0.6 km

Data Source:

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Attachment 6: Location of authorised impact to short-beaked echidna



Attachment 7: Approximate location of gas drainage pilot program



END OF ENVIRONMENTAL AUTHORITY