Permit

Environmental Protection Act 1994

Environmental authority EPML00853413

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

Environmental authority number: EPML00853413

Environmental authority takes effect on 19 December 2019

Environmental authority holder(s)

Name(s)	Registered address
QCT MINING PTY. LTD.	Level 16 480 Queen Street BRISBANE CITY QLD 4000 Australia
QCT Resources Pty Limited	Level 16, 480 Queen Street BRISBANE CITY QLD 4000
QCT INVESTMENT PTY. LTD.	Level 16 480 Queen Street BRISBANE CITY QLD 4000 Australia
BHP COAL PTY LTD	Level 14, 480 Queen Street BRISBANE CITY QLD 4000 Australia
BHP Queensland Coal Investments Pty Ltd	Level 14, 480 Queen Street BRISBANE CITY QLD 4000
Mitsubishi Development Pty Ltd	Level 16, 480 Queen Street BRISBANE CITY QLD 4000
Umal Consolidated Pty Ltd	Level 14, 480 Queen Street BRISBANE CITY QLD 4000

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70289
Schedule 3 13: Mining black coal	ML70287

Queensland Government

Environmentally relevant activity/activities	Location(s)
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML1802
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70194
Schedule 3 13: Mining black coal	ML70494
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70121
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML1900
Schedule 3 13: Mining black coal	ML1763
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70493
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML1764
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML700003
Schedule 3 13: Mining black coal	ML70288
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70289
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70193
Schedule 3 13: Mining black coal	ML70469
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100	ML70194

Environmentally relevant activity/activities	Location(s)
but not more than 1500EP otherwise	
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70287
Schedule 3 13: Mining black coal	ML70421
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML1900
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70494
Schedule 3 13: Mining black coal	ML70478
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML700003
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML1763
Schedule 3 13: Mining black coal	ML70479
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70193
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70288
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70468
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70469
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML1802
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70421

Environmentally relevant activity/activities	Location(s)
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70121
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70478
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70493
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70479
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML1764
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)	ML70468
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70289
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70287
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Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70194
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70494
Ancillary 08 - Chemical Storage 3: Storing more than 500 cubic metres of chemicals of class C1 or C2	ML70121

Environmentally relevant activity/activities	Location(s)
combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML1900
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML1763
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)	ML70493
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML700003
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70288
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)	ML1764
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70193
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70469
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)	ML70289
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other	ML70287

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Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70421
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Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70494
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70478
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Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML1763
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70479
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)	ML700003
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70288
Schedule 3 13: Mining black coal	ML70468
Ancillary 08 - Chemical Storage 3: Storing more than 500 cubic metres of chemicals of class C1 or C2	ML70193

Environmentally relevant activity/activities	Location(s)
combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70469
Schedule 3 13: Mining black coal	ML1802
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)	ML70287
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70421
Schedule 3 13: Mining black coal	ML70121
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)	ML70494
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70478
Ancillary 31 - Mineral processing 2: Processing, in a year, the following quantities of mineral products, other than coke (b) more than 100,000t	ML70479
Schedule 3 13: Mining black coal	ML70493
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)	ML1763
Ancillary 60 - Waste disposal 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) (h) more than 200,000t	ML1763
Schedule 3 13: Mining black coal	ML1764
Ancillary 08 - Chemical Storage 3: Storing more than 500 cubic metres of chemicals of class C1 or C2	ML70288

Environmentally relevant activity/activities	Location(s)
combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70468
Schedule 3 13: Mining black coal	ML70289
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)	ML70469
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML1802
Schedule 3 13: Mining black coal	ML70194
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)	ML70421
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70121
Schedule 3 13: Mining black coal	ML1900
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)	ML70478
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML70493
Schedule 3 13: Mining black coal	ML700003
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)	ML70479
Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	ML1764
Schedule 3 13: Mining black coal	ML70193

Environmentally relevant activity/activities	Location(s)
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	ML70468

Additional information for applicants

Environmentally relevant activities

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

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

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

Contaminated land

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

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

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

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

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 *Sustainable Planning Act 2009* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

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

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

Anthony Baker
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

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Date issued: 19 December 2019

Obligations under the *Environmental Protection Act 1994*

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

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

Conditions of environmental authority

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	**Estimated Rehabilitation Cost (ERC)** The environmental authority holder must not carry out, or allow the carrying out of, a resource activity under this environmental authority unless: a) an ERC decision is in effect for the resource activity being carried out; and b) the environmental authority holder has paid a contribution to the scheme fund or given a surety for the environmental authority under the *Mineral and Energy Resources (Financial Provisioning) Act 2018*; and c) the environmental authority holder has complied with the requirements under the *Mineral and Energy Resources (Financial Provisioning) Act 2018* for paying a contribution to the scheme fund, or giving a surety for the environmental authority, as required from time to time.
A3	**New Estimated Rehabilitation Cost (ERC) decision before expiry** When an ERC decision is in force for this environmental authority, the environmental authority holder must apply, under section 298 of the *Environmental Protection Act 1994*, for a new ERC decision, at least **three (3) months** before the ERC period to which the decision relates ends.
A4	**When holder must re-apply for Estimated Rehabilitation Cost (ERC) decision** When an ERC decision is in force for this environmental authority, the environmental authority holder must re-apply, under section 298 of the *Environmental Protection Act 1994*, for an ERC decision, within **ten (10) business days** of when the environmental authority holder becomes aware that: a) there is an increase in the likely maximum amount of disturbance to the environment as a result of the environmental authority holder carrying out the resource activity; or b) there is a change relating to the carrying out of the resource activity that may result in an increase in the ERC for the resource activity.
A5	**Prevent and /or minimise likelihood of environmental harm** In carrying out the environmentally relevant activities, the environmental authority holder must take all reasonable and practicable measures to prevent and/or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this environmental authority.

A6	**Maintenance of measures, plant and equipment** The environmental authority holder must ensure: a) that all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed; b) that such measures, plant and equipment are maintained in a proper condition; c) that such measures, plant and equipment are operated in a proper manner; and d) that all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.
A7	**Monitoring and records** Except where specified otherwise in another condition of this environmental authority, all monitoring records and reports required by this environmental authority must be kept for a period of not less than **five (5) years**.
A8	Monitoring and determinations required under any condition of this environmental authority must be conducted by an appropriately qualified person(s).
A9	Upon request from the administering authority, copies of monitoring results, records, registers, management plans and reports required by the conditions of this environmental authority must be made available and provided to the administering authority within **ten (10) business days** or an alternative timeframe agreed between the administering authority and the environmental authority holder.
A10	**Notification of emergencies, incidents and exceptions** The environmental authority holder must notify the administering authority by written notification within **twenty-four (24) hours** after becoming aware of any emergency or incident that 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 under condition **A10**, or the receipt of monitoring results associated with the notification made under condition **A10**, whichever is the latter, the environmental authority holder must provide further written advice 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 environmental authority holder 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) conclusions formed; f) actions taken to resolve the complaint, including the use of appropriate dispute resolution if required; g) any abatement measures implemented; and h) person responsible for resolving the complaint.
A13	A register of alternative arrangements must be established and maintained by the environmental authority holder. The register must include: a) the location to which the alternative arrangement applies; b) the period of the alternative arrangement; c) details about the particular environmental nuisance impact or impacts the arrangement is for; and d) details about the mitigation measures, where relevant.
A14	**Monitoring on request** When requested by the administering authority, the environmental authority holder must investigate any nuisance, or contaminant release, or environmental harm, or complaint that is neither frivolous nor vexatious in the opinion of the authorised person, by: a) undertaking the monitoring specified by the administering authority; b) undertaking the monitoring in the timeframe nominated or agreed to by the administering authority; c) completing an analysis and interpretation of the monitoring results; and d) implementing abatement measures, where required.
A15	The results of the investigation undertaken in accordance with condition **A14** must be provided to the administering authority within **twenty (20) business days** of completion of the monitoring timeframe in accordance with condition **A14(b)**, or a longer timeframe agreed to by the administering authority.
A16	No mining to be undertaken on ML70478 and ML70479.

Schedule B: Air	
Condition number	**Condition**
B1	**Odour nuisance** The release of noxious or offensive odour or any other noxious or offensive airborne contaminant resulting from the mining activities must not cause an environmental nuisance, at any sensitive place or commercial place.
B2	If the administering authority determines odour released from the mining activities to constitute an environmental nuisance, the environmental authority holder must immediately implement abatement measures so that emissions from the mining activities do not result in further environmental nuisance.
B3	**Dust nuisance** The release of dust or particulate matter or both resulting from the mining activities must not cause an environmental nuisance, at any sensitive place or commercial place.

B4	Monitoring of dust and particulate matter resulting from the mining activities, undertaken in accordance with condition **A14**, must be carried out at a place relevant to the potentially affected sensitive place or commercial place and must not exceed the following levels when measured at any sensitive place or commercial place: a) dust deposition, measured as total insoluble matter, of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with the most recent 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 micrometre (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of either: i. Australian Standard *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 Standard *AS3580.9.8 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 continuous direct mass method using a tapered element oscillating microbalance analyser*; or iii. Australian Standard *AS3580.9.9 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 low volume sampler – Gravimetric method*; or iv. Australian Standard *AS3580.9.11 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 beta attenuation monitors*. c) a concentration of particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a 1 year averaging time, when monitored in accordance with the most recent version of either: i. Australian Standard AS3580.9.3 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – Total suspended particulate matter (TSP) – High volume sampler gravimetric method; or ii. any alternative method of monitoring TSP that may be permitted by the Air Quality Sampling Manual as published from time to time by the administering authority. *NOTE: Exceedances due to events that cannot be managed by the environmental authority holder, such as bushfires, fuel reduction burning for fire management purposes or dust storms, would not be considered to be in breach of condition **B4** if the environmental authority holder can demonstrate that the exceedance was caused by such events.*
B5	If monitoring, undertaken in accordance with condition **A14**, indicates exceedance of the relevant limits in condition **B4**, the environmental authority holder must immediately implement abatement measures so that emissions from the mining activities do not result in further environmental nuisance.

Schedule C: Noise and Vibration	
Condition number	**Condition**
C1	**Noise nuisance** Noise from the mining activities must not cause an environmental nuisance, at any sensitive place or commercial place.
C2	Noise is not considered an environmental nuisance under condition **C1** if monitoring shows that noise does not exceed the limits in **Table C1 (Noise Limits)**, at any sensitive place or commercial place.
C3	**Noise monitoring** Noise monitoring, undertaken in accordance with condition **A14**, must comply with the most recent version of the administering authority's *Noise Measurement Manual*, and must include the following descriptors, characteristics and conditions: a) $L_{A10,\ adj,\ 10\ mins}$; b) $L_{A\ 1,\ adj,\ 10\ mins}$; c) the level and frequency of occurrence of impulsive or tonal noise; d) atmospheric conditions including wind speed and direction; e) effects due to extraneous factors such as traffic noise; and f) location, date and time of recording.
C4	If monitoring, undertaken in accordance with condition **A14**, indicates exceedance of the relevant limits in **Table C1 (Noise Limits)**, the environmental authority holder must immediately implement abatement measures so that emissions from the mining activities do not result in further environmental nuisance.

Table C1 (Noise Limits)

Noise Level dB(A)	**Monday to Saturday**			**Sundays and Public Holidays**		
	Day (7am to 6pm)	**Evening (6pm to 10pm)**	**Night (10pm to 7am)**	**Day (9am to 6pm)**	**Evening (6pm to 10pm)**	**Night (10pm to 9am)**
Sensitive Place						
$L_{A10,\ adj,\ 10\ mins}$	B/g + 5	B/g + 5	B/g + 0	B/g + 5	B/g + 5	B/g + 0
$L_{A1,\ adj,\ 10\ mins}$	B/g + 10	B/g + 10	B/g + 5	B/g + 10	B/g + 10	B/g + 5
Commercial Place						
$L_{A10,\ adj,\ 10\ mins}$	B/g + 10	B/g + 10	B/g + 5	B/g + 10	B/g + 10	B/g + 5
$L_{A1,\ adj,\ 10\ mins}$	B/g + 15	B/g + 15	B/g + 10	B/g + 15	B/g + 15	B/g + 10

C5	**Vibration nuisance** Vibration from the mining activities must not cause an environmental nuisance, at any sensitive place or commercial place.
C6	Vibration is not considered an environmental nuisance under condition **C5** if monitoring shows that vibration does not exceed the limits specified in **Table C2 (Vibration Limits)**.
C7	**Airblast overpressure nuisance** The airblast overpressure level from blasting operations on the mining leases must not cause an environmental nuisance, at any sensitive place or commercial place.
C8	Airblast overpressure is not considered an environmental nuisance under condition **C7** if monitoring shows that airblast overpressure does not exceed the levels specified in **Table C3 (Airblast Overpressure Level)**.
C9	**Vibration and/or airblast overpressure monitoring** Vibration and/or airblast overpressure monitoring, undertaken in accordance with condition **A14**, must comply with the most recent version of the administering authority's *Noise Measurement Manual*, and must include the following descriptors, characteristics and conditions: a) location of the blast(s) within the mining area (including which bench level); b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and c) location, date and time of recording.
C10	If monitoring, undertaken in accordance with condition **A14**, indicates exceedance of the relevant limits in **Table C2 (Vibration Limits)** or **Table C3 (Airblast Overpressure Level)**, the environmental authority holder must immediately implement abatement measures so that emissions from the mining activities do not result in further environmental nuisance.
C11	The environmental authority holder cannot undertake any blasting on ML70478 and ML70479.

Table C2 (Vibration Limits)

Location	Vibration Measured
Sensitive place or commercial place	5 mm/s peak particle velocity for nine (9) out of ten (10) consecutive blasts and not greater than 10 mm/s peak particle velocity at any time.

Table C3 (Airblast Overpressure Level)

Location	Airblast Overpressure Measured
Sensitive place or commercial place	115 dB (Linear peak) for nine (9) out of ten (10) consecutive blasts and not greater than 120 dB (Linear peak) at any time.

Schedule D: Waste	
Condition number	**Condition**
D1	**Bulk rubber waste** Bulk rubber waste resulting from the mining activities, including from the Red Hill Mine, may be disposed in spoil emplacements within the mining leases listed on this environmental authority. A record must be kept of the number, volume, and location for all bulk rubber waste disposed.
D2	Bulk rubber waste disposed of within the mining leases must not impede saturated aquifers or compromise the stability of the consolidated landform.
D3	**General waste** General waste can only be disposed of into the general waste landfill on ML1763 and identified in **Figure 1 (General Waste Landfill Location)**, which must be operated in accordance with the Waste Management Plan as described by condition **D4**.
D4	**Waste management** A Waste Management Plan must be developed by an appropriately qualified person(s) and implemented. The Waste Management Plan must include: a) a description of the mining activities that may generate waste; b) waste management control strategies, including: i. the types and amounts of wastes generated by the mining activities; ii. segregation of the wastes; iii. storage of the wastes; iv. transport of the wastes; and v. monitoring and reporting matters concerning the wastes; c) how the waste will be dealt with in accordance with the waste management hierarchy (that is, avoid, reuse, recycling, energy recovery, disposal); d) the hazardous characteristics of the wastes generated including disposal procedures for hazardous wastes; e) procedures for dealing with accidents, spills and other incidents; f) reference to the Groundwater Monitoring and Management Program for the general waste landfill; g) the indicators or other criteria on which the performance of the waste management program will be assessed; and h) staff training.
D5	Waste must not be burned or allowed to be burned on the mining leases unless approved by the administering authority prior to burning.

D6	Records must be maintained and must include the following information: a) date of pickup of waste; b) description of waste; c) cross reference to relevant waste transport documentation; d) quantity of waste; e) origin of the waste; f) destination of the waste; and g) intended fate of the waste, for example, type of waste treatment, reprocessing or disposal. *NOTE: Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition.*
D7	Records of trade and regulated wastes or material leaving the mining lease for recycling or disposal, including the final destination and method of treatment, must be in accordance with the *Environmental Protection Regulation 2019*.
D8	All regulated waste received at and removed from the mining leases must be transported by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994*.
D9	Except as otherwise permitted under the conditions of this environmental authority, all waste removed from the mining leases must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the *Environmental Protection Act 1994*.

Schedule E: Land	
Condition number	**Condition**
E1	**Topsoil** Topsoil must be strategically stripped ahead of mining in accordance with a Topsoil Management Plan.
E2	A topsoil inventory, which identifies the topsoil requirements for rehabilitation and availability of suitable topsoil on site, must be provided with any Estimated Rehabilitation Cost application.
E3	**Rehabilitation landform criteria** Unless otherwise permitted under the conditions of this environmental authority, all areas significantly disturbed by mining activities must be rehabilitated in accordance with **Table E1 (Rehabilitation Requirements)**.

Table E1 (Rehabilitation Requirements)

Post Mining Land Use	**Goal**	**Objective**	**Indicator**	**Acceptance Criteria**
Cattle grazing	Safe to humans and wildlife	Safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use	Hazard assessment	No significant difference
	Stable	Rehabilitation is geotechnically stable	Factor of safety	≥1.5
		Rehabilitation is erosionally stable	Extent, slope gradient and groundcover	1. Groundcover >50% 2. 70% of slopes ≤20%
	Non-polluting	Rainfall runoff from rehabilitation achieves relevant water quality objectives for receiving waters	pH EC Turbidity	Not significantly different to upstream values
		Deep drainage from rehabilitation achieves relevant water quality objectives for groundwater	EC	Not significantly different to: (a) the EPP (Water) schedule documents water quality objectives for relevant groundwater chemistry zones; or, (b) local water quality objectives developed in accordance with the Queensland Water Quality Guidelines.
	Able to sustain the agreed post-mining land use	Rehabilitation is suitable for sustainable cattle grazing	Land suitability assessment for cattle grazing	Land suitability class ≤3 or not different from pre-mining class if ≥4. Assessment completed in accordance with *LSA Framework for Open-Cut Coal Mine Rehabilitation 2018 (A rule-set for land suitability assessment of sustainable beef cattle grazing on land rehabilitated after open-cut coal mining in the Bowen Basin Queensland)* unless otherwise agreed in writing between the administering authority and the environmental authority holder.
			Leucaena stem density	<250 stems >2m height per ha (1 per 40m^2), mean total area

Dryland cropping	Safe to humans and wildlife	Safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use	Hazard assessment	No significant difference
	Stable	Rehabilitation is geotechnically stable	Factor of safety	≥1.5
		Rehabilitation is erosionally stable	Percentage of cultivation at >1% slope gradient with functional contour banks	100% of rehabilitated areas
	Non-polluting	Rainfall runoff from rehabilitation achieves relevant water quality objectives for receiving waters	pH EC Turbidity	Not significantly different to upstream values
		Deep drainage from rehabilitation achieves relevant water quality objectives for groundwater	EC	Not significantly different to: (a) the EPP (Water) schedule documents water quality objectives for relevant groundwater chemistry zones; or, (b) local water quality objectives developed in accordance with the Queensland Water Quality Guidelines.
	Able to sustain the agreed post-mining land use	Rehabilitation is suitable for sustainable dryland cropping	Land suitability assessment for dryland cropping	Land suitability class ≤3 or not different from pre-mining class if ≥4. Assessment completed in accordance with the *Regional Land Suitability Frameworks for Queensland 2013* unless otherwise agreed in writing between the administering authority and the environmental authority holder.
Woodland habitat	Safe to humans and wildlife	Safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use	Hazard assessment	No significant difference
	Stable	Rehabilitation is geotechnically stable	Factor of safety	≥1.5 unless an alternative is justified by an appropriately qualified person
		Rehabilitation is erosionally stable	Groundcover (steep slopes, >15%)	80%
			Groundcover (lesser slopes, ≤15%)	50%
	Non-polluting	Rainfall runoff from rehabilitation achieves relevant water quality objectives for receiving waters	pH EC Turbidity	Not significantly different to upstream values
		Deep drainage from rehabilitation achieves relevant water quality objectives for groundwater	EC	Not significantly different to: (a) the EPP (Water) schedule documents water quality objectives for relevant groundwater chemistry zones; or, (b) local water quality objectives developed in accordance with the Queensland Water Quality Guidelines.
	Able to sustain the agreed post-mining land use	Native bushland characteristics	Species richness Trees Shrubs Grasses	 ≥2 ≥3 ≥4
			Tree canopy cover	≥16%

Water Storage	Safe to humans and wildlife	Safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use	Hazard assessment	No significant difference
	Stable	Rehabilitation is geotechnically stable	Factor of Safety	≥1.5
		Rehabilitation is erosionally stable (banks and immediate surrounds)	Groundcover	>50%
	Non-polluting	Rainfall runoff from rehabilitation achieves relevant water quality objectives for receiving waters	pH EC Turbidity	Not significantly different to upstream values
		Deep drainage from rehabilitation achieves relevant water quality objectives for groundwater	EC	Not significantly different to: (a) the EPP (Water) schedule documents water quality objectives for relevant groundwater chemistry zones; or, (b) local water quality objectives developed in accordance with the Queensland Water Quality Guidelines.
	Able to sustain the agreed post-mining land use	Rehabilitation retains water that is a potential resource for cattle grazing, with quality according to ANZECC guidelines version October 2000	TDS Calcium Magnesium Nitrate Nitrite Sulphate	≤5,000mg/L ≤1,000mg/L ≤2,000mg/L ≤400mg/L ≤30mg/L ≤1,000mg/L
Watercourse	Safe to humans and wildlife	Safety hazards are not significantly different to surrounding unmined landscapes subject to the same land use	Hazard assessment	No significant difference
	Stable	Rehabilitation is erosionally stable	Geomorphic index (IDC method)	Greater or equal to upstream or downstream values.
	Non-polluting	Rainfall runoff from rehabilitation achieves relevant water quality objectives for receiving waters	pH EC Turbidity	Not significantly different to upstream values
	Able to sustain the agreed post-mining land use	Riparian vegetation	Riparian vegetation index (IDC method)	Greater or equal to upstream or downstream values.

E4	Progressive rehabilitation must commence within **two (2) years** when areas become available within the mining leases.
E5	Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria for Department review and comment. The investigation report must be reviewed and updated every **three (3) years**, commencing on **30 June 2008**. The Rehabilitation Management Plan must include, at a minimum: a) map existing areas of rehabilitation; b) develop design objectives for rehabilitation of disturbed areas and post mining land uses across the mine; c) specify spoil characteristics, soil analysis, soil separation for use on rehabilitation; d) detail rehabilitation methods applied to areas; e) contain landform design criteria including end of mine design; f) detail how landform design will be consistent with the surrounding topography; g) identify success criteria for areas and itemize revegetation criteria; h) explain planned native vegetation rehabilitation areas and corridors; i) identify at least a minimum of three (3) reference and three (3) rehabilitation sites to be used to develop rehabilitation success criteria; j) describe rehabilitation indicators and the monitoring program to be used; k) develop a contingency plan for rehabilitation maintenance or redesign; l) describe end of mine landform design plan and post mining land uses across the mine; and m) include a cost benefit analysis / triple bottom line assessment (or an alternative assessment method) of the proposed final landform design criteria and alternatives.
E6	**Residual void outcome** Residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the residual void itself and subject to any other condition within this environmental authority.

E7	Complete an investigation into residual voids and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in condition **E6** and landform design criteria in **Table E2 (Landform Design Parameters)** and must be reviewed and updated every **three (3) years**, commencing on **30 June 2008**. The investigation must at a minimum include the following: a) a study of options available for minimising final void area and volume; b) a void hydrology study, addressing the long-term water balance in the voids, connections to groundwater resources and water quality parameters in the long term; c) a pit wall stability study, considering the effects of long-term erosion and weathering of the pit wall and the effects of significant hydrological events; d) a hydrological study into the long-term risk of the Isaac River / final void interaction, including erosion of the banks and spoil and extreme hydrological events, and the consequences of such interaction to the long-term stability of the final voids; e) a study of void capability to support native flora and fauna; f) proposal/s for end of mine void rehabilitation success criteria and final void areas and volume; and g) the recommendations of this these studies are to be followed during the life of the mine, and will include detailed research and modelling.

Table E2 (Landform Design Parameters)

Rehabilitation Area	Design Criteria	Qualifications
Final high walls: Competent rock Incompetent rock	 <65° slope <17° slope	Competency certified by an appropriately qualified professional accredited by a credible third party
Low walls	<17° slope	Angle of repose / benched / graded

E8	**Preventing contaminant release to land** Contaminants must not be released to land in manner that constitutes a nuisance, material harm or serious environmental harm.
E9	**Storage and handling of chemicals and flammable or combustible liquids** All chemicals and flammable or combustible liquids must be stored and handled in accordance with the most recent version of an Australian Standard where such is applicable. Where no relevant Australian Standard exists, store such materials within an effective on-site containment system.
E10	**Infrastructure** All infrastructure, constructed by or for the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to surrender, except where agreed in writing by the post mining landowner/ landholder. *NOTE: This is not applicable where the landowner/ landholder is also the environmental authority holder.*

E11	**Exploration** Disturbance due to exploration activities in areas not authorised to be mined must be rehabilitated in accordance with the conditions of the *Eligibility criteria and standard conditions for exploration and mineral development projects—ESR/2016/1985 (Version 2.0)*.
E12	**Subsidence** The post mining land use for areas affected by subsidence as a result of underground mining, except for watercourse subsidence that is subject to **Schedule H: Watercourse Subsidence**, must be: a) if agricultural land use prior to mining – agricultural land use; or b) if a land use other than agricultural use – the same land use as existed prior to mining.
E13	Subsidence management procedures must be developed and implemented during the continuation of the environmental authority, except for watercourse subsidence that is subject to **Schedule H: Watercourse Subsidence**. The subsidence management strategies must be detailed in the Subsidence Management Plan and must at a minimum include: a) subsidence modelling prior to mining; b) rehabilitation methodology; and c) land management practices pre and post subsidence.
E14	No subsidence permitted on ML70478 and ML70479.
E15	**Impacts to Prescribed Environmental Matters** No impact on State Significant Biodiversity Values (SSBV) or Matters of State Environmental Significance (MSES) on ML70478 and ML70479.
E16	Impacts to Matters of State Environmental Significance (MSES) on ML1763 that are associated with Red Hill Mine are only authorised to occur in accordance with the conditions of the Red Hill Mine Environmental Authority EPML03337715.

Schedule F: Water	
Condition number	**Condition**
F1	**Contaminant Release** 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 mining activities, except as permitted under the conditions of this environmental authority.
F2	Unless otherwise permitted under the conditions of this environmental authority, the release of mine affected water to waters must only occur from the release points specified in **Table F1 (Mine Affected Water Release Points)**.
F3	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 conditions **F28** to **F29** inclusive is permitted.

Table F1 (Mine Affected Water Release Points)

Release Point (RP)	Easting (GDA94)	Northing (GDA94)	Mine Affected Water Source and Location	Monitoring Point	Receiving Waters Description
RP1	602621	7588947	GS4a Dam (Eureka Creek)	Upstream of spillway (MP1)	Isaac River

F4	The release of mine affected water to waters in accordance with condition **F2** must not exceed the release limits stated in **Table F2 (Mine Affected Water Release Limits)** when measured at the monitoring points specified in **Table F1 (Mine Affected Water Release Points)** for each quality characteristic.

Table F2 (Mine Affected Water Release Limits)

Quality Characteristic	Release Limit	Monitoring Frequency
Electrical Conductivity (µS/cm)	10,000	Real time telemetry for EC and pH with grab samples at commencement and weekly thereafter when safe to do so and access permits Daily grab samples if telemetry not available (the first sample must be taken as soon as practicable)^
pH (pH units)	6.5 (minimum) 9.0 (maximum)	
Sulphate (SO_4^{2-}) (mg/L)	N/A (correlated with EC)	Commencement of release and weekly thereafter during release when safe to do so and access permits

NOTES:
^ Generally during daylight hours only

F5	The release of mine affected water to waters from the release points must be monitored at the locations specified in **Table F1 (Mine Affected Water Release Points)** for each quality characteristic and at the frequency specified in **Table F2 (Mine Affected Water Release Limits)** and **Table F3 (Release Contaminant Trigger Investigation Levels)**. *NOTE: the administering authority will take into consideration any extenuating circumstances prior to determining an appropriate enforcement response in the event condition **F5** is contravened due to a temporary lack of safe or practical access. The administering authority expects the environmental authority holder to take all reasonable and practicable measures to maintain safe and practical access to designated monitoring locations. When there no temporary safe or practical access to the monitoring point, a representative alternative site or monitoring point can be used.*

Table F3 (Release Contaminant Trigger Investigation Levels)

Quality Characteristic	Trigger Level (µg/L)	Comment of Trigger Level	Monitoring Frequency
Aluminium	1530	Based on 80th percentile of 4 background sites and comparison with upstream values.	Commencement of release and weekly thereafter during release, when safe to do so and access permits.
Chromium	3	Based on 80th percentile of 4 background sites and comparison with upstream values.	
Copper	3	Based on 80th percentile of 4 background sites and comparison with upstream values.	
Iron	970	Based on 80th percentile of 4 background sites and comparison with upstream values.	
Nickel	11	For aquatic ecosystem protection, based on SMD guideline	
Zinc	8	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	
Uranium	1	For aquatic ecosystem protection, based on LOR for ICPMS	
Vanadium	10	For aquatic ecosystem protection, based on LOR for ICPMS	
Nitrate	1100	For aquatic ecosystem protection, based on ambient Qld WQ Guidelines (2006) for TN	
Petroleum hydrocarbons (C6-C9)	50	Based on LOR for P&T/GC/FID/MSD	
Petroleum hydrocarbons (C10-C36)	200	Based on LOR for C15-C28 fraction using GC/FID	
Total Nitrogen	500	For aquatic ecosystem protection, based on Isaac River Sub-basin Environmental Values and Water Quality Objectives (September 2011)	
Total Phosphorus	50	For aquatic ecosystem protection, based on Isaac River Sub-basin Environmental Values and Water Quality Objectives (September 2011)	

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.
3. SMD – slightly moderately disturbed level of protection, guideline refers ANZECC & ARMCANZ (2000).
4. LOR – typical reporting for method stated. ICPMS/CV FIMS – analytical method required to achieve LOR.

F6	If quality characteristics of the release exceed any of the trigger levels specified in **Table F3 (Release Contaminant Trigger Investigation Levels)** during a release event, the environmental authority holder must compare the downstream results in the receiving waters to the trigger values specified in **Table F3 (Release Contaminant Trigger Investigation Levels)** and: (1) where the trigger values are not exceeded then no action is to be taken; or (2) where the downstream results exceed the trigger values specified in **Table F3 (Release Contaminant Trigger Investigation Levels)** for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites and; (a) if the result is less than the background monitoring site data, then no action is to be taken; or (b) if the result is greater than the background monitoring site data, complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: i. details of the investigations carried out; and ii. actions taken to prevent environmental harm. *NOTE: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with condition **F6(2)(b)**, no further reporting is required for subsequent trigger events for that quality characteristic.*
F7	If an exceedance in accordance with condition **F6(2)(b)** is identified, the environmental authority holder must notify the administering authority within **twenty-four (24) hours** of receiving the result.
F8	**Mine Affected Water Release Events** The environmental authority 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 F4 (Mine Affected Water Release During Flow Events)**.
F9	Notwithstanding any other condition of this environmental authority, the release of mine affected water to waters in accordance with condition **F2** must only take place during periods of natural flow events in accordance with the receiving water flow criteria for discharge specified in **Table F4 (Mine Affected Water Release During Flow Events)** for the release point(s) specified in **Table F1 (Mine Affected Water Release Points)**.
F10	Notwithstanding condition **F9**, releases from RP1 may occur during periods of no flow in the Isaac River, provided: a) a surface flow has been recorded in Eureka Creek at Monitoring Point 2 within the **twenty-four (24) hour** period prior to release; and b) the release serves only to allow for the total volume of inflow into GS4a Dam resulting from natural flows in Eureka Creek to be conveyed through GS4a Dam into the Isaac River during periods of no flow in the Isaac River.

F11	The 80th percentile of electrical conductivity (EC) values recorded at the downstream monitoring points listed in **Table F6 (Receiving Waters Upstream Background and Downstream Monitoring Points)** must not exceed 2000uS/cm at any time during the release influence period. The 80th percentile must be calculated using all EC values recorded by the monitoring station during the release influence period. *Note: The release influence period is the period during which the downstream monitoring points are influenced by mine affected water includes both the duration of release and any lag time between release point/s and downstream monitoring points*
F12	The daily quantity of mine affected water released from each release point must be measured and recorded at the monitoring points in **Table F1 (Mine Affected Water Release Points)**.
F13	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.

Table F4 (Mine Affected Water Release During Flow Events)

Receiving waters	Release Point (RP)	Gauging Station	Gauging Station Easting (GDA94)	Gauging Station Northing (GDA94)	Receiving Water Flow Criteria for Discharge* (m^3/s)	Receiving Water Flow Recording Frequency^
Isaac River	RP1	Upper Isaac River	605183	7596105	≥ $3m^3/s$	Daily

^ Assumes access to real time telemetry monitoring is available. Where real time telemetry is not available, daily records will be calculated.
*# When the downstream flow gauge falls below the minimum flow trigger, the 6 week tail flow period commences. Tail flow restricted by trigger limits in receiving waters (**Table F5**).*
** Receiving water minimum flow requirements at the time of commencement apply to the entire release event, where the release period changes.*

F14	**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. The release commencement notification must include the submission of written advice to the administering authority of the following information: a) release commencement date and time; b) expected release cessation date and time; c) release point(s); d) release rate; e) receiving water(s) including the natural flow rate; and f) any details (including available data) regarding likely impacts on the receiving water(s).

F15	The environmental authority holder must notify the administering authority via WaTERS as soon as practicable and no later than **twenty-four (24) hours** after cessation of a release event notified under condition **F14**. The release cessation notification must include the submission of written advice to the administering authority of the following information: a) release cessation date and time; b) receiving water(s) including the natural flow rate; and c) volume of water released. *NOTE: Successive or intermittent releases occurring within **twenty-four (24) hours** of the cessation of any individual release can be considered part of a single release event and do not require individual notification for the purpose of compliance with conditions **F14** and **F15** and **F16**, provided the relevant details of the release are included within the notification provided in accordance with conditions **F14** and **F15** and **F16**.*
F16	Within **twenty-eight (28) days** of notification under condition **F15**, the environmental authority holder must provide the administrating authority via WaTERS the following information in writing: a) confirmation of: i. the release commencement date and time; ii. the release cessation date and time; iii. receiving water(s) including the natural flow rate; iv. volume of water released; b) all in-situ and laboratory water quality monitoring results; c) details regarding the compliance of the release with the conditions of **Schedule F: Water** of this environmental authority (i.e. contamination limits, natural flow, discharge volume); d) whether the release of water resulted in any impacts to the receiving environment; and e) any other matter(s) pertinent to the water release event.
F17	**Notification of release event exceedance** If the release limits defined in **Table F2 (Mine Affected Water Release Limits)** are exceeded, the environmental authority holder must notify the administering authority within **twenty-four (24) hours** of receiving the results.
F18	The environmental authority holder must, within **twenty-eight (28) days** of the notification provided in accordance with condition **F17**, provide a report to the administering authority via WaTERS detailing: a) the reason for the release; b) the location of the release; c) the total volume of the release and which (if any) part of this volume was non-compliant; d) the total duration of the release and which (if any) part of this period was non-compliant; e) all water quality monitoring results; f) any general observations; g) all calculations; and h) any other matters pertinent to the water release event.

F19	**Receiving Environment Monitoring and Contaminant Trigger Levels** The quality of the receiving waters must be monitored at the locations specified in **Table F6 (Receiving Water Upstream Background and Downstream Monitoring Points)** for each quality characteristic and at the monitoring frequency stated in **Table F5 (Receiving Waters Contaminant Trigger Levels)** and **Table F3 (Release Contaminant Trigger Investigation Levels)**.
F20	If quality characteristic(s) of the receiving water at the downstream monitoring point exceed any of the trigger levels specified in **Table F5 (Receiving Waters Contaminant Trigger Levels)** during a release event the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and: (1) where the downstream result is the same or a lower value than the upstream value for the quality characteristic then no action is to be taken; or (2) where the downstream results exceed the upstream results, complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: (a) details of the investigations carried out; and (b) actions taken to prevent environmental harm. *NOTE: Where an exceedance of a trigger level has occurred and is being investigated in accordance with **F20(2)** of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.*

Table F5 (Receiving Waters Contaminant Trigger Levels)

Quality Characteristic	Trigger Level	Monitoring Frequency
pH (pH units)	6.5 to 9.0	Real time telemetry for EC and pH with grab samples at commencement and weekly thereafter when safe to do so and access permits Daily grab samples if telemetry not available (the first sample must be taken as soon as practicable)^
Electrical Conductivity (µS/cm)	2000 – cease the release	
Sulphate (SO_4^{2-}) (mg/L)	1000	Commencement of release and weekly thereafter during release when safe to do so and access permits^

NOTES: ^ Generally during daylight hours only

Table F6 (Receiving Waters Upstream Background and Downstream Monitoring Points)

Monitoring Point (MP)	Receiving Waters Location Description	Easting (GDA94)	Northing (GDA94)
Upstream Background Monitoring Points [a]			
MP2	Eureka Creek upstream	595792	7592251
MP3	Isaac River upstream of confluence with Eureka Creek	604898	7590685
Release Point Monitoring Points			
MP1	Eureka Creek Diversion (GS4a Dam)	602621	7588947
Downstream Monitoring Points			
MP4	Isaac River downstream (Railway Bridge)	600545	7582923

NOTES: (a) The data from background monitoring points must not be used where they are affected by releases from other mines.

F21	**Receiving Environment Monitoring Program (REMP)** The environmental authority holder must develop and implement a Receiving Environment 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 the waters of the Isaac River and connected or surrounding waterways within **ten (10) kilometres** downstream of the release. 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.
F22	The REMP must: a) assess the condition or state of receiving waters, including upstream conditions, spatially within the REMP area, considering background water quality characteristics based on accurate and reliable monitoring data that takes into consideration temporal variation (e.g. seasonality); b) be designed to facilitate assessment against water quality objectives for the relevant environmental values that need to be protected; c) include monitoring from background reference sites (e.g. upstream or background) and downstream sites from the release (as a minimum, the locations specified in **Table F6 (Receiving Water Upstream Background and Downstream Monitoring Points)**); d) specify the frequency and timing of sampling required in order to reliably assess ambient conditions and to provide sufficient data to derive site specific background reference values in accordance with the *Queensland Water Quality Guidelines 2009*. This should include monitoring during periods of natural flow irrespective of mine or other discharges; e) include monitoring and assessment of dissolved oxygen saturation, temperature and all water quality parameters listed in **Table F2 (Mine Affected Water Release Limits)** and **Table F3 (Release Contaminant Trigger Investigation Levels)**); f) include, where appropriate, monitoring of metals/metalloids in sediments (in accordance with ANZECC & ARMCANZ 2000, BATLEY and/or the most recent version of AS5667.1 Guidance on Sampling of Bottom Sediments); g) include, where appropriate, monitoring of macroinvertebrates in accordance with the AusRivas methodology, h) apply procedures and/or guidelines from ANZECC & ARMCANZ 2000 and other relevant guideline documents; i) describe sampling and analysis methods and quality assurance and control; and j) incorporate stream flow and hydrological information in the interpretations of water quality and biological data.

F23	A report outlining the findings of the REMP, including all monitoring results and interpretations in accordance with conditions **F21** and **F22** must be prepared annually. This report must include the following: a) an assessment of background reference water quality; b) the condition of downstream water quality compared against water quality objectives; and c) the suitability of current discharge limits to protect downstream environmental values.
F24	**Water reuse** Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party for the purpose of: a) supplying stock water subject to compliance with the quality release limits specified in **Table F7 (Stock Water Release Limits)**; or b) supplying irrigation water subject to compliance with quality release limits in **Table F8 (Irrigation Water Release Limits)**; or c) supplying water for construction and/or road maintenance in accordance with the conditions of this environmental authority.

Table F7 (Stock Water Release Limits)

Quality Characteristic	Units	Minimum	Maximum
pH	pH units	6.5	8.5
Electrical Conductivity	µS/cm	N/A	5000

Table F8 (Irrigation Water Release Limits)

Quality Characteristic	Units	Minimum	Maximum
pH	pH units	6.5	8.5
Electrical Conductivity	µS/cm	N/A	Site specific value determined in accordance with ANZECC & ARMCANZ (2000) Irrigation Guidelines

F25	Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as dams or tanks, for the purpose of supplying water to any operation licensed for either ERA13 (mining black coal) or ERA31 (mineral processing). The volume, pH and electrical conductivity of water transferred must be monitored and recorded.

F26	If the responsibility for mine affected water is given or transferred to another person in accordance with conditions **F24** or **F25**: a) the responsibility for the mine affected water must only be given or transferred in accordance with a written agreement (the third party agreement); and b) the third party agreement must include a commitment from the person utilising the mine affected water to use it in such a way as to prevent environmental harm or public health incidents and specifically make the persons aware of the General Environmental Duty (GED) under section 319 of the *Environmental Protection Act 1994*, environmental sustainability of the water disposal and protection of environmental values of waters; and c) the third party agreement must be signed by both parties to the agreement.
F27	**Water general** All determinations of water quality and biological monitoring must be: a) performed by a person or body possessing appropriate experience and qualifications to perform the required measurements; b) made in accordance with methods prescribed in the latest edition of the administering authority's *Monitoring and Sampling Manual*; c) collected from the monitoring locations identified within this environmental authority, within ten hours of each other where possible; d) carried out on representative samples; and e) analysed at a laboratory accredited (e.g. NATA) for the method of analysis being used. *Note: Condition **F27** requires the Monitoring and Sampling Manual to be followed and where it is not followed because of exceptional circumstances this should be explained and reported with the results.*
F28	**Water Management Plan** A Water Management Plan must be developed by an appropriately qualified person(s) and implemented for all mining activities. The Water Management Plan must address, as a minimum, 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 administering authority's guideline *Preparation of water management plans for mining activities* 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.
F29	The Water Management Plan must be reviewed each calendar year by an appropriately qualified person(s).

F30	**Stormwater and water sediment controls** An Erosion and Sediment Control Plan must be developed by an appropriately qualified person and 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.
F31	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 **F30**; and b) water management infrastructure that is installed and operated, in accordance with a Water Management Plan that complies with conditions **F28** to **F29** inclusive, for the purpose of ensuring water does not become mine affected water.
F32	**Treated sewage effluent** The cumulative total daily peak design capacity of the sewage treatment plant/s must not exceed 1500 equivalent persons (EP). Small package plants and/or septic systems, each with a daily peak design capacity less than 21EP, are not included in the cumulative total daily peak design capacity.
F33	Treated sewage effluent must not be directly released from the sewage treatment plant/s to any waters. *Note: 'waters' does not include structures associated with the mine affected water management system.*
F34	Treated sewage effluent may be: a) released to the mine affected water management system for mixing with other mine affected water; b) released to land via a sub-surface infiltration trench; c) irrigated or sprayed for dust suppression or firefighting or evaporation; or d) removed as waste in accordance with conditions **D8** and **D9**.
F35	Treated sewage effluent released in accordance with condition **F34(a)** or **F34(b)** or **F34(c)** from any sewage treatment plant that has a daily peak design capacity of greater than 21EP must be monitored: a) at the point where the treated sewage effluent is released from the sewage treatment plant/s; b) for the quality characteristics specified in **Table F9 (Treated Sewage Effluent Contaminant Release Limits)**; and c) at the frequency specified in **Table F9 (Treated Sewage Effluent Contaminant Release Limits)**.
F36	Treated sewage effluent that is released in accordance with condition **F34(a)** and has mixed with other mine affected water must be managed as mine affected water in accordance with the conditions of this environmental authority.

F37	Treated sewage effluent that is released in accordance with condition **F34(b)** or **F34(c)** must be carried out in a manner such that: a) vegetation is not damaged; b) there is no surface ponding of effluent; and c) there is no run-off of treated sewage effluent to waters.
F38	If treated sewage effluent is being released in accordance with condition **F34(c)**: a) the results of monitoring in accordance with condition **F35** must not exceed the release limits specified in **Table F9 (Treated Sewage Effluent Contaminant Release Limits)**; and b) the release must not cause spray drift or over spray to any sensitive place or commercial place.
F39	If the release limits specified in **Table F9 (Treated Sewage Effluent Contaminant Release Limits)** are exceeded in accordance with condition **F38(a)**, the environmental authority holder must notify the administering authority in accordance with conditions **A10** and **A11**.

Table F9 (Treated Sewage Effluent Contaminant Release Limits)

Quality Characteristic	Release Limit	Units	Limit Type	Monitoring Frequency
5-day Biochemical Oxygen Demand (uninhibited)	50	mg/L	Maximum	Monthly
pH	6.0 to 9.0	pH units	Range	
Faecal coliforms	1000	Cfu/100mL	Maximum	

F40	**Groundwater Monitoring and Management Program** A Groundwater Monitoring and Management Program to detect and manage risk from the landfill authorised by condition **D3** must be developed, documented and implemented by an appropriately qualified person prior to the landfill receiving waste.

F41	The Groundwater Monitoring and Management Program required by condition **F40** must: a) identify potential sources of contamination to groundwater from the landfill; b) ensure that all potential groundwater impacts due to the landfill are identified, mitigated and monitored; c) document sampling and monitoring methodology; d) ensure that adequate groundwater monitoring and data analysis is undertaken to achieve the following objectives: i. detect any impacts to groundwater levels due to the landfill; ii. detect any impacts to groundwater quality due to the landfill; and iii. determine trends in groundwater quality; e) include an appropriate quality assurance and quality control program; f) include a conceptual groundwater model; g) be provided to the administering authority for review at least **six (6) weeks** before being finalised; and h) include a review process to identify required improvements to the program and address any comments provided by the administering authority.
F42	The construction, maintenance and decommissioning of groundwater monitoring bores must be undertaken in a manner that: a) prevents contaminants entering the groundwater; b) ensures the integrity of the bores to obtain representative groundwater samples from the target aquifer; and c) maintains the hydrogeological environment within the aquifer.
F43	A bore drill log must be kept for each reference, compliance and observation groundwater monitoring bore which includes: a) bore identification reference and geographic coordinate location; b) specific construction information including but not limited to depth of bore, depth and length of casing, depth and length of screening and bore sealing details; c) standing groundwater level and water quality parameters including physical parameters and results of laboratory analysis for the possible trigger parameters; d) lithological data, stratigraphic interpretation by an appropriately qualified person to identify important features associated with groundwater monitoring; and e) target aquifer formation of the bore.

Schedule G: Structures	
Condition number	**Condition**
G1	**Assessment of consequence category** The consequence category of any structure must be assessed by a suitably qualified and experienced person, in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*, 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.
G2	A consequence assessment report and certification must be prepared for each structure assessed and the report may include a consequence assessment for more than one structure.
G3	Certification must be provided by the suitably qualified and experienced person who undertook the assessment, in the form set out in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*.
G4	**Design and construction of a regulated structure** Conditions **G5** to **G9** inclusive do not apply to existing structures. *NOTE: Construction of a dam includes modification of an existing dam – see definitions.*
G5	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 *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*. *NOTE: Certification of design and construction may be undertaken by different persons.*
G6	Construction of a regulated structure is prohibited unless the environmental authority holder has submitted a consequence category assessment report and certification to the administering authority has been certified by a suitably qualified and experienced person for the design and design plan and the associated operating procedures in compliance with the relevant condition of this environmental authority.
G7	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 *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*, and must be recorded in the Register of Regulated Structures.

G8	Regulated structures must: a) be designed and constructed in accordance with and conform to the requirements of the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*; b) be designed and constructed with due consideration given to ensuring that the design integrity would not be compromised on account of: i. floodwaters 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 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.
G9	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.
G10	**Operation of a regulated structure** Operation of a regulated structure, except for an existing structure, is prohibited unless the environmental authority holder has submitted to the administering authority: a) one paper copy and one electronic copy of the design plan and certification of the 'design plan' in accordance with condition **G6**; b) a set of 'as constructed' drawings and specifications; c) certification of those 'as constructed drawings and specifications' in accordance with condition **G9**; d) where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system, a copy of the certified system design plan; e) the requirements of this environmental authority relating to the construction of the regulated structure have been met; f) the environmental authority holder has entered the details, required under this environmental authority, into the Register of Regulated Structures; and g) there is a current operational plan for the regulated structures.

G11	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 environmental authority 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.
G12	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.
G13	**Mandatory Reporting Level** Conditions **G14** to **G17** inclusive only apply to regulated structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
G14	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.
G15	The environmental authority 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.
G16	The environmental authority 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.
G17	The environmental authority holder must record any changes to the MRL in the Register of Regulated Structures.
G18	**Design Storage Allowance** The environmental authority 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.
G19	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 Design Storage Allowance (DSA) volume for the dam (or network of linked containment systems).
G20	The environmental authority holder must notify the administering authority 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.

G21	The environmental authority 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.
G22	**Annual inspection report** Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.
G23	At each annual inspection, the condition and adequacy of all components of the regulated structure must be assessed and a suitably qualified and experienced person must prepare an annual inspection report containing details of the assessment and include recommended actions to ensure the integrity of the regulated structure.
G24	The suitably qualified and experienced person who prepared the annual inspection report must certify the report in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*.
G25	The environmental authority holder must: a) within **twenty (20) business days** of receipt of the annual inspection report, provide to the administering authority: i. the recommendations section of the annual inspection report; and ii. if applicable, any actions being taken in response to those recommendations; and b) if, following receipt of the recommendations and (if applicable) actions, the administering authority requests a full copy of the annual inspection report from the environmental authority holder, provide this to the administering authority within **ten (10) business days** of receipt of the request.
G26	**Transfer arrangements** The environmental authority holder must provide a copy of any reports, documentation and certifications prepared under this environmental 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.
G27	**Decommissioning and rehabilitation** Dams must not be abandoned but be either: a) decommissioned and rehabilitated to achieve compliance with condition **G28**; or b) be left in-situ for a beneficial use(s) provided that: i. it no longer contains contaminants that will migrate into the environment; and ii. it contains water of a quality that is demonstrated to be suitable for its intended beneficial use(s); and iii. the administering authority, the environmental authority holder and the landholder agree in writing that the dam will be used by the landholder following the cessation of the environmentally relevant activity(ies).

G28	After decommissioning, all significantly disturbed land caused by the carrying out of the environmentally relevant activity(ies) must be rehabilitated to meet the following final acceptance criteria: a) the landform is safe for humans and fauna; b) the landform is stable with no subsidence or erosion gullies for at least three (3) years; c) any contaminated land (e.g. contaminated soils) is remediated and rehabilitated d) not allowing for acid mine drainage; or e) there is no ongoing contamination to waters (including groundwater); f) rehabilitation is undertaken in a manner such that any actual or potential acid sulphate soils on the area of significant disturbance are treated to prevent or minimise environmental harm in accordance with the *Instructions for the treatment and management of acid sulfate soils (2001)*; g) all significantly disturbed land is reinstated to the pre-disturbed soil suitability class; h) for land that is not being cultivated by the landholder: i. groundcover, that is not a declared pest species is established and self-sustaining ii. vegetation of similar species richness and species diversity to pre-selected analogue sites is established and self-sustaining, and iii. the maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance caused by carrying out the mining activity(ies). i) for land that is to be cultivated by the landholder, cover crop is revegetated, unless the landholder will be preparing the site for cropping within 3 months of mining activities being completed.
G29	**Register of Regulated Structures** A Register of Regulated Structures must be established and maintained by the environmental authority holder for each regulated structure.
G30	The environmental authority holder must provisionally enter the required information in the Register of Regulated Structures when a design plan for a regulated structure is submitted to the administering authority.
G31	The environmental authority holder must make a final entry of the required information in the Register of Regulated Structures once compliance with condition **G10** and **G11** has been achieved.
G32	The environmental authority holder must ensure that the information contained in the Register of Regulated Structures is current and complete on any given day.
G33	All entries in the Register of Regulated Structures must be approved by the chief executive officer for the environmental authority holder, or their delegate, as being accurate and correct.
G34	The environmental authority 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.

G35	**Transitional arrangements** All existing structures that have not been assessed in accordance with either, the Manual or the former *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams*, must be assessed and certified in accordance with the Manual within **six (6) months** of amendment of the environmental authority adopting this schedule.
G36	All existing structures must subsequently comply with the timetable for any further assessments in accordance with the Manual specified in **Table G1 (Transitional Requirements for Existing Structures)**, depending on the consequence category for each existing structure assessed in the most recent previous certification for that structure.
G37	**Table G1 (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.
G38	Certification of the transitional assessment required by **G35** and **G36** (as applicable) must be provided to the administering authority within **six (6) months** of amendment of the environmental authority adopting this schedule.

Table G1 (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 Structures (Version 4, 10 April 2014) (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% to ≤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 to ≤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 or 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 H: Watercourse Subsidence	
Condition number	**Condition**
H1	**Authorised subsidence** Subject to the conditions of this environmental authority, specifically conditions **H1** to **H14** inclusive, the environmental authority holder is authorised to subside the Isaac River within ML1763, as depicted in **Figure 2 (Authorised Subsidence Extent)**. This subsidence is authorised to occur as a result of underground longwall mining activities.
H2	This environmental authority does not authorise the use of top coal caving (or thick seam mining) methods where it would result in subsidence of the bed or banks of the Isaac River.
H3	**Subsidence Management Plan** A Subsidence Management Plan must be developed to the satisfaction of the administering authority, in accordance with the administering authority's guideline "Watercourse Subsidence – Central Queensland Mining Industry" or any subsequent versions, or any other relevant guideline as directed by the administering authority. The Subsidence Management Plan must include at least the following components: a) the condition of the existing watercourse (including a baseline assessment); b) the objectives and outcomes of the subsidence management plan; c) a risk assessment that identifies all potential impacts on the watercourse and associated floodplain resulting from subsidence of the watercourse; d) the measures to be implemented to avoid, minimise and mitigate each potential impact; e) a monitoring, maintenance and evaluation program that: i. details the level of effectiveness of the measures using indicators and success criteria; ii. includes the annual review of success and appropriateness of measures; and iii. details how improvements will be implemented where success criteria are not met. f) consideration of cumulative impacts on the Isaac River from upstream activities; g) consideration of impacts on groundwater as a result of subsidence of the watercourse; h) a rehabilitation plan for subsided areas of the Isaac River including: i. rehabilitation objectives; ii. completion criteria; and iii. schedule for progressive rehabilitation; and i) an action plan to address the outcomes and recommendations from annual inspections.
H4	The Subsidence Management Plan must be assessed and certified by an independent, third party, suitably qualified and experienced person, that the plan is compliant in all respects with this environmental authority.

H5	Subsidence of the Isaac River within longwall panel LW11 onwards must not commence until: a) the administering authority has received a copy of the certified subsidence management plan; and b) the subsidence management plan has been implemented.
H6	The administering authority may, within **twenty-eight (28) days** of receiving the certified Subsidence Management Plan as required by condition **H5**, provide comments in respect to the submitted plan.
H7	All comments made by the administering authority under condition **H6** must be considered and incorporated into the Subsidence Management Plan within **twenty-eight (28) days** of receipt of the comments, and the plan be re-submitted to the administering authority.
H8	**Annual inspection** Each subsided longwall panel and the full extent of the Isaac River must be inspected annually by a suitably qualified and experienced person in accordance with the following minimum requirements: a) report on the condition of the bed and banks of the watercourse; b) report on ground cover (%) and pasture biomass (kg/ha) in the riparian zone; c) a comparison of the bed depths, and bank widths from the previous inspection, to determine the overall soil loss from the subsided areas of the Isaac River, and the mitigation measures to be implemented to minimise further soil loss; d) assess the structural, geotechnical and hydraulic adequacy of the subsided longwall panels; e) assess the adequacy of all mitigation measures with respect to the subsidence management plan and any previous annual inspection; and, f) detail any recommended mitigation measures or rehabilitation requirements to be undertaken.
H9	After each annual inspection, a copy of a report including any recommendations, certified by an independent, third party, suitably qualified and experienced person, must be provided to the administering authority within **two (2) months** of completion.
H10	Any recommended mitigation measure, as identified in the annual inspection, must be implemented prior to **1 November** of the year that the recommendation was given, unless otherwise agreed to by the administering authority.
H11	If the mitigation measures recommended in the annual inspections are not implemented, no further subsidence of the Isaac River is permitted until the measures are completed, unless otherwise agreed to by the administering authority.
H12	The Subsidence Management Plan must be reviewed and updated to address any recommendations detailed in the annual inspection reports.

H13	**Rehabilitation of watercourse subsidence** All areas of the Isaac River that have been affected by subsidence must be rehabilitated to a standard consistent with items a) through e) below, and certified by a suitably qualified person; a) incorporate pre-existing natural features of the watercourse (including geomorphic and vegetation); b) attain the pre-existing hydrologic characteristics of surface water and groundwater systems for the area in which the watercourse is located; c) attain the hydraulic characteristics of the watercourse that are equivalent to other local watercourses, and are suitable for the subsided areas of the Isaac River, without using artificial structures that require on-going maintenance; d) attain sediment transport and water quality regimes that allow the watercourse to be self-sustaining, while minimising any impacts to upstream and downstream water quality, geomorphology and/or vegetation; and e) attain equilibrium and functionality in all substrate conditions at the location of the watercourse.
H14	Rehabilitation of the subsided areas of the Isaac River must be undertaken progressively in accordance with the Subsidence Management Plan.

END OF CONDITIONS

Definitions

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

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

a) vegetation establishment, survival and succession;

b) vegetation productivity, sustained growth and structure development;

c) fauna colonisation and habitat development;

d) ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;

e) microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;

f) effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;

g) resilience of vegetation to disease, insect attack, drought and fire; and

h) vegetation water use and effects on ground water levels and catchment yields.

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

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

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).

Alternative arrangement in relation to a sensitive place or a commercial place, means:

a) A written agreement:
   i. between the environmental authority holder and a third party;
   ii. that identifies a particular type(s) of environmental nuisance;
   iii. about the way in which the particular environmental nuisance impact(s) will be dealt with;
   iv. at a particular location; and
   v. for a defined period of time.

b) An alternative arrangement must make clear to the third party that by entering in to the agreement that:
   i. their place will be excluded as a sensitive place or commercial place; and
   ii. the consequences of exclusion as a sensitive place or commercial place.

Note: An alternative arrangement may include, but is not limited to, details of the nuisance abatement measures to be implemented, provision of alternative accommodation, or agreement between the parties that the location will not be considered a sensitive place or commercial place for the purposes of the Environmental Authority, for the duration of the alternative arrangement. The written agreement may be in any form, with some examples being a lease, or an agistment, or a conduct and compensation agreement under the *Mineral Resources Act 1989*.

Annual exceedance probability or AEP means 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.

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

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

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

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

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

a) of benefit to that owner in that it adds real value to their business or to the general community;

b) in accordance with relevant provisions of the *Environmental Protection Act 1994;*

c) sustainable by virtue of written undertakings given by that owner to maintain that dam; and

d) the transfer and use have been approved or authorised under any relevant legislation.

Biosolids means the treated and stabilised solids from sewage.

Blasting means the use of explosive materials to fracture:

a) rock, coal and other minerals for later recovery; or

b) structural components or other items to facilitate removal from a site or for reuse.

Bulk rubber waste means tyres and conveyor belt.

Certification in relation to regulated structures, means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)* or this environmental authority, 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).

Certifying, certify or certified have a corresponding meaning as 'certification' in relation to regulated structures.

Chemical means:

a) an agricultural chemical product or veterinary chemical product within the meaning of the *Agricultural and Veterinary Chemicals Code Act 1994 (Commonwealth)*; or

b) a dangerous good under the dangerous goods code; or

c) a lead hazardous substance within the meaning of the *Workplace Health and Safety Regulation 1997*; or

d) a drug or poison in the Standard for the Uniform Scheduling of Drugs and Poisons prepared by the Australian Health Ministers' Advisory Council and published by the Commonwealth; or

e) any substance used as, or intended for use as:

   i. a pesticide, insecticide, fungicide, herbicide, rodenticide, nematocide, miticide, fumigant or related product; or

   ii. a surface active agent, including, for example, soap or related detergent; or

   iii. a paint solvent, pigment, dye, printing ink, industrial polish, adhesive, sealant, food additive, bleach, sanitiser, disinfectant, or biocide; or

   iv. a fertiliser for agricultural, horticultural or garden use; or

f) a substance used for, or intended for use for:

   i. mineral processing or treatment of metal, pulp and paper, textile, timber, water or wastewater; or

   ii. manufacture of plastic or synthetic rubber.

Commercial place means:

a) A work place that is used as:
   i. an office; or
   ii. a place of business; or
   iii. a place used for commercial purposes.

b) Despite paragraph (a), the following places are not commercial places:
   i. subject to paragraph (c), a place that is the subject of an alternative arrangement; or
   ii. places that are part of the mining activity; or
   iii. employees accommodation or public roads; or
   iv. a property owned or leased by one or more of the environmental authority holders, or a related company, whether or not it is subject to an alternative arrangement.

c) A place that is the subject of a current alternative arrangement in relation to a particular type(s) of environmental nuisance, is not a commercial place for the purposes of that type(s) of environmental nuisance, however remains a commercial place for the purpose of other types of environmental nuisances.

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 *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*.

Construction or constructed in relation to a dam includes building a new dam and modifying or lifting an existing dam, but does not include investigations and testing necessary for the purpose of preparing a design plan.

Contaminate means to render impure by contact or mixture.

Contaminated means the substance has come into contact with a contaminant.

Contaminant can be

a) a gas, liquid or solid; or

b) an odour; or

c) an organism (whether alive or dead), including a virus; or

d) energy, including noise, heat, radioactivity and electromagnetic radiation; or

e) a combination of contaminants.

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

Dam means a land-based structure or a void that 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 (for example, 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 *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)* 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 dam, 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.

Dwelling means any of the following structures or vehicles that is principally used as a residence:

a) a house, unit, motel, nursing homer or other building or part of a building; or

b) a caravan, mobile home or other vehicle or structure on land; or

c) a water craft in a marina.

Effluent means treated waste water released from sewage treatment plants.

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 downstream communities and the implementation of protection measures. The plan must require dam owners to annually update contact.

End of pipe means the location at which water is released to waters or land.

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

Environmental authority holder means the holder of this environmental authority.

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

EPBC means the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

ERC decision means a decision made by the administering authority under section 300 of the *Environmental Protection Act 1994* about the estimated rehabilitation cost for a resource activity.

ERC period for the estimated rehabilitation cost for a resource activity, means:

a) if a PRCP schedule applies for the activity, the period of between 1 and 5 years stated in the application for an ERC decision under section 298(2)(b); or

b) if the activity is a petroleum activity that is an ineligible ERA, other than a petroleum activity to which a plan of operations applies, or the activity relates to a 1923 Act petroleum tenure granted under the *Petroleum Act 1923*, the period of between 1 and 5 years stated in the ERC decision about the estimated rehabilitation cost; or

c) if a plan of operations applies for the activities, the plan period for the plan of operations; or

d) otherwise, the total period during which the resource activity is likely to be carried out under the environmental authority for the activity.

Estimated rehabilitation cost (ERC) for a resource activity, see section 300(2) of the *Environmental Protection Act 1994*.

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 24 October 2014.

Extreme storm storage means a storm storage allowance determined in accordance with the criteria in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)* published by the administering authority.

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

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

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

General waste means waste other than regulated waste.

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

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 *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*.

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

$L_{A10, adj, 10 mins}$ means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

$L_{A1, adj, 10 mins}$ means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period, using Fast response.

Lake includes:

a) lagoon, swamp or other natural collection of water, whether permanent or intermittent; and

b) the bed and banks and any other element confining or containing the water.

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

Land use describes the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

Landfill means land used as a waste disposal site for lawfully putting solid waste on the land.

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.

Low consequence dam means any dam that is not a high or significant consequence category as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635).*

Mandatory reporting level or MRL means a warning and reporting level determined in accordance with the criteria in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)* published by the administering authority.

Manual means the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)* published by the administering authority.

Matters of state environmental significance or MSES has the meaning in schedule 2 of the *Environmental Offsets Regulation 2014*.

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.

mbgl means metres below ground level.

mg/L means milligrams per litre.

Mine affected water means the following types of water:

a) pit water, tailings dam water, processing plant water;

b) water contaminated by a mining activity which would have been an environmentally relevant activity under Schedule 2 of the *Environmental Protection Regulation 2008* if it had not formed part of the mining activity;

c) rainfall runoff which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated, excluding rainfall runoff discharging through release points associated with erosion and sediment control structures that have been installed in accordance with the standards and requirements of an Erosion and Sediment Control Plan to manage runoff containing sediment only, provided that this water has not been mixed with pit water, tailings dam water, processing plant water or workshop water;

d) groundwater which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated;

e) groundwater from the mine's dewatering activities; or

f) a mix of mine affected water (under any of paragraphs (a) to (e)) and other water.

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

a) clay if mined for use for its ceramic properties, kaolin and bentonite;

b) foundry sand;

c) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil there from;

d) limestone if mined for use for its chemical properties;

e) marble;

f) mineral oil or gas extracted or produced from shale or coal by in situ processes;

g) peat;

h) salt including brine;

i) shale from which mineral oil may be extracted or produced;

j) silica, including silica sand, if mined for use for its chemical properties; or

k) rock mined in block or slab form for building or monumental purposes;

But does not include:

a) living matter;

b) petroleum within the meaning of the *Petroleum Act 1923*;

c) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form; or

d) water.

Mining activities means the activities:

a) authorised as per the definition in section 110 of the *Environmental Protection Act 1994*; and

b) all environmentally relevant activities authorised under this environmental authority.

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) of the *Environmental Offsets Act 2014*.

Noxious means harmful or injurious to health or physical wellbeing.

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

Operational 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).

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

Protected area means

a) a protected area under the *Nature Conservation Act 1992*; or

b) a marine park under the *Marine Parks Act 1992*; or

c) a World Heritage Area.

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

Receiving environment, 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;

c) land; and

d) sediments.

Receiving waters means the waters into which this environmental authority authorises releases of mine affected water.

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

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 (Version 4, 10 April 2014) (EM635)*;

d) dates, 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 level (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);

   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 consequence category as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (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.

Regulated waste is defined in the *Environmental Protection Regulation 2008*.

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

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

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

Resource activity is an activity that involves

a) a geothermal activity; or

b) a GHG storage activity; or

c) a mining activity; or

d) a petroleum activity.

Saline drainage is the movement of waters, contaminated with salt(s), as a result of the mining activity.

Scheme fund means the scheme fund established under section 24 of the *Mineral and Energy Resources (Financial Provisioning) Act 2018*.

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

Sensitive place means:

a) Any of the following:

   i. a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or

   ii. a motel, hotel or hostel; or

   iii. an educational institution; or

   iv. a medical centre or hospital; or

   v. a protected area; or

   vi. a public park or gardens.

b) Despite paragraph (a), the following places are not sensitive places:

   i. subject to paragraph (c), a place that is the subject of an alternative arrangement; or

   ii. 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), 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 environmental authority holders for the mining project, or a related company; or

   iii. a property owned or leased by one or more of the environmental authority holders, or a related company, whether or not it is subject to an alternative arrangement.

c) A place that is the subject of a current alternative arrangement in relation to a particular type(s) of environmental nuisance, is not a sensitive place for the purposes of that type(s) of environmental nuisance, however remains a sensitive place for the purpose of other types of environmental nuisances.

Sewage means the used water of persons to be treated at a sewage treatment plant.

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.

Stable in relation to land, means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (trafficability), erosion resistance and geochemical stability with respect to seepage, leachate and related contaminant generation.

Stormwater means all surface water runoff from rainfall.

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 subsidence means one who holds relevant professional qualifications to the satisfaction of the administering authority and the administering authority is satisfied that person has knowledge, suitable experience and demonstrated expertise in relevant fields, as set out below:

a) knowledge of engineering principles related to the structures, hydrology, hydraulics and environmental impact of watercourse subsidence; and

b) a total of five years of suitable experience and demonstrated expertise in the following categories:

   i. hydrology with particular reference to flooding, estimation of extreme storms or water management;

   ii. hydraulics with particular reference to sediment transport and deposition and erosion control;

   iii. hydrogeology with particular reference to seepage, groundwater.

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.

The Act means the *Environmental Protection Act 1994*.

Void means any constructed, open excavation in the ground.

Waste as defined in section 13 of the *Environmental Protection Act 1994*.

Waste and resource management hierarchy has the meaning given by section 9 of the *Waste Reduction and Recycling Act 2011*.

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

Watercourse has the meaning in Schedule 4 of the *Environmental Protection Act 1994* and means a river, creek or stream in which water flows permanently or intermittently:

a) in a natural channel, whether artificially improved or not; or

b) in an artificial channel that has changed the course of the watercourse.

Watercourse includes the bed and banks and any other element of a river, creek or stream confining or containing water.

Waters includes all or any part of a river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water in natural or artificial watercourses, bed and banks of a watercourse, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater.

WaTERS means the Water Tracking and Electronic Reporting System.

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.

µg/L means micrograms per litre.

µS/cm means microsiemens per centimetre.

END OF DEFINITIONS

Figure 1 (General Waste Landfill Location)

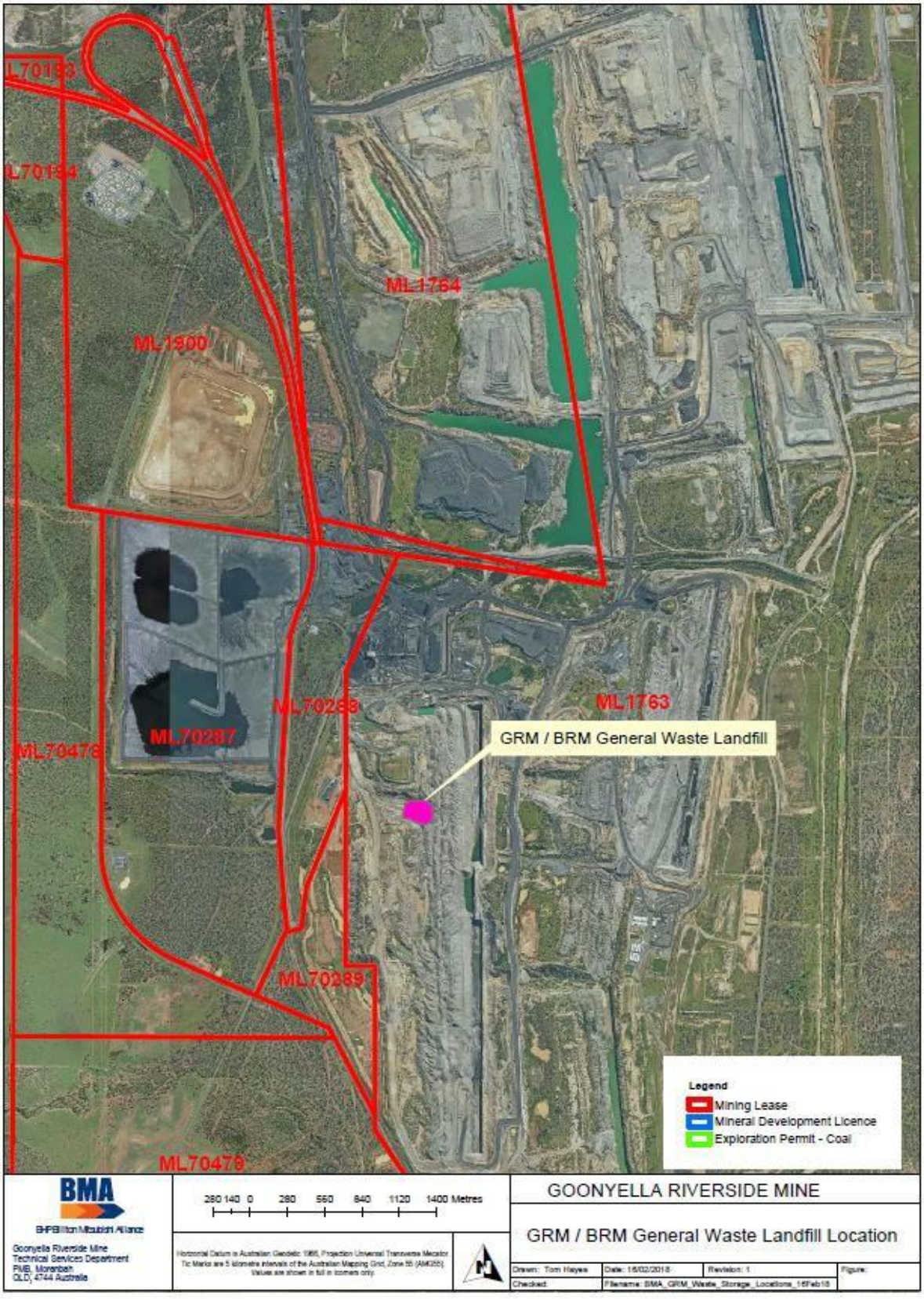
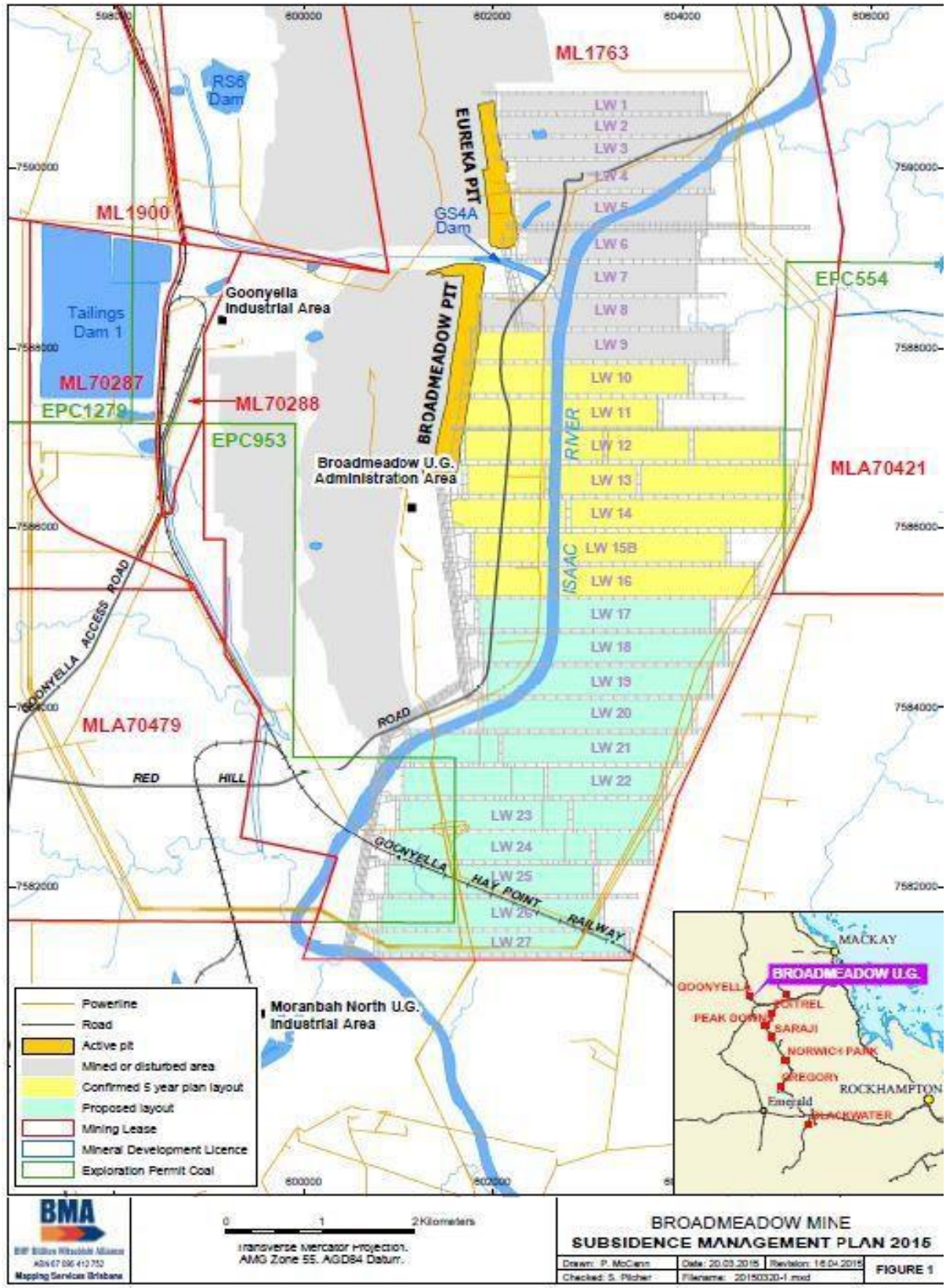


Figure 2 (Authorised Subsidence Extent)



END OF ENVIRONMENTAL AUTHORITY