Recommended conditions for draft Environmental Authority

Environmental Protection Act 1994

Schedule A - General

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 In carrying out the mining activity authorised by this environmental authority, disturbance of land:

a) may occur in the areas marked 'A'; and
b) must not occur in the areas marked 'B'; and
c) must not occur in the areas marked 'C' without consultation first occurring with the administering authority, on the map that is **Attachment 1 - Land Disturbance**, attached to this environmental authority.

Exclusion of Mining Activities

A3 Mining activities must not be carried out in, or within 200m of, the 'North-west Soak' or HESN Wetland Protection Area as defined by the coordinated in **Table A1 - Area of Exclusion of Mining Activities** and depicted in **Attachment 1 – Land Disturbance and Attachment 3 - North West Soak and HESN Wetland Protection Area**.

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Table A1 - Area of exclusion of mining activities

Name	Approximate boundary		Buffer
	Latitude (Decimal degrees, GDA94)	Longitude (Decimal degrees, GDA94)	
North-west soak	-24.10819	149.77021	200m
	-24.10452	149.79962	
	-24.10466	149.76847	
	-24.10310	149.76667	
	-24.10252	149.76736	
	-24.10178	149.76929	
	-24.10186	149.77062	
	-24.10226	149.77132	
	-24.10275	149.77176	
	-24.10300	149.77252	
	-24.10369	149.77339	
	-24.10419	149.77368	
	-24.10471	149.77382	
	-24.10526	149.77400	
	-24.10608	149.77402	
	-24.10675	149.77374	
	-24.10719	149.77330	
	-24.10752	149.77259	
	-24.10790	149.77199	
	-24.10819	149.77116	
HESN Wetland Protection Area	-24.10545	149.81750	200m
	-24.09995	149.81751	
	-24.09953	149.81714	
	-24.09849	149.81641	
	-24.09807	149.81568	
	-24.09795	149.81480	
	-24.09819	149.81380	
	-24.09877	149.81295	
	-24.09930	149.81230	
	-24.10005	149.81183	
	-24.10070	149.81169	
	-24.10148	149.81187	
	-24.10220	149.81246	
	-24.10253	149.81300	
	-24.10293	149.81361	
	-24.10315	149.81430	
	-24.10315	149.81542	
	-24.10318	149.81646	
	-24.10373	149.81644	
	-24.10447	149.81672	
	-24.10501	149.81705	

Deed of Cooperation

A4 It is acknowledged that the open cut coal mining operations on ML80169 (Baralaba Coal Pty Ltd) and ML80170 and MDL416 (Wonbindi Coal Pty Ltd) will be operated as a single open cut coal mine operation by way of the 'Baralaba North Mine Project Cooperation Deed', and will be jointly referred to as the Baralaba North Continued Operations.

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Maintenance of Measures, Plant and Equipment

A5 The holder of this environmental authority must:

a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority;
b) maintain such measures, plant and equipment in a proper and efficient condition;
c) operate such measures, plant and equipment in a proper and efficient manner; and
d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.

A6 No change, replacement or alteration of any plant or equipment is permitted if the change, replacement or alteration increases, or is likely to substantially increase, the risk of unlawful environmental harm caused by the mining activities.

NOTE: *Change in this case does not refer to trivial change e.g. a larger and stronger item of equipment replaces a small and outdated item of equipment, or it takes up a slightly larger area (ie. creating a larger area of disturbance, covered by the Plan of Operations).*

Coal Extraction

A7 The environmental authority holder is approved for a coal extraction rate of up to **4.1 million tonnes per annum** (Mtpa) of run-of-mine (ROM) ore from the Baralaba North Continued Operations and Baralaba Coal Mine (combined).

Monitoring

A8 Except where specified otherwise in another condition of this environmental authority, all monitoring records or reports required by this environmental authority must be kept for a period of not less than **five (5) years**.

A9 The environmental authority holder must, where monitoring requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.

A10 Upon request form the administering authority, copies of monitoring records and reports must be made available and/or provided to the administering authority's nominated office within **ten (10) business day** or by an alternative timeframe agreed between the administering authority and the holder.

A11 Any management or monitoring plans, systems or programs required to be developed and implemented by a condition of this environmental authority must be reviewed for effectiveness in minimising the likelihood of environmental harm on an annual basis, and amended promptly if required, unless a particular review date and amendment program is specified in the plan, system or program.

Financial Assurance

A12 Provide the administering authority financial assurance for the amount and in the form acceptable to the administering authority in accordance with the most recent edition of the administering authority's *Guideline – Calculating financial assurance for mining projects*, before the proposed mining activities can commence.

A13 The amount of financial assurance must be reviewed by the holder of this environmental authority when a Plan of Operations is amended or replaced or the authority is amended.

A14 The financial assurance is to remain in force until the administering authority is satisfied no claim is likely to be made on the assurance.

Risk Management

A15 The holder of this environmental authority must develop and implement a risk management system for mining activities which mirrors the content requirement for the Standard for Risk Management (ISO31000:2009), or the latest edition of an Australian Standard for risk management, to the extent relevant to environmental management, by **(3 months from date of issue of the environmental authority)**.

Emergency Response and Contingency Planning

A16 An emergency response/contingency plan must be developed and implemented within the current Plan of Operation to manage unacceptable risks identified in the risk management system or the associated monitoring.

A17 The emergency response/contingency plan must address the following matters:

a) response procedures to be implemented to reduce the likelihood of environmental harm arising from incidents of unacceptable risk;
b) response procedures to minimise the extent and duration of environmental harm by an incident;
c) the practices and procedures to be employed to restore the environment or mitigate any environmental impact caused;
d) a description of the resources to be used in response to an incident;
e) the training of staff that will be called upon to respond to incidents;
f) procedures to investigate the cause of any incidents, including releases, and where necessary, implement remedial actions to reduce the likelihood or recurrence of similar events;
g) the provision and availability of documented procedures to staff attending any incident to enable them to effectively respond; and
h) timely and accurate reporting of the circumstance and nature of incidents to the administering authority.

Notification of Emergencies, Incidents and Exceptions

A18 The holder of this environmental authority must notify the administering authority by written notification within **twenty-four (24) hours**, after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with, the conditions of this environmental authority.

A19 The holder of this environmental authority must notify the administering authority by written notification within **twenty-four (24) hours** after becoming aware of any emergency, incident or information about circumstances which results, or may result in, environmental harm not in accordance with the conditions of this environmental authority, or a contravention of the conditions of this environmental authority.

A20 The notification in conditions **A18** and **A19** must include, but not limited to, the following;

a) the environmental authority number and name of the holder;
b) the name and telephone number of the designated contact person;
c) the location of the emergency or incident;
d) the date and time of the emergency or incident;
e) the time the holder of the environmental authority became aware of the emergency or incident;

f) where known;
   i) the estimated quantity and type of substances involved in the emergency or incident;
   ii) the actual or potential cause of the emergency or incident;
   iii) a description of the nature and effects of the emergency or incident including environmental risks, and any risk to public health or livestock;
g) any sampling conducted or proposed, relevant to the emergency or incident;
h) immediate actions taken to prevent or mitigate any further environmental harm caused by the emergency or incident; and
i) what notification or stakeholders who may be affected by the emergency or incident has, or is being undertaken.

A21 Within **ten (10) business days** following initial notification of any emergency or incident, or receipt of monitoring results, whichever is the latter, further written advice must be provided to the administering authority, including the following:

a) results and interpretation of any samples taken and analysed;
b) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm; and
c) proposed actions to prevent a recurrence of the emergency or incident.

A22 All reasonable actions are to be taken to minimise environmental harm, or potential environmental harm, resulting from any emergency, incident or circumstances not in accordance with the conditions of this environmental authority.

Complaints

A23 In the event of a complaint about any mining activity that, after investigation, is in the opinion of any authorised person causing a nuisance at a sensitive place, the holder of this environmental authority must take appropriate action to mitigate the nuisance. The holder of this environmental authority must take the action within the reasonable time set by the administering authority.

A24 The holder of this environmental authority must record all environmental complaints received about the mining activities including the following details;

a) name, address and contact number for the complainant;
b) time and date of the complaint;
c) reasons for the complaint;
d) investigations undertaken;
e) conclusions formed;
f) actions taken to resolve the complaint;
g) any abatement measures implemented; and
h) person responsible for resolving the complaint.

A25 The holder of this environmental authority must, when requested by the administering authority, undertake relevant specified monitoring within a reasonable timeframe nominated or agreed to by the administering authority to investigate any compliant of environmental harm. The result of the investigation (including any analysis and interpretation of the monitoring results) and abatement measures, where implemented, must be provided to the administering authority within **ten (10) business days** of completion of the investigation, or no later than **ten (10) business days** after the end of the timeframe nominated by the administering authority to undertake the investigation.

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Third Party Reporting

A26 The holder of this environmental authority must:

a) within **one (1) year** of the commencement of this authority, obtain from a suitably qualified and experienced third party a report on compliance with the conditions of this environmental authority;
b) obtain further such reports at regular intervals not exceeding **three (3) years** from the completions of the report referred to in **condition A26 (a)**; and
c) provide each report to the administering authority within **ninety (90) days** of its completion.

A27 Where conditions of this environmental authority requires compliance with a standard, policy or guideline published externally to this environmental authority and the standard is amended or changed subsequent to the issue of this environmental authority the holder of this environmental authority must:

a) comply with the amended or changed standard, policy or guideline within 2 years of the amendment or change being made, unless a different period is specified in the amended standard or relevant legislation, or where the amendment or change relates specifically to regulated structures referred to in condition G36, the time specified in that condition; and

b) until compliance with the amended or changed standard, policy or guideline is achieved, continue to remain in compliance with the corresponding provision that was current immediately prior to the relevant amendment or change.

Definitions

A28 Words and phrases used throughout this environmental authority are defined in the Definitions section of this authority. Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the *Environmental Protection Act 1994*, its regulations and policies must be used.

Schedule B - Air

Dust

B1 The release of dust or particulate matter, or both, resulting from the mining activity, must not cause an environmental nuisance at any sensitive or commercial place.

B2 The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the dust and particulate matter emissions generated by the mining activities do not cause exceedances of the following levels when measured at any sensitive or commercial place:

a) dust deposition of 120 milligrams per square metre per day, averaged over 1 month, when monitored in accordance with the most 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 micrometres (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, for no more than 5 exceedances recorded each year, 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—PM_{10} high volume sampler with size-selective inlet – Gravimetric method*; or

ii) *Australian Standard AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM_{10} low volume sampler—Gravimetric method*.

c) a concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometres (PM2.5) suspended in the atmosphere of 25 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with the most recent version of *AS/NZS3580.9.10 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM (sub)2.5(/sub) low volume sampler—Gravimetric method*.

d) 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 *AS/NZS3580.9.3:2003 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method.*

B3 If monitoring indicates exceedance of the relevant limits in **condition B2**, resulting from mining operations, then the environmental authority holder must:

a) address any complaints including the use of appropriate dispute resolution if required; and
b) immediately implement dust abatement measures so that emissions of dust from the activity do not result in further exceedances of the relevant limits in condition B2 and/or cause environmental nuisance.

B4 The holder of this environmental authority must undertake real-time PM_{10} monitoring at a minimum of three locations specified in **Table B1 - Air Quality Monitoring**, at any given time.

B5 The holder of this environmental authority must undertake dust deposition monitoring at all of the locations specified in **Table B1 - Air Quality Monitoring**, at any given time.

B6 Where monitoring at locations is identified in **Table B1 - Air Quality Monitoring** indicates that the air quality objectives detailed in **condition B2** have been exceeded, the holder of this environmental authority must investigate the matter and report it to the administering authority within **fourteen (14) days**:

a) the concentration of PM_{10} particulates or dust deposition rate recorded;
b) a description of meteorological conditions occurring at the time; and
c) the measures taken to reduce dust generated by the mining activities.

Odour Nuisance

B7 The release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminants(s) resulting from the mining activity must not cause an environmental nuisance at any nuisance sensitive or commercial place.

B8 When requested by the administering authority odour monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place and the results must be notified within **fourteen (14) days** to the administering authority following completion of monitoring.

B9 If administering authority determines the odour released to constitute an environmental nuisance the environmental authority holder must:

a) address the compliant including the use of appropriate dispute resolution if required; and
b) immediately implement odour abatement measures so that emissions of odour from the activity do not result in further environmental nuisance.

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Table B1 - Air Quality Monitoring

Air Quality Determination	Monitoring Standard	Monitoring Point Description	Monitoring Point Location	
			Latitude (Decimal degrees, GDA94)	Longitude (Decimal degrees, GDA94)
PM_{10}	AS3580.9.6 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM (sub) 10 high volume sampler with size-selective inlet – Gravimetric Method	Landholder residence (Hoadley)	-24.13711	149.77528
		Landholder residence (House)	-24.15247	149.76156
Dust deposition	AS 3580.10.1:2003: Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method	Landholder residence (Maclean)	-24.18014	149.76512
		Landholder residence (Lawson)	-24.18183	149.79651
		Landholder residence (Austin)	-24.15247	149.76156
		Baralaba township	-24.17381	149.81347
Meteorological data[1]	*AS 3580.14-2011: Methods for sampling and analysis of ambient air.*	Baralaba Mine weather station	-24.15890	149.79587

[1] *Wind speed and direction, humidity, temperature and precipitation.*

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Schedule C - Water

Contaminant release

C1 Contaminants that will, or have the potential to, cause environmental harm must not be released directly or indirectly to any waters as a result of the authorised mining activities, except as permitted under the conditions of this environmental authority.

C2 Unless otherwise permitted under the conditions of this environmental authority, the release of mine affected water to waters must only occur from the release points specified in **Table C1 - Mine Affected Water Release Points, Sources and Receiving Waters** and depicted in **Attachment 2 – Mine Affected Water Release Points** attached to this environmental authority.

C3 The release of mine affected water to internal water management infrastructure installed and operated in accordance with a water management plan that complies with **conditions C32-C37** inclusive is permitted.

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

Release Point (RP)	Latitude (Decimal degrees, GDA94)	Longitude (Decimal degrees, GDA94)	Contaminant Source and Location	Monitoring Point	Receiving waters description
RP N1	-24.14440	149.80325	Baralaba Central Pit (CP2) and Mine Dam 1	Dawson River Anabranch – end of pipe	Dawson River (via Dawson River Anabranch)
RP N2	-24.14061	149.80168	Mine Dam 4a and 4b	Dawson River Anabranch – end of pipe	Dawson River (via Dawson River Anabranch)

C4 The release of mine affected water to waters must not exceed the release limits stated in **Table C2 – Mine Affected Water release Limits** when measured at the monitoring points specified in **Table C1 – Mine affected Water Release Points, Sources and Receiving Waters** for each quality characteristic.

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Table C2 - Mine Affected Water Release Limits

Quality Characteristic	Release Limits	Monitoring Frequency	Comment
Electrical conductivity (µS/cm)	Release limits specified in **Table C4: Mine Affected Water Release During Flow Events** below for variable flow criteria.	Daily during release *(the first sample must be taken within 2 hours of commencement of release).*	
pH (pH Unit)	6.5 (minimum) 9.0 (maximum)	Daily during release *(the first sample must be taken within 2 hours of commencement of release).*	
Turbidity (NTU)	Limit to be derived from suspended solids limit and demonstrated correlation between turbidity to suspended solids from historical monitoring data for dam water*	Daily during release *(the first sample must be taken within 2 hours of commencement of release).*	Turbidity is required to assess ecosystems impacts and can provide instantaneous results.
Suspended Solids (mg/L)	350	Daily during release *(the first sample must be taken within 2 hours of commencement of release).*	Suspended solids are required to measure the performance of sediment and erosion control measures.
Sulphate (SO_4^{-2}) (mg/L)	Release limits specified in **Table C4: Mine Affected Water Release During Flow Events** below for variable flow criteria	Daily during release *(the first sample must be taken within 2 hours of commencement of release).*	Drinking water environmental values *(from NHMRC 2006 guidelines OR ANZECC and ARMCANZ 2000 stock water quality guidelines).*

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

C5 The release of mine affected water to waters from the release points must be monitored at the locations specified in **Table C1 – Mine Affected Water release Points, Sources and Receiving Waters** for each quality characteristic and at the frequency specified in **Table C2 – Mine Affected Water Release Limits** and **Table C3 – Release Contamination 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 C5 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.

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Table C3 – Release Contamination Trigger Investigation Levels

Quality Characteristic	Trigger Levels (µg/L)	Comment on Trigger Level	Monitoring Frequency
Aluminium	55	*For aquatic ecosystem protection, based on SMD guideline*	Commencement of release and thereafter weekly during release
Arsenic	13	*For aquatic ecosystem protection, based on SMD guideline*	
Cadmium	0.2	*For aquatic ecosystem protection, based on SMD guideline*	
Chromium	1	*For aquatic ecosystem protection, based on SMD guideline*	
Copper	2	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Iron	300	*For aquatic ecosystem protection, based on low reliability guideline*	
Lead	4	For aquatic ecosystem protection, based on SMD guideline	
Mercury	0.2	*For aquatic ecosystem protection, based on LOR for CV FIMS*	
Nickel	11	*For aquatic ecosystem protection, based on SMD guideline*	
Zinc	8	*For aquatic ecosystem protection, based on SMD guideline*	
Boron	370	*For aquatic ecosystem protection, based on SMD guideline*	
Cobalt	1.4	For aquatic ecosystem protection, based on low reliability guideline	
Manganese	1900	*For aquatic ecosystem protection, based on SMD guideline*	
Molybdenum	34	*For aquatic ecosystem protection, based on low reliability guideline*	
Selenium	10	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Silver	1	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Uranium	1	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Vanadium	10	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Ammonia	900	*For aquatic ecosystem protection, based on SMD guideline*	
Nitrate	1100	*For aquatic ecosystem protection, based on ambient Qld WQ Guidelines (2006) for TN*	
Petroleum hydrocarbons (C6-C9)	20	-	
Petroleum hydrocarbons (C10-C36)	100	-	
Fluoride (total)	2000	*Protection of livestock and short term irrigation guideline*	
Sodium	180,000	*Australian Drinking Water Guidelines (NHMRC 2011)*	

1. *All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Trigger levels for metal/metalloids apply if dissolved results exceed trigger.*
2. *The quality characteristics required to be monitored as per Table C3 can be reviewed once the results of two years monitoring data is available, or if sufficient data is available to adequately demonstrate negligible environmental risk, and it may be determined that a reduced monitoring frequency is appropriate or that certain quality characteristics can be removed from Table C3 by amendment.*
3. *SMD- slightly moderately disturbed level of protection, guideline refers ANZECC and ARMCANZ (2000)*
4. *LOR - typical reporting method stated. ICPMS/CV FIMS- analytical method required to achieve LOR*

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C6 If quality characteristics of the release exceed any of the trigger levels specified in **Table C3 - 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 C3 - Release Contaminant Trigger Investigation Levels** and:

a) where the trigger values are not exceeded then no action is to be taken; or

b) where the downstream results exceed the trigger values specified in **Table C3 - Release Contaminant Trigger Investigation Levels** for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites and

i) if the result is less than the background monitoring site data, then no action is to be taken; or

ii) if the result is greater than the background monitoring site data, complete an investigation into the potential for environmental harm and provide a written report to the administering authority within 90 days of receiving the result, outlining

1) details of the investigations carried out; and

2) actions taken to prevent environmental harm.

*Note: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with **C6 (b)(ii)2** of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.*

C7 If an exceedance in accordance with condition **C6 (b)(ii)** is identified, the holder of the environmental authority must notify the administering authority in writing within **twenty-four (24) hours** of receiving the result.

Mine Affected Water Release Events

C8 The holder must ensure a stream flow gauging station/s is installed, operated and maintained to determine and record stream flows at the locations and flow recording frequency specified in **Table C4 – Mine Affected Water Release during Flow Events**.

C9 Notwithstanding any other condition of this environmental authority, the release of mine affected water to waters in accordance with condition **C2** must only take place during periods of natural flow in accordance with the receiving water flow criteria for discharge specified in **Table C4 – Mine Affected Water Release during Flow Events** for the release point(s) specified in **Table C1 – Contaminant Release Points, Sources and Receiving Waters**.

C10 The release of mine affected water to waters in accordance with condition **C2** must not exceed the Maximum Release Rate (for all combined release point flows) for each receiving water flow criterion for discharge specified in **Table C4 – Mine Affected Water Release during Flow Events** when measured at the monitoring points specified in **Table C1 – Contaminant Release Points, Sources and Receiving Waters**

Table C4 - Mine Affected Water Release during Flow Events

Receiving waters /stream	Release point (RP)	Gauging station	Gauging station Latitude (decimal degree, GDA94)	Gauging station Longitude (decimal degree, GDA94)	Receiving water flow recording frequency	Receiving water flow criteria for discharge*	Maximum release rate (for all combined RP flows*)	Electrical conductivity and sulphate release limits
Dawson River	RP N1 RP N2	Gauging Station 1 (Dawson River within 2,000m upstream of Anabranch confluence, and downstream of the Jerry Creek-Dawson River confluence)	-24.14418°S	149.80036° E	Continuous (minimum daily)	Low Flow <5 m^3/s For a period of 28 days after natural flow events that exceed 5 m^3/s	0.5 m^3/s	Electrical conductivity (µS/cm) <340 Sulphate ($SO_4 2^-$): 250 mg/L
						Medium flow > 5 m^3/s	0.5 m^3/s	Electrical conductivity (µS/cm) 500 Sulphate ($SO_4 2^-$): 250 mg/L
						> 24 m^3/s	0.5 m^3/s	Electrical conductivity (µS/cm) 1500 Sulphate ($SO_4 2^-$): 250 mg/L
						>53 m^3/s	0.5 m^3/s	Electrical conductivity (µS/cm) 3000 Sulphate ($SO_4 2^-$): 300 mg/L
						> 92 m^3/s	0.5 m^3/s	Electrical conductivity (µS/cm) <5000 Sulphate ($SO_4 2^-$): 300 mg/L
						High Flow > 140 m^3/s	0.5 m^3/s	Electrical conductivity (µS/cm) <7500 Sulphate ($SO_4 2^-$): 300 mg/L
						> 190 m^3/s	0.5 m^3/s	Electrical conductivity (µS/cm) <10000 Sulphate ($SO_4 2^-$): 400 mg/L

**Including all releases undertaken in accordance with this environmental authority*

C11 The daily quantity of mine affected water released from each release point must be measured at the monitoring points in **Table C1 – Mine Affected Water Release Points, Sources and Receiving Wat**ers, and recorded.

C12 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.

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Notification of Release Event

C13 The environmental authority holder must notify the administering authority within **six (6) hours** of commencing a release event. Notification must include the submission of written advice to the administering authority of the following information:

a) release commencement date/time;

b) details regarding the compliance of the release with the conditions of **Department interest: Water** of this environmental authority (that is, contaminant limits, natural flow, discharge volume);

c) release point/s;

d) release rate;

e) release salinity; and

f) receiving water/s including the natural flow rate.

Note: Notification to the administering authority must be addressed to the Manager and Project Manager of the local Administering Authority via email or facsimile.

C14 The environmental authority holder must notify the administering authority as soon as practicable (nominally within **twenty-four (24) hours** after cessation of a release) of the cessation of a release notified under **condition C13** and within **twenty-eight (28) days** provide the following information in writing:

a) release cessation date/time;

b) natural flow rate in receiving water;

c) volume of water released;

d) details regarding the compliance of the release with the conditions of Department Interest: Water of this environmental authority (i.e contamination limits, natural flow, discharge volume);

e) all in-situ water quality monitoring results; and

f) any other matters pertinent to the water release event.

*Note: Successive or intermittent releases occurring within 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 **C13** and **C14**, provided the relevant details of the release are included within the notification provided in accordance with conditions **C13** and **C14**.*

Notification of Release Event Exeedance

C15 If the release limits defined in **Table C2 - Mine Affected Water Release Limits** are exceeded, the holder of the environmental authority must notify the administering authority within **twenty-four (24) hours** of receiving the results.

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C16 The environmental authority holder must, within **twenty-eight (28) days** of a release that is not compliant with the conditions of this environmental authority, provide a report to the administering authority 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 (including all laboratory analyses);
f) identification of any environmental harm as a result of the non-compliance;
g) all calculations; and
h) any other matters pertinent to the water release event.

Monitoring of Water Storage Quality

C17 Water storage stated in **Table C5 – Water Storage Monitoring**, which are associated with the release points, must be monitored for the water quality characteristics specified in **Table C6 – Onsite Water Storage Contaminant Limits** at the monitoring locations and at the monitoring frequency specified in **Table C5 – Water Storage Monitoring**.

C18 In the even that waters storages defined in **Table C5 – Water Storage Monitoring** exceed the contaminant limits defined in **Table C6 – Onsite Water Storage Contaminant Limits**, the holder of the environmental authority must implement measures, where practicable, to prevent access to waters by all livestock.

Receiving Environment Monitoring and Contaminant Trigger Levels

C19 The quality of the receiving waters must be monitored at the locations specified in **Table C8 - Receiving Water Upstream Background Sites and Downstream Monitoring Points** and illustrated in **Attachment 2 – Mine Affected Release Points** for each quality characteristic and at the monitoring frequency stated in **Table C7 - Receiving Waters Contaminant Trigger Levels**.

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Table C5 – Water Storage Monitoring

Water Storage Description	Latitude (Decimal degrees, GDA94)	Longitude (Decimal degrees, GDA94)	Monitoring Location	Frequency of Monitoring
Mine Dam 1	-24.15698 -24.15884 -24.15905 -24.15805	149.80181 149.79254 149.79466 149.79447	Grab sample from edge of storage.	Quarterly
Baralaba Central Pit - CP2	-24.15897 -24.15923 -24.14689 -24.14535	149.80781 149.80358 149.79742 149.80239	To be negotiated- will depend on the individual storage structure volume. This will deal with stratification – depth profiles and be appropriate to in situ quality characteristics.	Quarterly
Mine Dam 4a	*	*	To be negotiated – will depend on the individual storage structure volume. This will deal with stratification – depth profiles and be appropriate to in situ quality characteristics.	Quarterly
Mine Dam 4b	*	*	To be negotiated – will depend on the individual storage structure volume. This will deal with stratification – depth profiles and be appropriate to in situ quality characteristics.	Quarterly

** To be provided when the design plans are submitted as per Schedule G*

Table C6 – Onsite Water Storage Contaminant Limits

Quality Characteristic	Test Value	Contaminant Limit#
pH (pH unit)	Range	Greater than 4, less than 9*
EC (µS/cm)	Maximum	5970[1]
Sulphate (mg/L)	Maximum	1000[1]
Fluoride (mg/L)	Maximum	2[1]
Aluminium (mg/L)	Maximum	5[1]
Arsenic (mg/L)	Maximum	0.5[1]
Cadmium (mg/L)	Maximum	0.01[1]
Cobalt (mg/L)	Maximum	1[1]
Copper (mg/L)	Maximum	1[1]
Lead (mg/L)	Maximum	0.1[1]
Nickel (mg/L)	Maximum	1[1]
Zinc (mg/L)	Maximum	20[1]

[1] Contaminant limit based on ANZECC & ARMCANZ (2000) stock water quality guidelines.

** Page 4.2-15 of ANZECC & ARMCANZ (2000) "Soil and animal health will not generally be affected by water with pH in the range of 4–9".*

 # Total measurements (unfiltered) must be taken and analysed

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Table C7 – Receiving Waters Contaminant Trigger Levels

Quality characteristic	Trigger level	Monitoring frequency
pH	6.5 – 8.5	Daily during the release
Electrical Conductivity (µS/cm)	500	
Suspended Solids (mg/L)	350	
Sulphate (SO_4^{2-}) (mg/L)	250	

Table C8 – Receiving Water Upstream Background Sites and Downstream Monitoring Points

Monitoring points	Receiving waters location description	Latitude (Decimal degrees , GDA94)	Longitude (Decimal degrees, GDA94)
Upstream background monitoring points[1, 2]			
Monitoring Point A1	Dawson River, between the two confluences with the Dawson River Anabranch and downstream of the Neville Hewitt Weir	-24.17096	149.81426
Downstream monitoring points[3]			
Monitoring Point DR4	Dawson River within 8km downstream of confluence with the Dawson River Anabranch and downstream of RP N1	-24.13304	149.83397

1. *The upstream monitoring point should be within 6 km of the release point.*
2. *The data from background monitoring points should not be used where they are affected by releases from other mines.*
3. *The downstream point should not be greater than 6 km from the release point.*

C20 If quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in **Table C7 – Receiving Waters Contaminant Trigger Levels** during a release event, the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and:

a) where the downstream result is the same or a lower value than the upstream value for the quality characteristic then no action is to be taken; or

b) where the downstream results exceed the upstream results 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 **C20 (b)** of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.*

Receiving Environment Monitoring Program (REMP)

C21 The environmental authority holder must 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 Dawson River Anabranch and connected or surrounding waterways within 15km 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.

Water reuse

C22 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 C9 – Stock Water Release Limits**; or
b) supplying irrigation water subject to compliance with quality release limits in **Table C10 – Irrigation Water Release Limits**; or
c) supplying water for constructions and/or road maintenance in accordance with the conditions of this environmental authority.

C23 Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party (with the consent of the third party).

C24 If the responsibility for mine affected water is given or transferred to another person in accordance with **conditions C22** or **C23**:

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 disposed and protection of environmental values of waters; and
c) the third party agreement must be signed by both parties to the agreement.

Table C9 – Stock Water Release Limits

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

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Table C10 – 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 to be determined in accordance with ANZECC & ARMCANZ (2000) Irrigation Guidelines

Water General

C25 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 editions of the administering authority's Monitoring and Sampling Manual;
c) collected from the monitoring locations identified within this environmental authority, within twelve (12) 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 C25** 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.*

C26 The release of any contaminants as permitted by this environmental authority, directly or indirectly to water, other than internal water management that is installed and operated in accordance with a water management plan that complies with **conditions C29 to C34** inclusive:

a) must not produce any visible discolouration of receiving waters; and
b) must not produce any slick or other visible or odourus evidence of oil, grease or petrochemicals nor contain visible floating oil, grease, scum, litter or other objectionable matter.

Annual Water Monitoring and Reporting

C27 The following information must be recorded in relation to all water monitoring required under the conditions of this environmental authority and submitted to the administering authority in the specified format:

a) the date on which the sample was taken;
b) the time at which the sample was taken;
c) the monitoring point at which the sample was taken;
d) the measured or estimated daily quantity of mine affected water released from all release points;
e) the release flow rate at the time of sampling for each release point;
f) the results of all monitoring and details of any exceedances of the conditions of this environmental authority; and
g) water quality monitoring data must be provided to the administering authority in the specified electronic format upon request.

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Water Management Plan

C28 A Water Management Plan must be developed by an appropriately qualified person and implemented, prior to the commencement of activities.

C29 The Water Management Plan must:

a) provide for effective management of actual and potential environmental impacts resulting from water management associated with the mining activity carried out under this environmental authority; and

b) be developed in accordance with the administering authority's guideline *Preparations of water management plans for mining activities* (EM324) 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.

C30 The Water Management Plan must be reviewed each calendar year and a report prepared by an appropriately qualified person. The report must:

a) assess the plan against the requirements under **condition C29**;
b) include recommended actions to ensure actual and potential environmental impacts are effectively managed for the coming year; and
c) identify any amendment made to the water management plan following the review.

C31 The holder of this environmental authority must attach to the review report required by **condition C30**, a written response to the report and recommended actions, detailing the actions taken or to be taken by the environmental authority holder on stated dates:

a) to ensure compliance with this environmental authority; and
b) to prevent a recurrence of any non-compliance issues identified.

C32 The review report required by **condition C30** and the written response to the review report required by **condition C31** must be submitted to the administering authority with the subsequent annual return under the signature of the appointed signatory for the annual return.

C33 A copy of the Water Management Plan must be provided to the administering authority on request.

Saline Drainage

C34 The holder of this environmental authority must ensure proper and effective measures are taken to avoid or otherwise minimise the generation and/or release of saline drainage.

Acid Rock Drainage

C35 The holder of this environmental authority must ensure proper and effective measures are taken to avoid or otherwise minimise the generation and/or release of acid rock drainage.

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Stormwater and Water sediment controls

C36 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.

C37 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 C36**; and
b) water management infrastructure that is installed and operated, in accordance with a Water Management Plan that complies with **conditions C28 to C33**, for the purpose of ensuring water does not become mine affected water.

C38 The maintenance and cleaning of any vehicles, plant or equipment must not be carried out in areas from which contaminants can be released into any receiving environment.

C39 Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable to minimise the releases of wastes, contaminants or materials to any stormwater drainage system or receiving waters.

Background Groundwater Monitoring Program

C40 The holder of the environmental authority must develop and implement a Groundwater Monitoring and Management Program prior to the commencement of mining activities. The program must:

a) be able to detect a significant change to groundwater quality values due to activities that are part of this mining project;
b) include measures to minimise the impact of the mining activates on groundwater resources;
c) include contingency procedures for emergencies; and
d) include a program for monitoring and review of the effectiveness of the groundwater monitoring and management program.

C41 A background groundwater monitoring program must be developed, as part of the groundwater monitoring and management program, to include bore(s) that are located an appropriate distance from potential sources of impact from mining activities to provide the following:

a) representative groundwater samples from the aquifers potentially affected by mining activities;
b) at least 12 sampling events, no more than **one (1) month** apart;
c) background groundwater quality in hydraulically isolated background bore(s) that have not been affected by any mining activities;
d) final groundwater investigation trigger levels required in **condition C50**;
e) final groundwater monitoring locations required in **Table C11 – Groundwater Monitoring Locations and Frequencies** and **Table C13 – Groundwater Levels**;
f) groundwater RL's required under condition **Table C13 – Groundwater Levels**; and
g) sufficient information to allow the holder to determine predicted seasonal fluctuation of groundwater levels.

C42 Groundwater contaminant trigger levels as per **Table C12 – Groundwater Investigation Trigger Levels** must be finalised based on a background groundwater monitoring program defined in **condition C41** and submitted to the administering authority with the groundwater monitoring and management program, within **twelve (12) months** of grant of this environmental authority.

C43 The construction, maintenance and management of groundwater bores (including groundwater monitoring bores) must be undertaken in a manner that prevents or minimises impacts to the environment and ensures the integrity of the bores to obtain accurate monitoring.

Groundwater Monitoring and Management

C44 The Groundwater Monitoring and Management Program, including all data, must be reviewed on an annual basis by an appropriately qualified and experienced person. The review must include:

a) the assessment of groundwater levels and quality data, and the suitability of the monitoring network;
b) assess the program against the requirements under **condition C40**;
c) include recommended actions to ensure actual and potential environmental impacts are effectively identified and managed for the coming year; and
d) identify any amendments to the Groundwater Monitoring and Management Program following the review.

C45 The assessment under **condition C44** must be submitted to the administering authority within **twenty-eight (28) days** of receiving the report, with a written response to the assessment report and recommended actions, detailing the actions taken or to be taken by the environmental authority holder to ensure compliance with this environmental authority and minimise impacts on groundwater resources by the mining activity.

Groundwater Monitoring

C46 Groundwater affected by the mining activities must be monitored at the locations and frequencies defined in **Table C11: Groundwater Monitoring Locations and Frequencies** for the parameters identified in **Table C12: Groundwater Investigations Trigger Levels.**

C47 Groundwater levels affected by the mining activities must be monitored at the locations and frequencies defined in **Table C13: Groundwater Levels.**

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Table C11 – Groundwater Monitoring Locations and Frequencies

Monitoring Points*	Latitude (decimal degree, GDA94)	Longitude (decimal degree, GDA94)	Lithology	Frequency (minimum)
Established monitoring network				
Quaternary and Tertiary Alluvial Aquifers				
PZ07**	-24.15902	149.79165	Alluvium	Quarterly
PZ08**	-24.15558	149.79052	Alluvium	Quarterly
PZ09**	-24.15251	149.78947	Alluvium	Quarterly
PZ07B**	-24.15904	149.79160	Sand and gravel	Quarterly
PZ10**	-24.12361	149.79779	Tertiary alluvium - Sand	Quarterly
PZ11**	-24.14130	149.78849	Dawson River Anabranch alluvium - Sand and gravel	Quarterly
PZ14S**	-24.10359	149.78213	Quaternary alluvium - Gravel, gravelly clay	Quarterly
Permian Coal Seam Aquifers				
PZ14D**	-24.10365	149.78161	Coolum seam – underlying Quaternary alluvium	Quarterly
Fault Zone				
PZ13**	-24.14104	149.79463	Sandstone - Fault zone underlying the Dawson River Anabranch alluvium	Quarterly
Additional monitoring network				
BN0679C***	-24.09315	149.77249	Coolum Seam	Quarterly
BN0744A***	-24.08124	149.76338	Alluvium	Quarterly
BN0744C***	-24.08124	149.76338	Reid Seam	Quarterly
BN0748A***	-24.08693	149.78298	Alluvium	Quarterly
SKM AM04***	-24.14363	149.78775	Alluvium	Quarterly
SKM PM01***	-24.10989	149.77088	Interburden	Quarterly
SKM PM02***	-24.10236	149.79014	Interburden	Quarterly
SKM PM03***	-24.14245	149.79785	Interburden	Quarterly
SKM PM04***	-24.14385	149.78697	Interburden	Quarterly
SKM PM05***	-24.12487	149.77318	Interburden	Quarterly
SKM PM06***	-24.11792	1494.80098	Interburden	Quarterly

**These points are to be monitored until the bores are destroyed by the progression of mining activities.*
***Established bores*
****Bores to be established*

Table C12 – Groundwater Investigation Trigger Levels

Parameter	Unit	Trigger Levels*	Trigger Levels**	Limit Type
pH	pH Units	TBA*	TBA**	Minimum/Maximum
Electrical Conductivity	µS/cm	TBA*	TBA**	Maximum
Total Dissolved Solids	µg/L	TBA*	TBA**	Maximum
Aluminium	µg/L	TBA*	TBA**	Maximum
Antimony	µg/L	TBA*	TBA**	Maximum
Arsenic	µg/L	TBA*	TBA**	Maximum
Calcium	µg/L	TBA*	TBA**	Maximum
Chlorine	mg/L	TBA*	TBA**	Maximum
CO3	mg/L	TBA*	TBA**	Maximum
HCO3	mg/L	TBA*	TBA**	Maximum
Iron	mg/L	TBA*	TBA**	Maximum
Magnesium	µg/L	TBA*	TBA**	Maximum
Mercury	µg/L	TBA*	TBA**	Maximum
Molybdenum	µg/L	TBA*	TBA**	Maximum
SO4	µg/L	TBA*	TBA**	Maximum
Potassium	µg/L	TBA*	TBA**	Maximum
Selenium	µg/L	TBA*	TBA**	Maximum
Silver	µg/L	TBA*	TBA**	Maximum
Sodium	µg/L	TBA*	TBA**	Maximum
Uranium	µg/L	TBA*	TBA**	Maximum
Total Petroleum Hydrocarbons (C10-14)	µg/L	TBA*	TBA**	Maximum
Total Petroleum Hydrocarbons (C15-28)	µg/L	TBA*	TBA**	Maximum
Total Petroleum Hydrocarbons (C29-36)	µg/L	TBA*	TBA**	Maximum

**Trigger levels to be provided within 12 months of grant of environmental authority for newly established bores.*

***Trigger values need to be supplied with environmental authority application for existing bores.*

Table C13 – Groundwater Levels

Monitoring Points*	Latitude (Decimal degrees, GDA94)	Longitude (Decimal degrees, GDA94)	Surface RL (m)	Frequency
PZ07B	-24.15904	149.79160	84.0	Monthly
PZ10	-24.12361	149.79780	86.5	Monthly
PZ11	-24.14130	149.78850	79.4	Monthly
PZ13	-24.14104	149.79463	80.1	Monthly
BN0744A	-24.08124	149.76338	96.0	Daily
BN0748A	-24.08693	149.78298	91.0	Daily

**These points are to be monitored until the bores are destroyed by the progression of mining activities.*

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C48 The following information must be recorded in relation to all groundwater water sampling:

a) the date on which the sample was taken;
b) the time at which the sample was taken;
c) the monitoring point at which the sample was taken; and
d) the results of all monitoring.

C49 The method of groundwater sampling required by this environmental authority must comply with that set out in the latest edition of the administering authority's *Water Quality Sampling Method*.

Groundwater Investigation

C50 Subject to requirements of **condition C46**, if the groundwater investigation trigger levels defined in **Table 12: Groundwater Investigation Trigger Levels** are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within **twenty-eight (28) days** of receiving the analysis results.

C51 In the event that groundwater fluctuations in excess of **two (2) metres** per year beyond predictable seasonal fluctuations as determined by **condition C41** are detected at the groundwater monitoring locations nominated in **Table C13: Groundwater Levels,** an investigation must be undertaken within **fourteen (14) days** of detection to determine if the fluctuations are a result of:

a) mining activities;
b) pumping from licensed or unlicensed bores; or
c) seasonal variation.

C52 If the results of the investigation identify that the groundwater fluctuations are a result of mining activities, the holder of the environmental authority must notify the administering authority and provide a copy of a report detailing the findings and outcomes of the investigation within **seven (7) days** of receiving the result.

Sewage Effluent

C53 Treated sewage effluent in compliance with the release limits stated in **Table C14 – Contaminant Release Limits to Land – Treated Sewage Effluent**, may be released to land.

Table C14 - Contaminant Release Limits to Land – Treated Sewage Effluent

Contaminant	Unit	Release limit	Limit type	Frequency
5 day Biochemical oxygen demand (BOD)	mg/L	20	Maximum	Monthly
Total Suspended Solids	mg/L	30	Maximum	Monthly
Nitrogen	mg/L	30	Maximum	Monthly
Phosphorus	mg/L	15	Maximum	Monthly
E coli	Organisms / 100ml	1000	Maximum	Monthly
pH	pH units	6.0 – 9.0.	Range	Monthly

C54 Treated sewage effluent may only be released to land in accordance with the conditions of this approval.

a) Within the nominated area(s) identified in Schedule ## - Figure ## (sewage treatment plant and effluent disposal)

b) Other land for the purpose of dust suppression and/or fire fighting.

C55 The application of treated effluent to land must be carried out in a manner such that:

a) vegetation is not damaged;
b) there is no surface ponding of effluent; and
c) there is no run-off effluent.

C56 If areas irrigated with effluent are accessible to employees or the general public, prominent signage must be provided advising that effluent is present and care should be taken to avoid consuming or otherwise coming into unprotected contact with the effluent.

C57 All sewage effluent released to land must be monitored at the frequency and for the parameters specified in **Table C14: Contaminant Release Limits to Land – Treated Sewage Effluent**.

C58 The daily volume of effluent release to land must be measured and records kept of the volumes of effluent released.

C59 When circumstances prevent the irrigation or beneficial reuse of treated sewage effluent such as during or following rain events, waters must be directed to a wet weather storage or alternative measures must be taken to store / lawfully dispose of effluent.

Schedule D - Waste

Waste Management

D1 The holder of this environmental authority must develop, implement and maintain a waste management program in accordance with the *Environmental Protection Act 1994* and subordinate legislation for the site. The waste management program must include:

a) a description of the mining activities that may generate waste;
b) the waste management control strategies must consider:
   i) the types and amounts of wastes generated by the mining activities;
   ii) segregation of the wastes;
   iii) storage of the wastes;
   iv) transport of the wastes;
   v) monitoring and reporting matters concerning the waste;
c) the hazardous characteristics of the wastes generated including disposal procedures for hazardous wastes;
d) a program for reusing, recycling or disposing of all waste;
e) how the waste will be dealt with in accordance with the waste management hierarchy, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices in the waste management hierarchy (i.e. avoidance, reuse, recycling, energy recovery, disposal);
f) procedures for identifying and implementing opportunities to minimise the amount of waste generate, promote efficiency in the use of resources and improve the management practices employed;
g) procedures for dealing with accidents, spills and other incidents;
h) details of any accredited management system employed, or planned to be employed, to deal with waste;

i) how often the performance of the waste management program will be assessed;
j) the indicators or other criteria on which performance of the waste management program will be assessed; and
k) staff training and induction to the waste management program.

D2 All general and regulated waste must be removed from the site to a facility that is lawfully able to accept the waste under the *Environmental Protection Act 1994*.

D3 Unless otherwise permitted by the conditions of this environmental authority or with prior approval from the administering authority and in accordance with a relevant standard operating procedure, waste must not be burnt.

D4 All combustible materials, including grass and vegetation, must be removed within a ten (10) metre radius of any waste storage area.

D5 Regulated waste, other than that authorised to be disposed of on-site under this authority, must only be removed and transported from the site by a person who holds a current authority to transport such wastes to a facility that is lawfully able to accept the waste under the *Environmental Protection Act 1994*.

D6 Regulated waste generated in the mining activity can be temporarily stored on site awaiting removal provided it is stored to ensure there is minimal risk of causing fire or contamination to land or waters.

D7 Regulated waste must only be removed to a facility licensed under the *Environmental Protection Act 1994* to receive such waste.

D8 A record of all wastes removed from site must be kept detailing the following information:

a) date of pickup of waste;
b) description of waste;
c) quantity of waste;
d) origin of the waste; and
e) destination of the waste.

D9 Scrap tyres stored awaiting disposal or transport for take-back and recycling, or waste-to-energy options must be stored must be stockpiled in volumes less than three (3) metres in height and 200m^2 in volume, and at least ten (10) metres from any other tyre storage area.

D10 Subject to demonstrating to the administering authority that no other use higher in the waste management hierarchy can be practicably implemented, waste tyres generated from mining activities may be disposed of on site in spoil emplacements.

D11 Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers, cause contamination or compromise the stability of the consolidated landform.

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Tailings disposal

D12 Tailings must be managed in accordance with procedures contained within the current plan of operations. These procedures must include provisions for:

a) containment of tailings;
b) the management of seepage and leachates both during operation and the foreseeable future;
c) the control of fugitive emissions to air;
d) a program of progressive sampling and characterisation to identify acid producing potential and metal concentrations of tailings;
e) maintaining records of the relative locations of any other waste stored within the tailings;
f) rehabilitation strategy; and
g) monitoring of rehabilitation, research and/or trials to verify the requirements and methods for decommissioning and final rehabilitation of tailings, including the prevention and management of acid mine drainage, erosion minimisation and establishment of vegetation cover.

D13 Treat and manage acid sulphate soils in accordance with the latest edition of the *Queensland Acid Sulphate Soil Technical Manual*.

Waste Rock

D14 A waste rock and spoil disposal plan should be developed and include, where relevant, at least:

a) an effective characterisation of the waste rock and spoil to predict under the proposed placement and disposal strategy the quality of runoff and seepage generated concerning potentially environmentally significant effects including salinity, acidity, alkalinity and dissolved metals, metalloids and non-metallic inorganic substances;
b) a program of progressive sampling and characterisation to identify dispersive and non-dispersive spoil and the salinity, acid and alkali producing potential and metal concentrations of waste rock;
c) a materials balance and disposal plan demonstrating how potentially acid forming and acid forming waste rock will be selectively placed and/or encapsulated to minimise the potential generation of acid mine drainage;
d) a sampling program to verify encapsulation and/or placement of potentially acid-forming and acid-forming waste rock;
e) how often the performance of the plan will be assessed;
f) the indicators or other criteria on which the performance of the plan will be assessed; and
g) a rehabilitation strategy.

Schedule E – Noise and Vibration

Noise and Vibration Nuisance

E1 All noise, overblast pressure and vibration from activities must not exceed the levels specified in **Table E1 - Noise Limits, Table E2 – Blasting Noise Limits** and **Table E3 - Vibration Limits** at any sensitive or commercial place.

E2 Noise, airblast overpressure and vibration from activities must not cause an environmental nuisance at any sensitive or commercial place.

Noise Monitoring

E3 Noise monitoring and recording must include the following descriptor characteristics and matters:

a) LAN, T (where N equals the statistical levels of 1, 10 and 90 and T = 15mins);
b) background noise LA90;
c) the level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to statistical levels;
d) atmospheric conditions including temperature, relative humidity and wind speed and directions;
e) effects due to any extraneous factors such as traffic noise;
f) location, date and time of monitoring;
g) if the complaint concerns low frequency noise, MAX LpLIN, T and one third octave band measurement in dB(LIN) for centre frequencies in the 10-200 Hz range.

E4 The holder of this environmental authority must develop and implement a blast monitoring program to monitor compliance with **Table E2 – Blasting Noise Limits** for:

a) at least <insert number>% of all blasts undertaken on this site in each <insert period for example, month or year> at the nearest sensitive place or commercial place <at insert a place nominated in this authority>; and
b) all blasts conducted during any time period specified by the administering authority at the nearest sensitive place or commercial place.

E5 The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority's *Noise Measurement Manual.*

Airblast Overpressure Monitoring

E6 The holder of this environmental authority must ensure that blasting does not cause the limits for peak particle velocity and air blast overpressure in **Table E2 – Blasting Noise Limits and Table E3 – Vibration Limits** to be exceeded at a sensitive place or commercial place.

Vibration Monitoring

E7 When requested by the administering authority, vibration monitoring must be undertaken to investigate any complaint of vibration nuisance, and the results notified within **fourteen (14) days** to the administering authority. Monitoring must include:

a) peak particle velocity (mm/s);
b) air blast overpressure level (dB linear Peak);
c) location of the blast/s within the mining area (including which bench level);
d) atmospheric conditions including temperature, relative humidity, and wind speed and direction; and
e) location, date and time of recording.

Noise, Airblast Overpressure and Vibration Exceedance

E8 If monitoring indicates exceedance of the limits in **Table E1 - Noise Limits, Table E2 – Blasting Noise Limits,** and **Table E3 - Vibration Limits** then the environmental authority holder must:

a) address any complaints including the use of appropriate dispute resolution if required; and
b) immediately implement abatement measures so that emissions from the activity do not result in further exceedances of the limits in **Table E1**, **Table E2**, **Table 3** and/or cause environmental nuisance.

Table E1 - Noise Limits*

Noise level dB(A)	Monday to Sunday (including public holidays)		
	7 am – 6 pm	6 pm – 10 pm	10 pm – 7 am
	Noise Measured at a 'sensitive or commercial place'		
$L_{Aeq, adj, 1 hr}$	40	40	35
$L_{A10, adj, 1 hr}$	45	45	40
$L_{A1, adj, 1 hr}$	50	50	45
Low Frequency Noise Limit (dB)(Lin)	-	55	55

**Table E1 does not purport to set operating hours for the mining activities.*

Table E2 – Blasting Noise Limits*

Parameter	Airblast overpressure measured at a sensitive or commercial place	
	Monday to Sunday 9am – 7pm	Other times
Air blast overpressure level (dB[Lin] peak)	Maximum 115 dB for 9 out of 10 consecutive blasts	No blasting to occur
Air blast overpressure level (dB[Lin] peak)	120 dB maximum	No blasting to occur

** Table E2 does not purport to set limits applicable to any particular explosive blast, rather sets design criteria for every explosive blast.*

Table E3 - Vibration Limits

Vibration Parameter	Vibration measured at a sensitive place	
	Monday to Sunday 9am – 7pm	Other times
Peak Particle Velocity (mm/s)	Maximum 5 mm/s for 9 out of 10 consecutive blasts	No blasting to occur
Peak Particle Velocity (mm/s)	10 mm/s maximum	No blasting to occur

Blasting

E9 Every explosive blast for the mining activity shall be designed by a competent person, and be in accordance with a Blast Management Plan, to achieve the criteria specified in **Table E1: Noise Limits, Table E2: Airblast Overpressure Level,** and **Table E3: Vibration Limits.**

E10 All relevant information pertaining to the design of every explosive blast for the mining activity in relation to the criteria specified in **Table E1: Noise Limits, Table E2: Airblast Overpressure Level,** and **Table E3: Vibration Limits** shall be kept in written and diagrammatic form.

Schedule F – Land

Topsoil

F1 Topsoil must be strategically stripped ahead of mining in accordance with a Topsoil Management Plan.

F2 A topsoil inventory which identifies the topsoil requirements and availability of suitable topsoil on-site, must be detailed in the Plan of Operations.

F3 Topsoil and subsoils must be managed to ensure stability and minimise the release contaminants. Measures must include:

a) vegetating stockpiles;
b) minimising the height of stockpiles; and
c) re-using stockpiles as soon as possible.

Preventing Contaminant Release to Land

F4 Contaminants must not be released to land, except where permitted under this Environmental Authority.

F5 The environmental authority holder must take all practicable actions necessary to secure loads prior to transporting materials off site to minimise emissions or spillage of any material from vehicles or other transport infrastructure.

Chemicals and Flammable or Combustible Liquids

F6 All flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the current edition of *AS 1940 – Storage and Handling of Flammable and Combustible Liquids*.

F7 All chemicals must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the current version of the relevant Australian Standard.

F8 All explosives, corrosive substances, toxic substances, gases and dangerous goods must be stored and handled in accordance with the relevant Australian Standard.

F9 All chemicals and flammable or combustible liquids stored on site that have the potential to cause environmental harm must be stored in, or serviced by, an effective containment system that is impervious to the materials stored and managed to prevent the release of liquids to waters or land. Where no relevant Australian Standard is available, the following must be applied:

a) storage tanks must be bunded so that the capacity and construction of the bund is sufficient to contain at least 110% of a single storage tank or 100% of the largest storage tank plus 10% of the second largest storage tank in multiple storage areas; and

b) drum storages must be bunded so that the capacity and construction of the bund is sufficient to contain at least 25% of the maximum design storage volume within the bund.

Spills

F10 Any spillage or release of flammable and combustible liquids; or, chemicals, must be controlled in a manner that prevents environmental harm.

F11 An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes, chemicals and flammable and combustible liquids associated with the activity must be kept at the site.

F12 Anyone operating with wastes, chemicals or flammable and combustible liquids under this approval must be trained in the use of the spill kit.

Infrastructure

F13 All infrastructure, constructed by, or for, the environmental authority holder during the licensed activities including water storage structures, must be removed from the site prior to surrender, except where agreed in writing by the post mining land owner / holder.

Note: This is not applicable where the landowner/holder is also the environmental authority holder.

Rehabilitation

F14 Land disturbed by mining must be rehabilitated in accordance with **Table F1 – Rehabilitation Requirements**.

Table F1 - Rehabilitation Requirements

Mine Domain	Mine Feature Name	Rehabilitation Goal	Rehabilitation Objectives	Indicators	Completion Criteria
Dams ML XXXX	Tailings dam	1. Safe	(a) Site safe for humans and animals	(a) Structural, geotechnical and hydraulic adequacy of the dam	
		2. Non-polluting	(a) Acid mine drainage will not cause environmental harm	(a) Technical design of capping (b) Surface and groundwater monitoring	e.g. Monitoring meeting release limits
		3. Stable	(a) Minimise erosion	(a) Engineered structure to control water flow (b) Vegetation cover	e.g. Surface armour/ engineered drop structures in place and functioning e.g. X% foliage cover recorded over a period of X years
		4. Self-sustaining	Describe post mine land use of land suitability or land capability	(a) Species diversity (b) Presence of key species	e.g. Certification that X% species diversity achieved and maintained for X years e.g. Certification that key species present over a period of X years

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Waste rock dump					
Infrastructure					
Voids					
Roads					

All areas significantly disturbed by mining activities must be rehabilitated to a stable landform with a self-sustaining vegetation over in accordance with:

a) **Table F2 (a): Final Land Use and Rehabilitation Approval Schedule – Baralaba Coal Mine**; and
b) **Table F2 (b): Final Land Use and Rehabilitation Approval Schedule – Baralaba North Continued Operations**; and
c) **Table F3 (a): Landform Design Criteria – Baralaba Coal Mine**; and
d) **Table F3 (b): Landform Design Criteria – Baralaba North Continued Operations**.

F15 Rehabilitation must commence progressively in accordance with the plan of operations.

Table F2 (a) - Final Land Use and Rehabilitation Approval Schedule – Baralaba Coal Mine

	Residual Voids	Elevated landform- Upper Surface	Elevated Landform- Slopes	Infrastructure
Tenure ID	ML5605 ML80157	ML5605 ML80157	ML5605 ML80157	ML5605 ML80157
Projective surface area (ha)	TBA	100	120	110
Pre-mine landuse	Grazing	Grazing	Grazing	Grazing
Post mine land use	TBA	Nature Conservation Area	Nature Conservation Area	Cattle Grazing
Post mine land use description	TBA	Establish a stable landform and revegetate with native species to control erosion. Allow the establishment of native trees and shrubs.	Establish a stable landform and revegetate with native species to control erosion. Allow the establishment of native trees and shrubs.	Establish a stable landform and revegetate with pasture species which may support cattle grazing and will be compatible with the surrounding “new” landform.
Post mine land capability classification (agricultural land suitability)	TBA	Class 4 land suitability	Class 5 land suitability	Class 4 land suitability
Projective cover range (%)	TBA	Approximately 70%	Approximately 70%	Approximately 70%

Table F2 (b) - Final Land Use and Rehabilitation Approval Schedule – Baralaba North Continued Operations

	Residual Voids	Elevated landform-Upper Surface	Elevated Landform-Slopes	Infrastructure
Tenure ID	ML80170 MDL416**	ML80169 ML80170 MDL416** Sub-Blocks C, D, J and O of CHAR142	ML80169 ML80170 MDL416** Sub-Blocks C, D, J and O of CHAR142	ML80169 ML80170 MDL416** Sub-Blocks C, D, J and O of CHAR142
Projective surface area (ha)	144	385	1096	275
Pre-mine land use	Grazing	Grazing	Grazing	Grazing
Post mine land use	Nature Conservation Area	Nature Conservation Area	Nature Conservation Area	Cattle Grazing
Post mine land use description	Final void to be negotiated*	Establish a stable landform and revegetate with native species to control erosion. Allow the establishment of native trees and shrubs.	Establish a stable landform and revegetate with native species to control erosion. Allow the establishment of native trees and shrubs.	Establish a stable landform and revegetate with pasture species which may support cattle grazing and will be compatible with the surrounding "new" landform.
Post mine land capability classification (agricultural land suitability)	Class 4 land suitability	Class 4 land suitability	Class 5 land suitability	Class 4 land suitability
Projective cover range (%)	Approximately 70%	Approximately 70%	Approximately 70%	Approximately 70%

**Note: Final void design must be proposed in the report completed as outlined in condition F27. The administering authority must approve the final void design.*
***Note: MLA80201 was accepted over the area which applies to the BNCOP Operational Land within MDL416 on 1 April 2014.*
Agricultural land suitability:
*Class 4 - **Marginal land with severe limitations** which make it doubtful whether the benefits from the activity will outweigh the inputs/costs required to achieve and maintain production in the long-term.*
*Class 5 - **Unsuitable land with extreme limitations** that preclude its use.*

Table F3 (a) - Landform Design criteria – Baralaba Coal Mine

Disturbance Type	Slope Range %	Projective Surface Area (ha)
Void (during mining)	TBA – geotechnical advice	100
Waste rock dumps	10-15%	100 (in-pit dumps) 100 (ex-pit dumps)
Infrastructure	<5%	110

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Table F3 (b) - Landform Design criteria – Baralaba North Continued Operations

Disturbance Type	Slope Range %	Projective Surface Area (ha)
Void (during mining)	TBA – geotechnical advice	312 (144 residual)
Waste rock dumps	10-15%	353 (in-pit dumps) 1128 (ex-pit dumps)
Infrastructure	<5%	275

Post Mine Land Use Plan

F16 The holder must develop and submit to the administering authority a Post Mine Land Use Plan (PMLUP) with the initial Plan of Operations and update and resubmit the plan with each subsequent Plan of Operations. The PMLUP must describe how the rehabilitation objectives in **Table F1: Rehabilitation Requirements** will be achieved:

a) schematic representation of final land from inclusive of drainage features;
b) drainage design;
c) erosion controls proposed on reformed land;
d) geotechnical, geochemical and hydrological studies;
e) chemical, physical and biological properties of soil and water;
f) proposed revegetation methods inclusive of plant species selection, re-profiling, respreading soil, soil ameliorant/amendments, surface preparation and method of propagation; and
g) a rehabilitation monitoring program.

Rehabilitation Management Plan

F17 Complete a rehabilitation management plan for disturbed areas and submit a report to the administering authority by **(date will be 3 months from the date of issue)** proposing acceptance criteria prior to the commencement of mining activities. The rehabilitation management plan must, at a minimum:

a) develop design criteria for rehabilitation of each domain;
b) identify success factors and completion criteria for each domain;
c) identify three (3) reference sites to be used to develop rehabilitation success criteria;
d) describe the monitoring of reference sites inclusive of statistical design;
e) detail rehabilitation methods applied to each domain;
f) contain landform design criteria including end of mine design;
g) detail how landform design will be consistent with the surrounding topography;
h) provide schematic representation of final landform inclusive of:
    i) drainage design and features;
    ii) slope designs;
    iii) cover design; and
    iv) erosion controls proposed on reformed land;
i) explain planned native vegetation rehabilitation areas and corridors;
j) describe rehabilitation monitoring and maintenance requirements to be applied to all areas of disturbance;
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.

Rehabilitation Monitoring Program

F18 Once rehabilitation has commenced, the holder of the environmental authority must conduct rehabilitation monitoring as proposed in a Rehabilitation Monitoring Program on a yearly basis, which must include sufficient spatial and temporal replication to enable statistically valid conclusions as established under the rehabilitation program.

F19 The Rehabilitation Monitoring Program must be developed and implemented by a person possessing appropriate qualifications and experience in the field of rehabilitation management, nominated by the environmental authority holder.

F20 Verification of rehabilitation success, determined by the rehabilitation success criteria developed as per **condition F18** is to be carried out as follows:

a) the minimum sampling intensity must be specified for the monitoring of progressive rehabilitation;
b) justification of the suitability of the minimum sampling intensity must be provided;
c) monitoring must include sufficient replication to enable statistical analysis of results at an acceptable power; and
d) undertaken at **twelve (12) monthly** intervals.

F21 The Rehabilitation Monitoring Program must be included in the Plan of Operations and updated with each subsequent Plan of Operations, describing:

a) how the rehabilitations objectives as per the Rehabilitation Management Plan will be achieved; and
b) verification of rehabilitation success as per **condition F21.**

Post Closure Management Plan

F22 A Post Closure Management Plan for the site must be prepared at least eighteen (18) months prior to the final coal processing on site and implemented for a nominal period of:

a) at least thirty (30) years following final coal processing on site; or
b) a shorter period if the site is proven to be geotechnically and geochemically stable and it can be demonstrated to the satisfaction of the administering authority that no release of contaminants form the site will result in environmental harm, and revegetation has established and is self-sustaining.

F23 The Post Closure Management Plan must include the following elements:

a) operation and maintenance of:
    i) wastewater collection and reticulation systems.
    ii) wastewater treatment systems.
    iii) the groundwater monitoring network.
    iv) final cover systems.
    v) vegetative cover.
b) monitoring of:
    i) surface water quality.
    ii) groundwater quality
    iii) seepage rates.
    iv) erosion rates.
    v) the integrity and effectiveness of final cover systems.

vi) the health and resilience of native vegetation cover.

Voids

F24 The residual void(s) 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.

F25 Complete an investigation into the residual void(s) and submit a report to the administering authority by **(12 months from date of issue of the environmental authority will be inserted)** for review and comment. The report must propose acceptance criteria to meet the outcomes identified in **condition F15**. On acceptance of the criteria proposed in the Void Management Plan, the holder must apply to amend the environmental authority so that the criteria are to be specified in the environmental authority. The investigation must at a minimum include the following:

a) design criteria for progressive backfilling of mine voids during operations and rehabilitation of final voids.
b) study of final landform capability to support native flora and fauna.
c) proposal/s for end of mine void rehabilitation success criteria and final void areas and volumes.

F26 Final void design must be approved by the administering authority.

Contaminated Land

F27 Before applying for surrender of a mining lease, the holder must (if applicable) provide to the administering authority a site investigation report under the Act, in relation to any part of the mining lease which has been used for notifiable activities or which the holder is aware is likely to be contaminated land, and also carry out any further work that is required as a result of that report to ensure that the land is suitable for its final land use.

F28 Before applying for progressive rehabilitation certification for an area, the holder must (if applicable) provide to the administering authority a site investigation report under the Act, in relation to any part of the area the subject of the application which has been used for notifiable activities or which the holder is aware is likely to be contaminated land, and also carry out any further work that is required as a result of that report to ensure that the land is suitable for its final land use under **condition F14**.

F29 Minimise the potential for contamination of land by hazardous contaminants.

Biodiversity Offsets

F30 The authority holder must deliver an environmental offset for the activity's impacts on prescribed environmental matters, with the total extent of impact on prescribed environmental matters to not exceed:

a) INSERT matter and extent

F31 Before the authority holder starts any part of the prescribed activity mentioned in **condition F31**, the holder must:

a) Elect, by notice in the approved from given to the administering agency, to deliver the offset condition by:

i) A proponent-driven offset; or
ii) A financial settlement offset; or
iii) A combination of a proponent-drives offset and a financial settlement offset; and

b) Agree with the administering agency about the delivery of the offset condition though both parties endorsing an 'agreed delivery arrangement'.

F32 To the extent that the notice of election under **condition F32** involves a proponent-driven offset, the notice must be accompanied by an offset delivery plan that meets the requirements of s18 of the *Environmental Offsets Act 2014*.

F33 To the extent that the 'agreed delivery arrangement':

a) Requires the authority holder to deliver a proponent-driven offset, the authority holder must comply with the agreed delivery arrangement, including the agreed offset delivery plan; and

b) Required the authority holder to deliver a financial settlement offset, the authority holder must pay the amount:

i) Required by, and in the way stated in, the agreed delivery arrangement to the department; and

ii) Before the authority holder starts any part of the prescribed activity to which the offset condition relates.

Note: *for Biodiversity conditions F31-F34: for definitions of 'prescribed activity' and 'prescribed environmental matter' refer to the* Environmental Offsets Act 2014.

Schedule G – Regulated Structures

Assessment of Consequence Category

G1 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 (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 any 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 (EM635)*.

Design and Construction of a Regulated Structure

Note: Construction of a dam includes modification of an existing dam.

G4 **Conditions G5 to G9** inclusive do not apply to existing structures.

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 (EM635)*.

G6 Construction of a regulated structure is prohibited unless the 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 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 (EM635)*, and must be recorded in the Regulated Dams/Levees register.

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 (EM635);

b) be designed and constructed with due consideration given to ensuring that the design integrity would not be compromised on account of:

i) Floodwater from entering the regulated dam from any watercourse or drainage line; and
ii) Wall failure due to erosion by floodwater arising from any watercourse or drainage line.

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;
b) construction of the regulated structures is in accordance with the design plan.

Operation of a Regulated Structure

G10 Operation of a regulated structure, except for an existing structure, is prohibited unless:

a) The holder has submitted to the administering authority:
i) one paper copy and one electronic copy of the design plan and certification of the 'design plan' in accordance with **condition G7**; and
ii) a set of 'as constructed' drawing and specifications; and
iii) certification of those 'as constructed drawings and specifications' in accordance with **condition G9**; and
iv) 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;
v) the requirements of this authority relating to the construction of the regulated structure have been met; and
vi) the holder has entered the details required under this authority, into a Register of Regulated Structures; and
vii) there is a current operations 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 holder must submit to the administering authority within **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.

Mandatory Reporting Level

G13 **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 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 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 holder must record any changes to the MRL in the Register of Regulated Structures.

Design Storage Allowance

G18 The holder must assess the performance of each regulated dam or linked containment system over the preceding November to May period based on actual observations of the available storage in each regulated dam or linked containment system taken prior to 1 July of each year.

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 holder must, as soon as possible and within **forty-eight (48) hours** of becoming aware that the regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, notify the administering authority.

G21 The holder must, immediately on becoming aware that a regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, act to prevent the occurrence of any unauthorised discharge from the regulated dam or linked containment systems.

Annual Inspection Report

G22 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 (EM635).*

G25 The holder must:

a) within **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 holder, provide this to the administering authority within **10 business days** of receipt of the request.

Transfer Arrangements

G26 The holder must provide a copy of any reports, documentation and certifications prepared under this authority, including but not limited to any Register of Regulated Structures, consequence assessment, design plan and other supporting documentation, to a new holder on transfer of this authority.

Decommissioning and Rehabilitation

G27 Dams must not be abandoned by 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 holder of the environmental authority and the landholder agree in writing that the dam will be used by the landholder following the cessation of the environmentally relevant activities.

G28 After decommissioning, all significantly disturbed land caused by the carrying out of the environmentally relevant activities must be rehabilitated to meed 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 sulfate 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 are no greater than that required for the land prior to its disturbance caused by carrying out the mining activities.
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 A **Register of Regulated Structures** must be established and maintained by the **holder** for each **regulated dam**:

G30 The holder must provisionally enter the required information in the Register of Regulated Structures when a design plan for a regulated dam is submitted to the administering authority.

G31 The holder must make a final entry of the required information in the Register of Regulated Structures once compliance with condition (X10)and (X11) has been achieved.

G32 The 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 holder of this authority, or their delegate, as being accurate and correct.

G34 The holder must, at the same time as providing the annual return, supply to the administering authority a copy of the records contained in the Register of Regulated Structures, in the electronic format required by the administering authority.

Transitional Arrangements

G35 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 6 months of amendment of the 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 Hydraulic Performance 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 Hydraulic Performance 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.

Table G1 Transitional Hydraulic Performance Requirements for Existing Structures

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

	unauthorised releases.	unauthorised releases.	
≤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.

G38 Certification of the transitional assessment required by **conditions G35 and G36** (as applicable) must be provided to the administering authority within 6 months of amendment of the authority adopting this schedule.

Schedule H – Cultural Heritage

H1 The holder of this environmental authority must update the Conservation Management Plan (CMP) for the State Heritage Place (*Queensland Heritage Act 1992*), Dawson Valley Colliery ID: 602823, every **five (5) years** (minimum) and submit the documentation to the administering authority for review and comment.

End of conditions

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Definitions

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

'airblast overpressure' means energy transmitted from the blast site within the atmosphere in the form of pressure waves. The maximum excess pressure in this wave, above ambient pressure is the peak airblast overpressure measured in decibels linear (dBL).

'annual 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) or 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.

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

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

'assessed' or **'assessment'** by a suitably qualified and experienced person in relation to a consequence assessment of a dam, 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.

'authority' means an environmental authority.

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

'blasting' means the use of explosive materials to fracture:

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

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

'certification' means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by this Manual, 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'.

'commercial place' means a workplace used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees' accommodation or public roads.

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

'consequence category' means a category, either low, significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures* (EM635).
'c**onstruction'** 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.
'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* (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.

'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.

e) disturbance that pre-existed the grant of the tenure.

'EC' means electrical conductivity.

'effluent' treated waste water released from sewage treatment plants.

'holder' means any person who is the holder of, or is acting under, the environmental authority.

'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* (EM635).

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

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

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

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

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

'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* (EM635).

'licensed place' means the mining activities carried out at the mining tenements detailed in the table titled "Environmentally relevant activity and location details" on page 1 of this environmental authority.

'm' means metres.

'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* (EM635) published by the administering authority.

'Manual' means *the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635) p*ublished by the administering authority.

'Modification' or **'modifying'** (see definition of 'construction')
'mine affected water':

a) means the following types of water:

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

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

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

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

v) groundwater from the mine's dewatering activities;

vi) a mix of mine affected water (under any of paragraphs i)-v) and other water.

b) does not include surface water runoff which, to the extent that it has been in contact with areas disturbed by mining activities that have not yet been completely rehabilitated, has only been in contact with:

i) land that has been rehabilitated to a stable landform and either capped or revegetated in accordance with the acceptance criteria set out in the environmental authority but only still awaiting maintenance and monitoring of the rehabilitation over a specified period of time to demonstrate rehabilitation success; or

ii) land that has partially been rehabilitated and monitoring demonstrates the relevant part of the landform with which the water has been in contact does not cause environmental harm to waters or groundwater, for example:

1. areas that are been capped and have monitoring data demonstrating hazardous material adequately contained with the site;
2. evidence provided through monitoring that the relevant surface water would have met the water quality parameters for mine affected water release limits in this environmental authority, if those parameters had been applicable to the surface water runoff; or
3. both.

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

'NATA' means National Association of Testing Authorities, Australia.

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

'non-polluting' means having no adverse impacts upon the receiving environment.

'Operational plan' includes:

a) normal operating procedures and rules (including clear documentation and definition of process inputs in the DSA allowance);

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 (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).

'protected area' means – a protected area under the *Nature Conservation Act 1992*; or

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

b) a World Heritage Area.

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

a) a watercourse;

b) groundwater; and

c) an area of land that is not specified in Schedule # – Table # (Authorised Activities) of this environmental authority.

The term does not include land that is specified in Schedule # – Table # (Authorised Activities) of this environmental authority.

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

'Register of Regulated Structures' includes:

a) date of entry in the register;

b) name of the dam, its purpose and intended/actual contents;

c) the consequence category of the dam as assessed using the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635);

d) 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* (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.

'Residual drilling material' means waste drilling materials including muds and cuttings or cement returns from well holes and which have been left behind after the drilling fluids are pumped out.
'rehabilitation' the process of reshaping and revegetating land to restore it to a stable landform

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

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

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

'saline drainage' The movement of waters, contaminated with salts, as a result of the mining activity.

'sensitive place' means:

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

b) a motel, hotel or hostel; or

c) an educational institution; or

d) a medical centre or hospital; or

e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or

f) a public park or gardens.

Note: The definition of 'sensitive place' and 'commercial place' is based on Schedule 1 of Environmental Protection (Noise) Policy 2008*. That is, a sensitive place is inside or outside on a dwelling, library & educational institution, childcare or kindergarten, school or playground, hospital, surgery or other medical institution, commercial & retail activity, protected area or an area identified under a conservation plan under* Nature Conservation Act 1992 *as a critical habitat or an area of major interest, marine park under* Marine Parks Act 2004*, park or garden that is outside of the mining lease and open to the public for the use other than for sport or organised entertainment. A commercial place is inside or outside a commercial or retail activity.*

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

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

'Structure' means dam or levee.

'Spillway' means a weir, channel, conduit, tunnel, gate or other structure designed to permit discharges form the dam, normally under flood conditions or in anticipation of flood conditions.

'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.

'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*.

'µS/cm' means micro siemens per centimetre.

'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.

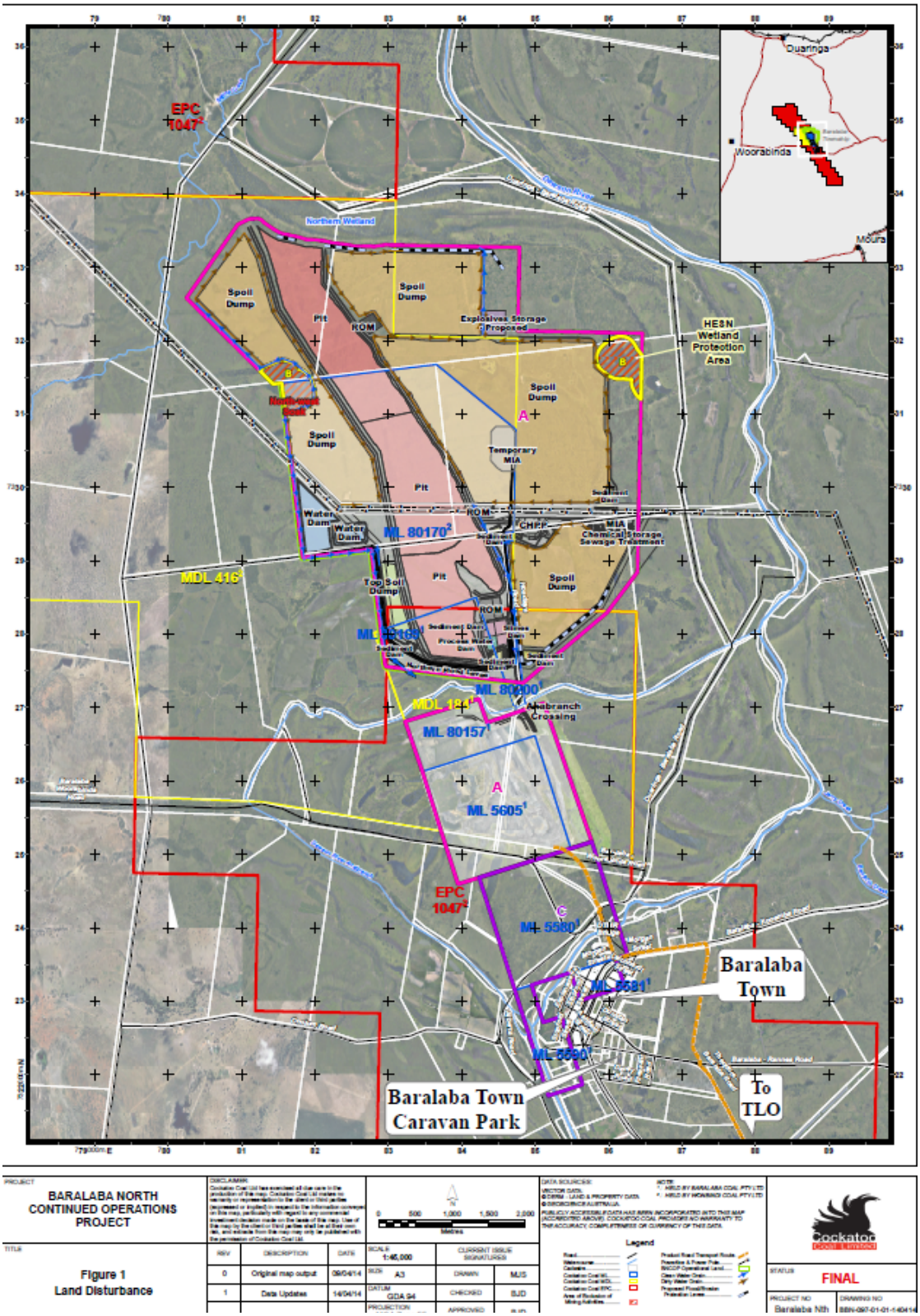
'Water year' means the 12-month period from 1 July to 30 June.

'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.

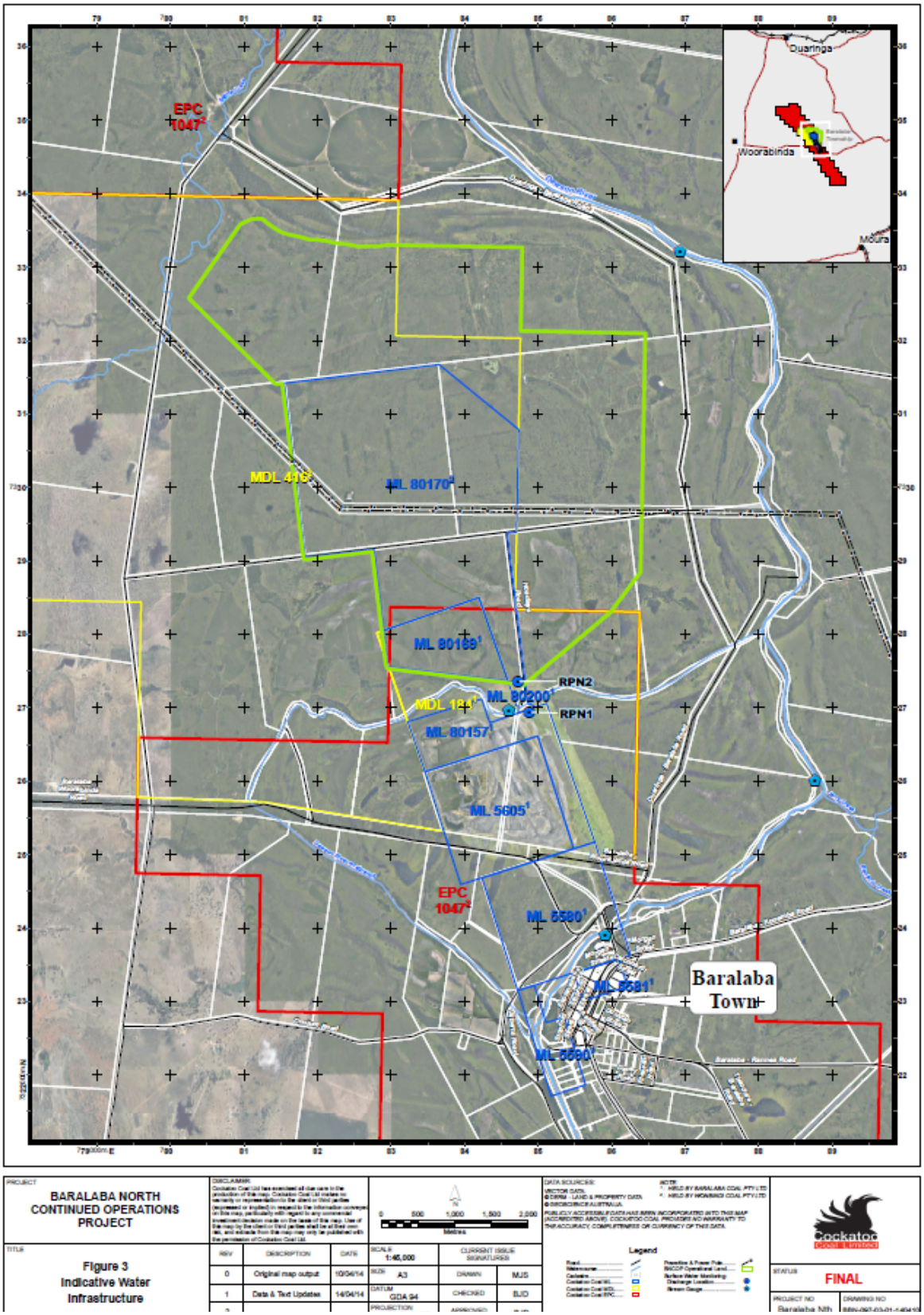
DRAFT

Attachments

Attachment 1 – Land Disturbance



Attachment 2 – Mine Affected Water Release Points



Attachment 3 – North West Soak and HESN Wetland Protection Area