Permit

Environmental Protection Act 1994

Environmental authority EPML00657413

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

Environmental authority number: EPML00657413

Environmental authority takes effect on 9 May 2025.

Environmental authority holder(s)

Name(s)	Registered address
Anglo Coal (Dawson South) Limited	Ground Floor 201 Charlotte Street BRISBANE CITY QLD 4000
Mitsui Moura Investment Pty Ltd	Level 46 1 Macquarie Place SYDNEY NSW 2000

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 13: Mining black coal	ML5657 ML80160 ML80161
Ancillary 8 – Chemical storage 1: Storing a total of 50t or more of chemicals of dangerous goods class 1 or class 2, division 2.3 under subsection (1)(a)	
Ancillary 8 – Chemical storage 3: Storing more than 500m3 of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	
Ancillary 33 – Crushing, milling, grinding or screening: Crushing, grinding, milling or screening more than 5000t of material in a year	
Ancillary 53 – Organic material processing, processing more than 200t of organic material in a year, (a) by composting the organic material	
Ancillary 62 – Resource recovery and transfer facility operation 1: Operating a facility for receiving and sorting, dismantling, baling or temporarily storing (b) general waste	
Ancillary 62 – Resource recovery and transfer facility operation 1: Operating a facility for receiving and sorting, dismantling, baling or temporarily storing- (c) category 2 regulated waste	

Queensland Government

Environmentally relevant activity/activities	Location(s)
Ancillary 62 – Resource recovery and transfer facility operation 1: Operating a facility for receiving and sorting, dismantling, baling or temporarily storing- (d) category 1 regulated waste	
Ancillary 63 – Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	

Additional information for applicants

Environmentally relevant activities

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

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

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

Contaminated land

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

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days) that is causing, or is reasonably likely to cause, serious or material environmental harm.

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

Take effect

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

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority – on the nominated day; or

b) if the authority states a day or an event for it to take effect – on the stated day or when the stated event happens; or

c) otherwise – on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State*

Development and Public Works Organisation Act 1971), this EA will not take effect until the additional authorisation has taken effect.

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

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

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

	9 May 2025
Signature	Date

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

Enquiries:
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Obligations under the *Environmental Protection Act 1994*

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

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

Other permits required

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

Conditions of environmental authority

The environmentally relevant activities conducted at the locations as described above may be conducted in accordance with the following site-specific conditions of approval. This environmental authority consists of the following Schedules:

- Schedule A – General
- Schedule B – Air
- Schedule C – Noise and vibration
- Schedule D – Waste
- Schedule E – Land
- Schedule F – Water
- Schedule G – Structures
- Schedule H – Sewage Treatment
- Schedule I – Groundwater
- Definitions
- Attachments

Schedule A: General	
Condition number	**Condition**
A1	This environmental authority authorises environmental harm referred to in the conditions. Where there is no condition or this environmental authority is silent on a matter, the lack of a condition or silence does not authorise environmental harm.
A2	**Prevent and /or minimise likelihood of environmental harm** In carrying out the environmentally relevant activities, the environmental authority holder must take all reasonable and practicable measures to prevent and/or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this environmental authority.
A3	**Storage and handling of chemicals and flammable or combustible liquids** All chemicals and flammable or combustible liquids must be stored and handled in accordance with the most recent version of an Australian Standard where such is applicable. Where no relevant Australian Standard exists, store such materials within an effective on-site containment system.
A4	**Authorised disturbance** Disturbance is authorised as shown in **Figure 1 (Authorised Disturbance Areas)**, including: a) Surface Disturbance within areas marked as “Approved Surface Disturbance”; and b) Open Cut Mining Disturbance within areas marked as “Approved Open Cut Mining Disturbance”; and c) Underground Mining Disturbance within areas marked as ‘Approved Underground Mining Disturbance”.
A5	Any disturbance outside of the areas marked in **Figure 1 (Authorised Disturbance Areas):** a) is only authorised to the extent reasonably necessary for exploration and activities ancillary to the mining activity conducted under EPML00657413, including but not limited to roads, fences, underground services, telecommunications facilities, pipelines, electrical infrastructure, storage depots, laydown or shutdown pads, monitoring stations and bores, vent shafts and gas drainage, and disturbance for rehabilitation activities; and b) must not result in significant residual impact to prescribed environmental matters.
A6	The environmental authority holder must maintain records of the assessment undertaken in accordance with condition **A5(b)** demonstrating that each impact to a prescribed environmental matter did not, or is not likely to, result in a significant residual impact to that matter and must be kept for the life of the environmental authority.

A7	**Maintenance of measures, plant and equipment** The environmental authority holder must ensure: a) that all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed; b) that such measures, plant and equipment are maintained in a proper condition; c) that such measures, plant and equipment are operated in a proper manner; and d) that all instruments and devices, used for the measurement or monitoring of any parameter under any condition of this environmental authority, are properly calibrated.
A8	**Monitoring and records** Except where specified otherwise in another condition of this environmental authority, all monitoring records and reports required by this environmental authority must be kept for a period of not less than **five (5) years**.
A9	Monitoring and determinations required under any condition of this environmental authority must be conducted by an appropriately qualified person(s).
A10	Upon request from the administering authority, copies of monitoring results, records, registers, management plans and reports required by the conditions of this environmental authority must be made available and provided to the administering authority within **twenty (20) business days** or an alternative timeframe agreed between the administering authority and the environmental authority holder.
A11	**Notification of emergencies, incidents and exceptions** The environmental authority holder must notify the administering authority by written notification within **twenty-four (24) hours** after becoming aware of any emergency or incident that results in the release of contaminants not in accordance, or reasonably expected to be not in accordance, with the conditions of this environmental authority.
A12	Within **twenty (20) business days** following the initial notification under condition **A11**, or the receipt of monitoring results associated with the notification made under condition **A11**, whichever is the latter, the environmental authority holder must provide further written advice to the administering authority, including: a) potential circumstances and actions that may have contributed to the emergency or incident; b) results and interpretation of any samples taken and analysed; c) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm; and d) proposed actions to prevent a recurrence of the emergency or incident and the timeframes to complete the actions.

A13	**Complaints** The environmental authority holder must record all environmental complaints received about the mining activities, including: a) complainant's name, address and contact number; b) time and date of complaint; c) reasons for the complaint; d) investigations undertaken; e) conclusions formed; f) actions taken to resolve the complaint, including the use of appropriate dispute resolution if required; g) any abatement measures implemented or proposed and the timeframes to implement the abatement measures; and h) person responsible for resolving the complaint.
A14	A register of alternative arrangements must be established and maintained by the environmental authority holder. The register must include: a) the location to which the alternative arrangement applies; b) the period of the alternative arrangement; c) details about the particular environmental nuisance impact/s the arrangement is for; and d) details about the mitigation measures, where relevant.
A15	**Monitoring on request** When requested by the administering authority, the environmental authority holder must investigate any nuisance, or contaminant release, or environmental harm, or complaint that is neither frivolous nor vexatious in the opinion of the authorised person, by: a) undertaking the monitoring specified by the administering authority; b) undertaking the monitoring in the timeframe nominated or agreed to by the administering authority; c) completing an analysis and interpretation of the monitoring results; and d) implementing abatement measures, where required.
A16	The results of the investigation undertaken in accordance with condition **A15** must be provided to the administering authority within **twenty (20) business days** of completion of the monitoring timeframe in accordance with condition **A15(b)**, or a longer timeframe agreed to by the administering authority.

A17	**Standards, policies and guidelines** Where a condition of this environmental authority requires compliance with a standard, policy or guideline published externally to this environmental authority, the environmental authority holder must: a) comply with the amended or changed standard, policy or guidelines within **two (2) years** of the amendment or change being made, unless, i. a different period is specified in the amended standard or relevant legislation, or ii. the period specified in condition **G36**, where the amendment or change relates specifically to existing regulated structures; and b) until compliance with the amended or changed standard, policy or guidelines is achieved, continue to remain in compliance with the corresponding provision that was current immediately prior to the relevant amendment or change.
A18	**Risk management** The environmental authority holder must develop and implement a risk management system for mining activities which mirrors the content requirement of the *Standard for Risk Management (ISO31000:2009)*, or the latest edition of an Australian standard for risk management, to the extent relevant to environmental management.
A19	**Third-party reporting** The environmental authority holder must: a) by **1 September 2026** and every **three (3) years** thereafter, obtain from an appropriately qualified person a report on compliance with the conditions of this environmental authority; and b) provide each report to the administering authority within **ninety (90) days** of its completion.

Schedule B: Air	
Condition number	**Condition**
B1	**Odour nuisance** The release of noxious or offensive odour or any other noxious or offensive airborne contaminant resulting from the mining activities must not cause an environmental nuisance, at any sensitive place or commercial place.
B2	If the administering authority determines odour released from the mining activities to constitute an environmental nuisance, the environmental authority holder must immediately implement abatement measures so that emissions from the mining activities do not result in further environmental nuisance.
B3	**Air quality objective** Dust and/or particulate matter resulting from the mining activities must not cause an Air Quality Exceedance at a sensitive place or commercial place. An Air Quality Exceedance occurs when monitoring in accordance with condition **A15** indicates exceedance of the air quality objective stated in **Table B1 (Air Quality Monitoring Requirements)**. *NOTE: Exceedances due to events that cannot be managed by the environmental authority holder, such as bushfires, fuel reduction burning for fire management purposes or dust storms, would not be considered to be in breach of condition **B3** if the environmental authority holder can demonstrate that the exceedance was caused by such events.*
B4	If an Air Quality Exceedance occurs at a sensitive place or commercial place, the environmental authority holder must: a) notify the administering authority in accordance with condition **A11**; and b) provide further written advice to the administering authority in accordance with condition **A12**, including: i. the air quality and meteorological data, collected in accordance with condition **A15**, relevant to the time of the exceedance; ii. if available, any air quality and meteorological data collected upwind of the mining activities; iii. measures taken to reduce dust and/or particulate matter generated by the mining activities; and iv. the contribution of the mining activities to the PM_{10} concentration at the sensitive or commercial place.

B5	**Air Emissions Management Plan** An Air Emissions Management Plan must be developed by an appropriately qualified person and implemented for all stages of the mining activity. The Air Emissions Management Plan must incorporate a program for continuous improvement for the management of dust and particulate matter resulting from the mining activities with respect to, but not limited to: a) when required in accordance with condition **A15**, the collection of air quality and meteorological data using the monitoring methods described in **Table B1 (Air Quality Monitoring Requirements)**; b) a system to identify adverse meteorological conditions likely to produce elevated levels of dust in exceedance of the Air Quality Objective identified in **Table B1 (Air Quality Monitoring Requirements)** at a sensitive place or commercial place due to the mining activities; and c) a dust and particulate matter control strategy which activates a timely implementation of management control actions.
B6	The Air Emissions Management Plan required by condition **B5** must be reviewed by **30 September** each **two (2) years** by an appropriately qualified person and any recommendations incorporated into the Air Emissions Management Plan.

Table B1 (Air Quality Monitoring Requirements)

Parameter	Monitoring Frequency	Air Quality Objective	Monitoring Method
PM_{10}	Continuous	50µg/m^3 (24-hour average)	AS/NZS 3580.9.6:2015 AS/NZS 3580.9.7:2009 AS 3580.9.8:2022 AS 3580.9.9:2017 AS/NZS 3580.9.11:2022
TSP	Continuous	90µg/m^3 (annual average)	AS/NZS 3580.9.3:2015 An alternative method of monitoring TSP agreed to by the administering authority.
Dust deposition	Monthly	120mg/m^2/day	AS/NZS 3580.10.1:2003
Wind speed and direction, Temperature, Precipitation, Relative Humidity	Continuous	N/A	AS/NZS 3850.14:2014

Schedule C: Noise and Vibration	
Condition number	**Condition**
C1	**Noise limits** Noise from the mining activities must not exceed the limits in **Table C1 (Noise Limits),** at any sensitive place or commercial place.
C2	**Noise monitoring** Noise monitoring, undertaken in accordance with condition **A15**, must: a) comply with the most recent version of the administering authority's *Noise Measurement Manual* (ESR/2016/2195), the relevant Australian Standard, and the *Environmental Protection Regulation 2019* (Chapter 5, Part 4); and b) be undertaken using a class 1 sound level meter as classified under *Australian Standard AS IEC 61672*; and c) assess compliance with the conditions of this environmental authority.
C3	If monitoring, undertaken in accordance with condition **C2**, indicates exceedance of the relevant limits in **Table C1 (Noise Limits)**, the environmental authority holder must immediately implement abatement measures so that emissions from the mining activities do not result in further environmental nuisance.

Table C1 (Noise Limits)

Noise Level dB(A)	**Monday to Sunday (including Public Holidays(**		
	Day (7am to 6pm)	**Evening (6pm to 10pm)**	**Night (10pm to 7am)**
Sensitive Place			
$L_{Aeq, adj, 10 mins}$	42	42	37
$L_{A1, adj, 10 mins}$	52	52	47
Commercial Place			
$L_{Aeq, adj, 10 mins}$	52	52	52

C4	**Vibration limits** Vibration from the mining activities must not exceed the limits in **Table C2 (Vibration Limits)**, at any sensitive place or commercial place.
C5	**Airblast overpressure limits** Airblast overpressure from the mining activities must not exceed the limits specified in **Table C3 (Airblast Overpressure Limits)**, at any sensitive place or commercial place.

C6	**Vibration and/or airblast overpressure monitoring** Vibration and/or airblast overpressure monitoring, undertaken in accordance with condition **A15**, must comply with the most recent version of the administering authority's *Noise Measurement Manual*, and must include the following descriptors, characteristics and conditions: a) location of the blast(s) within the mining area (including which bench level); b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and c) location, date and time of recording.
C7	If monitoring, undertaken in accordance with condition **C6**, indicates exceedance of the relevant limits in **Table C2 (Vibration Limits)** or **Table C3 (Airblast Overpressure Limits)**, the environmental authority holder must immediately implement abatement measures so that emissions from the mining activities do not result in further environmental nuisance.

Table C2 (Vibration Limits)

Location	Vibration Measured (7am to 8pm)
Sensitive place or commercial place	5 mm/s peak particle velocity for nine (9) out of ten (10) consecutive blasts and not greater than 10 mm/s peak particle velocity at any time.

Table C3 (Airblast Overpressure Limits)

Location	Airblast Overpressure Measured (7am to 8pm)
Sensitive place or commercial place	115 dB (Linear peak) for nine (9) out of ten (10) consecutive blasts and not greater than 120 dB (Linear peak) at any time.

Schedule D: Waste	
Condition number	**Condition**
D1	**Waste management** A Waste Management Plan must be developed by an appropriately qualified person and implemented for all mining activities. The Waste Management Plan must include, but is not limited to: a) a description of the mining activities that may generate waste; b) the location/s (including GPS coordinates) of where all waste activities are, or have been, carried out, including: i. the type of waste disposed of, treated, or reprocessed; and ii. the volume of waste disposed of, treated, or reprocessed; c) identification of the potential risks to the environment from all waste activities carried out; d) control measures to be implemented to minimise the potential for environmental harm associated with carrying out of the waste activities, including but not limited to: i. segregation of the wastes; ii. storage of the wastes; iii. transport of the wastes; iv. disposal of waste including leachate management; and v. monitoring and reporting matters concerning the wastes; e) how the waste will be managed in accordance with the waste management hierarchy (that is, avoid, reuse, recycling, energy recovery, disposal); f) the hazardous characteristics of the wastes generated including disposal procedures for hazardous wastes; g) procedures for reprocessing waste in accordance with condition **D4**; h) procedures for managing accidents, spills and other incidents; i) the indicators or other criteria on which the performance of the waste management plan will be assessed; j) staff training; k) a system for regular review; and l) be updated at intervals no greater than **five (5) years**.
D2	The environmental authority holder must review and update the Waste Management Plan required by condition **D1** and submit to the administering authority prior to commencing a new process, or varying an existing process, for reprocessing any waste and/or at intervals of no greater than **five (5) years**.

D3	**Waste receipt** The only waste permitted to be received is: a) the types of waste specified in conditions **D4** to **D7** (inclusive); and b) sewage and sludge for treatment in accordance with **Schedule H: Sewage Treatment**; and c) from an Anglo American site in Queensland.
D4	**Waste reprocessing** The only waste permitted to be reprocessed is: a) spoil or overburden; b) vegetation; c) water or sediment containing hydrocarbons; d) fuels, oils, lubricants and coolants; e) bulk rubber; f) inert waste; g) poly-pipe and other plastic; h) fibreglass; i) treated and untreated timber; and j) asphalt.
D5	**Waste disposal** Unless otherwise specified in conditions **D6** to **D7** (inclusive), waste, other than spoil or overburden or vegetation removed as part of the mining activity, must not be disposed of within the mining leases listed on this environmental authority and must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the *Environmental Protection Act 1994*.
D6	**Mineral waste disposal** The following types of waste are permitted to be disposed of within the specified features for the waste type: a) rejects and sediment containing hydrocarbons: i. in spoil emplacements; and ii. in regulated structures in accordance with **Schedule G: Structures** of this environmental authority; and iii. in pits or voids; and iv. in dedicated rejects emplacements; and b) tailings and water or sediment containing hydrocarbons: i. in regulated structures in accordance with **Schedule G: Structures** of this environmental authority; and ii. in pits or voids that are not regulated structures, provided a consequence category assessment in accordance with condition **G1** has been completed.

D7	**Non-mineral waste disposal** The following types of waste are permitted to be disposed of within the mining leases listed on this environmental authority: a) bulk rubber; b) inert waste; c) poly-pipe and other plastic; d) fibreglass; e) treated and untreated timber; f) asphalt; and g) asbestos These types of waste may be disposed of: a) in pits or voids; b) in spoil emplacements; and c) left in situ below ground level.

Schedule E: Land	
Condition number	**Condition**
E1	Land disturbed by mining must be rehabilitated in accordance with **Table E1 (Rehabilitation Requirements)**.
E2	Rehabilitation must commence progressively in accordance with the plan of operations.
E3	**Contaminated Land** 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.
E4	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 **E1**.
E5	**Preventing contaminant release to land** Contaminants must not be released to land in manner that constitutes a nuisance, material harm or serious environmental harm.
E6	**Progressive Certification** Certification of progressive rehabilitation was granted on 17 January 2025 for the area depicted in **Figure 3 (Approved Progressive Certification Area)** (total area of 81.8 ha).

Table E1 (Rehabilitation Requirements)

Mine Domain	Mine Feature Name	Rehabilitation Goal	Rehabilitation Objectives	Indicators	Completion Criteria
All Domains, with the exception of the Final Void	All	Safe, stable, self-sustaining, non-polluting	Bushland	Native plant species richness (total no. in RE)	15
				Non-eucalypt trees (stems per ha)	200
				Tree canopy cover (%)	30
				Native shrub cover (%)	20
				Native perennial grass cover (%)	20
				Organic litter cover (%)	60
			Grazing	Grass cover (%)	40 – 60
				Biomass (kg/ha)	1000
Final Void Non-use Management Area (NUMA) [see also Figure 2]	Residual Voids	Safe and stable	Safe for humans and livestock	Geotechnically and erosionally stable	(a) Maximum NUMA extent of Pit 25 of no greater than 76.7ha projected surface area; and (b) maximum NUMA extent of Pit 28 of no greater than 91.7ha projected surface area; and (c) exposed coal seam is capped; (d) fencing; and (e) warning signage posted at 50m intervals above the final voids; and (f) landform design in accordance with Table E2; and (g) erosionally and geotechnically stable.
		Non-polluting	Voids are groundwater sinks and do not overtop	Void modelling and monitoring	(a) The voids will not cause environmental harm outside of the relevant tenure boundary; (b) The water quality and quantity in the voids will not cause harm to the surrounding environment; (c) Water levels within the residual voids are not predicted to reach ≥121mRL.
		Self-sustaining	Not Applicable	Not Applicable	Not Applicable

Table E2 (Landform Design)

Mine Domain	Criteria
Externally draining slopes, internally draining slopes, top of dumps, roads infrastructure	<16.7%
Void - Highwall/Endwall/Ramps	<33.3%

Schedule F: Water	
Condition number	**Condition**
F1	**Contaminant Release** Contaminants that will or have the potential to cause environmental harm must not be released directly or indirectly to any waters as a result of the mining activities, except as permitted under the conditions of this environmental authority.
F2	Unless otherwise permitted under the conditions of this environmental authority, the release of mine affected water to waters must only occur from the release points specified in **Table F1 (Mine Affected Water Release Points)**.
F3	The release of mine affected water to internal water management infrastructure that is installed and operated in accordance with a Water Management Plan that complies with conditions **F26** to **F27** inclusive is permitted.

Table F1 (Mine Affected Water Release Points)

Release Point (RP)	Latitude (GDA2020)	Longitude (GDA2020)	Mine Affected Water Source and Location	Monitoring Point (Water Quality)	Monitoring Point (Flow – end of pipe)	Receiving Waters Description
RP-DS03T	-24.8404	150.0286	Dawson South, Pit 26 & 27	RP-DS01T	RP-DS03T	Dawson River

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

Table F2 (Mine Affected Water Release Limits)

Quality Characteristic	Release Limit	Monitoring Frequency
Electrical Conductivity (µS/cm)	Release limits specified in **Table F4**	Daily during release (the first sample must be taken within 2 hours of commencement of release)
pH (pH units)	6.5 (minimum) 9.0 (maximum)	
Turbidity (NTU)	560	
Sulphate (SO_4^{2-}) (mg/L)	Release limits specified in **Table F4**	Weekly during release (the first sample must be taken within 2 hours of commencement of release)

F5	The release of mine affected water to waters from the release points must be monitored at the locations specified in **Table F1 (Mine Affected Water Release Points)** for each quality characteristic and at the frequency specified in **Table F2 (Mine Affected Water Release Limits)** and **Table F3 (Release Contaminant Trigger Investigation Levels)**. *NOTE: the administering authority will take into consideration any extenuating circumstances prior to determining an appropriate enforcement response in the event condition **F5** is contravened due to a temporary lack of safe or practical access. The administering authority expects the environmental authority holder to take all reasonable and practicable measures to maintain safe and practical access to designated monitoring locations.*
F6	If quality characteristics of the release exceed any of the trigger levels specified in **Table F3 (Release Contaminant Trigger Investigation Levels)** during a release event, the environmental authority holder must compare the downstream results in the receiving waters to the trigger values specified in **Table F3 (Release Contaminant Trigger Investigation Levels)** and: (1) where the trigger values are not exceeded then no action is to be taken; or (2) where the downstream results exceed the trigger values specified in **Table F3 (Release Contaminant Trigger Investigation Levels)** for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites and; (a) if the result is less than the background monitoring site data, then no action is to be taken; or (b) if the result is greater than the background monitoring site data, complete an investigation into the potential for environmental harm and provide a written report to the administering authority within **twenty-eight (28) days**, outlining: i. details of the investigations carried out; and ii. actions taken to prevent environmental harm. *NOTE: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with condition **F6(2)(b)**, no further reporting is required for subsequent trigger events for that quality characteristic.*
F7	If an exceedance in accordance with condition **F6(2)(b)** is identified, the environmental authority holder must notify the administering authority within **twenty-four (24) hours** of receiving the result.

Table F3 (Release Contaminant Trigger Investigation Levels)

Quality Characteristic	Trigger Level (µg/L)	Comment of Trigger Level	Monitoring Frequency
Aluminium	55	*For aquatic ecosystem protection, based on SMD guideline*	Commencement of release and thereafter weekly during release when safe to do so and access permits
Arsenic	13	*For aquatic ecosystem protection, based on SMD guideline*	
Cadmium	0.2	*For aquatic ecosystem protection, based on SMD guideline*	
Chromium	1	*For aquatic ecosystem protection, based on SMD guideline*	
Copper	2	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Iron	300	*For aquatic ecosystem protection, based on low reliability guideline*	
Lead	4	*For aquatic ecosystem protection, based on SMD guideline*	
Mercury	0.2	*For aquatic ecosystem protection, based on LOR for CV FIMS*	
Nickel	11	*For aquatic ecosystem protection, based on SMD guideline*	
Zinc	8	*For aquatic ecosystem protection, based on SMD guideline*	
Boron	370	*For aquatic ecosystem protection, based on SMD guideline*	
Cobalt	90	*For aquatic ecosystem protection, based on low reliability guideline*	
Manganese	1900	*For aquatic ecosystem protection, based on SMD guideline*	
Molybdenum	34	*For aquatic ecosystem protection, based on low reliability guideline*	
Selenium	10	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Silver	1	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Uranium	1	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Vanadium	10	*For aquatic ecosystem protection, based on LOR for ICPMS*	
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 (C6-C9)	100		
Fluoride (total)	2000	*Protection of Livestock and short term irrigation guideline*	

NOTES:
1. All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Trigger levels for metal/metalloids apply if dissolved results exceed trigger.
*2. The quality characteristics required to be monitored as per **Table F3 (Release Contaminant Trigger Investigation Levels)** can be reviewed once the results of 2 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 F3 (Release Contaminant Trigger Investigation Levels)** by amendment.*
3. SMD – slightly moderately disturbed level of protection, guideline refers ANZECC & ARMCANZ (2000).
4. LOR – typical reporting for method stated. ICPMS/CV FIMS – analytical method required to achieve LOR.

F8	**Mine Affected Water Release Events** The environmental authority holder must ensure a stream flow gauging station(s) is installed, operated and maintained to determine and record stream flows at the locations and flow recording frequency specified in **Table F4 (Mine Affected Water Release During Flow Events)**.
F9	Notwithstanding any other condition of this environmental authority, the release of mine affected water to waters in accordance with condition **F2** must only take place during periods of natural flow events in accordance with the receiving water flow criteria for discharge specified in **Table F4 (Mine Affected Water Release During Flow Events)** for the release point(s) specified in **Table F1 (Mine Affected Water Release Points)**.
F10	The daily quantity of mine affected water released from each release point must be measured and recorded at the monitoring points in **Table F1 (Mine Affected Water Release Points)**.
F11	Releases to waters must be undertaken so as not to cause erosion of the bed and banks of the receiving waters or cause a material build-up of sediment in such waters.

Table F4 (Mine Affected Water Release During Flow Events)

Receiving waters	Release Point (RP)	Gauging Station	Gauging Station Latitude (GDA2020)	Gauging Station Longitude (GDA2020)	Receiving Water Flow Criteria for discharge (m3/s)	Receiving Water Flow Recording Frequency	Release Limits Electrical Conductivity (µ/cm) and Sulphate (SO_4^{2-} mg/L)
Dawson River	RP-DS01T	Bindaree	-24.8404	149.8086	5.4	Continuous (minimum daily)	EC<5000 Sulphate<9000

F12	**Notification of release event** The environmental authority holder must notify the administering authority via WaTERS as soon as practicable and no later than **twenty-four (24) hours** after commencing to release mine affected water to the receiving environment. The release commencement notification must include the submission of written advice to the administering authority of the following information: a) release commencement date and time; b) expected release cessation date and time; c) release point(s); d) release rate; e) receiving water(s) including the natural flow rate; and f) any details (including available data) regarding likely impacts on the receiving water(s).

F13	The environmental authority holder must notify the administering authority via WaTERS as soon as practicable and no later than **twenty-four (24) hours** after cessation of a release event notified under condition **F12**. The release cessation notification must include the submission of written advice to the administering authority of the following information: a) release cessation date and time; b) receiving water(s) including the natural flow rate; c) volume of water released; and d) all in situ water quality monitoring results. *NOTE: Successive or intermittent releases occurring within **twenty-four (24) hours** of the cessation of any individual release can be considered part of a single release event and do not require individual notification for the purpose of compliance with conditions **F12** and **F13** and **F14** and **F15** and **F16**, provided the relevant details of the release are included within the notification provided in accordance with conditions **F12** and **F13** and **F14** and **F15** and **F16**.*
F14	Within **twenty-eight (28) days** of notification under condition **F13**, the environmental authority holder must provide the administrating authority via WaTERS the following information in writing: a) all laboratory results from water quality monitoring; b) details regarding the compliance of the release with the conditions of **Schedule F: Water** of this environmental authority (i.e. contamination limits, natural flow, discharge volume); and c) any other matter(s) pertinent to the water release event.
F15	**Notification of release event exceedance** If the release limits defined in **Table F2 (Mine Affected Water Release Limits)** are exceeded, the environmental authority holder must notify the administering authority within **twenty-four (24) hours** of receiving the results.
F16	The environmental authority holder must, within **twenty-eight (28) days** of the notification provided in accordance with condition **F15**, provide a report to the administering authority via WaTERS detailing: a) the reason for the release; b) the location of the release; c) the total volume of the release and which (if any) part of this volume was non-compliant; d) the total duration of the release and which (if any) part of this period was non-compliant; e) all water quality monitoring results; f) any general observations; g) all calculations; and h) any other matters pertinent to the water release event.
F17	**Receiving Environment Monitoring and Contaminant Trigger Levels** The quality of the receiving waters must be monitored at the locations specified in **Table F6 (Receiving Water Upstream Background and Downstream Monitoring Points)** for each quality characteristic and at the monitoring frequency stated in **Table F5 (Receiving Waters Contaminant Trigger Levels)** and **Table F3 (Release Contaminant Trigger Investigation Levels)**.

F18	If quality characteristic(s) of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in **Table F5 (Receiving Waters Contaminant Trigger Levels)** during a release event the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and: (1) where the downstream result is the same or a lower value than the upstream value for the quality characteristic then no action is to be taken; or (2) where the downstream results exceed the upstream results, complete an investigation into the potential for environmental harm and provide a written report to the administering authority within **twenty-eight (28) days**, outlining: (a) details of the investigations carried out; and (b) actions taken to prevent environmental harm. *NOTE: Where an exceedance of a trigger level has occurred and is being investigated in accordance with **F18(2)** of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.*

Table F5 (Receiving Waters Contaminant Trigger Levels)

Quality Characteristic	Trigger Level	Monitoring Frequency
pH (pH units)	6.5 to 9.0	Daily during the release
Electrical Conductivity (µS/cm)	1,000 (80th percentile of data)	
Suspended Solids (mg/L)	560	Weekly during the release
Sulphate (SO_4^{2-}) (mg/L)	250	

Grab samples shall be taken only when safe to do so and in day light hours.

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

Monitoring Point (MP)	Receiving Waters Location Description	Latitude (GDA2020)	Longitude (GDA2020)
Upstream Background Monitoring Points [a]			
AQ-DS01R Theodore	Dawson River 1.4 kilometres upstream of confluence with release water channel	-24.9490	150.0736
Downstream Monitoring Points			
AQ-DN07T Bindaree	Dawson River main channel 4.5 kilometres downstream of the confluence with release water channel.	-24.3034	149.8086

F19	**Receiving Environment Monitoring Program (REMP)** The environmental authority holder must develop and implement a Receiving Environment Monitoring Program (REMP) to monitor, identify and describe any adverse impacts to surface water environmental values, quality and flows due to the authorised mining activity. This must include monitoring the effects of the mine on the receiving environment periodically (under natural flow conditions) and while mine affected water is being discharged from the site. For the purposes of the REMP, the receiving environment is the waters of the Dawson River. 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.
F20	The REMP must: a) assess the condition or state of receiving waters, including upstream conditions, spatially within the REMP area, considering background water quality characteristics based on accurate and reliable monitoring data that takes into consideration temporal variation (e.g. seasonality); b) be designed to facilitate assessment against water quality objectives for the relevant environmental values that need to be protected; c) include monitoring from background reference sites (e.g. upstream or background) and downstream sites from the release (as a minimum, the locations specified in **Table F6 (Receiving Water Upstream Background and Downstream Monitoring Points)**); d) specify the frequency and timing of sampling required in order to reliably assess ambient conditions and to provide sufficient data to derive site specific background reference values in accordance with the *Queensland Water Quality Guidelines 2009*. This should include monitoring during periods of natural flow irrespective of mine or other discharges; e) include monitoring and assessment of dissolved oxygen saturation, temperature and all water quality parameters listed in **Table F2 (Mine Affected Water Release Limits)** and **Table F3 (Release Contaminant Trigger Investigation Levels)**); f) include, where appropriate, monitoring of metals/metalloids in sediments (in accordance with ANZECC & ARMCANZ 2000, BATLEY and/or the most recent version of AS 5667.1 Guidance on Sampling of Bottom Sediments); g) include, where appropriate, monitoring of macroinvertebrates in accordance with the AusRivas methodology, h) apply procedures and/or guidelines from ANZECC & ARMCANZ 2000 and other relevant guideline documents; i) describe sampling and analysis methods and quality assurance and control; and j) incorporate stream flow and hydrological information in the interpretations of water quality and biological data.
F21	A report outlining the findings of the REMP, including all monitoring results and interpretations in accordance with conditions **F19** and **F20** must be prepared annually. This report must include the following: a) an assessment of background reference water quality; b) the condition of downstream water quality compared against water quality objectives; and c) the suitability of current discharge limits to protect downstream environmental values.

F22	**Water reuse** Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party (with the written consent of the third party with agreed water quality limits).
F23	**Water general** All determinations of water quality and biological monitoring must be: a) performed by a person or body possessing appropriate experience and qualifications to perform the required measurements; b) made in accordance with methods prescribed in the latest edition of the administering authority's *Monitoring and Sampling Manual*; c) collected from the monitoring locations identified within this environmental authority, within ten hours of each other where possible; d) carried out on representative samples; and e) analysed at a laboratory accredited (e.g. NATA) for the method of analysis being used. *Note: Condition **F24** 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.*
F24	The release of any contaminants as permitted by this environmental authority, directly or indirectly to waters, other than internal water management infrastructure that is installed and operated in accordance with a Water Management Plan that complies with conditions **F26** to **F27** inclusive: a) must not produce any visible discolouration of receiving waters; and b) must not produce any slick or other visible or odorous evidence of oil, grease or petrochemicals nor contain visible floating oil, grease, scum, litter or other objectionable matter.
F25	**Annual water monitoring reporting** The following information must be recorded in relation to all water monitoring required under the conditions of this environmental authority and submitted to the administering authority in the specified format with each annual return: 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.

F26	**Water Management Plan** A Water Management Plan must be developed by an appropriately qualified person(s) and implemented for all mining activities. The Water Management Plan must address, as a minimum, the following: a) provide for effective management of actual and potential environmental impacts resulting from water management associated with the mining activity carried out under this environmental authority; and b) be developed in accordance with administering authority's guideline *Preparation of water management plans for mining activities* (ESR/2016/3111) 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.
F27	The Water Management Plan must be reviewed each calendar year by an appropriately qualified person(s).
F28	**Temporary interference with waterways** Destroying native vegetation, excavating, or placing fill in a watercourse, lake or spring necessary for and associated with mining operations must be undertaken in accordance with the latest version of the Department of Regional Development, Manufacturing and Water's (or its successor's) Guideline – '*Riverine protection permit exemption requirements*' (WSS/2013/726).
F29	**Saline drainage** The environmental authority holder must ensure proper and effective measures are taken to avoid or otherwise minimise the generation and/or release of saline drainage.
F30	**Acid rock drainage** The environmental authority holder must ensure proper and effective measures are taken to avoid or otherwise minimise the generation and/or release of acid rock drainage.
F31	**Stormwater and water sediment controls** An Erosion and Sediment Control Plan must be developed by an appropriately qualified person and implemented for all stages of the mining activities on the site to minimise erosion and the release of sediment to receiving waters and contamination of stormwater.

F32	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 **F31**; and b) water management infrastructure that is installed and operated, in accordance with a Water Management Plan that complies with conditions **F26** to **F27** inclusive, for the purpose of ensuring water does not become mine affected water.
RR1	Conditions **F19** to **F21** do not apply if the environmental authority holder is a participant of the FRREMP.
RR2	The environmental authority holder must notify the administering authority in a written statement within **twenty (20) business days** of ceasing to be a participant of the FRREMP. The written statement must detail how the environmental authority holder is going to fulfil the requirements of conditions **F19** to **F20**.

Schedule G: Structures	
Condition number	**Condition**
G1	**Assessment of consequence category** The consequence category of any structure must be assessed by a suitably qualified and experienced person, in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*, at the following times: a) prior to the design and construction of the structure, if it is not an existing structure; or b) prior to any change in its purpose or the nature of its stored contents.
G2	A consequence assessment report and certification must be prepared for each structure assessed and the report may include a consequence assessment for more than one structure.
G3	Certification must be provided by the suitably qualified and experienced person who undertook the assessment, in the form set out in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*.
G4	**Design and construction of a regulated structure** Conditions **G5** to **G9** inclusive do not apply to existing structures. *NOTE: Construction of a dam includes modification of an existing dam – see definitions.*
G5	All regulated structures must be designed by, and constructed under the supervision of, a suitably qualified and experienced person in accordance with the requirements of the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*. *NOTE: Certification of design and construction may be undertaken by different persons.*
G6	Construction of a regulated structure is prohibited unless the environmental authority holder has submitted to the administering authority: a) a consequence category assessment report, design and design plan that has been certified by a suitably qualified and experienced person; and b) operational plans for the structure.
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 (ESR/2016/1933)*, and must be recorded in the Register of Regulated Structures.

G8	Regulated structures must: a) be designed and constructed in accordance with and conform to the requirements of the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933))*; b) be designed and constructed with due consideration given to ensuring that the design integrity would not be compromised on account of: i. floodwaters from entering the regulated dam from any watercourse or drainage line; and ii. wall failure due to erosion by floodwaters arising from any watercourse or drainage line. c) for regulated dams associated with a failure to contain – seepage, have the floor and sides of the dam designed and constructed to prevent or minimise the passage of the wetting front and any entrained contaminants through either the floor or sides of the dam during the operational life of the dam and for any period of decommissioning and rehabilitation of the dam.
G9	Certification by the suitably qualified and experienced person who supervises the construction must be submitted to the administering authority on the completion of construction of the regulated structure, and state that: a) the 'as constructed' drawings and specifications meet the original intent of the design plan for that regulated structure; and b) construction of the regulated structure is in accordance with the design plan.
G10	**Operation of a regulated structure** Operation of a regulated structure, except for an existing structure, is prohibited unless the environmental authority holder has submitted to the administering authority: a) one paper copy and one electronic copy of the design plan and certification of the 'design plan' in accordance with condition **G6**; b) a set of 'as constructed' drawings and specifications; c) certification of those 'as constructed drawings and specifications' in accordance with condition **G9**; d) where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system, a copy of the certified system design plan; e) the requirements of this environmental authority relating to the construction of the regulated structure have been met; f) the environmental authority holder has entered the details, required under this environmental authority, into the Register of Regulated Structures; and g) there is a current operational plan for the regulated structures.
G11	For existing structures that are regulated structures: a) where the existing structure that is a regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system, the environmental authority holder must submit to the administering authority within **twelve (12) months** of the commencement of this condition a copy of the certified system design plan including that structure; and b) there must be a current operational plan for the existing structures.

G12	Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitated, in a manner that is consistent with the current operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings.
G13	**Mandatory Reporting Level** Conditions **G14** to **G17** inclusive only apply to regulated structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
G14	The Mandatory Reporting Level (MRL) must be marked on a regulated dam in such a way that, during routine inspections of that dam, it is clearly observable.
G15	The environmental authority holder must, as soon as practical and within **forty-eight (48) hours** of becoming aware, notify the administering authority when the level of the contents of a regulated dam reaches the MRL.
G16	The environmental authority holder must immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised discharge from the regulated dam.
G17	The environmental authority holder must record any changes to the MRL in the Register of Regulated Structures.
G18	**Design Storage Allowance** The environmental authority holder must assess the performance of each regulated dam or linked containment system over the preceding November to May period based on actual observations of the available storage in each regulated dam or linked containment system taken prior to **1 July** of each year.
G19	By **1 November** of each year, storage capacity must be available in each regulated dam (or network of linked containment systems with a shared DSA volume), to meet the Design Storage Allowance (DSA) volume for the dam (or network of linked containment systems).
G20	The environmental authority holder must notify the administering authority as soon as possible and within **forty-eight (48) hours** of becoming aware that the regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on **1 November** of any year.
G21	The environmental authority holder must, immediately on becoming aware that a regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on **1 November** of any year, act to prevent the occurrence of any unauthorised discharge from the regulated dam or linked containment systems.
G22	**Annual inspection report** Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.

G23	At each annual inspection, the condition and adequacy of all components of the regulated structure must be assessed and a suitably qualified and experienced person must prepare an annual inspection report containing details of the assessment and include recommended actions to ensure the integrity of the regulated structure.
G24	The suitably qualified and experienced person who prepared the annual inspection report must certify the report in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*.
G25	The environmental authority holder must: a) within **twenty (20) business days** of receipt of the annual inspection report, provide to the administering authority: i. the recommendations section of the annual inspection report; and ii. if applicable, any actions being taken in response to those recommendations; and b) if, following receipt of the recommendations and (if applicable) actions, the administering authority requests a full copy of the annual inspection report from the environmental authority holder, provide this to the administering authority within **ten (10) business days** of receipt of the request.
G26	**Transfer arrangements** The environmental authority holder must provide a copy of any reports, documentation and certifications prepared under this environmental authority, including but not limited to any Register of Regulated Structures, consequence assessment, design plan and other supporting documentation, to a new holder on transfer of this authority.
G27	**Decommissioning and rehabilitation** Dams must not be abandoned but be either: a) decommissioned and rehabilitated to achieve compliance with condition **G28**; or b) be left in-situ for a beneficial use(s) provided that: i. it no longer contains contaminants that will migrate into the environment; and ii. it contains water of a quality that is demonstrated to be suitable for its intended beneficial use(s); and iii. the administering authority, the environmental authority holder and the landholder agree in writing that the dam will be used by the landholder following the cessation of the environmentally relevant activity(ies).

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

G35	**Notification of affected persons** All affected persons must be provided with a copy of the emergency action plan in place: a) for any new regulated structure constructed after **1 April 2025**, prior to the operation of the new regulated structure; and a) for any existing structures that are regulated structures, if the emergency action plan is amended, within **five (5) business days** of it being amended.
G36	**Transitional arrangements** All existing structures that have not been assessed in accordance with the '*Manual for Assessing Consequence Categories and Hydraulic Performance of Structures*' (ESR/2016/1933) or the former *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams*, must be assessed and certified in accordance with the '*Manual for Assessing Consequence Categories and Hydraulic Performance of Structures*' (ESR/2016/1933) within **six (6) months** of amendment of the environmental authority adopting this schedule.
G37	All existing structures must subsequently comply with the timetable for any further assessments in accordance with the Manual specified in **Table G1 (Transitional Requirements for Existing Structures)**, depending on the consequence category for each existing structure assessed in the most recent previous certification for that structure.
G38	**Table G1 (Transitional Requirements for Existing Structures)** ceases to apply for a structure once any of the following events has occurred: b) it has been brought into compliance with the hydraulic performance criteria applicable to the structure under the '*Manual for Assessing Consequence Categories and Hydraulic Performance of Structures*' (ESR/2016/1933); or c) it has been decommissioned; or d) it has been certified as no longer being assessed as a regulated structure.
G39	Certification of the transitional assessment required by **G36** and **G37** (as applicable) must be provided to the administering authority within **six (6) months** of amendment of the environmental authority adopting this schedule.

Table G1 (Transitional Requirements for Existing Structures)

Transition period required for existing structures to achieve the requirements of the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)*			
Compliance with Criteria	**High**	**Significant**	**Low**
>90% and a history of good compliance performance in last 5 years	No transition required	No transition required	No transitional conditions apply. Review consequence assessment every 7 years.
>70% to ≤90%	Within 7 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 10 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	No transitional conditions apply. Review consequence assessment every 7 years.
>50 to ≤70%	Within 5 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 7 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Review consequence assessment every 7 years.
≤50%	Within 5 years or as per compliance requirements (e.g. TEP timing)	Within 5 years or as per compliance requirements (e.g. TEP timing)	Review consequence assessment every 5 years.

Schedule H: Sewage Treatment	
Condition number	**Condition**
H1	**Treated sewage effluent** The cumulative total daily peak design capacity of the sewage treatment plant/s must not exceed 1500 equivalent persons (EP). Small package plants and/or septic systems, each with a daily peak design capacity less than 21EP, are not included in the cumulative total daily peak design capacity.
H2	Treated sewage effluent must not be directly released from the sewage treatment plant/s to any waters. *Note: 'waters' does not include structures associated with the mine affected water management system.*
H3	Treated sewage effluent may be: a) released to the mine affected water management system for mixing with other mine affected water; b) released to land via a sub-surface infiltration trench; c) irrigated; d) sprayed for dust suppression or firefighting or evaporation; or e) removed as waste.
H4	Treated sewage effluent that is released in accordance with condition **H3(a)** and has mixed with other mine affected water must be managed as mine affected water in accordance with the conditions of this environmental authority.
H5	Treated sewage effluent that is released in accordance with condition **H3(b)** or **H3(c)** must: a) not damage vegetation; b) not result in surface ponding of effluent; c) not result in run-off of treated sewage effluent to waters; and d) for any sewage treatment plant that has a daily peak design capacity of greater than 21EP, must not occur until a Figure showing the location of the sub-surface infiltration trench or irrigation area is provided to the administering authority.
H6	Treated sewage effluent released in accordance with condition **H3(a)** or **H3(b)** or **H3(c)** or **H3(d)** from any sewage treatment plant that has a daily peak design capacity of greater than 21EP must be monitored: a) from the sewage treatment plant/s; b) for the quality characteristics specified in **Table H1 (Treated Sewage Effluent Monitoring Requirements)**; and c) at the frequency specified in **Table H1 (Treated Sewage Effluent Monitoring Requirements)**.

Table H1 (Treated Sewage Effluent Monitoring Requirements)

Quality Characteristic	Units	Monitoring Frequency
5-day Biochemical Oxygen Demand (uninhibited)	mg/L	Monthly
pH	pH units	Monthly
Thermotolerant coliforms	Colonies per 100mL	Monthly
Total nitrogen	mg/L	Monthly
Total phosphorous	mg/L	Monthly

H7	If treated sewage effluent is being released in accordance with condition **H3(b)** and/or **H3(c)**: a) the results of monitoring in accordance with condition **H6** must not exceed the release limits specified in **Table H2 (Treated Sewage Effluent Contaminant Release Limits)**; and b) the release must not cause spray drift or over spray to any sensitive place or commercial place; and c) the daily volume of treated effluent irrigated must be measured and records kept.
H8	If the release limits specified in **Table H2 (Treated Sewage Effluent Contaminant Release Limits)** are exceeded in accordance with condition **H7(a)**, the environmental authority holder must notify the administering authority in accordance with conditions **A11** and **A12**.

Table H2 (Treated Sewage Effluent Contaminant Release Limits)

Quality Characteristic	Release Limit	Units	Limit Type
5-day Biochemical Oxygen Demand (uninhibited)	50	mg/L	Maximum
pH	6.0 to 9.0	pH units	Range
Thermotolerant coliforms, based on the average of a minimum number of five samples collected	1000	Colonies per 100mL	Maximum
Total nitrogen	40	mg/L	Maximum
Total phosphorus	15	mg/L	Maximum

Schedule I: Groundwater	
Condition number	**Condition**
I1	Contaminants from the activity must not be released to groundwater.
I2	**Bore Construction, Maintenance and Decommissioning** The construction, maintenance, operation and decommissioning of each groundwater monitoring bore must be undertaken by an appropriately qualified person in a manner that: a) prevents contaminants entering the groundwater; and b) ensures representative groundwater samples from the target hydrogeological unit; and c) maintains the hydrogeological environment within the hydrogeological unit.
I3	A bore report must be kept for each monitoring bore which includes: a) a unique identification reference number and geographic coordinate location; b) construction information including but not limited to the depth of bore, depth and length of casing, depth and length of screening and bore sealing details; c) stratigraphy and target hydrogeological unit of the bore; and d) depth at which groundwater was intercepted and the final standing water level (SWL) after bore development.
I4	The environmental authority holder must install, commission and maintain groundwater monitoring bores at the locations specified in **Table I1 (Groundwater monitoring locations and frequency)**.
I5	**Groundwater monitoring** Groundwater must be monitored: a) at the location and frequencies defined in **Table I1 (Groundwater monitoring locations and frequency)**; and b) for the quality characteristics specified in in **Table I2 (Groundwater quality triggers)**; and c) for the standing water levels (SWLs) stated in **Table I3 (Groundwater standing water level trigger threshold)**.
I6	Monitoring and sampling must be carried out in accordance with the requirements of the latest version of the following documents unless otherwise approved by the administering authority: a) '*Monitoring and Sampling Manual: Environmental Protection (Water) Policy'*, Department of Environment and Science, 2018; b) '*Groundwater Sampling and Analysis – A Field Guide*' (2009:27 GeoCat#6890.1); and c) *Australian Standard AS/NZS 5667.11:1998 Water quality - Sampling - Part 11: Guidance on sampling of groundwaters*.
I7	The monitoring data collected in accordance with condition **I5** must be submitted to the administering authority, via WaTERS, annually on **1 April** for the previous calendar year.

I8	**Groundwater quality trigger exceedance** Monitoring results from groundwater bores identified in **Table I1 (Groundwater monitoring locations and frequency)** must not exceed any of the trigger levels stated in **Table I2 (Groundwater quality triggers)** on three (3) consecutive monitoring occasions.
I9	If monitoring undertaken in accordance with condition **I5** demonstrates exceedance of groundwater quality triggers in **Table I2 (Groundwater quality triggers)** on three (3) consecutive monitoring occasions, the environmental authority holder must: a) notify the administering authority, via WaTERS, within **twenty-four (24) hours** of receiving the results; b) provide a report to the administering authority, via WaTERS, within **twenty (20) business days** of the notification made in accordance with condition **I9(a)**, that determines if mining activities are a potential cause or contributor to the exceedance; and c) if the report determines that mining activities are a potential cause or contributor to the exceedance, provide an investigation report to the administering authority, via WaTERS, within **twenty (20) business days** of the report provided in accordance with condition **I9(b)**, that includes: i. determination of whether environmental harm has occurred; and ii. any action required to mitigate the environmental harm.
I10	**Standing water level trigger exceedance** Monitoring results from groundwater bores identified in **Table I1 (Groundwater monitoring locations and frequency)** must not exceed any of SWL trigger levels stated in **Table I3 (Groundwater standing water level trigger threshold)**.
I11	If monitoring undertaken in accordance with condition **I5** demonstrates exceedance of the thresholds in **Table I3 (Groundwater standing water level trigger threshold)**, the environmental authority holder must; a) notify the administering authority, via WaTERS within **twenty-four (24) hours** of receiving the results; b) provide a report to the administering authority, via WaTERS, within **twenty (20) business days** of the notification made in accordance with condition **I11(a)**, that determines if mining activities are a potential cause or contributor to the exceedance; and c) if the report determines that mining activities are a potential cause or contributor to the exceedance, provide an investigation report to the administering authority, via WaTERS, within **twenty (20) business days** of the report provided in accordance with condition **I11(b)**, that includes: i. determination of any impacts to environmental values and/or water users as a result of the exceedance; and ii. any action required to mitigate the impacts.
I12	**Groundwater Monitoring and Management Program** The environmental authority holder must develop and implement a Groundwater Monitoring and Management Program (GMMP) for all mining activities.

I13	The GMMP required by condition **I12** must: a) provide a hydrogeological numerical groundwater model in accordance with the most recent version of the '*Australian Groundwater Modelling Guidelines*' (2012); and b) include all hydrogeological units potentially impacted by the activities authorised under this environmental authority; and c) detail groundwater levels in all identified hydrogeological units present across and adjacent to the site to confirm existing groundwater flow paths; and d) identify all potential sources of contamination to groundwater from the activities; and e) identify all environmental values that may be impacted; and f) describe the groundwater monitoring and data analysis that will be undertaken to achieve the following objectives: i. detect impacts to groundwater quality and standing water level (SWL) due to the activities authorised under this environmental authority; and ii. determine trends in groundwater quality and SWL; and g) document groundwater management and monitoring methodologies undertaken for the duration of all the activities authorised under this environmental authority; and h) provide an appropriate quality assurance and quality control program; and i) include a review process to identify improvements to the program that includes addressing any comments provided by the administering authority.
I14	A review report for the GMMP required by condition **I12** must be prepared by **30 April 2028** and every **two (2) subsequent years** thereafter, and include: a) an analysis, including an assessment of trends, of the all the groundwater quality and SWL monitoring data for all groundwater bores listed within **Table I1 (Groundwater monitoring locations and frequency)**; b) an assessment of the adequacy of the conceptual groundwater model to accurately determine contaminant transport and changes to SWL; c) an assessment of any impacts on groundwater quality and SWL due to the mining activities; d) an assessment of any interactions with, or impacts to, surface water resulting from changes to groundwater quality and SWL due to the mining activities; e) recommendations, if any, for the environmental authority holder to complete to address any inadequacy or impacts identified by (a) through (d) of this condition.
I15	**Groundwater Model** The groundwater model required by condition **I13(a)** must be reviewed and updated by an appropriately qualified person by **30 April 2030** and every **four (4) years** thereafter.

I16	The groundwater model review in condition **I15** must: a) include all hydrogeological units potentially impacted by the activities authorised under this environmental authority; b) be undertaken in accordance with the most recent version of the '*Australian Groundwater Modelling Guidelines*' (2012); c) be validated and recalibrated with all recent monitoring data; d) be documented in a report that includes: i. changes to predicted end of mine life and post mining standing water level (SWL) in all major hydrogeological units; ii. changes to the model predictions of impacts to environmental values; iii. where residual voids are proposed, the changes to predicted post mining void water levels and water quality; and iv. recommended amendments to environmental authority conditions.
I17	Within **twenty (20) business days** of preparing the review report under condition **I14** and/or **I6(d)**, the environmental authority holder must provide to the administering authority: a) the review report/s; b) if applicable, any actions being taken by the environmental authority holder to address the recommendations of the review report; and c) if action is not being taken to address a recommendation, the environmental authority holder must provide justification for not taking action.
I18	Upon submission of the report required by condition **I17**, all comments given by the administering authority must be considered for incorporation into the GMMP required by condition **I13**.

I19	**Transitional arrangements** Unless an alternate timeframe is agreed to by the administering authority, the environmental authority holder must: a) for groundwater monitoring bores identified as "existing bores" in **Table I1 (Groundwater Monitoring Locations and Frequency)**: i. by **30 April 2025**, commence monitoring in accordance with condition **I5**; and ii. by **30 April 2026**; submit a report to the administrating authority. The report must propose interim groundwater trigger values to populate **Table I2 (Groundwater quality triggers)**, based on a minimum of eight (8) sampling events per bore; and iii. by **30 April 2026**, submit a report to the administering authority. The report must propose groundwater standing water level trigger thresholds, derived from the results of the groundwater model required by condition **I13(a)**, to populate **Table I3 (Groundwater standing water level trigger thresholds)**; iv. by **30 April 2027**; submit a report to the administrating authority. The report must review the interim groundwater trigger values and propose revised groundwater trigger values to populate **Table I2 (Groundwater quality triggers)** based on a minimum of eighteen (18) sampling events per bore; and b) for groundwater monitoring bores identified as "new bores" in **Table I1 (Groundwater Monitoring Locations and Frequency)**: i. by **31 May 2025**, provide planned location coordinates of new bores to administering authority; and ii. by **30 June 2026**, install and commission groundwater monitoring bores in accordance with condition **I4** and provide bore reports to the administering authority in accordance with condition **I3**; and iii. by **31 July 2026**, commence monitoring in accordance with condition **I5**; and iv. by **31 July 2027**, submit a report to the administering authority. The report must propose interim groundwater trigger values to populate **Table I2 (Groundwater quality triggers)**, based on a minimum of eight (8) sampling events per bore; and v. by **31 July 2027**, submit a report to the administering authority. The report must propose groundwater standing water level trigger thresholds, derived from the results of the groundwater model required by condition **I13(a)**, to populate **Table I3 (Groundwater standing water level trigger thresholds)**; vi. by **31 July 2028**; submit a report to the administrating authority. The report must review the interim groundwater trigger values and propose revised groundwater trigger values to populate **Table I2 (Groundwater quality triggers)** based on a minimum of eighteen (18) sampling events per bore; and c) by **30 April 2026**, develop and implement the Groundwater Monitoring and Management Program in accordance with condition **I12.** *Note: The reports required by condition **I19(a)(ii), I19(a)(iv), I19(b)(iv) and I19(b)(vi)** must consider the requirements of the administering authority's, or its successor's, most recent edition of the Guideline: "Using monitoring data to assess groundwater quality and potential environmental impacts" (DES, 2021).*

Table I1 (Groundwater Monitoring Locations and Frequency)

Monitoring Points	Hydrogeological Unit	Easting (GDA2020)	Northing (GDA2020)	Monitoring Frequency
Existing Bores				
DSMB03	Tertiary Sediments	201408	7238271	Monthly until trigger values are established, quarterly thereafter
DSMB04	Alluvium	200755	7238489	
DSMB05	Alluvium	199958.2	7242428.3	
DSMB06	Alluvium	199742.8	7243192.5	
DSMB07	Alluvium	199158.1	7244360.7	
DSMB13	Alluvium	197537.86	7246445.3	
DSMB14	Alluvium	197362.88	7248965.59	
New Bores				
P25 _MB02D	Tertiary Sediments	TBD	TBD	Monthly from installation until trigger values are established, quarterly thereafter
P25 _MB02S	Alluvium	TBD	TBD	

Table I2 (Groundwater Level and Contaminant Limits)

Parameter*	**Units**	**Hydrogeological Unit - Trigger Levels**		
		TBD	**TBD**	**TBD**
Physico-chemical parameters/sulfate				
pH	pH Units	TBD		
Electrical Conductivity (EC)	µS/cm	TBD		
Sulfate	mg/L	TBD		
Total Dissolved Solids	mg/L	TBD		
Major Ions				
Calcium	mg/L	TBD		
Magnesium	mg/L	TBD		
Sodium	mg/L	TBD		
Potassium	mg/L	TBD		
Chloride	mg/L	TBD		
Sulfate	mg/L	TBD		
Carbonate	mg/L	TBD		
Bicarbonate	mg/L	TBD		
Phosphate	mg/L	TBD		
Nitrate	mg/L	TBD		
Ammonium	mg/L	TBD		
Fluoride	mg/L	TBD		
Metals/metalloids (Dissolved)				
Iron	µg/L	TBD		
Aluminium	µg/L	TBD		
Silver	µg/L	TBD		
Arsenic	µg/L	TBD		
Mercury	µg/L	TBD		

Antimony	µg/L	TBD
Cobalt	µg/L	TBD
Nickel	µg/L	TBD
Zinc	µg/L	TBD
Cadmium	µg/L	TBD
Chromium	µg/L	TBD
Copper	µg/L	TBD
Lead	µg/L	TBD
Boron	µg/L	TBD
Manganese	µg/L	TBD
Molybdenum	µg/L	TBD
Selenium	µg/L	TBD
Vanadium	µg/L	TBD
Uranium	µg/L	TBD
Petroleum Hydrocarbons (C6-C9)	µg/L	TBD
Petroleum hydrocarbons (C10-C36)	µg/L	TBD

NOTES:

Table I3 – Groundwater standing water level trigger threshold

Monitoring location	Hydrogeological Unit	Baseline water level (mAHD)	Standing Water Level Trigger Threshold (mAHD)
DSMB03	Tertiary Sediments	*TBD*	*TBD*
DSMB04	Alluvium	*TBD*	*TBD*
DSMB05	Alluvium	*TBD*	*TBD*
DSMB06	Alluvium	*TBD*	*TBD*
DSMB07	Alluvium	*TBD*	*TBD*
DSMB13	Alluvium	*TBD*	*TBD*
DSMB14	Alluvium	*TBD*	*TBD*
P25 _MB02D	Tertiary Sediments	*TBD*	*TBD*
P25 _MB02S	Alluvium	*TBD*	*TBD*

Definitions

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

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

a) vegetation establishment, survival and succession;

b) vegetation productivity, sustained growth and structure development;

c) fauna colonisation and habitat development;

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

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

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

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

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

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

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

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

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

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

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

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

Anglo American site in Queensland, means any tenure for coal under section 6D of the *Mineral Resources Act 1989* that is held by one or more of the environmental authority holders, or a related company.

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

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

a) against recommendations contained in previous annual inspections reports;

b) against recognised dam safety deficiency indicators;

c) for changes in circumstances potentially leading to a change in consequence category;

d) for conformance with the conditions of this authority;

e) for conformance with the 'as constructed' drawings;

f) for the adequacy of the available storage in each regulated dam, based on an actual observation or observations taken after 31 May each year but prior to 1 November of that year, of accumulated sediment, state of the containment barrier and the level of liquids in the dam (or network of linked containment systems); and

g) for evidence of conformance with the current operational plan.

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

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

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

a) exactly what has been assessed and the precise nature of that determination;

b) the relevant legislative, regulatory and technical criteria on which the assessment has been based;

c) the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and

d) the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

Associated works in relation to a dam, means:

a) operations of any kind and all things constructed, erected or installed for that dam; and

b) any land used for those operations.

Authority means an environmental authority or a development approval.

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

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

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

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

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

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

Biosolids means the treated and stabilised solids from sewage.

Blasting means the use of explosive materials to fracture:

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

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

Bulk rubber means tyres, conveyor belt, and other similar rubber waste.

Certification in relation to regulated structures, means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)* or this environmental authority, including design plans, 'as constructed' drawings and specifications, construction, operation or an annual report regarding regulated structures, undertaken in accordance with the Board of Professional Engineers of Queensland Policy Certification by RPEQs (ID: 1.4 (2A).

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

Chemical means:

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

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

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

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

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

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

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

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

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

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

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

   ii. manufacture of plastic or synthetic rubber.

Commercial place means:

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

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

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

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

Consequence category means a category, either low, significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*.

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

Contaminate means to render impure by contact or mixture.

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

Contaminant can be

a) a gas, liquid or solid; or

b) an odour; or

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

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

e) a combination of contaminants.

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

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

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

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

Design storage allowance or DSA means an available volume, estimated in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)* published by the administering authority, must be provided in a dam as at 1 November each year in order to prevent a discharge from that dam to an annual exceedance probability (AEP) specified in that Manual.

Designer for the purposes of a regulated dam, means the certifier of the design plan for the regulated dam.

Disturbance of land includes:

a) compacting, removing, covering, exposing or stockpiling of earth;

b) removal or destruction of vegetation or topsoil or both to an extent where the land has been made susceptible to erosion;

c) carrying out mining within a watercourse, waterway, wetland or lake;

d) the submersion of areas by tailings or hazardous contaminant storage and dam/structure walls;

e) temporary infrastructure, including any infrastructure (roads, tracks, bridges, culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc.) which is to be removed after the mining activity has ceased; or

f) releasing of contaminants into the soil, or underlying geological strata.

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

a) areas off lease (e.g. roads or tracks which provide access to the mining lease);

b) areas previously disturbed which have achieved the rehabilitation outcomes;

c) by agreement with the administering authority, areas previously disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);

d) areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc.) which is to be left by agreement with the landowner; or

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

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

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

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

c) a water craft in a marina.

Effluent means treated waste water released from sewage treatment plants.

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

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

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

Environmental authority holder means the holder of this environmental authority.

Environmental monitoring for the purpose of Condition E23 means installation of water quality monitoring stations, as well as installation of air quality, noise and vibration monitoring equipment.

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

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

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

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

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

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

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

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

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

Existing authority has the meaning in section 94 of the *Environmental Offsets Act 2014*.

Existing structure means a structure that was in existence prior to 22 October 2014.

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

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

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

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

FRREMP means a Fitzroy Basin Receiving Environment Monitoring Program for the region in which the EA is located, that has been endorsed in writing by the administering authority.

General waste means waste other than regulated waste.

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

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

Hydraulic performance means the capacity of a regulated dam to contain or safely pass flowable substances based on the design criteria specified for the relevant consequence category in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*.

Inert waste means bricks, pavers, ceramics, concrete, glass, steel, or similar waste that does not biodegrade or decompose.

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

$L_{Aeq, adj, 15\ mins}$ means the A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within a 15 minutes period has the same mean square sound pressure of a sound that varies with time.

$L_{A1, adj, 15\ mins}$ means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 15 minute measurement period, using Fast response.

Lake includes:

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

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

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

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

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

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

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

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

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

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

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

mbgl means metres below ground level.

mg/L means milligrams per litre.

Mechanically reprocessing waste includes mechanically crushing, milling, grinding, shredding or sorting waste, whether or not for the purpose of recycling the waste.

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; or

   vi. a mix of mine affected water (under any of paragraphs i to 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:

      a. areas that are been capped and have monitoring data demonstrating hazardous material adequately contained with the site;

      b. evidence provided through monitoring that the relevant surface water would have met the water quality parameters for mine affected water release limits in this environmental authority, if those parameters had been applicable to the surface water runoff; or

   iii. both.

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

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

b) foundry sand;

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

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

e) marble;

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

g) peat;

h) salt including brine;

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

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

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

But does not include:

a) living matter;

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

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

d) water.

Mining activities means the activities:

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

b) all environmentally relevant activities authorised under this environmental authority; and

c) waste activities.

Modification or modifying (see definition of 'construction').

Natural flow means the flow of water through waters caused by nature.

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

Noxious means harmful or injurious to health or physical wellbeing.

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

Open Cut Mining Disturbance is excavation of a pit for open cut mining and can include any other type of surface disturbance.

Operational plan includes:

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

b) contingency and emergency action plans including operating procedures designed to avoid and/or minimise environmental impacts including threats to human life resulting from any overtopping or loss of structural integrity of the regulated structure.

Participant of the FRREMP means an environmental authority holder that is identified as a current participant by the organisation carrying out the Regional REMP.

Peak particle velocity or ppv means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mm/s).

Potentially affected stakeholders includes (but should not be limited to):

a) the administering authority; and

b) a local landholder whose property is riparian, downstream of the release point specified in Table F1 of the environmental authority and is determined by the environmental authority holder to be potentially impacted by mine affected water releases; and

c) other party nominated by the administering authority; and

d) the relevant local government authority; and

e) a Resource Operations Licence (ROL) holder or other water entitlement holder under the *Water Act 2000* located between the nearest compliance point listed in Table 1 of the operational policy and the release point specified in Table F1 of the environmental authority; and

f) does not include a landholder or other party who by written agreement with the environment authority holder has declined to be notified for the purpose of this condition.

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

Protected area means

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

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

c) a World Heritage Area.

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

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

a) a watercourse;

b) groundwater;

c) land; and

d) sediments.

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

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

Register of Regulated Structures includes:

a) date of entry in the register;

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

c) the consequence category of the dam as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)*;

d) dates, names, and reference for the design plan plus dates, names, and reference numbers of all document(s) lodged as part of a design plan for the dam;

e) name and qualifications of the suitably qualified and experienced person who certified the design plan and 'as constructed' drawings;

f) for the regulated dam, other than in relation to any levees –

i. the dimensions (metres) and surface area (hectares) of the dam measured at the footprint of the dam;

ii. coordinates (latitude and longitude in GDA94) within five metres at any point from the outside of the dam including its storage area

iii. dam crest volume (megalitres);

iv. spillway crest level (metres AHD).

v. maximum operating level (metres AHD);

vi. storage rating table of stored volume versus level (metres AHD);

vii. design storage allowance (megalitres) and associated level of the dam (metres AHD);

viii. mandatory reporting level (metres AHD);

g) the design plan title and reference relevant to the dam;

h) the date construction was certified as compliant with the design plan;

i) the name and details of the suitably qualified and experienced person who certified that the constructed dam was compliant with the design plan;

j) details of the composition and construction of any liner;

k) the system for the detection of any leakage through the floor and sides of the dam;

l) dates when the regulated dam underwent an annual inspection for structural and operational adequacy, and to ascertain the available storage volume for 1 November of any year;

m) dates when recommendations and actions arising from the annual inspection were provided to the administering authority; and

n) dam water quality as obtained from any monitoring required under this authority as at 1 November of each year.

Regulated dam means any dam in the significant or high consequence category as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (Version 4, 10 April 2014) (EM635)* published by the administering authority.

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

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

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

Rejects means:

a) breaker rejects; or

b) coarse rejects; or

c) mid/fine size rejects; or

d) tailings that have been dewatered; or

e) any combination of rejects (under any of paragraphs a to d).

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

Reprocessing includes:

a) recycling; or

b) mechanical treatment; or

c) thermal treatment; or

d) biological treatment; or

e) chemical treatment.

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

Resource activity is an activity that involves

a) a geothermal activity; or

b) a GHG storage activity; or

c) a mining activity; or

d) a petroleum activity.

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

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

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

Sensitive place means:

a) Any of the following:

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

ii. a motel, hotel or hostel; or

iii. an educational institution; or

iv. a medical centre or hospital; or

v. a protected area; or

vi. a public park or gardens.

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

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

ii. a mining camp (i.e. accommodation and ancillary facilities for mine employees or contractors or both, associated with the mine the subject of the environmental authority), whether or not the mining camp is located within a mining tenement that is part of the mining project the subject of the environmental authority. For example, the mining camp might be located on neighbouring land owned or leased by the same company as one of the environmental authority holders for the mining project, or a related company; or

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

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

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

Significant residual impact has the meaning in section 8 of the *Environmental Offsets Act 2014*.

Soil monitoring for the purpose of Condition E23 means test pits for geotechnical and other analysis to inform designs and future approvals.

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

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

Stormwater means all surface water runoff from rainfall.

Structure means dam or levee.

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

a) for regulated dams, an RPEQ who is a civil engineer with the required qualifications in dam safety and dam design.

b) for regulated levees, an RPEQ who is a civil engineer with the required qualifications in the design of flood protection embankments.

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

Surface Disturbance is any disturbance of the land but does not include Open Cut Mining Disturbance or Underground Mining Disturbance.

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.

Tailings means fines from mineral processing that have not been dewatered.

The Act means the *Environmental Protection Act 1994*.

Underground Mining Disturbance is the subsidence of the land associated with underground mining and includes surface disturbance from any ancillary activity associated with underground mining.

Void means any constructed, open excavation in the ground.

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

Waste activities means receiving, storing, disposing, treating, or reprocessing wastes, and does not include composting.

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

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

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

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

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

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

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

WaTERS means the Water Tracking and Electronic Reporting System.

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

µg/L means micrograms per litre.

µS/cm means microsiemens per centimetre.

Figure 1 (Authorised Disturbance Areas)

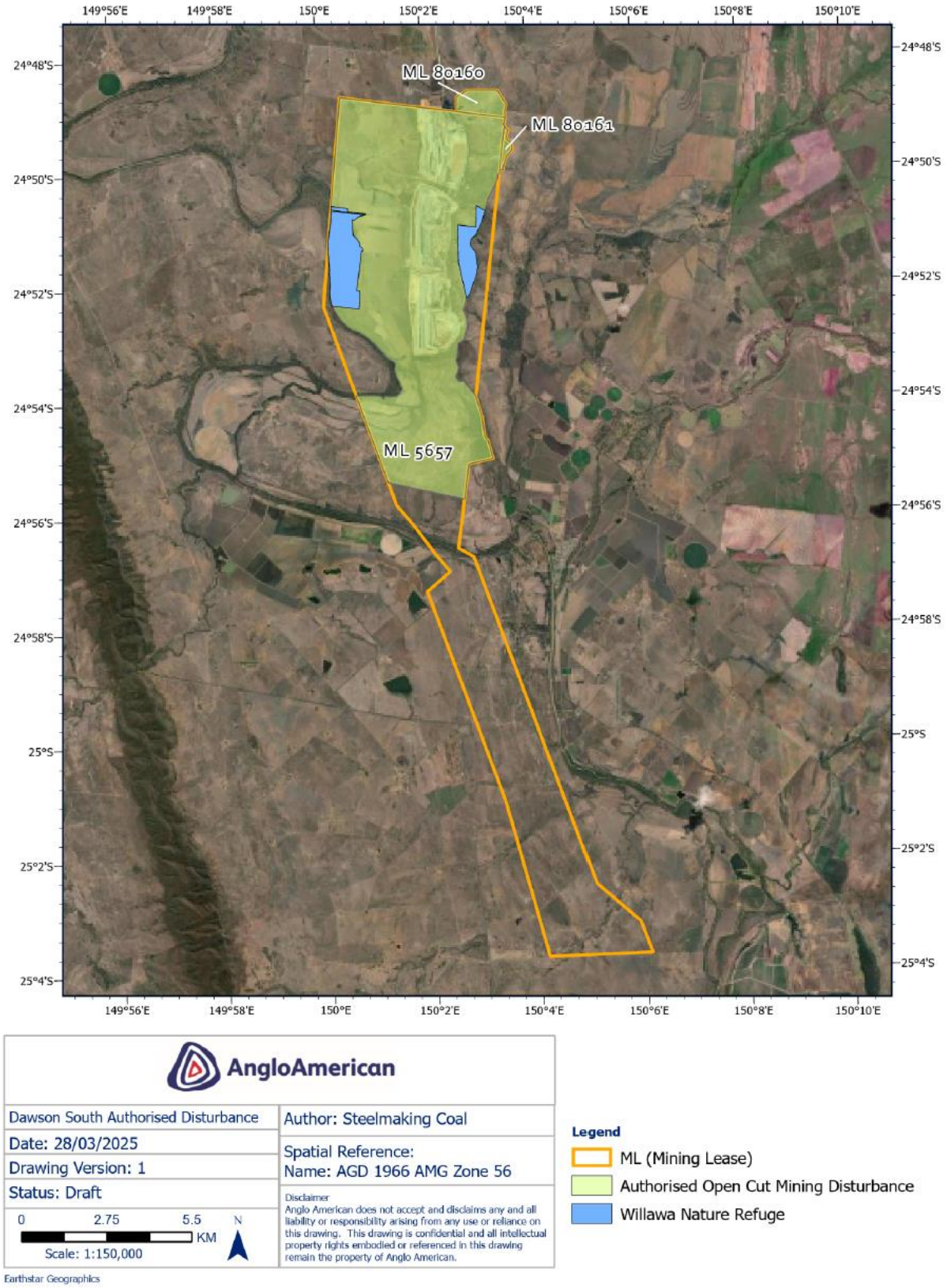


Figure 2 (Indicative Pit 28 Non-use Management Area – Plan View)

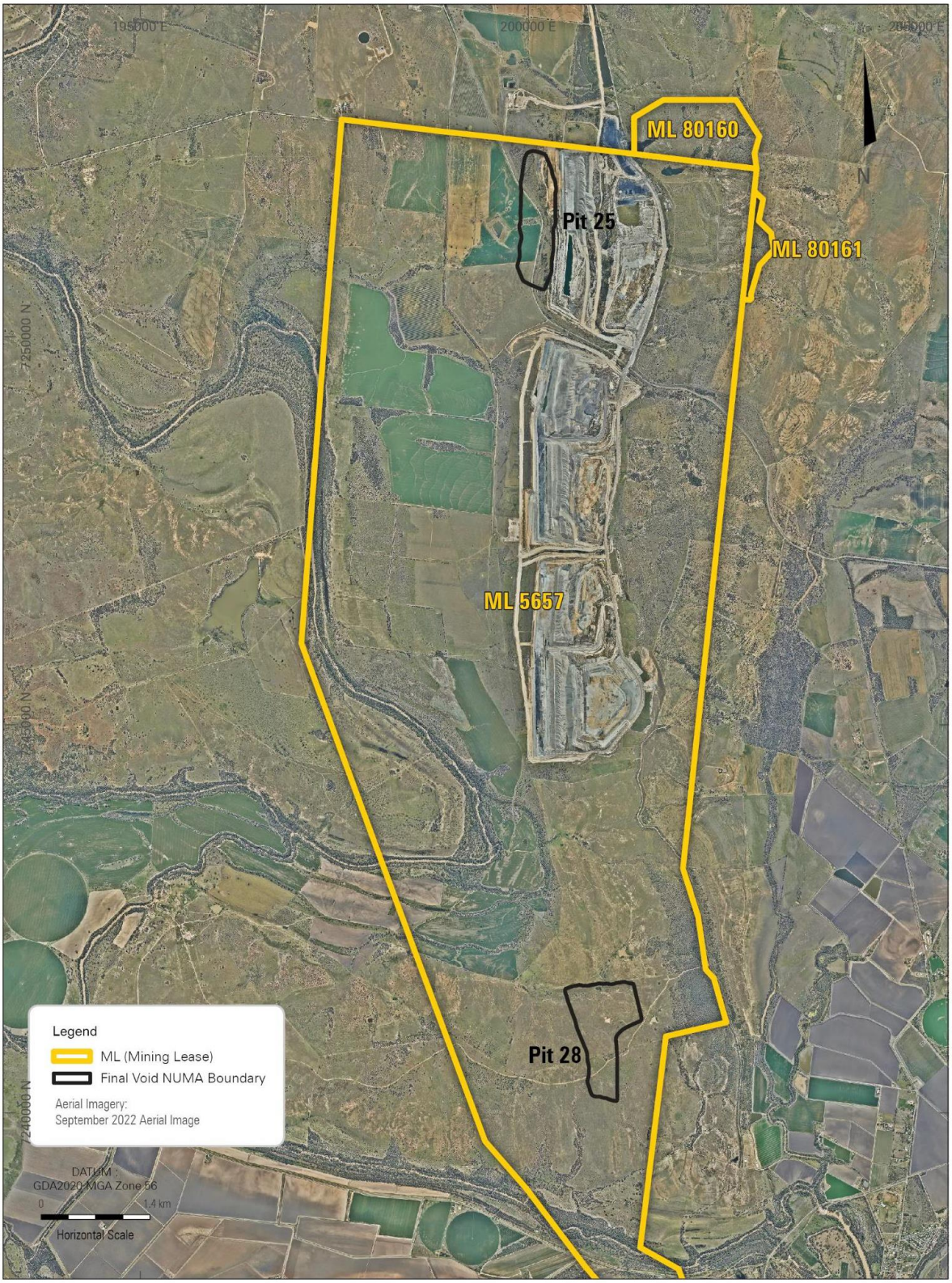


Figure 3 (Approved Progressive Rehabilitation Certification Area)



END OF ENVIRONMENTAL AUTHORITY