Permit

Environmental Protection Act 1994

Environmental authority EPML00844613

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

Environmental authority number: EPML00844613

Environmental authority takes effect on 1 October 2021

Environmental authority holder(s)

Name(s)	Registered address
YARRABEE COAL COMPANY PTY. LTD.	Darling Park Tower 2, Level 18, 201 Sussex Street SYDNEY NSW 2000 Australia

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Resource Activity, Schedule 3, 13: Mining black coal	ML80172, ML80049, ML1770, ML80096, ML80195, ML80198, ML80104, ML80196, ML80197, ML80050.
Resource Activity, Ancillary 63 - Sewage Treatment, 1: Operating sewage treatment works, other than no release works, with a total daily peak design capacity of, (b-i) more than 100 but not more than 1500EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	ML80172, ML80049, ML1770, ML80096, ML80195, ML80198, ML80104, ML80196, ML80197, ML80050.
Resource Activity, Ancillary 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (a) 50t to 2000t	ML80172, ML80049, ML1770, ML80096, ML80195, ML80198, ML80104, ML80196, ML80197, ML80050.
Resource Activity, Ancillary 08 - Chemical Storage, 3: Storing more than 500 cubic metres of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	ML80172, ML80049, ML1770, ML80096, ML80195, ML80198, ML80104, ML80196, ML80197, ML80050.
Resource Activity, Ancillary 08 - Chemical Storage, 1: Storing a total of 50t or more of chemicals of	ML80172, ML80049, ML1770, ML80096, ML80195, ML80198, ML80104, ML80196, ML80197, ML80050.

Environmentally relevant activity/activities	Location(s)
dangerous goods class 1 or class 2, division 2.3 under subsection (1)(a)	
Resource Activity, Ancillary 31 - Mineral processing, 2: Processing, in a year, the following quantities of mineral products, other than coke, (b) more than 100,000t	ML80172, ML80049, ML1770, ML80096, ML80195, ML80198, ML80104, ML80196, ML80197, ML80050.

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

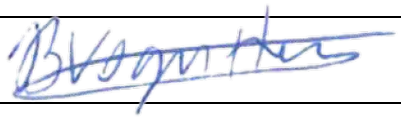
c) otherwise - on the day the authority is issued.

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.

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.

	1 October 2021
Signature	Date

Bianca Voges-Haug
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Date Issued*:* 1 October 2021

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Privacy statement

Pursuant to section 540 of the EP Act, the Department is required to maintain a register of certain documents and information authorised under the EP Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the EP Act. There is no general discretion allowing the Department to withhold documents or information required to be kept on the public register. For more information on the Department's public register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

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).

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 harm.
A2	**Operational Capacity-Coal production** The environmental authority holder is approved for a coal extraction rate of up to **four (4) million tonnes per annum (Mtpa)** of run-of-mine (ROM) ore in accordance with this permit, within each calendar year or alternate twelve-month period as agreed in writing with the administering authority
A3	In carrying out the mining activity authorised by this environmental authority, the holder of this environmental authority must comply with **Figure 1: Approved Surface Disturbance**.
A4	**Prevent and /or minimise likelihood of environmental harm** In carrying out an environmentally relevant activity(ies), 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, must be carried out in a proper manner in accordance with the conditions of this authority.
A5	**Maintenance of measures, plant and equipment** The environmental authority holder must ensure: a) that all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed; b) that such measures, plant and equipment are maintained in a proper condition; and c) that such measures, plant and equipment are operated in a proper manner.
A6	**Monitoring and records** Except where specified otherwise in another condition of this environmental authority, all monitoring records or reports required by this environmental authority must be kept for a period of not less than **five (5) years**.
A7	All records, reports, plans and programs required by this environmental authority, must be made available to the administering authority within **5 business days** of the administering authority's request.
A8	Where monitoring is a requirement of this environmental authority, ensure that a suitably qualified person(s) conducts all monitoring.

A9	**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 which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with, the conditions of this environmental authority.
A10	Within **ten (10) business days** following the initial notification of an emergency or incident, or receipt of monitoring results, whichever is the latter, further written advice must be provided to the administering authority, including the following: a) results and interpretation of any samples taken and analysed b) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm c) proposed actions to prevent a recurrence of the emergency or incident.
A11	**Complaints** The environmental authority holder must record all environmental complaints received about the mining activities including: a) name, address and contact number for of the complainant; b) time and date of complaint; c) reasons for the complaint; d) investigations undertaken; e) conclusions formed; f) actions taken to resolve the complaint; g) any abatement measures implemented; and h) person responsible for resolving the complaint.
A12	The environmental authority holder must, when requested by the administering authority, undertake relevant specified monitoring within a reasonable timeframe nominated or agreed to by the administering authority to investigate any complaint of environmental harm. The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures, where implemented, must be provided to the administering authority within **ten (10) business days** of completion of the investigation, or no later than ten (10) business days after the end of the timeframe nominated by the administering authority to undertake the investigation.
A13	Unless otherwise permitted by the conditions of this environmental authority or with prior approval from the administering authority and in accordance with a relevant standard operating procedure, waste must not be burnt.
A14	The holder of this environmental authority may burn vegetation cleared in the course of carrying out extraction activities provided the activity does not cause environmental harm at any sensitive place or commercial place.

A15	**Tailings disposal** Tailings must be managed in accordance with procedures contained within the Tailings Management Plan. The Tailings Management Plan must include information on the following: a) containment of tailings; b) the management of seepage and leachates both during operation and the foreseeable future; c) the control of fugitive emissions to air; d) a program of progressive sampling and characterisation to identify acid producing potential and metal concentrations of tailings; e) maintaining records of the relative locations of any other waste stored within the tailings f) rehabilitation strategy; and g) monitoring of rehabilitation, research and/or trials to verify the requirements and methods for decommissioning and final rehabilitation of tailings, including the prevention and management of acid mine drainage, erosion minimisation and establishment of vegetation cover.
A16	**Final cover system for out-of pit tailings disposal structures** When the deposition of tailings ceases, the holder of this Environmental Authority must install a final cover system to out-of pit tailings disposal structures in accordance with the design in **Condition F20** which results in no ponding of water and effectively minimising the following: a) infiltration of water into the tailings disposal structure; b) the likelihood of any erosion occurring to either the final cover system, dumped spoil material or deposited tailings; and c) moisture content of the disposed tailings to facilitate safe entry of heavy equipment onto surface of tailings disposal structure.
A17	**Final cover system for in-pit tailings disposal structures** When the deposition of tailings ceases, the holder of this environmental authority must install a final cover system to in-pit tailings disposal structures, so it is safe, stable and non-polluting, complies with best management practice and completion criteria in **Attachment 1: Rehabilitation Requirements**.
A18	The final cover system must include an inert layer to reduce infiltration and an upper/final layer of non-acid forming (NAF) material that is capable of sustaining plant growth.
A19	Accurate records are to be retained on the monthly disposal of tailings and other material in the tailings disposal structure to demonstrate the cumulative volumetric capacity of the structure.
A20	**Landfill** Inert general waste generated by authorised activities must only be disposed of into the waste disposal trench facilities located within mining pits on ML80104, ML1770, ML80049, ML80050, ML80096 and ML80172, and must be disposed in accordance with the Waste Management Plan required in **Condition A21**.

A21	A **Waste Management Plan** must be developed and implemented by a suitably qualified person(s), for all stages of mining activities and reviewed every three (3) years. The Waste Management Plan must include the following: a) a description of the mining activities that may generate mineral waste materials; b) characterisation programs to ensure that the physical properties of the mineral waste are progressively characterised during use and disposal; c) the availability or leachability of metals from the mineral waste; d) waste management control strategies for all wastes, except requirements for tailings management in **Conditions A15** to **A19**, including: a. the types and amounts of wastes generated by the mining activities. b. segregation of the wastes. c. storage of the wastes. d. disposal of the wastes. e. transport of the wastes. f. monitoring and reporting matters concerning the wastes. g. linkage to environmental values and potential environmental impacts. h. control measures for mine operations to minimise likelihood of environmental harm from waste management. e) the hazardous characteristics of all waste generated, including disposal procedures for hazardous wastes; f) a program for reusing, recycling or disposing of all wastes; g) how all wastes will be dealt with in accordance with the waste and resource management hierarchy defined in *Waste Reduction and Recycling Act 2011*, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices in the waste and resource management hierarchy (that is, avoidance, reduction, re-use, recycling, recovery, treatment and disposal); h) a commitment to maintaining records of the relative locations of any inert general waste stored within the waste disposal trench facilities in **Condition A20**; i) procedures for identifying and implementing opportunities to minimise the amount of waste generated, promote efficiency in the use of resources and improve the waste management practices employed at site; j) procedures for dealing with accidents, spills and other incidents; k) details of any accredited management system employed, or planned to be employed, to deal with any waste; l) how often the performance of the Waste Management Plan will be assessed; m) the indicators or other criteria on which the performance of the waste management plan will be assessed; n) staff training and induction to the Waste Management Plan;

	o) contingency plans and emergency response procedures for Waste Management Plan; and p) periodic review of environmental performance and continual improvement of Waste Management Plan.

Schedule B: Air	
Condition number	**Condition**
B1	**Dust nuisance** The environmental authority holder shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the dust and particulate matter emissions generated by the mining activities do not cause exceedances of the following levels when measured at any sensitive or commercial place: a) Dust deposition of 120 milligrams per square metre per day, averaged over 1 month, when monitored in accordance with the most recent version of Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter – Gravimetric method. b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, for no more than 5 exceedances recorded each year, when monitored in accordance with the most recent version of either: i) Australian Standard AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM_{10} high volume sampler with size-selective inlet – Gravimetric method; or ii) Australian Standard AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM_{10} low volume sampler—Gravimetric method. c) A concentration of particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a 1 year averaging time, when monitored in accordance with the most recent version of AS/NZS3580.9.3:2003 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method.

Schedule C: Water	
Condition number	**Condition**
C1	**Contaminant release** Contaminants must not be released to waters, except as permitted under the conditions of this environmental authority.
C2	The release of mine affected water to waters must only occur from the release points specified in **Table C1: Mine affected water release points, sources and receiving waters** and depicted in **Figure 2: Mine affected water release infrastructure** attached to this environmental authority.
C3	The release of mine affected water to internal water management infrastructure installed and operated in accordance with a water management plan that complies with **Condition C27** inclusive is permitted.
C4	The release of mine affected water to waters in accordance with **Condition C2** must not exceed the release limits stated in **Table C2: Mine affected water release limits** when measured at the monitoring points specified in **Table C1: Mine affected water release points, sources and receiving waters** for each quality characteristic.
C5	The release of mine affected water to waters from the release points must be monitored at the locations specified in **Table C1: Mine affected water release points, sources and receiving waters** for each quality characteristics and at the frequency specified in **Table C2: Mine Affected Water Release Limits** and **Table C3: Release Contaminant Trigger Investigation Levels**.

Table C1: Mine affected water release points, sources and receiving waters

Release Point (RP)	Latitude (GDA94)	Longitude (GDA94)	Mine affected water source and location	Monitoring Point for release point	Receiving waters description
RP 1	-23.283315	149.025427	D pit A Pit Dom 2 North	Mobile Pump discharge	Twelve Mile Creek
RP 2	-23.275117	149.033796	C and D pits	Mobile Pump discharge	Twelve Mile Creek
RP 3	-23.267427	149.034174	CE North Pit A Pit Sediment Dams	Mobile Pump discharge	Twelve Mile Creek
RP5	-23.278841	149.029953	Discharge from D Pit	Mobile Pump discharge	Twelve Mile Creek
RP6	-23.258618	149.036077	Yen Pit	Spillway Outlet / Mobile Pump Discharge	Twelve Mile Creek

Table C2: Mine affected water release limits

Quality Characteristic	Release Limits	Monitoring Frequency	Comment
Electrical conductivity (µS/cm)	Release limits specified in **Table C4: Mine affected water release limits** during flow events for variable flow criteria.	Upon commencement, (the first sample must be taken within 2 hours of commencement of release), daily and on cessation of release.	
pH (pH Unit)	6.5 (minimum) 9.0 (maximum)	Upon commencement, (the first sample must be taken within 2 hours of commencement of release), daily and on cessation of release.	
Turbidity (NTU)	Limit to be derived from suspended solids limit and demonstrated correlation between turbidity to suspended solids historical monitoring data for dam water*	Upon commencement, (the first sample must be taken within 2 hours of commencement of release), daily and on cessation of release.	Limit for suspended solids can be omitted if turbidity limit is included. Limit for turbidity not required if suspended solids limit included. Both indicators should be measured in all cases.
Suspended Solids (mg/L)	500	Upon commencement, (the first sample must be taken within 2 hours of commencement of release), daily and on cessation of release.	
Sulphate (SO_4^{2-}) (mg/L)	Release limits specified in **Table C4** for variable flow criteria.	Upon commencement, (the first sample must be taken within 2 hours of commencement of release), daily and on cessation of release.	Drinking water environmental values from NHMRC 2006 guidelines OR ANZECC.

Table C3: Release Contaminant Trigger Investigation Levels

Quality Characteristic	Trigger Levels (µg/L)	Comment on Trigger Level	Monitoring Frequency
Aluminium	55	*For aquatic ecosystem protection, based on SMD guideline*	Upon commencement of release, and thereafter weekly and on cessation of release.
Arsenic	13	*For aquatic ecosystem protection, based on SMD guideline*	
Cadmium	0.2	*For aquatic ecosystem protection, based on SMD guideline*	
Chromium	1	*For aquatic ecosystem protection, based on SMD guideline*	
Copper	2	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Iron	300	*For aquatic ecosystem protection, based on low reliability guideline*	
Lead	3.4	*For aquatic ecosystem protection, based on SMD guideline*	
Mercury	0.2	*For aquatic ecosystem protection, based on LOR for CV FIMS*	
Nickel	11	*For aquatic ecosystem protection, based on SMD guideline*	
Zinc	8	*For aquatic ecosystem protection, based on SMD guideline*	
Boron	370	*For aquatic ecosystem protection, based on SMD guideline*	
Cobalt	1.4	*For aquatic ecosystem protection, based on low reliability guideline*	
Manganese	1900	*For aquatic ecosystem protection, based on SMD guideline*	
Molybdenum	34	*For aquatic ecosystem protection, based on low reliability guideline*	
Selenium	10	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Silver	1	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Uranium	1	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Vanadium	10	*For aquatic ecosystem protection, based on LOR for ICPMS*	
Ammonia	900	*For aquatic ecosystem protection, based on SMD guideline*	
Nitrate	1100	*For aquatic ecosystem protection, based on ambient Qld WQ Guidelines (2006) for TN*	
Petroleum hydrocarbons (C6-C9)	20		
Petroleum hydrocarbons (C10-C36)	100		
Fluoride (total)	2000	*Protection of livestock and short term irrigation guideline*	
Sodium	115,000	*For the prevention of foliar injury in sensitive crops (ANZECC and ARMCANZ 2000)*	

Notes:

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

*2. The quality characteristics required to be monitored as per **Table C3: Release Contaminant Trigger Investigation Levels** can be reviewed once the results of two years monitoring data is available, or if sufficient data is available to adequately demonstrate negligible environmental risk, and it may be determined that a reduced monitoring frequency is appropriate or that certain quality characteristics can be removed from **Table C3** by amendment.*
3. SMD – slightly moderately disturbed level of protection, guideline refers ANZECC & ARMCANZ (2000).
4. LOR – typical reporting for method stated. ICPMS/CV FIMS – analytical method required to achieve LOR.

C6	If quality characteristics of the release exceed any of the trigger levels specified in **Table C3: Release Contaminant Trigger Investigation Levels** during a release event, the environmental authority holder must compare the downstream results in the receiving waters to the trigger values specified in **Table C3: Release Contaminant Trigger Investigation Levels** and: a) where the trigger values are not exceeded then no action is to be taken; or b) where the downstream results exceed the trigger values specified **Table C3: Release Contaminant Trigger Investigation Levels** for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites and; i) if the result is less than the background monitoring site data, then no action is to be taken; or ii) if the result is greater than the background monitoring site data, complete an investigation into the potential for environmental harm and provide a written report to the administering authority within 90 days of receiving the result, outlining: 1) details of the investigations carried out; and 2) actions taken to prevent environmental harm. ***Note:** Where an exceedance of a trigger level has occurred and is being investigated, in accordance with C6(b)(ii) of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.*
C7	If an exceedance in accordance with **Condition C6(b)(ii)(2)** is identified, the holder of the environmental authority must notify the administering authority within seven (7) days of receiving the result.
C8	**Mine Affected Water Release Event** The environmental authority holder must ensure an automatic stream flow gauging station(s) is installed, operated and maintained to determine and record stream flows at the location(s) and flow recording frequency specified in **Table C4: Mine affected water release during flow events**.
C9	The release of mine affected water to waters in accordance with **Condition C2** must only take place during periods of natural flow events in accordance with the receiving water flow criteria for discharge specified in **Table C4: Mine affected water release during flow events for the release point(s)** specified in **Table C1: Mine affected water release points, sources and receiving waters**.
C10	The release of mine affected water to waters in accordance with **Condition C2** must not exceed the maximum release rate (for all combined release point flows) for each receiving water flow criteria for discharge specified in **Table C4: Mine affected water release during flow events** when measured at the monitoring points specified in **Table C1: Mine affected water release points, sources and receiving waters**.

Table C4: Mine affected water release during flow events

Receiving Waters /stream	Release Point (RP)	Gauging Station			Receiving water flow recording frequency	Receiving water flow criteria for discharge (m^3/s)	Maximum release rate (for all combined RP flows)	Electrical conductivity and sulphate release limits
		Name	Latitude (GDA94)	Longitude (GDA94)				
Twelve Mile Creek	RP1	Upstream	-23.315774	148.998104	Continuous (minimum daily)	**Low Flow**		
						< 0.46 m^3/s for a period of 28 days after natural flow events that exceed 0.46 m^3/s	< 0.46 m^3/s	Electrical conductivity: 310 µS/cm; Sulphate (SO_4^{2-}): 250 mg/L
						Medium Flow		
						> 0.46 m^3/s	<0.28 m^3/s	Electrical conductivity: 1500 µS/cm; Sulphate (SO_4^{2-}): 650 mg/L
						>1.0 m^3/s	<0.61 m^3/s	Electrical conductivity: 1500 µS/cm; Sulphate (SO_4^{2-}): 650 mg/L

						>2.0 m^3/s	<0.35 m^3/s	Electrical conductivity: 3500 µS/cm; Sulphate (SO_4^{2-}): 1500 mg/L
						High Flow		
						>4.0 m^3/s	<0.60 m^3/s	Electrical conductivity: 4000 µS/cm; Sulphate (SO_4^{2-}): 2000 mg/L
						>4.0 m^3/s	<0.30 m^3/s	Electrical conductivity: 7000 µS/cm; Sulphate (SO_4^{2-}): 3400 mg/L
						>5.8 m^3/s	<0.30 m^3/s	Electrical conductivity: 10000 µS/cm; Sulphate (SO_4^{2-}): 5000 mg/L

						Very High Flow		
						>10 m^3/s	<0.78 m^3/s	Electrical conductivity: 7000 µS/cm; Sulphate (SO_4^{2-}): 3400 mg/L
						>10 m^3/s	<0.51m $^3/s$	Electrical conductivity: 10000 µS/cm; Sulphate (SO_4^{2-}): 5000 mg/L
Twelve Mile Creek	RP2, RP3, RP5, RP6	Gauging Station 1	-23.278312	149.028958	Continuous (minimum daily)	**Low Flow**		
						< 0.46 m^3/s for a period of 28 days after natural flow events that exceed 0.46 m^3/s	< 0.46 m^3/s	Electrical conductivity: 310 µS/cm; Sulphate (SO_4^{2-}): 250 mg/L
						Medium Flow		
						> 0.46 m^3/s	<0.28 m^3/s	Electrical conductivity: 1500 µS/cm; Sulphate (SO_4^{2-}): 650 mg/L

						>1.0 m^3/s	<0.61 m^3/s	Electrical conductivity: 1500 µS/cm; Sulphate (SO_4^{2-}): 650 mg/L
						>2.0 m^3/s	<0.35 m^3/s	Electrical conductivity: 3500 µS/cm; Sulphate (SO_4^{2-}):1500 mg/L
						High Flow		
						>4.0 m3/s	<0.60 m3/s	Electrical conductivity: 4000 µS/cm; Sulphate (SO_4^{2-}): 2000 mg/L
						>4.0 m^3/s	<0.30 m^3/s	Electrical conductivity: 7000 µS/cm; Sulphate (SO_4^{2-}): 3400 mg/L
						>5.8 m^3/s	<0.30 m^3/s	Electrical conductivity: 10000 µS/cm; Sulphate (SO_4^{2-}): 5000 mg/L

						Very High Flow		
						>10 m^3/s	<0.78 m^3/s	Electrical conductivity: 7000 µS/cm; Sulphate (SO_4^{2-}): 3400 mg/L
						>10 m^3/s	<0.51m $^3/s$	Electrical conductivity: 10000 µS/cm; Sulphate (SO_4^{2-}): 5000 mg/L

C11	The daily quantity of mine affected water released from each release point must be measured and recorded at the monitoring points in **Table C1: Mine affected water release points, sources and receiving waters**, and provided to the administering authority on request
C12	Releases to waters must be undertaken so as not to cause erosion of the bed and banks of the receiving waters, or cause a material build-up of sediment in such waters.
C13	**Notification of release event** The environmental authority holder must notify the administering authority via WaTERS within twenty-four (24) hours after commencing to release mine affected water to the receiving environment. Notification must include the submission of written advice to the administering authority of the following information: a) release commencement date and time; b) details regarding the compliance of the release with the conditions of this environmental authority (that is, contaminant limits, natural flow, discharge volume etc.); c) release point(s); d) release rate; e) release salinity; and f) receiving water(s) including the natural flow rate.
C14	The environmental authority holder must notify the administering authority via WaTERS (within twenty-four (24) hours after cessation of a release event) of the cessation of a release notified under Condition and within twenty-eight (28) days provide the following information in writing: a) release cessation date and time; b) natural flow volume in receiving water; c) volume of water released from each release point; and d) details regarding the compliance of the release with the conditions of agency interest—water of this environmental authority (i.e. contamination limits, natural flow, discharge volume); ***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 C13*** *and* ***C14****, provided the relevant details of the release are included within the notification provided in accordance with* ***Conditions C13*** *and* ***C14****.*
C15	**Notification of release event exceedance** If the release limits defined in **Table C2: Mine Affected Water Release Limits** are exceeded, the environmental authority holder must notify the administering authority via WaTERS within twenty-four (24) hours of receiving the results.

C16	The environmental authority holder must, within twenty-eight (28) days of a release that is not compliant with the conditions of this environmental authority, provide a report to the administering authority 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 in situ and any water quality monitoring results (including all laboratory analyses); f) identification of any environmental harm as a result of the non-compliance; and g) any other matters pertinent to the water release event.
C17	**Receiving environment monitoring and contaminant trigger levels** The quality of the receiving waters must be monitored at the locations specified in **Table C6: Receiving water upstream background sites and downstream monitoring points** for each quality characteristic and at the monitoring frequency stated in **Table C5: Receiving waters contaminant trigger levels**.

Table C5: Receiving waters contaminant trigger levels

Quality Characteristic	Trigger Level	Monitoring Frequency
pH	6.5 – 8.5	Upon commencement, daily and on cessation of release.
Electrical Conductivity (µS/cm)	1000 ***Note**: For protection against toxicity this may need to be reduced in some circumstances e.g. where in close proximity upstream of a drinking water dam or regional waterway.*	
Suspended solids (mg/L)	130[1]	
Sulphate (SO_4^{2-}) (mg/L)	250	
Sodium (µg/L)	115,000	

[1] *Suspended solids limit must be reviewed within twelve (12) months from date of issue of this environmental authority, and the results submitted to the administering authority for review*

Table C6: Receiving water upstream background sites and downstream monitoring points

Receiving Waters Location Description	Latitude (GDA94)	Longitude (GDA94)
Upstream Background Monitoring Point (Twelve Mile Creek)		
Upstream of RP1	-23.315774	148.998104
Downstream Monitoring Point (Twelve Mile Creek)		
Downstream of RP6	-23.254601	149.032498

Note: *The data from background monitoring points must not be used where they are affected by releases from other mines.*

C18	If quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in **Table C5: Receiving waters contaminant trigger levels** during a release event the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and: a) where the downstream result is the same or a lower value than the upstream value for the quality characteristic then no action is to be taken; or b) where the downstream results exceed the upstream results complete an investigation into the potential for environmental harm and provide a written report to the administering authority in the next annual return, outlining: i) details of the investigations carried out; and ii) actions taken to prevent environmental harm. ***Note:*** *Where an exceedance of a trigger level has occurred and is being investigated, in accordance with* ***Condition C18(b)****, no further reporting is required for subsequent trigger events for that quality characteristic.*
C19	**Receiving Environment Monitoring Program (REMP)** The environmental authority holder must develop and implement a 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 Twelve Mile Creek and connected or surrounding waterways within 15km downstream of the release. The REMP should encompass any sensitive receiving waters or environmental values downstream of the authorised mining activity that will potentially be directly affected by an authorised release of mine affected water.

C20	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 C6: Receiving water upstream background sites and downstream monitoring points** of this environmental authority); 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 C2: Mine affected water release limits** and **Table C3: Release Contaminant Trigger Investigation Levels** of this environmental authority; f) include, where appropriate, monitoring of metals/metalloids in sediments (in accordance with ANZECC & ARMCANZ 2000, BATLEY and/or the most recent version of AS5667.1 Guidance on Sampling of Bottom Sediments); g) include, where appropriate, monitoring of macroinvertebrates in accordance with the AusRivas methodology; h) apply procedures and/or guidelines from ANZECC and 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.
C21	A report outlining the findings of the REMP, including all monitoring results and interpretations in accordance with **Conditions C19** and **C20** must be prepared annually and made available on request to the administering authority. This must include an assessment of background reference water quality, the condition of downstream water quality compared against water quality objectives, and the suitability of current discharge limits to protect downstream environmental values.
C22	**Water reuse** Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party (with the consent of the third party).

C23	**Water general** All determinations of water quality and biological monitoring must be performed by an appropriately qualified person.
C24	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 **Condition C27**: 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.
C25	**Annual Water Monitoring Reporting** The following information must be recorded in relation to all water monitoring required under the conditions of this environmental authority and submitted to the administering authority 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.
C26	**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 Department of Natural Resources and Mines *Guideline – Activities in a Watercourse, Lake or Spring associated with Mining Activities* (or its successor).

C27	**Water Management Plan** A Water Management Plan must be developed and implemented by an appropriately qualified person(s) for all stages of the authorised activity on site. The Water Management Plan must be reviewed and submitted to the administering authority for review every three (3) years after 28 February 2018. The Water Management Plan must be developed in accordance with the administering authority's Guideline for Preparing a Water Management Plan 2009 or the latest version and must include: a) a contaminant source study; b) site water balance and model; c) onsite water quality sampling, including stratification sampling of pits used for water storages; d) water management system; e) saline drainage prevention and management measures; f) acid rock drainage prevention and management measures (if applicable); g) erosion and sediment control measures; h) maintenance of water management and erosion and sediment control infrastructure; i) emergency and contingency planning; and j) monitoring and review.
C28	**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.
C29	**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.
C30	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 Water Management Plan required by **Condition C27**; and b) water management infrastructure that is installed and operated, in accordance with a Water Management Plan that complies with **Condition C27**, for the purpose of ensuring water does not become mine affected water.
C31	**Sewage effluent** All effluent released from the sewage treatment facilities must be monitored at the frequency and for the parameters specified in **Table C8: Sewage effluent quality targets for sub-surface irrigation.**

Table C8: Sewage effluent quality targets for sub-surface irrigation

Quality Characteristic	Release Limit	Units	Limit Type	Monitoring Frequency
5-day Biochemical Oxygen Demand (uninhibited)	240	mg/L	Maximum	Monthly
pH	6.0 – 9.0	-	Range	Monthly
Total Suspended Solids	180	Mg/L	Maximum	Monthly

C32	Sewage effluent used for sub-surface irrigation must not exceed sewage effluent release limits defined in **Table C8: Sewage effluent quality targets for sub-surface irrigation.**
C33	Subject to **Conditions C34** to **C35** inclusive, sewage effluent from sewage treatment facilities must not be directly released from the sewage treatment plant to any water way or drainage line.
C34	The daily volume of contaminants released to land must be determined by an appropriate method, for example, a flow meter and records kept of such determinations.
C35	The irrigation of treated effluent must be carried out in a manner such that: a) vegetation is not damaged; b) soil erosion and soil structure damage is avoided; c) there is no surface ponding of effluent; d) percolation of effluent beyond the plant root zone is minimised; e) the capacity of the land to assimilate nitrogen, phosphorus, salts, organic matter as measured by oxygen demand and water is not exceeded; and f) the quality of groundwater is not adversely affected.
C36	Notices must be prominently displayed on any treated effluent irrigation area warning staff and the public that the area is irrigated with treated effluent and not to use or drink the treated effluent. These notices must be maintained in a visible and legible condition.
C37	When conditions prevent the release of treated effluent to land (such as during or following rain events), the contaminants must be directed to a wet weather storage (effluent holding tank) or alternative measures must be taken to store/lawfully dispose of effluent (such as wet weather storage or tanking off site to another treatment plant or sewer). A record must be kept of any removal or discharge off site, including destination, transporter, dates and volumes.

C38	If the responsibility of the treated effluent is given or transferred to another person: a) the responsibility of such effluent must only be given or transferred in accordance with a written agreement (the third party agreement); b) include in the third party agreement a commitment from the person utilising the effluent to use effluent in such a way as to prevent environmental harm or public health incidences and specifically make the persons aware of the General Environmental Duty (GED) under section 319 of the Act, environmental sustainability of any effluent disposal and protection of environmental values of waters; and c) upon being notified or otherwise becoming aware that the person's use of effluent is causing or threatens to cause environmental harm or is posing a human health risk, and if the person does not rectify the situation upon written request, the giving and transferring responsibility for such effluent must cease.
C39	**Groundwater** The environmental authority holder must notify the administering authority as soon as reasonably practicable in the event of mining activities intersecting any groundwater resource.
C40	**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.
C41	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.
C42	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).
C43	**Design and construction of a regulated structure** **Conditions C44** to **C48** inclusive do not apply to existing structures.
C44	All regulated structures must be designed by, and constructed[5] 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.*

C45	Construction of a regulated structure is prohibited unless: a) the holder has submitted a consequence category assessment report and certification to the administering authority; and b) certification for the design, design plan and the associated operating procedures has been certified by a suitably qualified and experienced person in compliance with the relevant condition of this authority.
C46	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.
C47	Regulated structures must: a) be designed and constructed in compliance with 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.
C48	Certification by the suitably qualified and experienced person who supervises the construction must be submitted to the administering authority on the completion of construction of the regulated structure, and state that: a) the 'as constructed' drawings and specifications meet the original intent of the design plan for that regulated structure b) construction of the regulated structure is in accordance with the design plan.
C49	**Notification of affected persons** All affected persons must be provided with a copy of the emergency action plan in place for each regulated structure a) for existing structures that are regulated structures, within 10 business days of this condition taking effect; b) prior to the operation of the new regulated structure; and c) if the emergency action plan is amended, within 5 business days of it being amended.

C50	**Operation of a regulated structure** Operation of a regulated structure, except for an existing structure, is prohibited unless the holder has submitted to the administering authority in respect of regulated structure, all of the following: a) one paper copy and one electronic copy of the design plan and certification of the 'design plan' in accordance with **Condition C46**; b) a set of 'as constructed' drawings and specifications; c) certification of the 'as constructed drawings and specifications' in accordance with **Condition C51**; 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 authority relating to the construction of the regulated structure have been met; f) the holder has entered the details required under this authority, into a Register of Regulated Structures; and g) there is a current operational plan for the regulated structure.
C51	For existing structures that are regulated structures: a) where the existing structure that is a regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the DSA volume across the system, the holder must submit to the administering authority within 12 months of the commencement of this condition a copy of the certified system design plan including that structure; and b) there must be a current operational plan for the existing structures.
C52	Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitated, in compliance with the current operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings.
C53	**Mandatory reporting level** **Conditions C54** to **C55** inclusive only apply to Regulated Structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
C54	The Mandatory Reporting Level (the MRL) must be marked on a regulated dam in such a way that during routine inspections of that dam, it is clearly observable.
C55	The holder must, as soon as practicable but 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.
C56	The holder must, immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised discharge from the regulated dam.
C57	The holder must record any changes to the MRL in the Register of Regulated Structures.

C58	**Design storage allowance** The holder must assess the performance of each regulated dam or linked containment system over the preceding November to May period based on actual observations of the available storage in each regulated dam or linked containment system taken prior to 1 July of each year.
C59	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).
C60	The holder must, as soon as practicable but within forty-eight (48) hours of becoming aware that the regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, notify the administering authority.
C61	The holder must, immediately on becoming aware that a regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on 1 November of any year, act to prevent the occurrence of any unauthorised discharge from the regulated dam or linked containment systems.
C62	**Annual inspection report** Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.
C63	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 a recommendations section, with any recommended actions to ensure the integrity of the regulated structure or a positive statement that no recommendations are required.
C64	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).
C65	The holder must within twenty (20) business days of receipt of the annual inspection report, provide to the administering authority: a) The recommendations section of the annual inspection report; and b) If applicable, any actions being taken in response to those recommendations; and c) If, following receipt of the recommendations and (if applicable) recommended actions, the administering authority requests a copy of the annual inspection report from the holder, provide this to the administering authority within ten (10) business days[6] of receipt of the request.
C66	**Transfer arrangements** The holder must provide a copy of any reports, documentation and certifications prepared under this authority, including but not limited to any Register of Regulated Structures, consequence assessment, design plan and other supporting documentation, to a new holder on transfer of this authority.

C67	**Decommissioning and rehabilitation** Regulated structures must not be abandoned but be either: a) decommissioned and rehabilitated to achieve compliance with **Condition C68**; or b) be left in-situ for a use by the landholder 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 use(s); and c) the holder of the environmental authority and the landholder agree in writing that the; i) dam will be used by the landholder following the cessation of the environmentally relevant activity(ies); and ii) landholder is responsible for the dam, on and from an agreed date.
C68	Before surrendering this environmental authority, the site must be rehabilitated to achieve a safe, stable, non-polluting landform and the final land use as required by final landform design plan in **Condition F20**.
C69	**Register of Regulated Structures** A Register of Regulated Structures must be established and maintained by the holder for each regulated structure.
C70	The holder must provisionally enter the required information in the Register of Regulated Structures when a design plan for a regulated dam is submitted to the administering authority.
C71	The holder must make a final entry of the required information in the Register of Regulated Structures once compliance with **Conditions C50** and **C51** has been achieved.
C72	The holder must ensure that the information contained in the Register of Regulated Structures is current and complete on any given day.
C73	All entries in the Register of Regulated Structures must be approved by the chief executive officer for the holder of this authority, or their delegate, as being accurate and correct.
C74	The holder must, at the same time as providing the annual return, supply to the administering authority a copy of the records contained in the Register of Regulated Structures, in the electronic format required by the administering authority.
C75	**Transitional arrangements** All existing structures that have not been assessed in accordance with either the Manual or the former *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams* must be assessed and certified in accordance with the Manual within 6 months of amendment of the authority adopting this schedule.
C76	All existing structures must subsequently comply with the timetable for any further assessments in accordance with the Manual specified in **Table C11: Transitional hydraulic performance requirements for existing structures**, depending on the consequence category for each existing structure assessed in the most recent previous certification for that structure.

C77	**Table C11: Transitional hydraulic performance requirements for existing structures** ceases to apply for a structure once any of the following events has occurred: a) it has been brought into compliance with the hydraulic performance criteria applicable to the structure under the Manual; or b) it has been decommissioned; or c) it has been certified as no longer being assessed as a regulated structure.
C78	Certification of the transitional assessment required by **Conditions C75** and **C76** (as applicable) must be provided to the administering authority within 6 months of amendment of the authority adopting this schedule.

Table C11: Transitional hydraulic performance requirements for existing structures

Compliance with criteria	High consequence	Significant consequence	Low consequence
>90% and a history of good compliance performance in last 5 years	No transition required	No transition required	No transitional conditions apply. Review consequence assessment every 7 years.
>70%-≤90%	Within 7 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 10 years, unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	No transitional conditions apply. Review consequence assessment every 7 years.
>50-≤70%	Within 5 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Within 7 years unless otherwise agreed with the administering authority, based on no history of unauthorised releases.	Review consequence assessment every 7 years.
≤50%	Within 5 years 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.
Regulated levee designed to prevent the ingress of clean flood water <100% compliant[7]	Within 5 years unless otherwise agreed with the administering authority.		

Schedule D: Noise	
Condition number	**Condition**
D1	**Noise nuisance** Noise from activities must not cause an environmental nuisance at any noise sensitive or commercial place.
D2	All noise from activities must not exceed the levels specified in **Table D1: Noise level limits** at any noise affected place.
D3	**Noise monitoring** When requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within fourteen (14) days to the administering authority. Monitoring must include: a) $L_{A\ 10,\ adj,\ 10\ mins}$; b) $L_{A\ 1,\ adj,\ 10\ mins}$; c) the level and frequency of occurrence of impulsive or tonal noise; d) atmospheric conditions including wind speed and direction; e) effects due to extraneous factors such as traffic noise; and f) location date and time of recording.
D4	Noise is not considered to be a nuisance under **Condition D1** if monitoring shows that noise does not exceed the following levels in the time periods specified in **Table D1: Noise level limits**.

Table D1: Noise level limits

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

***Note**: "B/g" means background noise.*

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D5	The method of measurement and reporting of noise monitoring must comply with the latest edition of the administering authority's *Noise Measurement Manual*.
D6	If monitoring indicates exceedance of the relevant limits in **Table D1: Noise level limits** then the environmental authority holder must: a) address the complaint including the use of appropriate dispute resolution if required; and b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.
D7	**Vibration nuisance** Vibration from the authorised mining activities must not cause an environmental nuisance, at any sensitive or commercial place.
D8	When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within fourteen (14) days to the administering authority following completion of monitoring.
D9	**Airblast overpressure nuisance** The airblast overpressure level from blasting operations on the premises must not exceed the limits defined in **Table D2: Airblast overpressure level** at any nuisance sensitive or commercial place.

Table D2: Airblast overpressure level

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

D10	When requested by the administering authority, airblast overpressure monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of an authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within fourteen (14) days to the administering authority following completion of monitoring.
D11	Airblast overpressure monitoring 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.
D12	If monitoring indicates exceedance of the relevant limits in **Table D2: Airblast overpressure level**, then the environmental authority holder must: a) address the complaint including the use of appropriate dispute resolution if required; and b) immediately implement airblast overpressure abatement measures so that airblast overpressure from the activity does not result in further environmental nuisance.
D13	The method of measurement and reporting of airblast overpressure levels must comply with the latest edition of the administering authority's *Noise Measurement Manual*.

Schedule F: Land	
Condition number	**Condition**
F1	**Preventing contaminant release to land** Contaminants must not be released to land unless authorised by a condition of this environmental authority.
F2	**Topsoil** Topsoil must be strategically stripped ahead of mining and managed for effective use to progressively rehabilitate over time, in accordance with a **Topsoil Management Plan**.
F3	**Rehabilitation** Land disturbed by the authorised mining activities must be rehabilitated to a safe, stable and non-polluting landform, with a self-sustaining vegetation cover and in accordance with: a) **Figure 5: Final Land Use**; b) Landform design criteria, including end of mine design as per **Condition F20**; and c) **Attachment 1: Rehabilitation Requirements**.

F4	**Rehabilitation Management Plan** The Rehabilitation Management Plan must be developed, implemented and reviewed by a suitably qualified and experienced person and reviewed every three years. The Rehabilitation Management Plan must include at a minimum: a) map existing areas of rehabilitation; b) inventory and map of onsite topsoil stockpiles; c) develop design objectives for rehabilitation of disturbed areas and final land uses across the mine; d) specify spoil characteristics, soil analysis, soil separation for use on rehabilitation; e) detail rehabilitation methods applied to all disturbed areas, including exploration sites in **Condition F16**; f) contain landform design criteria including end of mine design; g) detail how landform design will be consistent with the surrounding topography; h) identify rehabilitation success criteria for each domain and itemise re-vegetation criteria in **Attachment 1: Rehabilitation requirements**; i) explain planned native vegetation rehabilitation areas and corridors; j) identify references sites in accordance with **Condition F15**; k) describe rehabilitation indicators and the linkage to the Rehabilitation Monitoring Program in **Condition F7**; l) develop a contingency plan for rehabilitation maintenance or redesign; m) describe end of mine landform design plan in Condition F20 and final land uses across the mine in Attachment 1: Rehabilitation requirements; n) the health and resilience of native vegetation cover; and o) include a cost benefit analysis / triple bottom line assessment (or an alternative assessment method) of the proposed landform design criteria in Condition F20 and alternatives.

Table F1: Residual Void Design[1]

Void Identification	Void high wall competent rock maximum slope (degrees)	Void high wall incompetent rock maximum slope (degrees)	Void low wall competent rock maximum slope (degrees)	Void low wall incompetent rock maximum slope (degrees)	Void Maximum Depth (m)	Void Maximum Area (ha)	Void Maximum Volume (Mm^3)
A-Pit	70	45	37	37	126	127	133
CE-North	70	45	37	37	58	54	28
DOM1[2]	70	45	37	37	10	52	5
DOM2N	70	45	37	37	160	94	122
DOM2S	70	45	37	37	121	43	46
DOM3	70	45	37	37	38	13	5
DOM5[3]	70	45	37	37	74	122	76
DOM6	70	45	37	37	85	22	17
YEN-Pit	70	45	37	37	202	212	406
YES-Pit	70	45	37	37	170	169	259

Notes:

*1. Geotechnical review of residual void design for highwalls and low walls in **Table F1**, can be undertaken in final landform design plan in **Condition F20** to ensure the final slope profiles achieve a safe and stable landform.*

2. Includes tailings disposal structure.

3. The extent of DOM5 residual void includes the consolidated extent of DOM5N, DOM5S and DOM4 mine voids.

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F5	**Residual void outcome** Residual voids must comply with the following outcomes: a) Residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the residual void itself and subject to any other condition within this environmental authority; b) Residual voids must comply with **Table F1: Residual Void Design** and **Figure 3: Void Outcomes;** c) Final landform of residual voids should comply with design plan in **Condition F20**; and d) Rehabilitation requirements for residual voids are to comply with **Attachment 1: Rehabilitation requirements**.
F6	The rehabilitated landform criteria for residual void outcomes must be reviewed every three (3) years. The residual void outcomes must at a minimum include the following: a) a study of options available for minimising final void area and volume; b) develop design criteria for rehabilitation of final voids; c) a void hydrology study, addressing the long-term water balance in the voids, connections to groundwater resources and water quality parameters in the long term; d) a pit wall stability study, considering the effects of long-term erosion and weathering of the pit wall and the effects of significant hydrological events; e) a study of void capability to support native flora and fauna; and f) a proposal/s for end of mine void rehabilitation success criteria and final void areas and volumes.
F7	**Rehabilitation Monitoring Program** The holder of the environmental authority must conduct a Rehabilitation Monitoring Program on a yearly basis, which must include sufficient spatial and temporal replication to enable statistically valid conclusions as established under the rehabilitation program.
F8	The Rehabilitation Monitoring Program must be developed and implemented by a suitably qualified person.
F9	The Rehabilitation Monitoring Program, including results, must be made available to the administering authority upon request and reviewed every three (3) years, describing: a) how the rehabilitation objectives in **Attachment 1: Rehabilitation requirements** will be achieved; and b) verification of rehabilitation success by monitoring completion criteria in **Attachment 1: Rehabilitation requirements**.

F10	**Post Closure Management Plan** A Post Closure Management Plan for the site must be prepared at least eighteen (18) months prior to the final coal processing on site and implemented for a nominal period of: a) at least thirty (30) years following final coal processing on site; or b) a shorter period if the site is proven to be geotechnically and geochemically stable and it can be demonstrated to the satisfaction of the administering authority that no release of contaminants from the site will result in environmental harm.
F11	The Post Closure Management Plan must include the following elements: a) operation and maintenance of: i) wastewater collection and reticulation systems; ii) wastewater treatment systems; iii) the groundwater monitoring network; iv) final cover systems; and v) vegetative cover. b) monitoring of: i) surface water quality; ii) groundwater quality; iii) seepage rates; iv) erosion rates; v) the integrity and effectiveness of final cover systems; and vi) the health and resilience of native vegetation cover.
F12	**Storage and handling of flammable and combustible liquids** All flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the latest version of Australian Standard (*AS) 1940 – Storage and Handling of Flammable and Combustible Liquids*.
F13	Spillage of all flammable and combustible liquids must be controlled in a manner that prevents environmental harm.
F14	**Acid rock drainage and leachate management** Subject to the release limits defined in **Schedule C: Water** of this environmental authority, all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater.

F15	**Reference Sites** A range of reference sites are to be chosen to assess the applicable criteria in **Attachment 1: Rehabilitation requirements**. The reference sites must be: a) Located outside of rehabilitation zone and recorded to have latitude and longitude coordinates (GDA94); b) Provide a useful comparison of rehabilitation requirements for each mine domain/secondary domain and land uses in **Attachment 1: Rehabilitation requirements**; c) Have similar conditions and circumstances to facilitate the comparison such as natural sites, grazing sites and listed regional ecosystems (REs); d) Have similar geographical location and landform to the mine domain/secondary domain and land uses in **Attachment 1: Rehabilitation requirements** and landform to minimise any differences due to weather/rainfall, climate, aspect and year-to-year naturally occurring regular and irregular climatic events; e) Have similar physical factors and landform including topography, slope length and gradient to ensure comparison is as representative as possible; and f) Have similar other relevant factors such as soil type, chemical, biological, ecological and erosional factors to ensure comparison is as representative as possible.
F16	**Exploration** Disturbance due to exploration activities must be rehabilitated in accordance with provisions detailed in the *Eligibility criteria and standard conditions for exploration and mineral development projects* (ESR/2016/1985) or its successor.
F17	**Flood Protection Structures** Design requirements for the flood protection structures and adjacent mining excavation at final land use must meet the following: a) the design level of the flood protection structures crest must be at least 1 in 1,000 AEP flood event for Twelve Mile Creek and other adjacent watercourses; and b) final landform slopes of flood protection structures must remain stable and are to be designed with a factor of safety of 1.2 or above (calculated from the flood protection structure toe) based on a certified stability analysis in the final landform design plan as per **Condition F20**. ***Note:*** *Flood protection structures are a final land use and do not include temporary levees or regulated structures during operation.*

F18	Design requirements for the flood protection structures and adjacent mining excavation must: a) not result in increased erosion of the bank or bed of Twelve Mile Creek and adjacent tributaries; b) not significantly impact upon existing riparian/remnant vegetation or final land use in **Attachment 1: Rehabilitation requirements** such as Twelve Mile Creek Permanent Diversion, grazing and/or native vegetation including riparian; and c) remain stable during, with no active erosion following, flood events up to and including 1 in 1,000 AEP event. ***Note:*** *This does not include areas completed before 30 September 2021*.
F19	As part of rehabilitation details in **Attachment 1: Rehabilitation requirements** the flood protection structures are to be retained and developed into a landform that supports a final land use of native vegetation and/or grazing.
F20	**Final Landform Design Plan** A final landform design plan must be developed, implemented and reviewed by a suitably qualified and experienced person(s). The final landform design plan must: a) include final landform design criteria including end of mine design resulting from **Conditions F4** and **F6**; b) achieves the final landforms and final land uses in **Attachment 1: Rehabilitation requirements**, **Figure 4: Mine Domains and Final Land Uses** and **Figure 5: Final Land Use**; c) be based on a risk assessment of failure, effectiveness of control measures and any potential contamination issues that may impact environmental values. d) include an assessment of risks and requirements needed to incorporate any current or future regulated structure into the landform and final land use in **Attachment 1: Rehabilitation requirements** including flood protection structures in **Condition F17**; and e) be reviewed following a material change in mine planning or mining sequence. ***Note:*** *This does not include areas completed before 30 September 2021.*
F21	The final landform as per the final landform design plan in **Condition F20** is to be supported by a set of certified ‘as built’ drawings and specifications for all landforms discussed in **Attachment 1: Rehabilitation requirements** and **Figure 4: Mine Domains and Final Land Uses**. These ‘as built’ drawings and specifications must state that the 'as built' landform is in accordance with the specifications and/or intent of the final landform design plan in **Condition F20** and **Attachment 1: Rehabilitation requirements.** ***Note:*** *This does not include areas completed before 30 September 2021.*

Schedule H – Biodiversity	
Condition	**Condition**
H1	Significant residual impacts to prescribed environmental matters outside of the approved surface disturbance in **Figure 1: Approved Surface Disturbance** are not authorised under this environmental authority.
H2	All areas within mining lease will be managed to reduce the spread of weeds and pests including both disturbed and undisturbed areas.

Definitions

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

"accepted engineering standards" in relation to dams, means those standards of design, construction, operation and maintenance that are broadly accepted within the profession of engineering as being good practice for the purpose and application being considered. In the case of dams, the most relevant documents would be publications of the Australian National Committee on Large Dams (ANCOLD), guidelines published by Queensland government departments, and relevant Australian and New Zealand Standards.

"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.

"AEP" means the Annual Exceedance Probability, which is the probability that at least one event in excess of a particular magnitude will occur in any given year.

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

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

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

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

a) against recommendations contained in previous annual inspections reports;

b) against recognised dam safety deficiency indicators;

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

d) for conformance with the conditions of this authority;

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

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

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

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

"assessment", "assessed" or **"assess"** by a suitably qualified and experienced person in relation to a hazard 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 at any time:

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

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.

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

"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.

"blasting" means the use of explosive materials to fracture-

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

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

"certification" or "certified" by a suitably qualified and experienced person in relation to a design plan or an annual report regarding dams, 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 at any time:

a) exactly what is being certified and the precise nature of that certification;

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

c) the relevant data and facts on which the certification 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 certification has been based using the relevant data and facts, and the relevant criteria.

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

"completion criteria" means the measures by which actions implemented to create rehabilitation can be deemed to be complete. The completion criteria indicate the success of the decommissioning and rehabilitation outcomes or remediation of areas which have been significantly disturbed by the environmentally relevant activities. Completion criteria may include information regarding:

a) stability of final land forms in terms of settlement, erosion, weathering, pondage and drainage;

b) control of geochemical and contaminant transport processes;

c) quality of runoff waters and potential impact on receiving environment;

d) vegetation establishment, survival and succession;

e) vegetation productivity, sustained growth and structure development;

f) fauna colonisation and habitat development;

g) 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;

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

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

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

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

"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.

"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 (ESR/2016/1933)*.

"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 is designed to contain, divert or control 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" means an available volume, estimated in accordance with the Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933) 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.

"development approval" means a development approval under the *Planning Act 2016* (or under the repealed *Sustainable Planning Act 2009 or Integrated Planning Act 1997*) in relation to a matter that involves an environmentally relevant activity under the *Environmental Protection Act 1994*.

"effluent" means treated waste water discharged from sewage treatment plants.

"EC" means electrical conductivity.

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

"existing structure" means a structure that prior to 20 November 2017 meets any or both of the following, a structure:

a) with a design that is in accordance with the ESR/2016/1934, Version 8.00, Effective: 05 July 2017 Manual for Assessing Consequence Categories and Hydraulic Performance of Structures and that is considerably in progress; and

b) that is under considerable construction or that is constructed.

"extreme storm storage" means a storm storage allowance determined in accordance with the criteria in the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)* published by the administering authority.

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

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

"flowable substance" means matter or a mixture of materials which can 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.

"general waste" means generally, waste other than regulated waste, as in Environmental Protection Regulation 2019 Schedule 19.

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

"hazard 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 Site Water Management Technical Guideline for Environmental Management of Exploration and Mining in Queensland (DME 1995).*

Holder means:

a) where this document is an environmental authority, any person who is the holder of, or is acting under, that environmental authority; or

b) where this document is a development approval, any person who is the registered operator for that development approval.

"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 (ESR/2016/1933)*.

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

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

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

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

"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 (ESR/2016/1933)*.

"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 (ESR/2016/1933)* published by the administering authority.

"manual" means the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)* published by the administering authority, as amended from time to time.

"mg/L" means milligrams per litre.

"mine affected water"

a) means the following types of water:

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

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

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

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

v) groundwater from the mine's dewatering activities;

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

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

"mineral waste materials" means spoil (i.e. waste rock/overburden) and reject material (i.e. coarse and fine rejects/tailings) produced from operations at Yarrabee Coal Mine and disposed of or stored on-site.

"modification" or "modifying" (see definition of 'construction').

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

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

"Non-acid forming" (NAF) means geochemical classification criterion for a sample that would not generate acid conditions. A sample classified as NAF may, or may not, have a significant sulfur content but the availability of neutralising material within the sample is more than adequate to neutralise all the acid that theoretically could be produced by any contained sulfide minerals. Material classified as NAF is considered unlikely to be a source of acidic drainage.

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

"operational plan" includes:

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

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

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

"receiving environment" means all groundwater and surface water, land and sediments that are not disturbed areas authorised by this environmental authority.

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

"register of regulated structures" includes**:**

a) Date of entry in the register;

b) Name of the structure, 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 (ESR/2016/1933)*;

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); and
   viii. Mandatory reporting level (metres AHD);

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

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

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

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

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

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

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

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

"regulated structure" means any structure in the significant or high consequence category as assessed using the *Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933)* published by the administering authority. A regulated structure does not include:

a) a fabricated or manufactured tank or container, designed and constructed to an Australian Standard that deals with strength and structural integrity of that tank or container;

b) a sump or earthen pit used to store residual drilling material and drilling fluid only for the duration of drilling and well completion activities;

c) a flare pit.

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

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

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

"residual drilling material" means waste drilling materials including muds and cuttings or cement returns from well holes and which have been left behind after the drilling fluids are pumped out.

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

"saline drainage" means the movement of waters, contaminated with salt(s), as a result of the mining activity.

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

b) a motel, hotel or hostel; or

c) an educational institution; or

d) a medical centre or hospital; or

e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or

f) a public park or gardens.

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

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

"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 person" in relation to rehabilitation means one who holds relevant professional qualifications to the satisfaction of the administering authority; AND demonstrated knowledge, experience and expertise in relevant fields as set out below:

a) rehabilitation practices for resource activities; and

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

i. coal mine site rehabilitation;
ii. development of rehabilitation management plans and monitoring programs; and
iii. Assessment of rehabilitation performance indicators in the resources industry.

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

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

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

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

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

"the Act" means the *Environmental Protection Act 1994*.

"void" means any constructed, open excavation in the ground.

"waste and resource management hierarchy" has the meaning in Section 9 of the *Waste Reduction and Recycling Act 2011*.

"watercourse" has the meaning in Schedule 4 of the *Environmental Protection Act 1994* and means:

1) 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.

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

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

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

"water year" means the 12-month period from 1 July to 30 June.

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

"µS/cm" means microsiemens per centimetre.

"µg/L" means micrograms per litre.

Figure 1: Approved Surface Disturbance

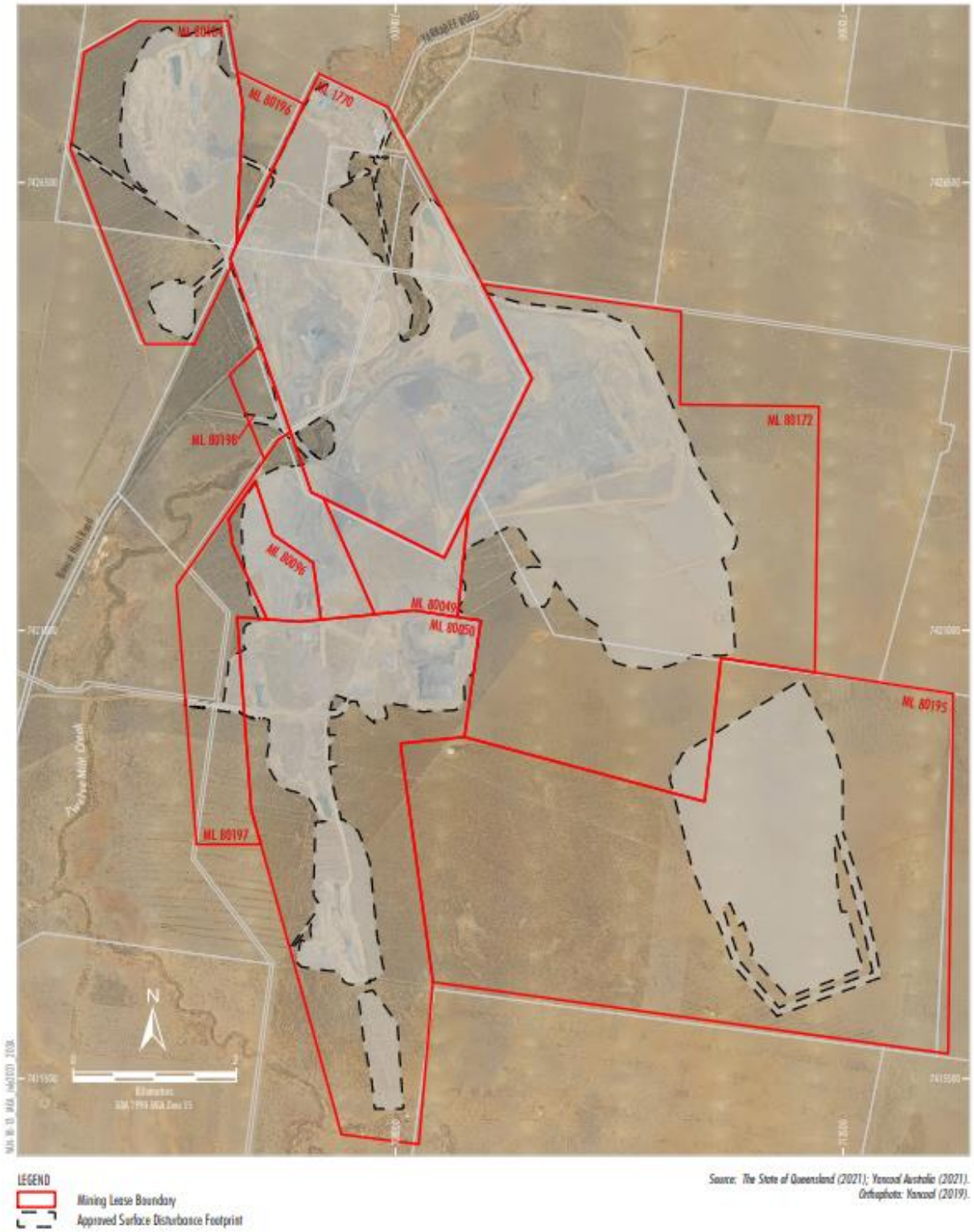


Figure 2: Mine affected water release infrastructure

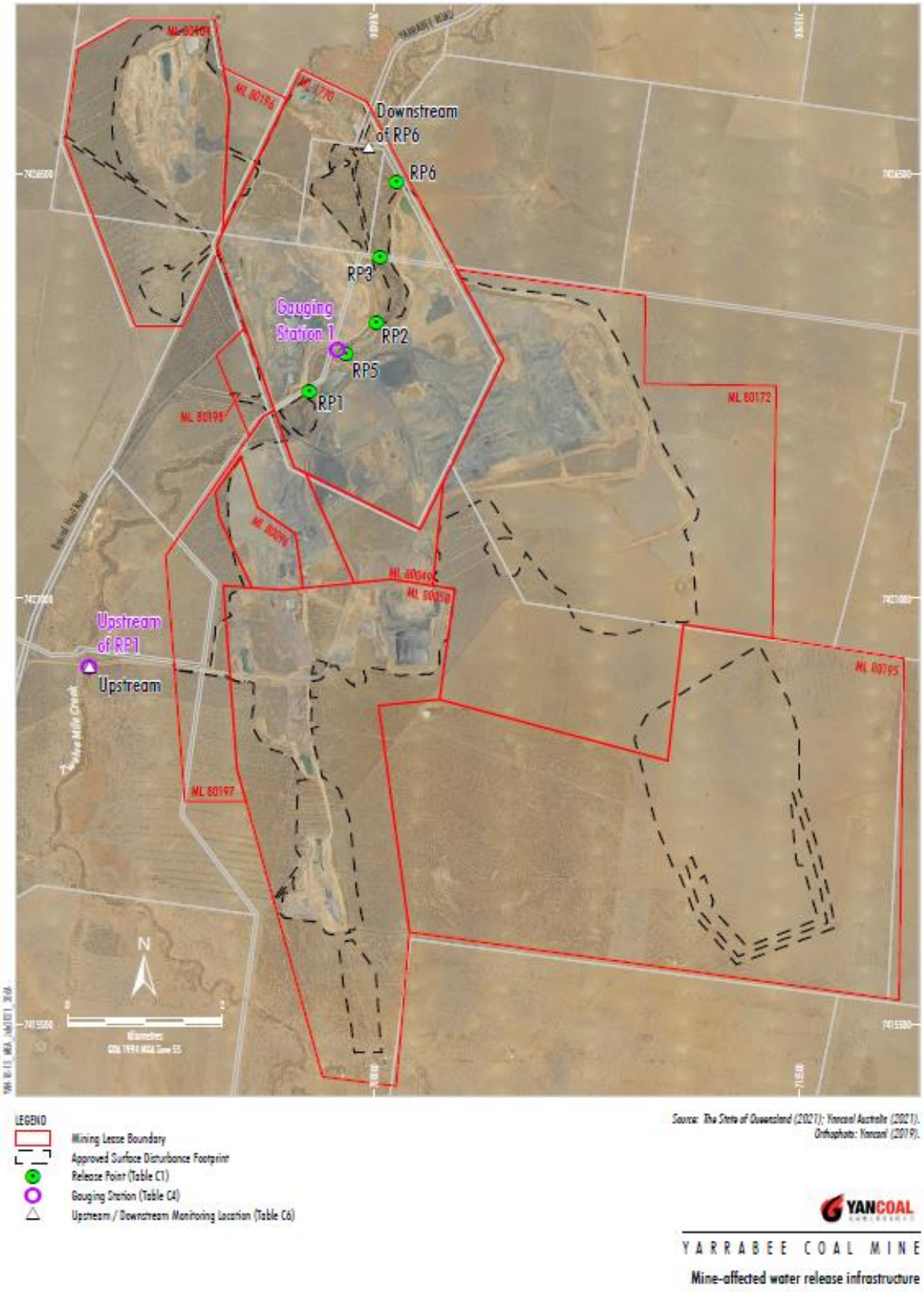


Figure 3: Void Outcomes

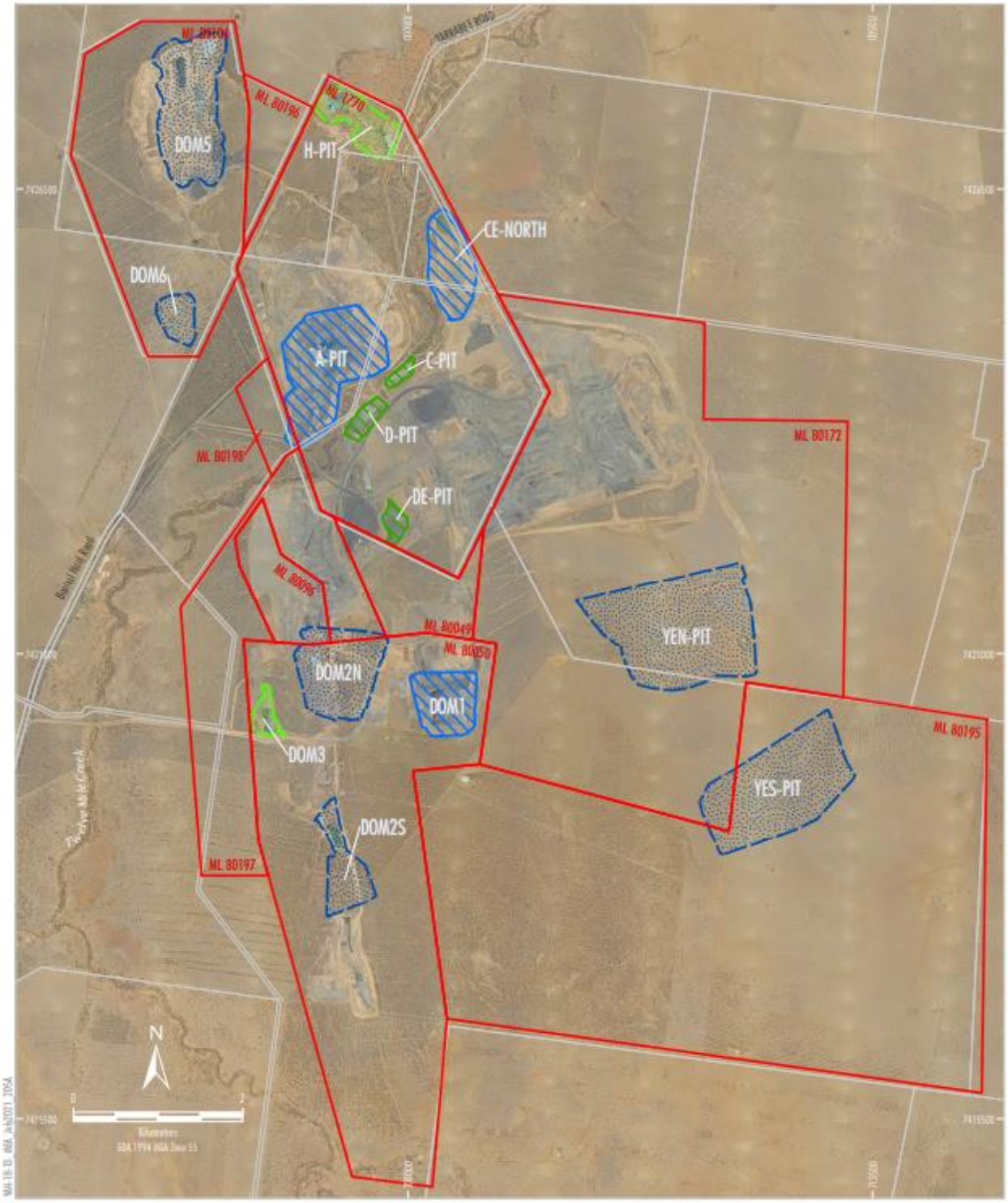


Figure 4: Mine Domains and Final Land Uses

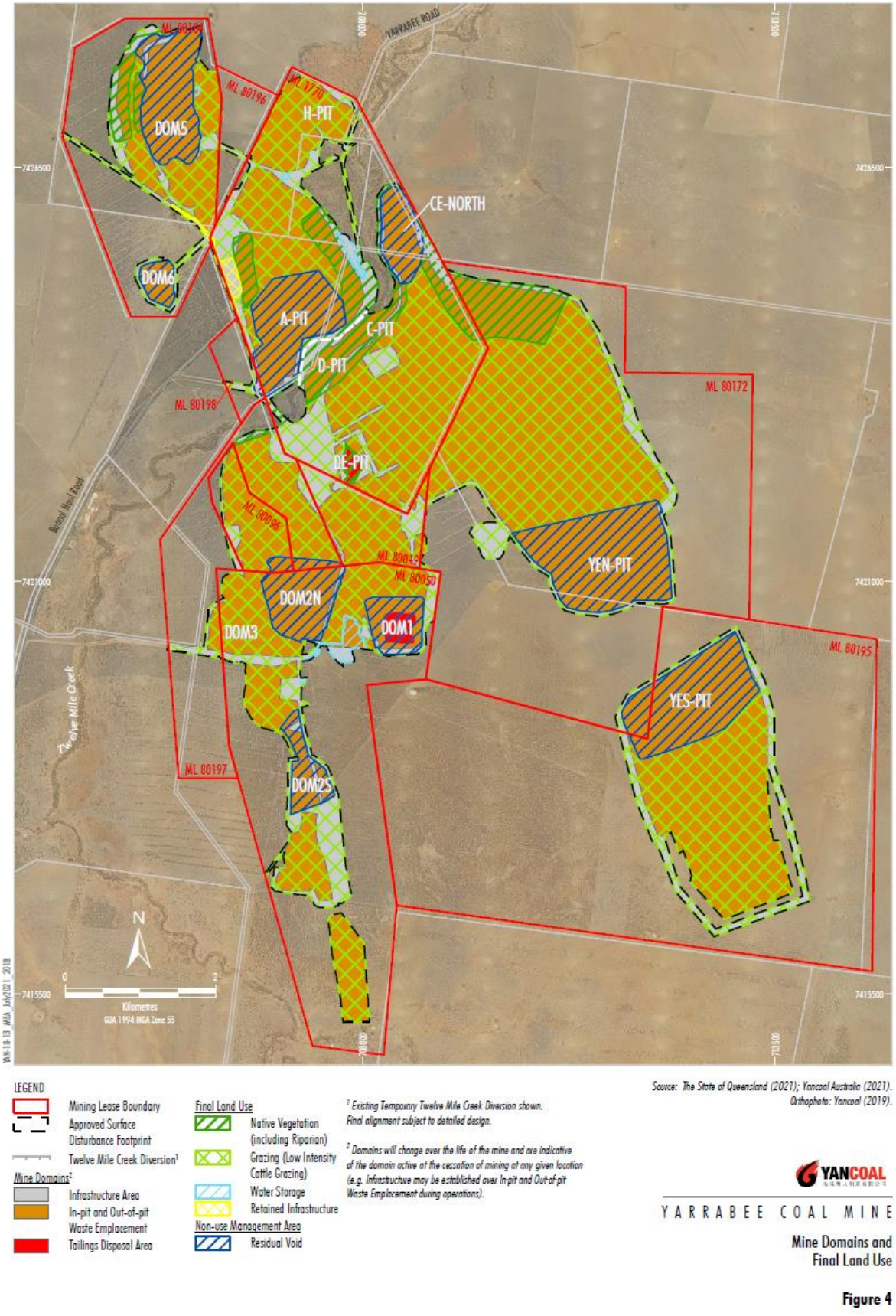
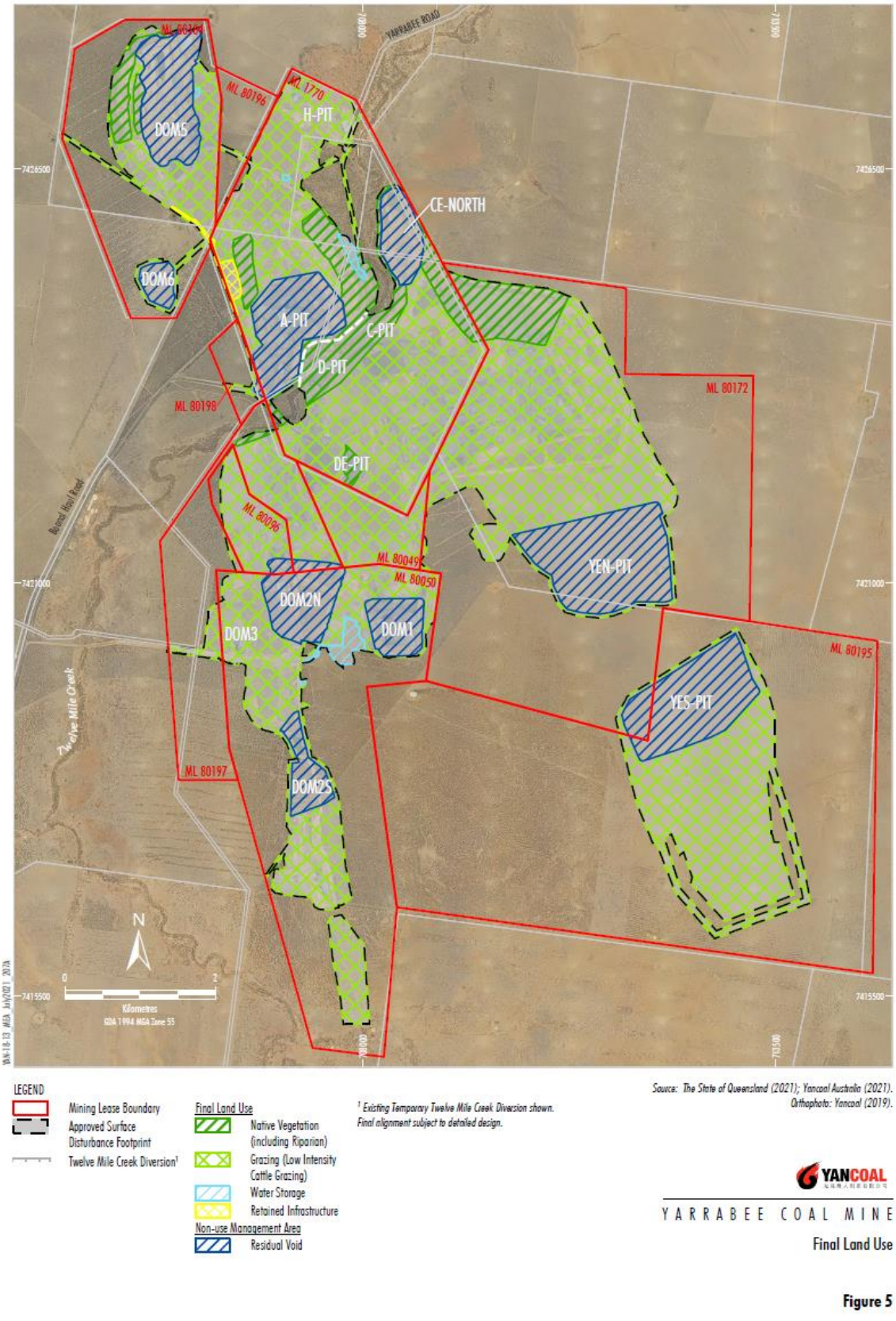


Figure 5: Final Land Use



Attachment 1: Rehabilitation requirements

Mine Domain	Rehabilitation Domain	Final Land Use	Rehabilitation Goal	Rehabilitation Objectives	Rehabilitation Indicators	Completion Criteria
In-pit and Out-of-pit Waste Emplacement	Voids - Completely backfilled with spoil	Grazing	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that there is no exposed hazardous material.	• The hazards in the grazing land must have no significant difference to hazards in grazing land in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings to completely backfill void to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	• Voids will be backfilled to ground level or higher (for settlement) and self-draining, according to design plan in **Condition F20**. • Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 12.5% based on chemical and physical characteristics of local site.

						• Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • No active rill, piping or gully erosion. • Erosion rates comparable to reference sites as determined by **Condition F15**.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining grazing final land use.	Establishment of adequate pasture vegetation cover and diversity. Material characterisation of soil conducted. Pasture vegetation to be resilient to disease, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils, capable of sustaining grazing activities and suitable for providing stabilising groundcover.

						• Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • Vegetation dominated by pasture grass and legume species. • >70% palatable perennial pasture cover. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Class 4 or improved land suitability outcomes[1]. • Capable of supporting sustainable (light intensity) grazing, with stocking rates comparable to reference sites determined by **Condition F15**.
In-pit and Out-of-pit Waste Emplacement	Voids - Completely backfilled with spoil	Native Vegetation	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of site contaminated land investigation confirm that there is no exposed hazardous material.	• The hazards in the native vegetation must have no significant difference to hazards in local regional ecosystems in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Records retained of 'as built' drawings to completely backfill void to certify that it is operating in accordance with landform and mine

						closure design and associated criteria in **Condition F20**. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	• Voids will be backfilled to ground level or higher (for settlement) and self-draining, according to design plan in **Condition F20**. • Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 25% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • No active rill, piping or gully erosion. • Erosion rates comparable to reference sites determined by **Condition F15**.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**

			Able to sustain a final land use	Meets a self-sustaining native vegetation final land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.	Establishment of adequate locally native vegetation cover and diversity. Vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative). • Pest and weed density comparable to reference site determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
In-pit and Out-of-pit Waste Emplacement	Voids - Partially Backfilled with Spoil Including Wall and Floor Contouring/Shaping	Residual Void	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated	• Suitable bunding, security fencing and signage installed around entire perimeter and up to high wall. • Access is prohibited to final voids by bund wall with a minimum height of 2 m, a minimum base width of 4 m and be located at least 10 m beyond

					land investigation confirm that no exposed hazardous material (geochemistry). No access to steep zones (angle of repose or greater).	the area potentially affected by any instability of the pit edge or a fence. • A suitability qualified geotechnical engineer certifies that low walls, high walls and end wall slopes are safe and achieve a minimum factor of safety of 2. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented. • Records retained of 'as built' drawings to partially backfill void to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • All major earthworks completed in accordance with design plan in **Condition F20**.
			Stable	Minimise erosion and low probability of slope slippage, failure and rock falls.	Structural and geotechnical integrity with no failure and/or slumping. No active erosion.	• Backfilling and regrading/reshaping of the low walls and high wall completed, according to **Table F1** and design plan in **Condition F20**. • Slopes no greater than 25% based on chemical and physical characteristics of local site.
			Non-polluting	No serious environmental harm from discharge, seepage and run-off.	Any void water does not cause environmental harm.	• Partial backfilling undertaken to ensure it is internally draining, avoids water related interaction with the surrounding landscape/naturally occurring environment and creates any required flood immunity and low wall has native vegetation, in

						accordance with design plan in **Condition F20.** • Evidence that final void water is contained with no potential for overflow events as predicted by water balance modelling. • For groundwater see **Condition C39**.
			Able to sustain a final land use	N/A	N/A	N/A
In-pit and Out-of-pit Waste Emplacement	Residual void with stabilised walls	Residual Void	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry).	• Suitable bunding, security fencing and signage installed around entire perimeter and up to high wall. • Access is prohibited to final voids by bund wall with a minimum height of 2 m, a minimum base width of 4 m and be located at least 10 m beyond the area potentially affected by any instability of the pit edge or a fence. • A suitability qualified geotechnical engineer certifies that low walls, high walls and end wall slopes are safe and achieve a minimum factor of safety of 2. • Records retained of 'as built' drawings to ensure each void has stabilised walls to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion.

						• Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and rock falls.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	• Battering back of the low walls and high wall completed, according to **Table F1** and design plan in **Condition F20**. • All major earthworks are completed in accordance with design plan in **Condition F20**.
			Non-polluting	No serious environmental harm from discharge, seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Stabilisation works undertaken so void is internally draining and avoids water related interaction with the surrounding landscape/naturally occurring environment and low wall having native vegetation, in accordance with design plan in **Condition F20**. • Evidence that final void water is contained with no potential for overflow events as predicted by water balance modelling. • For groundwater see **Condition C39**.
			Able to sustain a final land use	N/A	N/A	N/A
In-pit and Out-of-pit Waste Emplacement	Out-of-pit Waste Emplacement	Grazing	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated land investigation	• The hazards in the grazing land must have no significant difference to hazards in grazing land in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • Records retained of 'as built' drawings for reshaping out-of-pit

					confirm that no exposed hazardous material (geochemistry).	waste emplacement to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	• Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 12.5% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • No active rill, piping or gully erosion. • Erosion rates comparable to reference sites determined by **Condition F15**.

			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining grazing final land use.	Establishment of adequate pasture vegetation cover and diversity. Pasture vegetation to be resilient to disease, insert attack, drought and fire.	• All major earthworks are completed in accordance with design plan in **Condition F20**. • Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils, capable of sustaining grazing activities and suitable for providing stabilising groundcover. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**.

						• Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • >70% palatable perennial pasture cover. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Class 4 or improved land suitability outcomes[1]. • Capable of supporting sustainable (light intensity) grazing, with stocking rates comparable to reference sites determined by **Condition F15**.
In-pit and Out-of-pit Waste Emplacement	Out-of-pit Waste Emplacement	Native Vegetation	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry).	• The hazards in the native vegetation must have no significant difference to hazards in native vegetation in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • Records retained of 'as built' drawings for reshaping of out-of-pit waste emplacement to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.

			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	• Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 25% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • No active rill, piping or gully erosion. • Erosion rates comparable to reference sites determined by **Condition F15**.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining native vegetation final land use based on reference sites described in **Condition F15**, on similar landform/slope and	Establishment of adequate locally native vegetation cover and diversity. Vegetation to be resilient to disease, insert	• All major earthworks are completed in accordance with design plan in **Condition F20**. • Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do

				substrate of rehabilitated areas	attack, drought and fire.	not limit its suitability for vegetation growth. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative). • Pest and weed density comparable to reference site determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
In-pit and Out-of-pit Waste Emplacement Infrastructure Areas	Water Storage	Water Storage	Safe	Protects humans and animals now and in the foreseeable future.	Structural, geotechnical and hydraulic factors based on chemical and physical characteristics of local site. No exposed hazardous material remaining in water storage	• The hazards in the water storage must have no significant difference to hazards in water storage in surrounding unmined landscape. • Removal of any contaminated sediments identified by site contaminated land investigation. • Structural and geotechnical stability confirmed by suitably qualified hydro-geotechnical engineer for water storage structures. • All major earthworks are completed in accordance with design plan in **Condition F20**.

					area verified by site contamination land investigation. No active erosion.	• No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity with no major failure and/or slumping. No active erosion.	• Bywash/spillway structures with adequate capacity. • No active rill, piping or gully erosion. • Records retained of structural integrity of permanent retention of water storage structures and certification that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**.
			Non-polluting	No serious environmental harm from discharge, seepage and run-off.	Run-off, seepage and discharge do not cause environmental harm	• Water and sediment analysis to confirm water quality from run-off will be suitable and sediments are benign for intended final land use. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Functioning self-sustaining water storage structure.	Water storage is consistent with surrounding areas and final land uses and can function as a water storage without any maintenance.	• Preservation of existing beneficial use of water resources. • Management inputs required to sustain aquatic habitat are comparable to selected reference sites determined by **Condition F15**. • Water storages contain water of a suitable quality for native wildlife and/or livestock ingestion.

					Water quality suitable for drinking water for native wildlife and/or livestock.	
In-pit and Out-of-pit Waste Emplacement	Water Storage	Native Vegetation (water storage and associated drainage rehabilitated as native vegetation)	Safe	Protects humans and animals now and in the foreseeable future.	Structural, geotechnical and hydraulic factors based on chemical and physical characteristics of local site. No active erosion.	• The hazards in the native vegetation must have no significant difference to hazards in native vegetation in surrounding unmined landscape. • Removal of any contaminated sediments identified by site contaminated land investigation. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings for filling in each water storage structure to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**.
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity with no major failure and/or slumping. No active erosion.	• Water storage structure backfilled to ground level or higher (for settlement), according to design plan in **Condition F20**. • Spoil shaped to be consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 25% based on chemical and physical characteristics of local site.

						• Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off, seepage and run-off must not cause environmental harm. No exposed hazardous material remaining in filled in area as verified by site contaminated land investigation.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Removal of any contaminated sediments identified by site contaminated land investigation. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.** • Evidence that measures required in site contaminated land investigation report have been implemented.
			Able to sustain a final land use	Meets a self-sustaining native vegetation final land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas	Establishment of adequate locally native vegetation cover and diversity. Vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative). • Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of

						generational succession of trees and shrubs. • Pest and weed density comparable to reference site determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
In-pit and Out-of-pit Waste Emplacement	Water Storage	Grazing	Safe	Protects humans and animals now and in the foreseeable future.	Structural, geotechnical and hydraulic factors based on chemical and physical characteristics of local site. No active erosion.	• The hazards in the grazing land must have no significant difference to hazards in grazing land in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings for filling in each water storage structure to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20.**
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity with no major failure and/or slumping. No active erosion.	• Water storage structure backfilled to ground level or higher (for settlement), according to design plan in **Condition F20**. • Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**.

						• Slopes no greater than 12.5% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • No active rill, piping or gully erosion. • Erosion rates comparable to reference sites determined by **Condition F15**.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off, seepage and run-off do not cause environmental harm. No exposed hazardous material remaining in filled in water storage area verified by site contaminated land investigation.	• Removal of any contaminated sediments identified by site contaminated land investigation. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.** • Evidence that measures required in site contaminated land investigation report have been implemented.
			Able to sustain a final land use	Meets a self-sustaining grazing final land use.	Establishment of adequate pasture vegetation cover and diversity. Pasture vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils,

						capable of sustaining grazing activities and suitable for providing stabilising groundcover. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >70% palatable perennial pasture cover. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Class 4 or improved land suitability outcomes[1]. • Capable of supporting sustainable (light intensity) grazing, with stocking rates comparable to reference sites determined by **Condition F15**.
In-pit and Out-of-pit Waste Emplacement	Diversion Drains	Drainage line	Safe	Protects humans and animals now and in the foreseeable future.	Structural, geotechnical and hydraulic factors based on chemical and physical characteristics of local site. No exposed hazardous material (geochemistry) remaining in area verified by site contaminated land investigation. No active erosion.	• The hazards in the diversion drains must have no significant difference to hazards in drainage lines in surrounding unmined landscape. • Meets earthworks and engineering design as part of design plan in **Condition F20**. • Similar geomorphology to regional ephemeral drainage lines in reference sites determined by **Condition F15**. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • Records retained of 'as built' drawings for permanent retention of diversion drains to certify that it is operating in accordance with landform and mine closure design

						and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity with no major failure and/or slumping. No active erosion.	• Diversion drains functioning to move water, according to design plan in **Condition F20**. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from discharge, seepage and run-off.	Run-off, seepage and discharge do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required for functioning of a non-polluting diversion drain. • Water and sediment analysis to confirm water quality from run-off will be suitable and sediments are benign for intended final land use. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Functioning self-sustaining drainage line.	Diversion consistent with surrounding areas and final land uses.	• Preservation of existing beneficial use of water resources. • Management inputs required to sustain diversion drain are comparable to selected reference sites determined by **Condition F15**.

					Diversion drains functioning as self-sustaining drainage line with no maintenance requirements.	
In-pit and Out-of-pit Waste Emplacement	Diversion Drains	Native Vegetation	Safe	Protects humans and animals now and in the foreseeable future.	Structural, geotechnical and hydraulic factors based on chemical and physical characteristics of local site. No active erosion.	• The hazards in the native vegetation must have no significant difference to hazards in native vegetation in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings to fill in diversion drains to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. .
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity with no major failure and/or slumping. No active erosion.	• Diversion drains to be backfilled to ground level or higher (for settlement), according to design plan in **Condition F20**. • Spoil shaped to be consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 25% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment.

						• Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm. Results of a site contaminated land investigation confirm no exposed hazardous material remaining in area.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Removal of any contaminated sediments identified by site contaminated land investigation. • Run-off into receiving waters do not exceed limits for water quality indicators specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.** • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Able to sustain a final land use	Meets a self-sustaining native vegetation final land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas**.**	Establishment of adequate locally native vegetation cover and diversity. Vegetation to be resilient to disease, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative).

						• Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • Pest and weed density comparable to reference site determined by **Condition F15**. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
In-pit and Out-of-pit Waste Emplacement	Diversion Drains	Grazing	Safe	Protects humans and animals now and in the foreseeable future.	Structural, geotechnical and hydraulic factors based on chemical and physical characteristics of local site. No exposed hazardous material (geochemistry) remaining in area verified by of site contaminated land investigation. No active erosion.	• The hazards in the grazing land must have no significant difference to hazards in grazing land in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings to fill in diversion drains to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site

						contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity with no failure and/or slumping. No active erosion.	• Diversion drains backfilled to ground level or higher (for settlement), according to design plan in **Condition F20.** • Spoil shaped to be consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 12.5% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage and do not cause environmental harm.	• Diversion drains to be backfilled to ground level or higher (for settlement), according to design plan in **Condition F20**. • Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Spoil shaped to be consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**.

						• Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining grazing final land use.	Establishment of adequate pasture vegetation cover and diversity. Pasture vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils, capable of sustaining grazing activities and suitable for providing stabilising groundcover. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >70% palatable perennial pasture cover. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Class 4 or improved land suitability outcomes[1]. • Capable of supporting sustainable (light intensity) grazing, with stocking rates comparable to

						reference sites determined by **Condition F15**.
In-pit and Out-of-pit Waste Emplacement Infrastructure Area	Levees and other structures	Grazing (after removing temporary levee or other structures)	Safe	Protects humans and animals now and in the foreseeable future.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No exposed hazardous material (geochemistry) remaining in area verified by site contaminated land investigation. No active erosion.	• The hazards in the grazing land must have no significant difference to hazards in grazing land in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings for flood protection structures to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F21**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity with no failure and/or slumping. No active erosion.	• Removal of temporary levee/other structures (decommissioning), according to design plan in **Condition F21**. • Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F21**. • Slopes no greater than 12.5% based on chemical and physical characteristics of local site.

						• Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters do not exceed limits for release water quality indicators specified in **Table C2**.
			Able to sustain a final land use	Meets a self-sustaining grazing final land use.	Establishment of adequate pasture vegetation cover and diversity. Pasture vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils, capable of sustaining grazing activities and suitable for providing stabilising groundcover.

						• Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >70% palatable perennial pasture cover. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Class 4 or improved land suitability outcomes[1]. • Capable of supporting sustainable (light intensity) grazing, with stocking rates comparable to reference sites determined by **Condition F15**.
In-pit and Out-of-pit Waste Emplacement Infrastructure Areas	Levees and other structures	Native Vegetation (after removing temporary levee or other structures)	Safe	Protects humans and animals now and in the foreseeable future.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No exposed hazardous material remaining in area verified by site contaminated land investigation. No active erosion.	• The hazards in the native vegetation must have no significant difference to hazards in native vegetation in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings for flood protection structures to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion.

						• Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity with no major failure and/or slumping. No active erosion.	• Removal of temporary levee/other structures (decommissioning), according to design plan in **Condition 21**. • Spoil shaped to be consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 25% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • No active rill, piping or gully erosion. • Erosion rates comparable to reference sites determined by **Condition F15**.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining native vegetation final	Establishment of adequate locally native vegetation	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness

				land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.	cover and diversity. Vegetation to be resilient to disease, drought and fire.	and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative). • Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • Pest and weed density comparable to reference site determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
In-pit and Out-of-pit Waste Emplacement Infrastructure Areas	Flood Protection Structures	Grazing (retention including reshaping of temporary levee/other structures as flood protection landform with grazing)	Safe	Protects final landform, humans and animals now and in the foreseeable future. The A-Pit Twelve Mile Creek levee will be reshaped and rehabilitated to create a permanent	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No exposed hazardous material	• The hazards in the grazing land must have no significant difference to hazards in grazing land in surrounding unmined landscape. • Meets engineering design as part of design plan in **Condition F20** including functioning as a permanent flood protection landform.

				stable landform feature which will serve to protect the A-Pit residual void from flood inundation up to and including a 1:1000 AEP flood event.	(geochemistry) remaining in area verified by site contaminated land investigation. No active erosion.	• Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings for Flood Protection Structures to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • Design of A-Pit Twelve Mile Creek permanent Flood Protection structure is in accordance with the design plan in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Low probability of failure, slumping of embankments and/or flood protection structures.	Structural and geotechnical integrity that is integrated into surrounding final landform and supports final land use.	• Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • Slopes no greater than 12.5% based on chemical and physical characteristics of local site. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm	Run-off and seepage do not cause	• Water management infrastructure and erosion control structures

				from seepage and run-off.	environmental harm.	installed as required for flood protection structures. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining grazing final land use.	Establishment of adequate pasture vegetation cover and diversity. Pasture vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils, capable of sustaining grazing activities and suitable for providing stabilising groundcover. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >70% palatable perennial pasture cover. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Class 4 or improved land suitability outcomes[1]. • Capable of supporting sustainable (light intensity) grazing, with

						stocking rates comparable to reference sites determined by **Condition F15**.
In-pit and Out-of-pit Waste Emplacement Infrastructure Areas	Flood Protection Structures	Native Vegetation (retention including reshaping of temporary levee/other structures as flood protection landform with native vegetation)	Safe	Protects final landform, humans and animals now and in the foreseeable future. The A-Pit Twelve Mile Creek levee will be reshaped and rehabilitated to create a permanent stable landform feature which will serve to protect the A-Pit residual void from flood inundation up to and including a 1:1000 AEP flood event.	Structural, geotechnical and hydraulic factors based on chemical and physical characteristics of local site. No exposed hazardous material (geochemistry) remaining in area verified by site contaminated land investigation. No active erosion.	• Increase size of levee to create permanent flood protection structure as part of the final landform, according to design plan in **Condition C21**. • Meets engineering design as part of design plan in **Condition F20** including functioning as a permanent flood protection landform. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings for Flood Protection Structures to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • Design of A-Pit Twelve Mile Creek permanent Flood Protection Structure is in accordance with the design plan in **Condition F20.** • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.

			Stable	Low probability of failure, slumping of embankments and/or flood protection structures.	Structural and geotechnical integrity that is integrated into surrounding final landform and final land use.	• Slopes no greater than 25% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • No active, rill, pipping and gully erosion. • Erosion rates comparable to reference sites determined by **Condition F15**.
			Non-polluting	No serious environmental harm from sediment and run-off.	Run-off does not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required for flood protection structures. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining native vegetation land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas	Establishment of adequate locally native vegetation cover and diversity. Vegetation to be resilient to disease, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative).

						• Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • Pest and weed density comparable to reference site determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
In-pit and Out-of-pit Waste Emplacement	Sediment Dams	Water Storage	Safe	Protects humans and animals now and in the foreseeable future.	Structural, geotechnical and hydraulic factors based on chemical and physical characteristics of local site. No active erosion.	• The hazards in the water storages must have no significant difference to hazards in water storages in surrounding unmined landscape. • Structural and geotechnical stability confirmed by suitably qualified hydro-geotechnical engineer for water storage structures. • All major earthworks are completed in accordance with design plan in **Condition F20**.
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity. No active erosion.	• Bywash/spillway structures with adequate capacity. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion on banks. • Records retained of structural integrity of permanent retention of sediment dams as water storage structures and certification that it is operating in accordance with

						landform and mine closure design and associated criteria in **Condition F20**.
			Non-polluting	No serious environmental harm from discharge, seepage and run-off.	Run-off, seepage and discharge do not cause environmental harm. Results of a site contaminated land investigation confirm no exposed hazardous material remaining in area.	• Removal of any contaminated sediments identified by site contaminated land investigation. • Water and sediment analysis to confirm water quality from runoff will be suitable and sediments are benign for intended final land use. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.** • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Able to sustain a final land use	Functioning as a self-sustaining water storage structure.	Water storage is consistent with surrounding areas and final land uses and functioning as a water storage structure without any maintenance. Water quality suitable for drinking water for	• Preservation of existing beneficial use of water resources. • Management inputs required to sustain aquatic habitat are comparable to selected reference sites determined by **Condition F15**. • Water storages contain water of a suitable quality for native wildlife and/or livestock ingestion.

					native wildlife and/or livestock.	
In-pit and Out-of-pit Waste Emplacement	Sediment Dams	Native Vegetation	Safe	Protects humans and animals now and in the foreseeable future.	Structural, geotechnical and hydraulic factors based on chemical and physical characteristics of local site. No active erosion.	• The hazards in the native vegetation must have no significant difference to hazards in native vegetation in surrounding unmined landscape. • Removal of any contaminated sediments identified by site contaminated land investigation. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings for filling in sediment dams to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**.
			Stable	Low probability of failure, slumping of embankments.	Structural and geotechnical integrity with no major failure and/or slumping. No active erosion.	• Sediment dams backfilled to ground level or higher (for settlement), according to design plan in **Condition F20**. • Spoil shaped to consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 25% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment.

						• Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gull erosion.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm. Results of a site contaminated land investigation confirm no exposed hazardous material (geochemistry) remaining in area.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Removal of any contaminated sediments identified by site contaminated land investigation. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.** • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Able to sustain a final land use	Meets a self-sustaining native vegetation final land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.	Establishment of adequate locally native vegetation cover and diversity. Vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative).

						• Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • Pest and weed density comparable to reference site determined by **Condition F15**. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
In-pit and Out-of-pit Waste Emplacement	Quarries and Borrow Pits	Grazing	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry).	• The hazards in the grazing land must have no significant difference to hazards in grazing land in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings for filling in quarries/borrow pits to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site

						contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	• Quarries/Borrow pits backfilled to ground level or higher (for settlement), according to design plan in **Condition F20**. • Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 12.5% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • Contour ripping and seeding undertaken in accordance with the Revegetation Strategy in the Rehabilitation Management Plan. • No active rill, piping or gully erosion. • Erosion rates comparable to reference sites determined by **Condition F15**.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**.

						• Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining grazing final land use.	Establishment of adequate pasture vegetation cover and diversity. Pasture vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils, capable of sustaining grazing activities and suitable for providing stabilising groundcover. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >70% palatable perennial pasture cover. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Class 4 or improved land suitability outcomes[1]. • Capable of supporting sustainable (light intensity) grazing, with stocking rates comparable to reference sites determined by **Condition F15**.
In-pit and Out-of-pit Waste	Quarries and Borrow Pits	Native Vegetation	Safe	Safe for humans and animals now	Structural and geotechnical	• The hazards in the native vegetation must have no significant difference

Emplacement Infrastructure Areas				and in the foreseeable future.	integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry).	to hazards in native vegetation in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings for filling in quarries/borrow pits to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	• Quarries/borrow pits backfilled to ground level or higher (for settlement), according to design plan in **Condition F20**. • Spoil shaped to be consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 25% based on chemical and physical characteristics of local site. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • No active rill, piping or gully erosion.

						• Erosion rates comparable to reference sites determined by **Condition F15**.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining native vegetation final land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas	Establishment of adequate locally native vegetation cover and diversity. Vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative). • Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs.

						• Pest and weed density comparable to reference site determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
In-pit and Out-of-pit Waste Emplacement Infrastructure Areas	Twelve Mile Creek Permanent Diversion	Riparian Native Vegetation and Creek Diversion	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry).	• The hazards in the permanent diversion must have no significant difference to hazards in creek system in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • Records retained of 'as built' drawings for permanent creek diversion to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical	• All major earthworks are completed, and structural integrity is undertaken in accordance with design plan in **Condition F20**. • The hazards in the creek diversions have no significant difference to

					characteristics of local site. No active erosion.	hazards in creeks in surrounding unmined landscape. • An assessment demonstrates that the creek diversion is functioning as designed in **Condition F20** and the integrity of the watercourse diversion and/or adjoining watercourses is not threatened.
			Non-polluting	No serious environmental harm from diversion.	Diversion does not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Water and sediment analysis to confirm water quality from run-off will be suitable and sediments are benign for intended final land use.
			Able to sustain a final land use	Meets a self-sustaining permanent diversion and self-sustaining native vegetation final land use based on benchmark for RE11.3.3.	Establishment of adequate locally native riparian vegetation cover and diversity. Riparian vegetation to be resilient to disease, drought and fire. Twelve Mile Creek permanent diversion to be functioning as a creek with riparian vegetation that is self-sustaining	<u>Permanent diversion</u> • The watercourse diversion and associated structures are certified as maintaining equilibrium and functionality and do not require ongoing maintenance, according to design plan in **Condition F20**. <u>Riparian vegetation</u> • Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Develop features by vegetating mixed riverine vegetation on sandy clay soils along watercourses, which

					with no need for maintenance.	provide for groundcover, canopy habitat and aquatic habitat. • Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative). • Pest and weed density comparable to reference site determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
DE-Pit	DE-Pit	Native Vegetation	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry).	• The hazards in the native vegetation must have no significant difference to hazards in native vegetation in surrounding unmined landscape. • Surface capped with suitable material that has been certified as complying with design requirements in **Condition F20**. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • A suitability qualified geotechnical engineer certifies that batters are safe and achieves a minimum factor of safety of 2. • Contaminated land assessment conducted to verify the proposed use is suitable.

						• No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	• Earthworks completed to reshape slopes to no greater than 10% and based on chemical and physical characteristics of local site. • Final top surface is to be free-draining and include drainage structures to channel run-off and to avoid erosion and surface water ponding. • Engineering and capping designs ensures structure is geotechnically stable, accordingly, to design plan in **Condition F20**. • Minimum of 4 meters of NAF earthen material placed on top of the tailings. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment. • No active rill, piping or gully erosion. • Erosion rates comparable to reference sites determined by **Condition F15**.
			Non-polluting	No serious environmental harm from construction materials and water quality of run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required. • Receiving water quality indicators do not exceed limits specified in **Table C5**.

						• Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining native vegetation final land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas	Establishment of adequate locally native vegetation cover and diversity. Vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative). • Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
DOM1 with tailings disposal	DOM1 with tailings disposal	Residual Void with tailings disposal	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no	• Surface capped with suitable material that has been certified as complying with design requirements in **Condition F20**.

					major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry).	• Suitable bunding, security fencing and signage installed around entire perimeter and up to high wall. • Access is prohibited to final voids by bund wall with a minimum height of 2 m, a minimum base width of 4 m and be located at least 10 m beyond the area potentially affected by any instability of the pit edge or a fence. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • A suitability qualified geotechnical engineer certifies that site is safe and footprint achieves a minimum factor of safety of 2. • Certification from an appropriately qualified person that the residual void is safe to humans and livestock. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure, slumping and rock falls.	Structural and geotechnical integrity with no major failure, slumping and/or slippage. No active erosion.	• Engineering and capping designs ensure structure is geotechnically stable, accordingly, to design plan in **Condition F20**. • Regrading/reshaping of the low walls and high wall completed as required, according to **Table F1** and design plan in **Condition F20**. • Slopes no greater than 10% based on chemical and physical characteristics of local site.

						• Placement of at least 4m of NAF earthen material on top of the final deposited tailings layer. • Ameliorate spoil as required to a depth of a minimum of 200 mm to suitably stabilise the landform and promote vegetative establishment.
			Non-polluting	No serious environmental harm from site use and water quality of run-off.	Tailing disposal does not cause environmental harm. Monitoring of water level and quality in residual void and surrounding aquifer.	• Internally draining and avoids water related interaction with the surrounding landscape and naturally occurring environment, according to design plan in **Condition F20**. • Evidence that final void water outside of tailings disposal area is contained with no potential for overflow events as predicted by water balance modelling. • For groundwater see **Condition C39**.
			Able to sustain a final land use	N/A	N/A	N/A
Infrastructure Areas	Workshop and Supporting Facilities and Services Administrative Office Areas Haul Roads Light Vehicle Access Roads	Retained Infrastructure	Safe	Humans and animals protected now and in the foreseeable future from impacts due to retained infrastructure.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. Services disconnected. Results of a site contaminated land investigation confirm that no exposed	• Contaminated land assessment conducted to verify the proposed use is suitable. • Encapsulation or removal of contaminated materials/areas identified by site contaminated land investigation. • Evidence from suitability qualified person the retained infrastructure is structurally and functionally sound before providing/selling such infrastructure to a future landholder. • Audit results showing that any applicable areas subject to AS1940:2004 (The storage and handling of flammable and

					hazardous material (geochemistry). Any contamination is identified by site contaminated land investigation and remediated. No contaminated drainage or discharges. Wastes are managed according to waste and resource management hierarchy.	combustible liquids) that are left for the landowner after mining are in compliance with the standard. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage and structural failure.	Structural and geotechnical stability based on chemical and physical characteristics of local site. No active erosion.	• No infrastructure with structural or geotechnical instability retained. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from retained infrastructure and water quality of run-off.	Run-off or site use does not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required. • Design according to design plan in **Condition F20** ensures no serious environmental harm from retained infrastructure.

					Any contamination is identified by site contaminated land investigation and remediated.	• Encapsulation or removal of contaminated materials/areas identified by a site contaminated land investigation. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Supports surrounding final land uses.	Retained infrastructure support surrounding final land uses.	• Surface infrastructure and services • Signed landholder agreement to indicate acceptance of any associated risks of all retained infrastructure after closure.
Infrastructure Areas	Workshop and Supporting Facilities and Services	Grazing	Safe	Safe for humans and animals now and in the foreseeable future.	Structural integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry). Any contamination is identified by site contaminated land investigation and remediated.	• The hazards in the grazing land must have no significant difference to hazards in grazing land in surrounding unmined landscape. • Plant, infrastructure, services and associated components removed and/or demolished and landform reshaped in accordance with design plan in **Condition F20**. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of ‘as built’ drawings to completely backfill void to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**.

						• Encapsulation or removal of contaminated materials/areas identified by a site contaminated land investigation. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of structural failure.	Structural integrity based on characteristics of buildings and local site. No active erosion.	• Concrete pads and footings removed to a depth of 1.5 m below the landform elevation and backfilled to ground level or higher (for settlement) and shaped, in accordance with design plan in **Condition F20**. • Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 12.5% based on chemical and physical characteristics of local site. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**.

						• Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining grazing final land use.	Establishment of adequate pasture vegetation cover and diversity. Pasture vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils, capable of sustaining grazing activities and suitable for providing stabilising groundcover. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >70% palatable perennial pasture cover. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Class 4 or improved land suitability outcomes [1]. • Capable of supporting sustainable (light intensity) grazing, with stocking rates comparable to reference sites determined by **Condition F15**.
Infrastructure Areas	CHPP	Grazing	Safe	Safe for humans and animals now	Structural and geotechnical	• The hazards in the grazing land must have no significant difference

	ROM Pads, ROM and Product Stockpiles Hardstand and Laydown Areas Administrative Office Areas			and in the foreseeable future.	integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry). Any contamination is identified by site contaminated land investigation and remediated.	to hazards in grazing land in surrounding unmined landscape. • Plant, infrastructure, services, and associated components removed and/or demolished and landform shaped, in accordance with design plan in **Condition F20**. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings to completely backfill void to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • Encapsulation or removal of contaminated materials/areas identified by site contaminated land investigation. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and slumping	Structural and geotechnical integrity based on chemical and physical characteristics of local site.	• Concrete pads and footings removed to a depth of 1.5 m below the landform elevation and backfilled to ground level or higher (for settlement) and shaped, in accordance with design plan in **Condition F20**.

					No active erosion.	• Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 12.5% based on chemical and physical characteristics of local site. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a self-sustaining grazing final land use.	Establishment of adequate pasture vegetation cover and diversity. Pasture vegetation to be resilient to disease, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • Vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils, capable of sustaining grazing

						activities and suitable for providing stabilising groundcover. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • >70% palatable perennial pasture cover. • Pest and weed density comparable to reference sites determined by **Condition F15**. • Class 4 or improved land suitability outcomes[1]. • Capable of supporting sustainable (light intensity) grazing, with stocking rates comparable to reference sites determined by **Condition F15**.
Infrastructure Areas	Haul Roads Light Vehicle Access Roads	Grazing Native Vegetation	Safe	Safe for humans and animals now and in the foreseeable future.	Structurally and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry). Any contamination is identified by site contaminated	• The hazards in the grazing land or native vegetation must have no significant difference to hazards in grazing land or native vegetation in surrounding unmined landscape. • Geotechnical stability confirmed by suitably qualified geotechnical engineer for landform. • All major earthworks are completed in accordance with design plan in **Condition F20**. • Records retained of 'as built' drawings to remove haul roads and access roads to certify that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. • Encapsulation or removal of contaminated materials/areas

					land investigation and remediated.	identified by site contaminated land investigation • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.
			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	• Hard surface materials removed) and landform shaped, in accordance with design plan in **Condition F20**. • For grazing outcomes, slopes are no greater than 12.5% and based on chemical and physical characteristics of local site. • For native vegetation outcomes, slopes are no greater than 25% and based on chemical and physical characteristics of local site. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from seepage and run-off.	Run-off and seepage do not cause environmental harm.	• Water management infrastructure and erosion control structures installed as required, such as sediment dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • Run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**

			Able to sustain a final land use	Meets a self-sustaining grazing or self-sustaining native vegetation final land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas	Establishment of adequate vegetation cover and diversity for grazing and adequate locally native vegetation cover and diversity for native vegetation. Vegetation to be resilient to disease, insert attack, drought and fire.	• Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • For grazing outcomes, vegetated with a mix of perennial pasture species (grasses and legumes) and low-density wooded vegetation (for livestock shelter) suited to the reinstated soils, capable of sustaining grazing activities and suitable for providing stabilising groundcover. • Manage pests and weeds that impact on the establishment, growth and natural regeneration of seeded grass species. • Soil nutrient concentrations and nutrient cycling comparable to reference sites determined by **Condition F15**. • For grazing outcomes, >70% palatable perennial pasture cover. • For grazing outcomes, Class 4 or improved land suitability outcomes[1]. • For grazing outcomes, capable of supporting sustainable (light intensity) grazing, with stocking rates comparable to reference sites determined by **Condition F15**. • For native vegetation outcomes, >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative).

						• For native vegetation outcomes, evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs. • For native vegetation outcomes, pest and weed density comparable to reference sites determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.
Infrastructure Areas	Sediment Dams	Water Storage (Sediment basin retained as water storage) Native Vegetation (Sediment basin to be removed)	Safe	Safe for humans and animals now and in the foreseeable future.	Structural and geotechnical integrity with no major failure and/or slumping. Results of a site contaminated land investigation confirm that no exposed hazardous material (geochemistry).	• The hazards in the water storage or native vegetation must have no significant difference to hazards in water storage or native vegetation in surrounding unmined landscape. • Structural and geotechnical stability confirmed by suitably qualified by hydro-geotechnical engineer for water storage structures and geotechnical for the landform for native vegetation. • All major earthworks are completed in accordance with design plan in **Condition F20**. • No exposed hazardous materials at surface determined by results of site contaminated land investigation including exposure due to erosion. • Evidence that measures required in site contaminated land investigation report have been implemented.

			Stable	Minimise erosion and low probability of slope slippage, failure and slumping.	Structural and geotechnical integrity based on chemical and physical characteristics of local site. No active erosion.	**<u>Water storage structure</u>** • Bywash/spillway structures with adequate capacity. • No active rill, piping or gully erosion on banks. • Records retained of structural integrity of permanent retention of sediment dams as water storage structures and certification that it is operating in accordance with landform and mine closure design and associated criteria in **Condition F20**. **<u>Native vegetation</u>** • Sediment dams to be backfilled to ground level or higher (for settlement), according to design plan in **Condition F20**. • Spoil shaped to be sympathetic to and consistent with the surrounding unmined areas and in accordance with design plan in **Condition F20**. • Slopes no greater than 25% based on chemical and physical characteristics of local site. • Erosion rates comparable to reference sites determined by **Condition F15**. • No active rill, piping or gully erosion.
			Non-polluting	No serious environmental harm from discharges, seepage and run-off.	Run-off, seepage and discharges do not cause environmental harm. Results of a site contaminated	• For water storage, removal of any contaminated sediments identified by site contaminated land investigation. • For native vegetation, water management infrastructure and erosion control structures installed as required, such as sediment

					land investigation confirm no exposed hazardous material (geochemistry) remaining in area.	dams, contour banks, drop structures, drainage swales and diversion channels. • Receiving water quality indicators do not exceed limits specified in **Table C5**. • For native vegetation, run-off into receiving waters not to exceed limits for release water quality indicators specified in **Table C2.**
			Able to sustain a final land use	Meets a water storage or self-sustaining native vegetation final land use based on reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas	Establishment of adequate locally native vegetation cover and diversity. Water storage is consistent with surrounding areas and final land uses. Vegetation to be resilient to disease, drought and fire. Water quality suitable for drinking water for native wildlife and/or livestock.	**Water Storage:** • Preservation of existing beneficial use of water resources. • Management inputs required to sustain water storage are comparable to selected reference sites determined by **Condition F15**. • Water storages contain water of a suitable quality for native wildlife and/or livestock ingestion. **Native Vegetation:** • Certification that the growth medium has physical properties (e.g. rockiness, depth of soil, wetness and plant available water capacity) are adequate to sustain vegetation growth and chemical properties do not limit its suitability for vegetation growth. • >30% living ground cover and >70% overall ground cover (including live, dead and non-vegetative). • Evidence of natural recruitment (flowering, viable seed, germination and emergence) and evidence of generational succession of trees and shrubs.

						• Pest and weed density comparable to reference sites determined by **Condition F15**. • Trees, shrubs and grass diversity and cover % are, or are on a demonstrated trajectory towards being, comparable to reference sites described in **Condition F15**, on similar landform/slope and substrate of rehabilitated areas.

1. Department of Natural Resources and Mines and the Department of Science, Information Technology, Innovation and the Arts (2013) *Regional Land Suitability Frameworks for Queensland*, State of Queensland.

END OF PERMIT