

PRCP schedule

Environmental Protection Act 1994

P-PRCP100897461_V4

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

PRCP schedule: P-PRCP-100897461_V4

PRCP schedule holder(s)

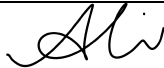
Name(s)	Registered address
Bowen Basin Coal Pty Ltd	Level 7, 12 Creek Street BRISBANE CITY QLD 4000

Location details

Location(s)
Mining Lease (ML) 70331, ML70477, ML70528

Take effect

In accordance with section 202B of the *Environmental Protection Act 1994* (EP Act), the PRCP schedule has effect on the day the environmental authority for carrying out relevant activities on land to which the schedule relates takes effect. Pursuant to section 202C of the EP Act, a PRCP schedule continues in force until the environmental authority for the relevant activities to which the PRCP schedule relates is cancelled or surrendered, even if the resource tenure expires or is cancelled and even if the relevant environmental authority is suspended under Chapter 5, part 11 or 11A of the EP Act.



Signature

8 May 2026

Date

Alison Cummings

Department of the Environment, Tourism, Science and Innovation

Delegate of the administering authority

Environmental Protection Act 1994

Enquiries:

Coal Business Centre

PO Box 3028, Emerald QLD 4720

Phone: (07) 4987 9320

Email: CRMining@detsi.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

Pursuant to section 202E of the EP Act, if there is an inconsistency between an environmental authority and a PRCP schedule, the environmental authority prevails to the extent of the inconsistency.

Pursuant to section 285 of the EP Act:

- the holder of a PRCP schedule must commission an audit of the schedule by a rehabilitation auditor for the following periods (each an audit period) —
 - (a) the 3-year period starting on the day the schedule takes effect
 - (b) each 3-year period starting on the day after the previous audit period ended.
- the holder must, within 4 months after the end of each audit period, give the administering authority -
 - (a) the rehabilitation auditor's report (an audit report) about the audit that complies with section 286 of the EP Act, and
 - (b) a declaration for the audit report that complies with section 285 of the EP Act.

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

PRCP schedule

The PRCP schedule incorporates the following sections:

- Section A - Conditions of PRCP schedule
- Section B - Final site design and reference maps
- Section C - Post mining land uses
- Section D - Non-use management areas.
- Section E - Attachments

1 Section A - Conditions of PRCP schedule

Pursuant to section 206A of the EP Act:

- it is a condition of this PRCP schedule that, in carrying out a relevant activity under the schedule, the holder must comply with a requirement stated in the environmental authority relevant to carrying out the activity.
- it is a condition of this PRCP schedule that the holder must comply with the following matters stated in the schedule -
 - (a) each rehabilitation milestone and management milestone
 - (b) when each rehabilitation milestone and management milestone is to be achieved

General conditions

PRCP1	For each rehabilitation area the holder must achieve the rehabilitation milestone criteria (milestone reference): (a) For the cumulative area available specified in this schedule; and (b) By the milestone completion date specified in this schedule.
PRCP2	Where land becomes 'available for rehabilitation' earlier than the date nominated in this schedule, the holder must: (a) Notify the administering authority in writing within 30 business days of the land being assessed as becoming 'available for rehabilitation'. The written notification must include: (i) Precise details of the relevant land area and the date when that land became 'available for rehabilitation'; and (ii) Whether or not it considers that it would be reasonable and appropriate to apply to the administering authority to amend this schedule in a way that maximises the progressive rehabilitation of the land to a stable condition; and (b) Within 30 days of any notification to the administering authority that it considers an amendment application would be reasonable and appropriate, apply to the administering authority to amend this schedule in a way that maximises the progressive rehabilitation of the land to a stable condition. Note: 1) Reference to "earlier than the nominated date in the schedule" means a date that is greater than 1 year prior to the date nominated in the schedule. 2) Assessment of land becoming available is undertaken on nominally an annual basis. 3) Rehabilitation of land size must be practicable and economical. 4) The dates by which milestones are to be completed is brought forward, to the extent it is reasonably practicable to do so, by the same amount of time as the commencement was brought forward.
PRCP3	Where an area achieves a rehabilitation milestone, the holder must continue to achieve the milestone criteria for that rehabilitation milestone until (a) The next rehabilitation milestone is achieved; or (b) A progressive certification area has satisfied the provisions of section 318ZB(4) of the EP Act; or (c) A surrender is approved.
PRCP4	The holder must maintain a risk register that identifies the risks to not achieving a stable condition for post-mining land uses, and how the risks are being managed or minimised. The risk register must be reviewed every 3 years.

PRCP5	The holder must undertake monitoring and maintenance as described in this schedule and the rehabilitation planning part for the activity. Where there is any inconsistency between this schedule and the rehabilitation planning part the schedule criteria prevail to the extent of the inconsistency.
PRCP6	Disturbance due to exploration activities in areas not authorised to be mined must be rehabilitated in accordance with the provisions detailed in the Eligibility criteria and standard conditions for exploration and mineral development projects or its successor, with the exception that land must be rehabilitated to a stable condition that achieves the relevant PMLU as indicated by Figure 1 Final Site Design .
PRCP7	The holder must make, and keep until the relevant milestone criteria has been met or progressive rehabilitation certification has been achieved, up to date records on: (a) Achievement and maintenance of achievement of each rehabilitation milestone criteria of this schedule; (b) Rehabilitation activities and the results of those activities (including but not limited to, actions taken, date, location, methods, data collected, QA/QC, photos, waste tracking and disposal records, appropriately qualified person details and assumptions); (c) Maintenance of rehabilitation and the results of maintenance activities; (d) Monitoring of rehabilitation and the results of monitoring; (e) Details and results of rehabilitation trials; (f) Designs, drawings, specifications and any similar documents developed in accordance with good professional practice in relation to rehabilitation milestones or milestone criteria; (g) All documents in relation to the requirements of this schedule, including reports (e.g. site investigation report), statements (e.g. site suitability statement), certifications, assessments, investigations, inspections, audits or any similar documents developed in relation to rehabilitation milestones or milestone criteria; (h) Landholder agreements; and (i) Details of community consultation in the community consultation register relating to rehabilitation and closure activities.
PRCP8	A summary report of key records under PRCP7 is maintained until the relevant environmental authority has been surrendered or progressive rehabilitation certification is achieved.
PRCP9	Records made under PRCP7 must be provided to the administering authority in the specified format within 10 business days of a written request.
PRCP10	Monitoring must be undertaken at the co-disposal cover design rehabilitation trial locations for a period of at least two years between 2024-2026 to incorporate: (a) Biannual sampling (pre-wet season and post-wet season events) of soil parameters and vegetation cover, with monitoring of Total Kjeldahl Nitrogen, Total Phosphorous and Total Nitrate in soil, to be incorporated into the soil monitoring parameters; (b) Monitoring of leaching fraction to determine EC through the topsoil profile at 0.1m intervals; (c) Assessment of erosion risk; and (d) Carry out a single event of test pitting at trial locations (one per location to minimise disturbance) to determine root depth and the soil capping profile.
PRCP11	The holder must install groundwater monitoring bore MB5 by 1 July 2028 .
PRCP12	The holder must, by 1 July 2030 , submit to the administering authority a hydrogeological unit and bore-specific groundwater quality limits derived from a minimum of 8 sampling results for MB5 in Attachment 6 – Groundwater monitoring bores .
PRCP13	The holder must, by 31 December 2030 and via application, seek to amend this PRCP schedule to include the outcomes of the report required by condition PRCP12 .

PRCP14	The holder must, by 31 December 2055 , submit to the administering authority amended bore-specific Attachment 7 – Groundwater quality limits for all bores in Attachment 6 – Groundwater monitoring bores that require compliance assessment.
PRCP15	Rehabilitation of gas drainage pilot program Rehabilitation of disturbance associated with the Pilot Gas Drainage Program must be completed within six (6) months of the cessation of gas drainage activities and must achieve the following outcomes: (a) All drilling stimulation and gas drainage equipment removed from the site; (b) Boreholes sealed with grout and casing removed 300mm below the ground surface; (c) Topsoil replaced at drill pad and access track areas; and (d) Drill pad areas reseeded with pasture grass.

END OF CONDITIONS

Definitions

Appropriately qualified person (AQP)	means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods or literature.
Activity (EP Regulation)	includes that part, if any, of an activity relating to the following— (a) Preparing a place for the activity before carrying out the activity; (b) Rehabilitating a place after it has been used for carrying out the activity.
Rehabilitation activity	means any activity that the holder is required to carry out in relation to this PRCP schedule.
Stable In relation to land	means landform 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. Land is in a stable condition if: (a) The land is safe and structurally stable, and (b) There is no environmental harm being caused by anything on or in the land, and (c) The land can sustain a post mining land use (PMLU).
Suitably qualified and experienced person (SQP)	means a suitability qualified person for performing a regulatory function under chapter 7, part 8 (Contaminated Land) of the EP Act or another function prescribed under a regulation, means a person who— (a) Has qualifications and experience relevant to performing the function; and (b) If a regulation prescribes an organisation for this paragraph—is a member of the organisation.
Weeds	are defined by the <i>Biosecurity Act 2014</i> .

END OF DEFINITIONS

2 Section B - Final site design and reference maps

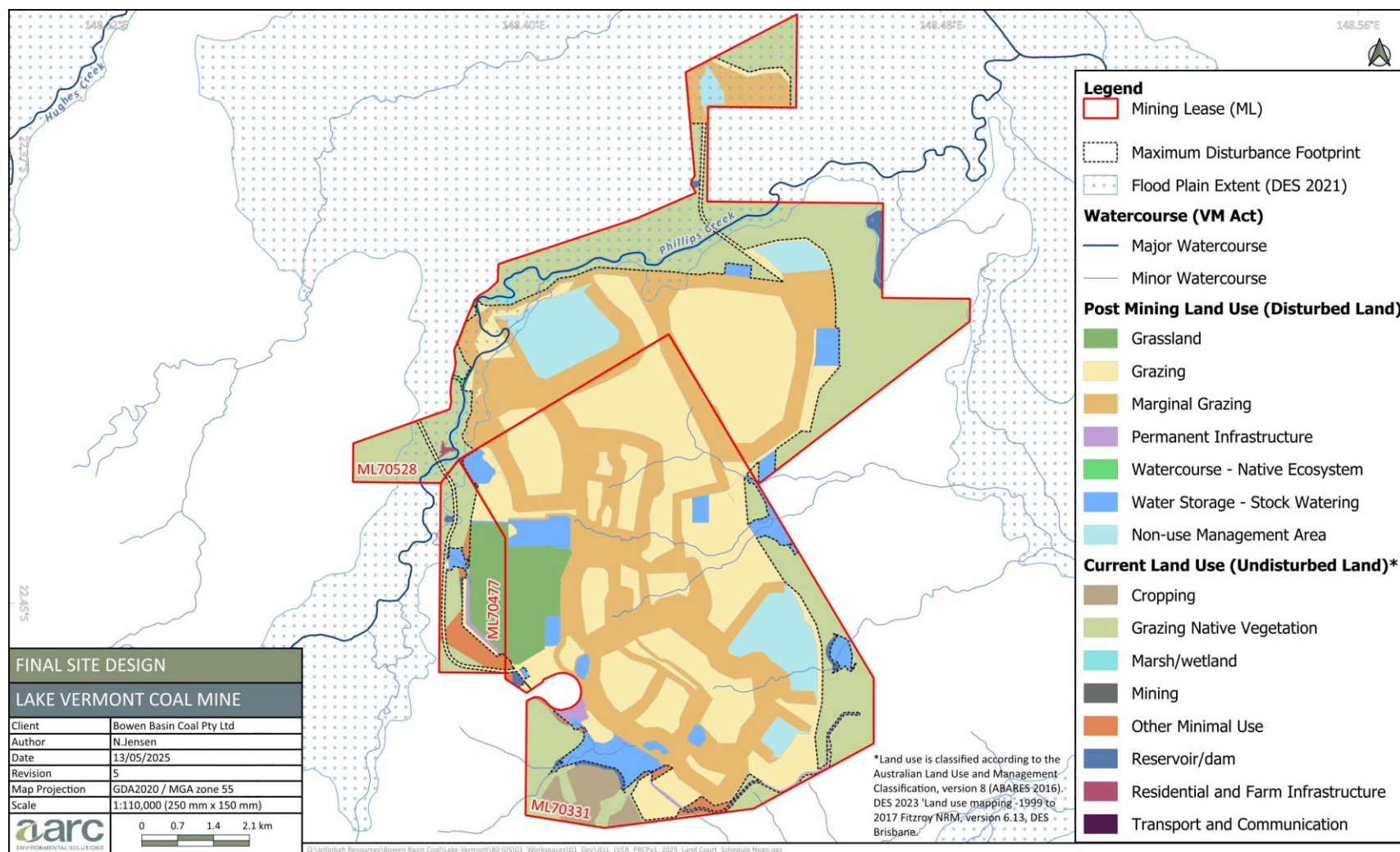


Figure 1: Final site design

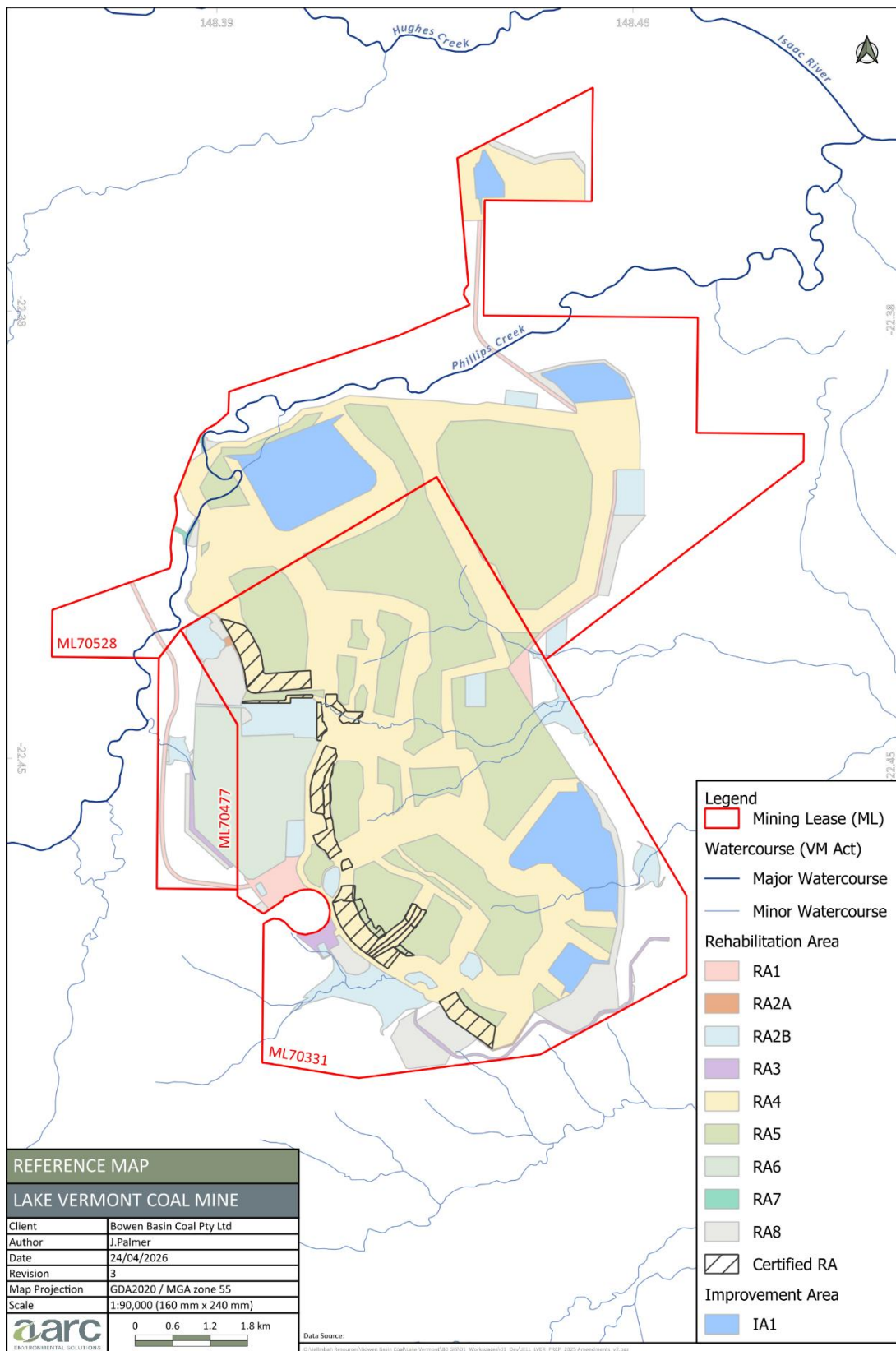


Figure 2: Rehabilitation areas and improvement areas (Including Progressively Certified Areas as 'Certified RAs')

3 Section C – Post mining land uses

3.1 (RA1) Rehabilitation area 1

Post-mining land uses (PMLU)			
Rehabilitation area	RA1		
Relevant activities	Mine infrastructure area: coal handling preparation plant, associated infrastructure, laydown, hardstands, tracks, power infrastructure, sewage treatment plant and internal haul roads, tracks to be decommissioned		
Total rehabilitation area size (ha)	136		
Commencement of first milestone: RM1	10/12/2057		
PMLU	Grazing		
Date area is available	10/12/2057		
Cumulative area available (ha)	136	136	136
Milestone completed by	10/12/2062	10/12/2067	10/12/2074
Milestone Reference	Cumulative area achieved (ha)		
RM1	136		
RM2	136		
RM3	136		
RM5		136	
RM6		136	
RM7			136
RM11			136
RM13			136

3.2 (RA2a) Rehabilitation area 2a

Post-mining land uses (PMLU)			
Rehabilitation area	RA2a		
Relevant activities	Water management infrastructure (rehabilitated to pasture): Diversion drains regraded to natural landform and rehabilitated to pasture (diversion drain located at the toes of the FN and FS out-of-pit spoil dumps and the toe of CDA 3B)		
Total rehabilitation area size (ha)	7.6		
Commencement of first milestone: RM1	10/12/2057		
PMLU	Grazing		
Date area is available	10/12/2057		
Cumulative area available (ha)	7.6	7.6	7.6
Milestone completed by	10/12/2062	10/12/2067	10/12/2074
Milestone Reference	Cumulative area achieved (ha)		
RM1	7.6		
RM3	7.6		
RM5	7.6		
RM6		7.6	
RM7			7.6
RM11			7.6
RM13			7.6

3.3 (RA2b) Rehabilitation area 2b

Post-mining land uses (PMLU)			
Rehabilitation area	RA2b		
Relevant activities	Water management infrastructure (retained as stock watering) - Mine dams		
Total rehabilitation area size (ha)	383.1		
Commencement of first milestone: RM3	10/12/2057		
PMLU	Water storage – stock watering		
Date area is available	10/12/2057		
Cumulative area available (ha)	383.1	383.1	383.1
Milestone completed by	10/12/2062	10/12/2064	10/12/2074
Milestone Reference	Cumulative area achieved (ha)		
RM3	383.1		
RM5	383.1		
RM6	383.1		
RM9		383.1	
RM13			383.1

3.4 (RA3) Rehabilitation area 3

Post-mining land uses (PMLU)		
Rehabilitation area	RA3	
Relevant activities	Mine infrastructure area (retained infrastructure): Heavy vehicle workshops and associated infrastructure; light vehicle workshop; administration buildings and associated infrastructure (laydown, hardstands and tracks); and site access road / access to retained buildings / workshops to be retained. Retained diversion drains (Southern clean water diversion drain and CDA clean water diversion drain)	
Total rehabilitation area size (ha)	52.9	
Commencement of first milestone: RM10	10/12/2057	
PMLU	Retained infrastructure	
Date area is available	10/12/2057	
Cumulative area available (ha)	52.9	52.9
Milestone completed by	10/12/2058	10/12/2074
Milestone Reference	Cumulative area achieved (ha)	
RM10	52.9	
RM13		52.9

3.5 (RA4) Rehabilitation area 4

Post-mining land uses (PMLU)										
Rehabilitation area				RA4						
Relevant activities				Spoil emplacements and bunds / levees (slopes >10%): Disturbance area associated with in-pit and out-of-pit spoil emplacements and bunds / levees (slopes >10%)						
Total rehabilitation area size (ha)				2426.2 (226.9 ha progressively certified)						
Commencement of first milestone: RM3				10/12/2027						
PMLU				Marginal grazing						
Date area is available	10/12/2027	10/12/2032	10/12/2032	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area available (ha)	421.2	535.2	641.2	744.7	1140.7	1544.3	2426.2	2426.2	2426.2	2426.2
Milestone completed by	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2070	10/12/2074
Milestone Reference	Cumulative area achieved (ha)									
RM3	421.2	535.2	614.2	744.7	1140.7	1544.3	2426.2			
RM5	421.2	535.2	614.2	744.7	1140.7	1544.3	2426.2			
RM6	421.2	535.2	614.2	744.7	1140.7	1544.3	2426.2			
RM7	299.3	421.2	535.2	614.2	744.7	1140.7	1544.3	2426.2		
RM11	299.3	299.3	421.4	535.2	614.2	744.7	1140.7	1544.3	2426.2	
RM13										2426.2

3.6 (RA5) Rehabilitation area 5

Post-mining land uses (PMLU)										
Rehabilitation area				RA5						
Relevant activities				Spoil emplacements and bunds / levees (slopes <10%): Disturbance area associated with in-pit and out-of-pit spoil emplacements (slopes <10%)						
Total rehabilitation area size (ha)				2149.6 (12.1ha progressively certified)						
Commencement of first milestone: RM3				10/12/2027						
PMLU				Grazing						
Date area is	10/12/2027	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area available (ha)	93.6	158.9	365	591.2	756	1266	2149.6	2150.6	2150.6	2150.6
Milestone	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2070	10/12/2074
Milestone	Cumulative area achieved (ha)									
RM3	93.6	158.9	365	591.2	756	1266	2149.6			
RM5	93.6	158.9	365	591.2	756	1266	2149.6			
RM6	93.6	158.9	365	591.2	756	1266	2149.6			
RM7	28.9	93.6	158.9	365	591.2	756	1266	2149.6		
RM11	28.9	28.9	93.6	158.9	365	591.2	756	1266	2149.6	
RM13										2149.6

3.7 (RA6) Rehabilitation area 6

Post-mining land uses (PMLU)							
Rehabilitation area		RA6					
Relevant activities		Co-disposal area: Disturbance area associated with the management of coarse and fine coal reject material					
Total rehabilitation area size (ha)		378.5					
Commencement of first milestone: RM4		10/12/2042					
PMLU		Grassland					
Date area is available	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area	29.1	60.5	104.5	378.5	378.5	378.5	378.5
Milestone completed	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2070	10/12/2074
Milestone Reference	Cumulative area achieved (ha)						
RM4	29.1	60.5	104.5	378.5			
RM5	29.1	60.5	104.5	378.5			
RM6	29.1	60.5	104.5	378.5			
RM7		29.1	60.5	104.5	378.5		
RM11			29.1	60.5	104.5	378.5	
RM13							378.5

3.8 (RA6) Rehabilitation area 6

Post-mining land uses (PMLU)							
Rehabilitation area		RA6					
Relevant activities		Co-disposal area: Disturbance area associated with the management of coarse and fine coal reject material					
Total rehabilitation area size (ha)		378.5					
Commencement of first milestone: RM4		10/12/2042					
PMLU		Grassland					
Date area is	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area	29.1	60.5	104.5	378.5	378.5	378.5	378.5
Milestone	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2070	10/12/2074
Milestone	Cumulative area achieved (ha)						
RM4	29.1	60.5	104.5	378.5			
RM5	29.1	60.5	104.5	378.5			
RM6	29.1	60.5	104.5	378.5			
RM7		29.1	60.5	104.5	378.5		
RM11			29.1	60.5	104.5	378.5	
RM13							378.5

3.9 (RA7) Rehabilitation area 7

Post-mining land uses (PMLU)					
Rehabilitation area	RA7				
Relevant activities	Phillips Creek diversion: Disturbance area associated with the diversion of Phillips Creek.				
Total rehabilitation area size (ha)	6.4				
Commencement of first milestone: RM5	10/12/2032				
PMLU	Watercourse – Native Ecosystem				
Date area is available	10/12/2032				
Cumulative area available (ha)	6.4	6.4	6.4	6.4	6.4
Milestone completed by	10/12/2037	10/12/2042	10/12/2047	10/12/2049	10/12/2074
Milestone Reference	Cumulative area achieved (ha)				
RM5	6.4				
RM6	6.4				
RM8		6.4	6.4		
RM12				6.4	
RM13					6.4

3.10 (RA8) Rehabilitation area 8

Post-mining land uses (PMLU)				
Rehabilitation area	RA8			
Relevant activities	Other minor disturbance: Disturbance associated with topsoil stockpiles on natural ground; and Minor disturbance from other approved disturbance activities resulting in compacted land requiring rehabilitation ^A			
Total rehabilitation	365.1			
Commencement of	10/12/2057			
PMLU	Grazing			
Date area is available	10/12/2057			
Cumulative area	365.1	365.1	365.1	365.1
Milestone completed	10/12/2062	10/12/2067	10/12/2070	10/12/2074
Milestone Reference	Cumulative area achieved (ha)			
RM3	365.1			
RM4	365.1			
RM5	365.1			
RM6	365.1			
RM7		365.1		
RM11			365.1	
RM13				365.1

3.11 Rehabilitation area milestones

Milestone reference	Rehabilitation milestone	Milestone criteria	
RM1	Infrastructure decommissioning and removal	1.1	With the exception of any infrastructure to remain as part of the post-mining land use (PMLU) or where infrastructure is agreed to be retained by the landholder as evidenced by a signed landholder agreement, the following are complete: (a) All services disconnected and removed; (b) All concrete, bitumen and gravel roads removed; (c) All operational pipelines drained and removed; (d) All fencing that is not part of PMLU requirements removed; (e) All buildings demolished and/or removed off-site; (f) All machinery and equipment removed; (g) All surface water drainage infrastructure removed; and (h) All waste removed.
RM2	Management of contaminated land status	2.1	Contaminated Land Investigation Document completed in accordance with the <i>Environmental Protection Act 1994</i> , including a site investigation report, and, where required, a Validation Report and/or a draft Site Management Plan.
		2.2	A declaration from a SQP that no contamination unsuitable for the post-mining land use remains.
RM3	Landform development (re-profiling / re shaping) – excluding co-disposal area (CDA)	3.1	<u>Landform development works:</u> All bulk earthworks and landform reshaping/reprofiling works completed to design specifications.
		3.2	Certification provided by an appropriately qualified person (AQP) confirms that drainage features are constructed to design specifications.
		3.3	Geotechnical assessment undertaken by an AQP prior to construction confirms that the landform design will achieve long-term stability for each relevant landform, meaning there is a low likelihood of mass failure impacting surrounding rehabilitation areas.

		3.4	<u>Landform constructed to the following design parameters:</u> Spoil dumps: (a) Maximum slopes of $\leq 1:6H$ (16.66%) when measured from the toe of slope to the crest of the slope; (b) Maximum vertical height is no more than 50m above the original ground level; and (c) Pre-2022 slopes: (i) Uninterrupted batter length $\leq 70m$; (ii) Stable berms or bunds ($\geq 5m$ wide); and (iii) Maximum slopes of $\leq 1:6H$ (16.66%) when measured in between contour banks or benches from the toe of slope to the crest of the slope section; and (d) Certification by an AQP that spoil dump tops are internally draining landforms.
		3.5	Water Management Infrastructure: (a) Retained infrastructure (RA2b): Earthworks provide safe wildlife and stock access to dams and certified by an AQP as safe for the intended use. (b) Removed infrastructure (RA2a): slopes $\leq 1:6H$ (16.66%).
		3.6	Flood protection: (a) All flood protection landforms provide final void immunity up to 0.1% AEP, as confirmed by an AQP.
RM4	Landform development (re-profiling / re-shaping) – CDA	4.1	All bulk earthworks and landform reshaping/reprofiling works completed to design specifications: (a) Maximum slope embankments $\leq 1:6H$ (16.66%) measured from the toe of the slope to the crest of the slope. (b) Maximum vertical height is no more than 25m above the original ground level. (c) Spoil material applied as required to create a water shedding landform. (d) No presence of potentially acid forming reject material at the surface.
		4.2	Geotechnical assessment undertaken by an AQP confirms that the landform design will achieve long-term stability, meaning there is a low likelihood of mass failure.
RM5	Surface preparation (topdressing,	5.1	Prior to each rehabilitation event, soil health and suitability assessed and documented by an AQP: and (a) Confirms soil is suitable for vegetation establishment, where the parameters in Attachment 9 – Soil quality criteria are met. (b) Where the soil health and suitability assessment identifies that criteria in Attachment 9 – Soil quality criteria are not met, a recommendation made for ameliorants to ensure sodicity, salinity, pH and fertility levels are suitable to achieve the relevant PMLU.

	contour ripping, soil amelioration)	5.2	Records demonstrate that ameliorants and mitigation measures have been undertaken as per AQP recommendations in RM5.1(b) .
		5.3	Records of topsoil placement, and evidence indicating achievement of a target depth of 0.2m (+/- 0.05m) for all RAs except for RA6 which has a target depth of 0.3m (+/- 0.05m).
		5.4	Ripping on contour undertaken.
RM6	Revegetation (seeding and / or planting)	6.1	Seeding of all topsoil surfaces using a selection of the recommended species seed mix for each PMLU and at the minimum seeding rate as described in Attachment 1 - Recommended species seed mixes .
		6.2	For a native ecosystem PMLU, seeding of a minimum number of species for each functional layer consistent with the number of species required to achieve the benchmarks in Attachment 3 – BioCondition Benchmark criteria .
		6.3	For a grazing or grassland PMLU, the seed mix should: (a) Comprise a minimum of 25% (by weight) native species; and (b) Include a minimum of 3, 3P species.
RM7	Achievement of surface requirements for grazing or grassland PMLU	7.1	RA1, RA2a, RA5, RA8: Rehabilitation polygons have a median fractional vegetation cover (FVC) greater than the first quartile of reference polygons for at least 85% of all sample times, as determined using the satellite-derived fractional vegetation cover method ^{2, 3} .
		7.2	RA4 and RA6: Total percentage of vegetative groundcover to be ≥70%.
		7.3	AQP certifies that: (a) There is no moderate or severe sheet, rill or gully erosion present as defined by Attachment 2 – Erosion classification framework ³ ; and (b) Mass movement and tunnel erosion are absent

		7.4	AQP certifies that all minor gully erosion present: (a) Does not exceed 1m in depth at any point; (b) Has not exposed environmentally problematic materials; (c) The cause of the gully is known and has been resolved; (d) Has established and persistent vegetation cover at the head of the gully; (e) Is in a stabilised¹⁰ state, demonstrated by monitoring data over a 2 year period; (f) Does not provide a safety hazard within the context of the PMLU; and (g) Does not impact the stability or performance of engineered drainage features.
		7.5	Weed presence is less than 10% of total vegetative groundcover and an AQP has confirmed that appropriate weed management controls are being implemented.
		7.6	A species presence that is consistent with ⁵ those used in the rehabilitation seed mix in Attachment 1 – Species seed mixes .
		7.7	RA6: there is no evidence of surface salting and bare soil due to capillary rise.
		7.8	Surface water runoff collected (when surface flows occur and it is safe to do so) from representative areas of rehabilitation, as identified by an AQP, that meets RM7.1 and RM7.2 is non-polluting to receiving waters.
RM8	Achievement of surface requirements for watercourse - native ecosystem along reinstated drainage lines	8.1	A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'.
		8.2	The BioCondition assessment completed under RM8.1 complies with the PRCP Benchmark for the PMLU, as per Attachment 3 – BioCondition Benchmark Criteria .
		8.3	Weed presence is less than 10% of total vegetative groundcover and an AQP has confirmed that appropriate weed management controls are being implemented.
		8.4	AQP certifies that: (a) There is no moderate or severe sheet, rill or gully erosion present as defined by Attachment 2 – Erosion classification framework; and (b) Mass movement and tunnel erosion are absent

		8.5	AQP certifies that all minor gully erosion present: (a) Does not exceed 1m in depth at any point; (b) Has not exposed environmentally problematic materials; (c) The cause of the gully is known and has been resolved; (d) Has established and persistent vegetation cover at the head of the gully; (e) Is in a stabilised⁷ state, demonstrated by monitoring data over a 2 year period; (f) Does not provide a safety hazard within the context of the PMLU; and (g) Does not impact the stability or performance of engineered drainage features
		8.6	Assessment by an AQP confirms that the watercourse diversion is self-sustaining and trending toward a stable condition in accordance with the Design Plan.
RM9	Achievement of water storage for stock watering PMLU to stable condition	9.1	Transfer of ownership agreements in place for all water storages to be retained.
		9.2	Retained water storages, must meet water quality parameters that are below the trigger values for livestock drinking water defined in Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018).
		9.3	All retained water storages assessed as safe and stable by an AQP, where: (a) There is no moderate or severe sheet, rill or gully erosion present as defined by Attachment 2 – Erosion classification framework; (b) Mass movement and tunnel erosion are absent; (c) Water storages are accompanied by ‘certified as constructed’ drawings; and (d) Safe access is provided for stock.
RM10	Achievement of retained infrastructure PMLU to stable condition	10.1	All retained structures and landforms assessed as safe, stable and not causing environmental harm by an AQP.
		10.2	Diversion drains to be accompanied by ‘as constructed’ engineering drawings, certified by an AQP as being fit for their intended purpose.
		10.3	Transfer of ownership agreements in place for all infrastructure to be retained.
		10.4	Final landform survey confirms no built structures remain other than those that form part of a landholder agreement.

RM11	Achievement of grazing and grassland PMLU to a stable condition	11.1	Land suitability assessment by an AQP certifies that: (a) Land has achieved a minimum post mining land suitability of class 3 ⁴ on slopes <10% (RA1, RA2a, RA5 and RA8) and class 4 ⁴ on slopes >10% (RA4); and (b) Describes the limitations on the proposed PMLU and describes the limitations on the proposed post mining land use.
		11.2	Without limiting subparagraph (a) above, RA1, RA2a, RA5, RA8 : Total percentage of vegetative groundcover over a 3-year average is: (a) For a gradient slope of 0% to 5%, vegetative groundcover of ≥55%, (b) For a gradient slope over 5%, vegetative groundcover of ≥70%.
		11.3	RA4 and RA6 : Total percentage of vegetative groundcover to be >70%.
		11.4	Weed presence less than 10% of total vegetative groundcover and confirmed by an AQP report as not affecting the achievement of a stable condition (a)
		11.5	RA6 : there is no evidence of surface water ponding due to changes in soil physical properties such as dispersion and hard-setting.
		11.6	RA6 : there is no evidence of capillary rise.
		11.7	AQP certifies that: (a) There is no moderate or severe sheet, rill or gully erosion present as defined by Attachment 2 – Erosion classification framework ; and (b) Mass movement and tunnel erosion are absent.

		11.8	AQP certifies that all minor gully erosion present: (a) Does not exceed 1m in depth at any point; (b) Has not exposed environmentally problematic materials; (c) The cause of the gully is known and has been resolved; (d) Has established and persistent vegetation cover at the head of the gully; (e) Is in a stabilised¹⁰ state, demonstrated by monitoring data over a 5 year period; (f) Does not provide a safety hazard within the context of the PMLU; and (g) Does not impact the stability or performance of engineered drainage features.
		11.9	Assessed as geotechnically stable by an AQP.
		11.10	A species presence that is consistent with ⁵ those used in the rehabilitation seed mix in Attachment 1 –Species seed mixes , including 3P grasses as recommended by grazing land management information provided by NQ Dry Tropics ⁸ or the Fitzroy Basin Association ⁹ , and are suitable to achieve the approved PMLU of grazing or grassland.
RM12	Achievement of watercourse - native ecosystem PMLU to stable condition	12.1	A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'.
		12.2	The BioCondition assessment completed under RM12.1 complies with the PRCP Benchmark for the PMLU, as per Attachment 3 – BioCondition Benchmark Criteria .
		12.3	>70% established and persistent vegetative groundcover on embankments.
		12.4	Evidence of woody debris salvaged during clearing and placed in native ecosystem rehabilitation sites.
		12.5	Evidence of native fauna utilisation through direct or indirect observations during vegetation field surveys (e.g. scats, markings, calls).
		12.6	Weed presence less than 10% of total vegetative groundcover and confirmed by an AQP report as not affecting the achievement of a stable condition.
		12.7	Report prepared by an AQP confirms the target native ecosystem of RE11.3.25, consistent with the derived benchmarks Attachment 3 – BioCondition Benchmark Criteria has been achieved and is self-sustaining.

		12.8	AQP certifies that: (a) There is no moderate or severe sheet, rill or gully erosion present as defined by Attachment 2 – Erosion classification framework; and (b) Mass movement and tunnel erosion are absent.
		12.9	AQP certifies that all minor gully erosion present: (a) Does not exceed 1m in depth at any point; (b) Has not exposed environmentally problematic materials; (c) The cause of the gully is known and has been resolved; (d) Has established and persistent vegetation cover at the head of the gully; (e) Is in a stabilised⁷ state, demonstrated by monitoring data over a 5 year period; (f) Does not provide a safety hazard within the context of the PMLU; and (g) Does not impact the stability or performance of engineered drainage features.
		12.10	Monitoring reports prepared by an AQP indicate design requirements have been met for the Philips Creek diversion in accordance with certified Design Plan.
		12.11	An AQP has certified that diversions being retained in the landform continue to achieve the following: (a) Incorporate natural features (including geomorphic and vegetation) present at the location of the diversion. (b) Maintain the pre-existing hydrologic characteristics of surface water and groundwater systems for the area in which the watercourse diversion is located. (c) Maintain the hydraulic characteristics of the permanent watercourse diversion that are equivalent to other local watercourses and are suitable for the area in which the diversion is located without using artificial structures that require on-going maintenance. (d) Maintain sediment transport and water quality regimes that allow the diversion to be self-sustaining, while minimising any impacts to upstream and downstream water quality, geomorphology, or vegetation. (e) Maintain equilibrium and functionality in all substrate conditions at the location of the diversion
		12.12	Geotechnical assessment by an AQP confirms that long- term geotechnical stability has been achieved for each relevant landform.

		12.13	Aquatic ecology (i.e. bank and bed condition, erosion, sediment deposition and riparian vegetation) monitoring has been undertaken by an AQP every 1 year in the first 5 years and 5 yearly thereafter, and shows a progressive improvement, or is similar to, upstream monitoring locations.
RM13	Surface water and groundwater demonstrate non-polluting landform	13.1	Surface water quality results monitored monthly during flow at, but not limited to, downstream locations specific in Attachment 4 – Surface water monitoring locations , must not exceed the limits in Attachment 5 – Surface water quality limits , for a minimum of 5 consecutive years.
		13.2	If (A) the surface water quality results exceed the criteria in RM13.1 ; and (B) if there is flow at both the upstream and downstream monitoring location for each watercourse; then, each year by 1 November, an AQP must complete and provide to the administering authority an assessment of the cause of the exceedance and risk of rehabilitation not achieving a stable condition. Where the assessment concludes: (a) There is a low risk to achieving a stable condition from the mining tenure (ML70331, ML70477, ML70528), then no further action is to be taken; or (b) There is a risk greater than low to achieve a stable condition then an assessment of potential environmental harm and any changes or rectification actions to rehabilitation activities must be determined and implemented.
		13.3	If RM13.2(b) is triggered the 5 year timeframe under RM13(a) is reset
		13.4	For a minimum of five consecutive years groundwater quality must be monitored quarterly at, but not limited to, bores specified in Attachment 6 – Groundwater monitoring bores , for all quality characteristics listed in Attachment 7 – Groundwater quality limits .
		13.5	Groundwater quality results must not exceed the limits in Attachment 7 – Groundwater quality limits , for 3 consecutive results.
		13.6	Groundwater level is monitored quarterly and all results must not exceed the Level Thresholds outlined in Attachment 8 - Level Thresholds , for a minimum of 10 consecutive years.
		13.7	Any AQP report provided under RM13 must identify any updates necessary to the risk register under PRCP4 .

Notes:

1. McDonald RC, Isbell RF (2009) Soil profile. In 'Australian soil and land survey field handbook'. 3rd edition. National Committee on Soil and Terrain, CSIRO Publishing: Melbourne, or later version.
2. Spectral unmixing algorithm employed in seasonal fractional cover – Landsat, JRSRP algorithm, Australia coverage v1.0 (Beutel et al. 2019)
3. Fractional Vegetation Cover Monitoring Methodology, AARC 2024, or equivalent, methodology to be used for rehabilitation monitoring
4. Department of Minerals and Energy (1995) Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland – Land Suitability Assessment Techniques. Environmental Protection Agency, Brisbane. .
5. A species presence consistent with those used in the rehabilitation seed mix (Attachment 1 - Recommended species see mixes), does not require all species seeded to be present. However, rehabilitation monitoring results should demonstrate species presence of those which can be expected at the time of monitoring (i.e., wet or dry season) consistent with the rehabilitation seed mix.
6. For pH, the quality result measured at the downstream location must be within the prescribed range. However, where pH at the downstream location is greater-than (>) the highest limit in the range, the pH at the applicable upstream location must be greater-than or equal-to ($\geq$) the downstream location. Conversely, where pH at the downstream location is less than (<) the lowest limit in the range, the upstream pH at the applicable upstream location must be less-than or equal-to ($\leq$) the downstream location.
7. Definition of stabilised to be reproduced per the Australian Soil and Land Survey Handbook (3rd ed.) and included in the schedule - one or both of the following conditions apply: no evidence of sediment movement; sides and/or floors of erosion form are revegetated.
8. <https://nrm.nqdrytropics.com.au/land/3p-grasses/>.
9. <https://fba.org.au/services/graziers/>.

4 Section D – Non-use management areas

4.1 (IA1) Improvement area 1

Non-use management area (NUMA)				
Improvement area	IA1			
Relevant activities	Residual void - pit water containment area: Disturbance area below the natural ground level that will not be rehabilitated to achieve a PMLU; and disturbance extent of the final water level. Residual void - surrounding in-situ walls and spoil sloped landform: Disturbance area below the natural ground level that will not be rehabilitated to achieve a PMLU; and disturbance area above the pit lake final water level, in-situ walls and spoil sloped landform.			
Total size (ha)	550			
Commencement of first milestone:	10/12/2047			
NUMA	Non-use management area			
Date area is available	10/12/2047	10/12/2052	10/12/2057	
Cumulative area available (ha)	33.6	226	550	550
Milestone completed by	10/12/2057	10/12/2057	10/12/2062	10/12/2067
Milestone Reference	Cumulative area achieved (ha)			
MM1	33.6	226	550	
MM2	33.6	226	550	
MM3		33.6	226	550

4.2 Improvement area milestones

Milestone reference	Management milestone	Milestone criteria	
MM1	Achievement of final landform design	1.1	Predictive modelling undertaken by an AQP, confirming that the voids will remain as a groundwater sink and that there is no risk of contaminant release to surface or groundwaters post-mining.
		1.2	Certification by an AQP that void highwalls and low walls have been constructed as per the design criteria specified in criterion MM1.5 and MM1.6 .
		1.3	Certification by an AQP that mitigation measures required to achieve a FoS>1.5 of the void walls have been undertaken.
		1.4	Certification that the final landform provides final void flood immunity up to PMF, as confirmed by flood modelling undertaken by AQP.
		1.5	Final void design ¹ Final void highwall with the following angles (a) B-Pit and Satellite Pit: (i) ≤70° for competent rock; and (ii) ≤45° for incompetent rock. (b) Central Pit and South Pit: (i) ≤45° for competent rock; and (ii) ≤30° for incompetent rock. (c) East Pit: (i) ≤65° for competent rock; and (ii) ≤30° for incompetent rock. (d) Catch benching along highwalls to raise the FoS, as required. (e) 80m crest offset to the levee for B-pit. (f) 30m crest offset and 70m bench with soft wall on fault intersects for Central Pit, as required.

		1.6	Low walls (a) Low wall with average slope of $\leq 16^\circ$ for B-Pit, South Pit, East Pit, Satellite Pit and Central Pit (in areas of floor dipping). (b) Low wall with average slope of $\leq 18^\circ$ for Central Pit in areas without floor dipping. (c) Maximum low wall height of: (i) 180m for B-pit and East Pit. (ii) 115m for Central Pit (no floor dipping) or 125m (floor dipping). (iii) 80m for South Pit. (iv) 160m for Satellite Pit. (d) The preparation of void floors by blasting and buttressing to highwalls to raise the FoS as required.
MM2	Achievement of safety requirements	2.1	Safety infrastructure established around the void, including the following: (a) Adequate bunding in place with a minimum height of 2m and minimum base width of 4m and located at least 10m beyond the projected stable crest, around the boundary of the NUMA area; (b) Perimeter fencing and signage erected to limit access to fauna and humans located at least 10m beyond the projected stable crest, including: (i) Fencing to specification (five strand barbed stock fencing); (ii) Safety signage erected at 100m intervals along the fence line; and (c) All safety precautions undertaken in accordance with the relevant legislation—signs comply with AS1319:1994—Safety Signs for the Occupational Environment.
MM3	Achievement of sufficient improvement	3.1	Voids assessed to be geotechnically stable by an AQP, modelled to achieve; (a) A modelled FOS of ≥ 1.5 for the in-situ pit walls before maximum in-pit water level is reached; (b) A modelled FOS ≥ 1.5 for the in-situ pit walls after maximum in-pit water level is reached; (c) A FOS ≥ 1.5 spoil pit walls above the maximum in-pit water level.
		3.2	Water level in the voids is monitored to support that the voids remain groundwater sinks.
		3.3	Certification from an AQP that the water level in each residual void; (a) Will not cause environmental harm to the surrounding environment; (b) The voids act as groundwater sinks to the receiving groundwater environment; and (c) Predictive modelling of the final landform confirms that water levels will remain below the void spill level in a probable maximum precipitation storm event.

		3.4	Certification from an AQP that the residual void is safe to humans and livestock.
		3.5	Groundwater level is monitored quarterly and all results must not exceed the Level Trigger Thresholds outlined in Attachment 8 - Level Trigger Thresholds , for a minimum of 10 consecutive years.

Notes:

1. Further geotechnical assessment and predictive water modelling by AQP will be undertaken prior to disturbance, as required, to determine residual void design parameters and to ensure voids will remain as groundwater sinks.

5 Section E – Attachments

Section E – Attachments

5.1 Attachment 1 – Species seed mixes

i. Grazing and grassland PMLU and where required for erosional stability of the banks of water storages

Scientific name	Common name	Minimum application rate (kg/ha)
<i>Macroptilium bracteatum</i>	Burgundy Bean	2
<i>Panicum maximum</i>	Green Panic	2
<i>Cenchrus ciliaris</i>	Gayndah Buffel	3
<i>Macroptilium atropurpureum</i>	Siratiro	3
<i>Stylosanthes scabra</i>	Seco Stylo	2
<i>Chloris gayana</i>	Rhodes Grass	2
<i>Bothriochloa insculpta</i> cvv. <i>Bisset</i>	Creeping blue grass	3
<i>Native 3P Species</i>		
<i>Themeda triandra</i>	Kangaroo Grass	2
<i>Bothriochloa bladhii</i>	Forest Bluegrass	2
<i>Dicanthium sericeum</i>	Queensland Bluegrass	2
<i>Panicum decompositum</i>	Native Millet	2
<i>Rhynchosia minima</i> var. <i>minima</i>	Rhyncho	2
<i>Glycine tabacina</i>	Glycine Pea	2
Minimum total sowing rate		15

- ii. Watercourse - native ecosystem PMLU, where 'The Channel – low flow and lower bank' zone is revegetated with grass species, rushes and sedges only.

Scientific name	Common name	Application rate
Trees(T) /shrubs(S)		
<i>Acacia salicina</i> (T)	Doolan	0.3
<i>Cassia brewsteri</i> (S)	Leichardt Bean	0.3
<i>Casuarina cunninghamiana</i> subsp.	River oak	0.3
<i>Grewia retusifolia</i> (S)	Dogs Balls	0.3
<i>Lysiphyllum hookeri</i> (T)	White Bauhinia	0.7
<i>Eucalyptus camaldulensis</i> (T)	River red gum	0.3
<i>Corymbia tessellaris</i> (T)	Moreton Bay Ash	0.3
<i>Alectryon diversifolius</i> (S)	Scrub Boonaree	0.3
<i>Bridelia leichhardtii</i> (T)	Small-leaved Scrub Ironbark	0.3
<i>Eucalyptus coolabah</i> (T)	Coolabah	0.3
<i>Ficus opposita</i> (T)	Sandpaper Fig	0.3
<i>Melaleuca bracteata</i> (S)	Black Tea Tree	0.3
<i>Carissa ovata</i> (S)	Currant Bush	0.3
<i>Abutilon oxycarpum</i> (S)	Flannel Weed	0.3
<i>Alstonia constricta</i> (S)	Quinine Bush	0.3
Minimum total sowing rate		4
Rushes and sedges		
<i>Chrysopogon zizanioides</i>	Vetiver Grass (sterile)	2
<i>Cyperus exaltatus</i>	Tall Flat Sedge	1
<i>Cyperus fulvus</i>	Sticky Sedge	1
<i>Cyperus gracilis</i>	Slender Flat-Sedge	1
<i>Eleocharis pallens</i>	Pale Spike Rush	1
<i>Lomandra longifolia</i>	Spiny Head Matt-Rush	1
Minimum total sowing rate		7
Ground cover – Grasses(G) and Forbs(F)		
<i>Bothriochloa bladhii</i> (G)	Forest Bluegrass	2
<i>Dichanthium sericeum</i> (G)	Queensland Bluegrass	2.5
<i>Glycine tabacina</i> (G)	Glycine Pea (nitrogen fixer)	2
<i>Heteropogon contortus</i> (G)	Black Speargrass	1
<i>Rhynchosia minima</i> var. <i>minima</i> (G)	Rhyncho (nitrogen fixer)	2
<i>Themeda triandra</i> (G)	Kangaroo Grass	2.5
<i>Chloris divaricata</i> (G)	Slender Chloris	1

<i>Bothriochloa decipiens</i> (G)	Red Grass	1
<i>Chrysopogon fallax</i> (G)	Ribbon Grass	1
<i>Aristida calycina</i> (G)	Dark Wiregrass	1
<i>Sida hackettiana</i> (F)	Spiked Sida	2
<i>Glycine tomentella</i> (F)	Woolly Glycine	1
<i>Eustrephus latifolius</i> (F)	Wombat Berry	2
<i>Alternanthera denticulate</i> (F)	Lesser Joyweed	2
<i>Neptunia gracilis</i> (F)	Native Sensitive Plant	1
Minimum total sowing rate		15

Note: Where seed for a specific species is not available in sufficient quality or quantity as listed in this table, it will be supplemented by the equivalent weight of a comparable native species from the technical descriptions for RE11.3.25 or RE 11.3.27

5.2 Attachment 2 – Erosion classification framework:

Erosion classification	Minor	Moderate	Severe
Sheet erosion	Shallow soil deposits downslope	Partial exposure of roots; moderate soil deposits downslope, etc	Loss of surface horizon; root exposure; moderate substantial soil deposits downslope
Rill erosion	<0.3m deep <15 rills/transect*	<0.3m deep 15-30 rills/transect*	<0.3m deep >30 rills/transect*
Gully erosion	Absent	>0.3m deep Gullies are linear, continuous, and restricted to primary or minor drainage lines	>0.3m deep Gullies are continuous or discontinuous, and either tend to branch away from primary drainage lines and on to foot slopes, or have multiple branches within drainage lines
Tunnel erosion	Absent	Absent	Present
Mass movement	Absent	Absent	Present

Source: NCST (2009) Australian Soil and Land Survey Field Handbook, 3rd edition. The National Committee on Soil and Terrain. CSIRO Publishing, Collingwood, Australia.

*Transect linear 100m across the contour (Source: Tongway, D. J. and Hindley, N. L. 2005. Landscape Function Analysis: Procedures for Monitoring and Assessing Landscapes. CSIRO Publishing, Canberra, Australia)

5.3 Attachment 3 – BioCondition Benchmark Criteria

PMLU	Modified BioCondition* Milestone Criteria	
	BioCondition Benchmarks	Modified BioCondition attributes and weightings
Native riparian vegetation Target RE 11.3.25 consistent with surrounding landscape	• Non-native plant cover 0% • Dominant canopy species present as regeneration 100% • Tree height 23m • Native tree species richness • Native shrub species richness • Native grass species richness 8 • Native forb/other species richness 13 • Native tree canopy cover 34% • Native shrub canopy cover 7% • Native perennial grass cover 35% • Litter cover 21%	a. Non-native cover (weighting = 10) b. Recruitment (weighting = 5) c. Tree canopy height (weighting = 5) d. Native species ¹ richness in four lifeforms (weighting=20) e. Tree canopy cover (weighting = 5) f. Shrub layer cover (weighting = 5) g. Native perennial grass cover (weighting = 5) h. Litter cover (weighting = 5) Weighting total = 60
Score to achieve	Established rehabilitation (5 years)	Score ≥ 20/60*
	On-track to stable condition (15 years)	Score ≥ 30/60*

* excluding the landscape, large tree, and coarse woody debris BioCondition attributes

¹ These should be species that occur in RE 11.3.25 (or 11.3.27 for Phillips Creek diversion)

Modified BioCondition score (BC) for a site can be calculated as: $BC = a+b+c+d+e+f+g+h/60$.

Refer to the BioCondition Assessment Manual for assessment methods and calculating an overall area-weighted BC score for the area of interest: Eyre, T.J., Kelly, A.L., Neldner, V.J., Wilson, B.A., Ferguson, D.J., Laidlaw, M.J. and Franks, A.J. (2015). BioCondition: A Condition Assessment Framework for Terrestrial Biodiversity in Queensland. Assessment Manual. Version 2.2. Queensland Herbarium, Department of Science, Information Technology, Innovation and Arts, Brisbane.

5.4 Attachment 4 – Surface water monitoring locations

Monitoring Locations	Receiving waters location description	Latitude (GDA2020)	Longitude (GDA2020)
<i>Upstream monitoring locations</i>			
REMP 1 (MP1)	Located 100 m upstream of mine access road	-22.54022	148.41116
REMP 2 (MP2)	Located west of the ML at the confluence of Phillips Creek and a small tributary	-22.45019	148.37841
REMP 3US	Located at the confluence of Isaac River and Phillips Creek	-22.35361	148.49133
CLOS 1US	Upstream of Spoil dump	-22.47949	148.41131
<i>Downstream monitoring locations</i>			
REMP 3DS (MP3)	Located downstream of the confluence of Isaac River and Phillips Creek	-22.35589	148.49411
REMP 4	Located on Phillips Creek at the confluence of Isaac River	-22.35588	148.49235
REMP 5	Located adjacent to Carfax Road along the Isaac River	-22.45569	148.58567
REMP 6	Located 3 km west of REMP 5 along a small tributary (Carfax Gully)	-22.45304	148.55509
REMP 8	Located in Lake Vermont (lake)	-22.38869	148.467107
CLOS DS1	Located on Phillips Creek within the Phillips Creek wetland	-22.39985	148.39657
CLOS DS2 (MP4)	Located on Phillips Creek downstream of East Pit Void	-22.38179	148.44781

5.5 Attachment 5 – Surface water quality limits

Quality characteristic (units)	Limit	Comment on limit
pH	6.5-8.5	Upper Isaac River WQO
Electrical Conductivity (µS/cm)	720	Upper Isaac River WQO baseflow
Turbidity (NTU)	50	Upper Isaac River WQO
Sulphate (mg/L)	25	Upper Isaac River WQO
Aluminium - dissolved (µg/L)	55	ANZG 2018
Cobalt - dissolved (µg/L)	1.4	ANZG 2018
Chromium - dissolved (µg/L)	1.0	ANZG 2018
Copper - dissolved (µg/L)	1.4	ANZG 2018
Manganese - dissolved (µg/L)	1,900	ANZG 2018
Molybdenum - dissolved (µg/L)	34	ANZG 2018
Nickel - dissolved (µg/L)	11	ANZG 2018
Selenium - dissolved (µg/L)	5	ANZG 2018
Zinc - dissolved (µg/L)	8	ANZG 2018
Total petroleum hydrocarbons (C6-C9) (µg/L)	20	
Total petroleum hydrocarbons (C10-C36) (µg/L)	100	
Major ions (mg/L) Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	For interpretation purposes only	
Hardness (mg/L)	For interpretation purposes only	

Notes:

- All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample) and total (unfiltered).
- Limits for metals and metalloids apply to dissolved results.

ANZG (2018) Aquatic ecosystem protection for moderately disturbed system (95% protection).

5.6 Attachment 6 – Groundwater monitoring bores

Monitoring Bore	Hydrogeological Unit	Compliance assessment required		Location	
		Water quality (Y/N)	Water level (Y/N)	Latitude (GDA2020)	Longitude (GDA2020)
1238_MB1	Tertiary	Y	Y	-22.39314	148.46476
1238_MB2	Vermont Seam	Y	Y		
2218-MB2	Rewan	Y	Y	-22.39345	148.41479
2218-MB3	Leichardt Seam	Y	Y	-22.39345	148.41476
2226-MB2	Rewan	Y	Y	-22.40095	148.39164
2226-MB3	Leichardt Seam	Y	Y		
2371W-MB1	Tertiary	Y	Y	-22.40095	148.39161
2375-MB2	Vermont Seam	Y	Y	-22.38313	148.43912
2372-MB1	Tertiary	Y	Y	-22.36387	148.43386
2372-MB2	Rewan Group	Y	Y		
2372-MB3	Vermont Seam	Y	Y		
West_MB1	Tertiary	Y	Y	-22.41920109	148.38927
West_MB2	Permian Rangal Coal Measures	Y	Y		
2393-MB1	Tertiary	Y	Y	-22.39084	148.41642
2393-MB2	Leichardt Seam	Y	Y		
2393-MB3	Vermont Seam	Y	Y		
2394-MB1	Tertiary	Y	Y	-22.39165	148.40867
2394-MB2	Rewan Group	Y	Y		
2226-VWP	Rewan Group, Permian coal	N	Y	-22.40092713	148.3915864
2183-VWP	Permian Rangal Coal Measures	N	Y	-22.41522632	148.4008505
2218-VWP	Rewan Group, Permian Rangal	N	Y	-22.39347	148.41479
2372-VWP	Permian Rangal Coal Measures	N	Y	-22.36392	148.43381
2375W-VWP	Permian Rangal Coal Measures	N	Y	-22.38322	148.43911
1235C-VWP	Permian Rangal Coal Measures	N	Y	-22.39942	148.45636
2369W-MB1	Tertiary Clay/Sand	Y	Y	-22.39348	148.41477
2370W-MB1	Tertiary Sand/Sandy Clay	Y	Y	-22.38310	148.43908
MB1	Tertiary Duaringa Formation	Interpretation bore		-22.46549	148.46645

Monitoring Bore	Hydrogeological Unit	Compliance assessment required		Location	
		Water quality (Y/N)	Water level (Y/N)	Latitude (GDA2020)	Longitude (GDA2020)
MB2	Tertiary/Quaternary Alluvium	Interpretation bore		-22.48958	148.43538
MB3	Tertiary/Quaternary Alluvium	Interpretation bore		-22.43114	148.44455
MB4	Tertiary/Quaternary Alluvium	Interpretation bore		-22.45928	148.384600
MB5	Tertiary/Quaternary Alluvium	Y	Interpretation	-22.4325	148.3855

Note: The hydrogeological unit to be updated in accordance with **PRCP12** and **PRCP13**.

5.7 Attachment 7 – Groundwater quality limits

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

Notes:

- All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample) and total (unfiltered).
- Limits for metals and metalloids apply to dissolved results.
- ANZG (2018) Aquatic ecosystem protection for moderately disturbed system (95% protection)
- The bore-specific limits for all compliance bores to be updated in accordance with **PRCP14**

5.8 Attachment 8 – Groundwater standing water level monitoring locations, frequency and thresholds

Monitoring Bore*	Hydrogeological Unit	Location		Surface RL (mAHD)	Baseline Water Level (mAHD)	Level Threshold – End of mining drawdown (m)	End of Mining Water Level (mAHD)
		Easting (GDA2020)	Northing (GDA2020)				
1238_MB1	Tertiary	650785	7522923	165.52	142.43	13.5	128.93
1238_MB2	Vermont Seam				134.99	14.9	120.09
2372-MB1	Tertiary	647635	7526194	166.91	144.53	34.0	110.53
2372-MB2	Rewan Group				144.61	5.0	139.61
2372-MB3	Vermont Seam				146.25	64.0	82.25
2393-MB1	Tertiary	645811	7523225	173.24	152.38	17.2	135.18
2393-MB2	Leichhardt Seam				151.09	18.7	132.39
2393-MB3	Vermont Lower Seam				150.88	30.8	120.08
2394-MB1	Tertiary	645013	7523144	173.96	150.12	17.6	132.52
2394-MB2	Rewan Group				151.85	19.4	132.45
West_MB1	Tertiary	642987	7520111	184.0	161.24	7.3	153.94
West_MB2	Permian Rangal Coal Measures				163.24	4.8	158.44
2371W-MB1	Tertiary Sediments	643246	7522129	178.92	162.08	15.7	146.38

2375-MB2	Vermont Seam	648156	7524056	168.36	142.63	15.7	126.93
2226-MB2	Rewan Group	643249	7522129	178.84	160.04	15.2	144.84
2226-MB3	Leichhardt Seam				157.31	18.7	138.61
2218-MB2	Rewan Group	645641	7522938	173.29	151.15	25.3	125.85
2218-MB3	Leichhardt Seam	645638	7522936		150.45	33.4	117.05
2226-VWP	Rewan Group, Permian coal measures	643244	7522132	178.84	154.97	20.4	134.57
2183-VWP	Permian Rangal Coal Measures	644183	7520540	185.16	145.09	47.9	97.19
2218-VWP	Rewan Group, Permian Rangal Coal Measures	645641	7522935	173.29	146.90	34.7	112.2
2372-VWP	Permian Rangal Coal Measures	647630	7526189	166.91	144.49	83.0	61.49
2375W-VWP	Permian Rangal Coal Measures	648154	7524047	168.36	141.63	14.5	127.13
1235C-VWP	Permian Rangal Coal Measures	649913	7522236	170.81	133.42	22.8	110.62
2369W-MB1	Tertiary Clay/Sand	645639	7522934	173.4	Dry	18.5	Dry
2370W-MB1	Tertiary Sand/Sandy Clay	648151	7524060	168.3	150.45	14.1	136.35

* Monitoring against water level criteria is only applicable to bores in the receiving environment of the rehabilitation area under investigation.

5.9 Attachment 9 – Soil Quality Criteria

Parameter	Criteria
	RM5
pH	5.5 – 9.0
EC _{1:5} (µS/cm)	<1000
Nitrate (mg/kg)	>5
Total Kjeldahl Nitrogen (mg/kg)	>500
Total Phosphorus (mg/kg)	≥50
Exchangeable Sodium Percentage [ESP] (%)	<6
Total Organic Carbon (%)	>1

END OF **PRCP** SCHEDULE