PRCP schedule

Environmental Protection Act 1994

PRCP schedule P-PRCP-100885812_V2

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

PRCP schedule: P-PRCP-100885812_V2

PRCP schedule holder(s)

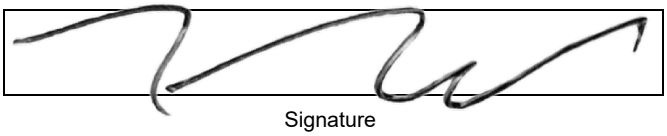
Name(s)	Registered address
Fitzroy (CQ) Pty Ltd (ACN 103 902 389); Nebo Central Coal Pty Ltd (ACN 079 942 377).	Level 20, 324 Queen Street BRISBANE CITY QLD 4000

Location details

Location(s)
ML700024

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 October 2025

Date

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

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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 - Definitions
- Section C - Final site design and reference maps
- Section D - Post mining land uses
- Schedule E - Appendices

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 All mining disturbance authorised under environmental authority EA0001299 must have an associated rehabilitation outcome provided in this PRCP Schedule.

PRCP2 The holder must for each rehabilitation area, achieve the corresponding rehabilitation milestone criterion (milestone reference):

(a) for the cumulative area available specified in this schedule; and

(b) by the milestone completion date specified in this schedule.

PRCP3 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 days of the land becoming ‘available for rehabilitation’. The written notification must include precise details of the relevant land area and the date when that land became ‘available for rehabilitation’; and

(b) unless otherwise agreed to by the administrating authority in writing, within 90 days of the land becoming ‘available for rehabilitation’, apply to the administering authority to amend this schedule in a way that maximises the progressive rehabilitation of the land to a stable condition, including bring forward achievement of relevant milestones and criteria.

Note: 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.

PRCP4 Where an area achieves a rehabilitation milestone, the holder must continue to achieve the milestone criteria until a surrender is approved.

PRCP5 The holder must maintain a risk register that identifies the risks to not achieving:

(a) a stable condition for post-mining land uses, and

(b) how the risks are being managed or minimised.

The risk register must include consideration of the outcomes of PRCP monitoring data.

PRCP6 The risk register (**PRCP5**) must be reviewed annually.

PRCP7 The holder must carry out monitoring in accordance with:

(a) the monitoring and maintenance program described in the rehabilitation planning part for the activity titled *Progressive Rehabilitation and Closure Plan: Ironbark Coal Mine (Doc no. 21M051–001 / 24B02804)*; and

(b) any requirement under this schedule; and

(c) as necessary to demonstrate achievement of each rehabilitation milestone or management milestone criteria.

Note: Where there is any inconsistency between this schedule and the rehabilitation planning part, the schedule criteria prevail to the extent of the inconsistency.

PRCP8 The holder must make and keep up to date records on:

(a) Achievement and maintenance 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;

(i) Details of community consultation in the community consultation register relating to rehabilitation and closure activities.

PRCP9 Records made under **PRCP8** must be kept until the relevant environmental authority has been surrendered.

PRCP10 Records made under **PRCP8** must be provided to the administering authority in the specified format within 10 business days of a written request.

PRCP11 All AQP designs, specifications, certifications, assessments and any similar documents, must:

(a) include documented consideration of any relevant guideline or publication material, including material published by the administering authority;

(b) detail the boundary conditions (of any model);

(c) detail any assumptions made, limitations and areas of uncertainty; and

(d) must contain sufficient detail to allow for independent peer review and substantiation.

PRCP12 Disturbance due to exploration and minor ancillary activities in areas not planned to be mined and not within a Rehabilitation Area in this Schedule 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 condition1 and achieves the pre-disturbance land use as detailed in **Figure 1 – Final Site Design**.

PRCP13 The holder must, by **10 December 2037** or **five (5) years** prior to the completion of mineral extraction from ML700024, whichever is earlier, submit to the administering authority updated long term post-mining prediction modelling for drawdown and groundwater level elevations. The modelling must be prepared by an AQP and be compliant with the latest version of the PRCP guideline (ESR/2019/4964) and the *Environmental Protection Act 1994* ('EP Act'). In addition to the requirements prescribed by the PRCP guideline and the EP Act, the updated modelling must incorporate the following requirements:

(a) Justification for the specific yield percentage selection used in the modelling for the mine goaf zone.

(b) Justification for the selected recharge rate in the modelling in response to impacts of fracturing to the surface.

(c) Details of field testing carried out to support the horizontal hydraulic conductivity values used to represent the coal seams at depth.

(d) The predicted groundwater level within the box cut area.

PRCP14 The holder must, within three (3) months of finalising the updated modelling required by condition **PRCP13**, seek to amend this PRCP schedule by application to include the outcomes of the updated modelling.

PRCP15 **Subsidence record**

The holder must keep a record of all longwall panels detailing:

(a) the surface area (ha) and depth of subsidence within each subsided panel, including dry subsidence areas as well as areas with temporary and permanent/residual ponds;

(b) The locations of pre-existing drainage lines and drainage lines to be established to prevent/manage ponding;

(c) The locations of proposed and existing infrastructure;

(d) The pre-subsidence (baseline) condition of the vegetation and land condition; and

(e) Spatial data for each panel as well as the extent of each temporary and permanent/residual pond modelled/predicted, and/or authorised ponded areas.

The record must be prepared and subsequently updated for each longwall panel within 18 months of the completion of mining for that panel.

The record must be provided to the administering authority upon request.

PRCP16 The baseline condition of each subsidence panel must be assessed prior to the mining of each mining panel. The baseline condition assessment may be undertaken for the whole of site, partial site, or panel by panel. The baseline condition must include, but is not limited to:

(a) Site hydrology and fluvial networks;

(b) Soil types, properties and productivity;

(c) Flora species composition and structure;

(d) Land stability (pre-existing degradation/erosion and predisposition to ongoing stability issues);

(e) Regional ecosystem details for areas of remnant vegetation; and

(f) BioCondition assessment in accordance with latest version of the BioCondition Assessment Methodology (Queensland Herbarium*), for areas of remnant vegetation in RA7. Methodology may include digital surface model or terrain model generated.

Components of the baseline condition should be informed by the latest version of the rehabilitation planning part and where relevant, the Subsidence Management Plan, with consideration of the following:

(1) Assessment of subsidence impacts on vegetation;

(2) Subsidence analysis and modelling;

(3) Surface ponding and cracking mitigation measures; and

(4) Post-subsidence stabilisation requirements.

Where the information required under **PRCP16 (a)** to **(e)** inclusive is available from previously submitted plans/reports/applications, if still valid, this information may be used to satisfy this condition, subject to the following:

(5) If the holder intends to rely on a previously submitted information to satisfy information required under **PRCP16 (a)** to **(e)**, the holder must prepare a summary report about the baseline condition of each subsidence panel for review by an independent AQP prior to the scheduled mining of the relevant mining panel; and

(6) Prior to mining, the independent AQP must provide a written confirmation that the previous information is suitable for the purposes of recording the baseline condition of the relevant mining panel, and the summary report under **PRCP16 (5)** adequately addresses the baseline condition of the relevant mining panel.

PRCP17 A pre-construction landform design plan and report for any flood protection features must be developed and certified by an AQP and provided to the administering authority no later than **30 June 2026**.

PRCP18 The landform design plan and report required by **PRCP17** must:

(a) include detailed engineering designs and a durability assessment;

(b) demonstrate that any flood protection features are safe, will achieve geotechnical and erosional stability, and be appropriate for the PMLU, with regard to the material properties and local conditions, during any flood event up to and including 0.1% AEP;

(c) demonstrate available freeboard of ≥300mm during a 0.1% AEP event;

(d) demonstrate that the flood protection features and surrounding landform will support the achievement of a stable condition;

(e) include parameters to mitigate high-energy flow (≥2.5m/s) to reduce flow energy and ensure the stability of the landform, as determined by the AQP;

(f) not result in increased erosion of the bank or bed of the adjacent waterways; and

(g) not impact upon existing remnant vegetation (other than that allowed under the approved disturbance footprint).

PRCP19 By **10 December 2025**, an independent AQP, following peer review, certifies that existing and designs for proposed permanent Erosion and Sediment Control (ESC) structures and drainage structures on site are appropriate to the landform, materials and the PMLU, with consideration given to their performance, stability, maintenance requirements, and residual risk post-closure; and provides for the achievement of stable condition as per the *Environmental Protection Act 1994*.

PRCP20 The certification by the AQP under **PRCP19** must make an assessment of whether the installation of such structures would result in greater environmental harm than the ponding of the landform.

PRCP21 Where a structure would result in greater environmental harm, an amendment to EA0001299 and the PRCP Schedule must be sought.

PRCP22 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—

(1) the rehabilitation auditor's report (an audit report) about the audit that complies with section 286 of the EP Act; and

(2) a declaration for the audit report that complies with section 285 of the EP Act.

Chapter 5, Part 12, Division 1 of the *Environmental Protection Act 1994* prevails over condition **PRCP22** to the extent of any inconsistency.

PRCP23 By **10 December 2030**, or another timeframe agreed to by the administering authority in writing, the holder must submit an application to the administering authority to amend the PRCP Schedule to:

(a) replace the interim limits specified in **Appendix 3 – Receiving surface water quality limits** with the 80th percentile of monitoring data for upstream/reference sites for physico-chemical indicators and the 95th percentile for toxicants; and

(b) replace the interim limits for groundwater quality characteristics specified in **Appendix 6 – Groundwater quality limits** with the 95th percentile of baseline (pre-mining) monitoring data.

The application must be accompanied by supporting information that addresses the EP Act requirements for the PRCP amendment and must include:

(1) an assessment determining if the surface water monitoring network prescribed in **Appendix 4 – Surface water monitoring locations** is fit for purpose.

(2) monitoring results for baseline surface water quality based on a minimum of 18 months of sampling.

(3) monitoring results of the baseline site-specific groundwater quality in accordance with the guideline *Using monitoring data to assess groundwater quality and potential environmental impacts* (DES 2021) or more recent version.

(4) identification and interpretation of any trends in the surface water and groundwater network monitoring data.

PRCP24 The holder must, by **15 May 2026**, apply to amend this PRCP Schedule to provide site-specific groundwater level thresholds for all groundwater monitoring bores, unless otherwise agreed with the administering authority.

END OF CONDITIONS

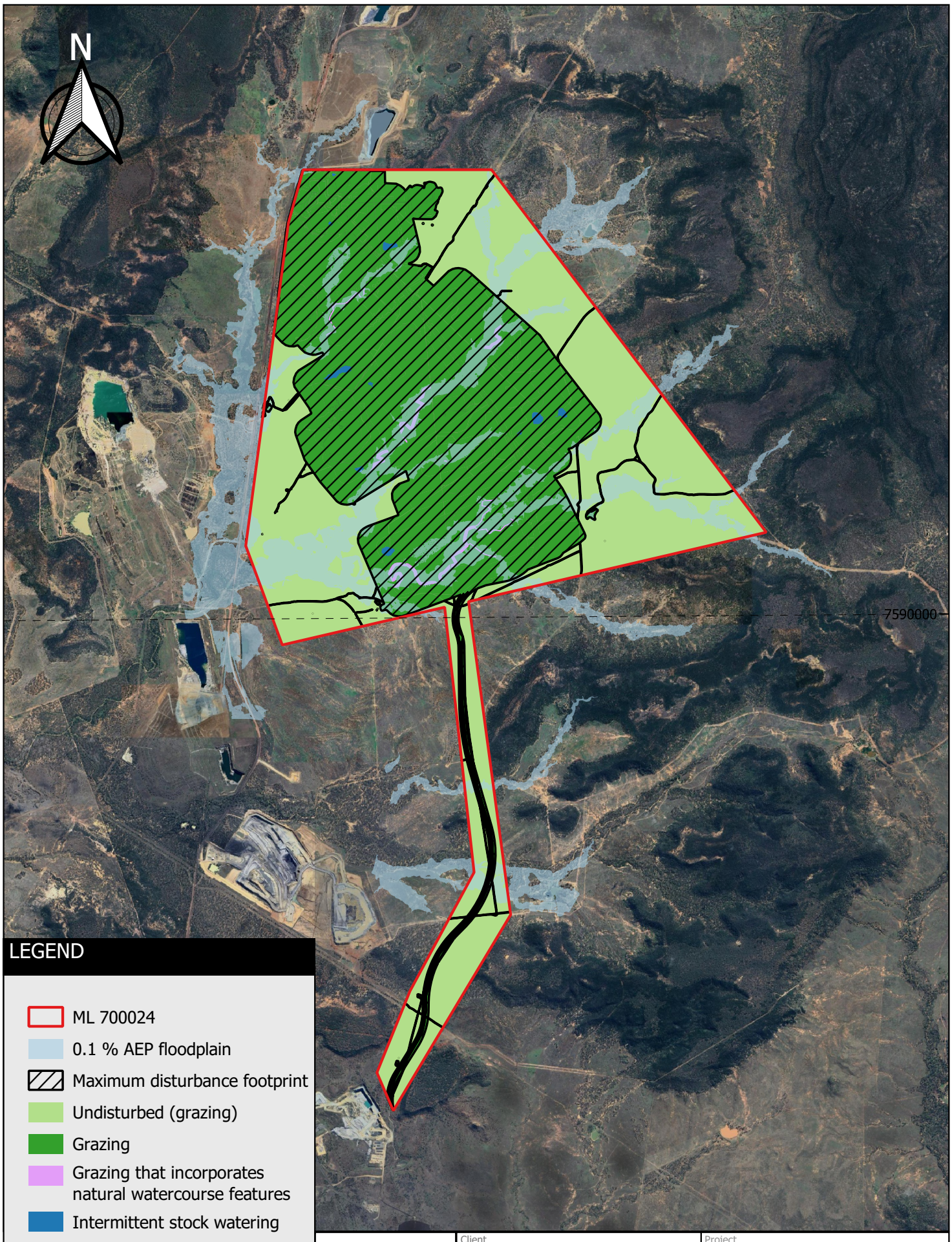
Section B – Definitions

Appropriately qualified person (AQP)	means a person who has professional qualifications, training, skills and 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.
Ancillary activities	see section 19A of the *Environmental Protection Act 1994*.
Available for rehabilitation	land is available for rehabilitation if the land is not being mined, unless— (a) the land is being used for operating infrastructure or machinery for mining, including, for example, a dam or water storage facility; or (b) the land is identified in the PRCP schedule as containing a probable or proved ore reserve that is to be mined within 10 years after the land would otherwise have become available for rehabilitation; or (ba) the land is required for the mining of a probable or proved ore reserve mentioned in paragraph (b); or (c) the land contains permanent infrastructure identified in this PRCP schedule as remaining on the land for a post-mining land use.
BioCondition	refers to the *BioCondition Assessment Manual* (Eyre, T.J., Kelly, A.L, Neldner, V.J., Wilson, B.A., Ferguson, D.J., Laidlaw, M.J. and Franks, A.J. (2015)) and *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) or later versions thereof.
Contaminants	can be a gas, liquid or solid; or an odour; or an organism (whether alive or dead), including a virus; or energy, including noise, heat, radioactivity and electromagnetic radiation; or a combination of contaminants.
Environmentally problematic material	means material that will negatively impact water quality and stability or vegetation growth.
Functionality	means the purpose that something is designed or expected to fulfil
Flood stress	is the pressure on structures from rapid water rise, erosion, and saturation during extreme floods, risking instability.
Growth media	is defined as all soil and soil-like material that will support the final vegetation cover. This includes the topsoil and subsoil where these materials are applied independently. Where the topsoil is incorporated into the underlying subsoil/spoil, topsoil refers to the depth of incorporation and the remaining depth is regarded as subsoil. The total depth of growth media is nominally considered to be the effective plant root zone
Gully	A gully is a channel excavated by water; more than 0.3 m deep.

Independent AQP	is an AQP who is a third party, being independent of the PRCP schedule holder, and has not previously provided advice on the matter the subject of the review.
Independently peer reviewed	means a peer reviewer who is a third-party to the PRCP schedule holder and the AQP whose report is being reviewed and substantiated. The peer reviewer shall also be an AQP and documentation provided must contain sufficient detail to allow for independent technical review and substantiation and provide and justify site-specific landform performance (SMART) criteria.
Potentially acid forming (PAF)	means material with either a Net Acid Producing Potential of greater than 5 kg of H_2SO_4/tonne or a Net Acid Generation oxidation pH of less than 4.5 (pH unit).
Rehabilitation activity	means any activity that the holder is required to carry out in relation to this PRCP schedule.
Relevant material	includes: i. Final landform design report, ii. Durability assessment/ report, iii. "As Constructed" report; iv. All monitoring data v. Assessment of monitoring data, vi. All maintenance records; and vii. Modelling and technical assessments.
Relevant structure	To be defined during the assessment and listed here. Typically includes TSF and higher risk structures, including WRDs.
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 environmental context, geotechnical stability, settlement and consolidation allowances, bearing capacity (trafficability), erosion resistance and geochemical stability with respect to seepage, leachate and related contaminant generation.
Stabilised	means one or both of the following conditions apply: no evidence of sediment movement; sides and/or floors of erosion form are revegetated (Australian Soil and Land Survey Field Handbook Third Edition).
Stable condition	see section 111A of the *Environmental Protection Act 1994*.
Suitably qualified and experienced person (SQP)	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.
Vegetative groundcover	Means plants, plant litter, tree leaf litter, twigs and woody debris capable of protecting the soil surface from erosion

Section C - Final site design and reference maps

List of figures:



LEGEND

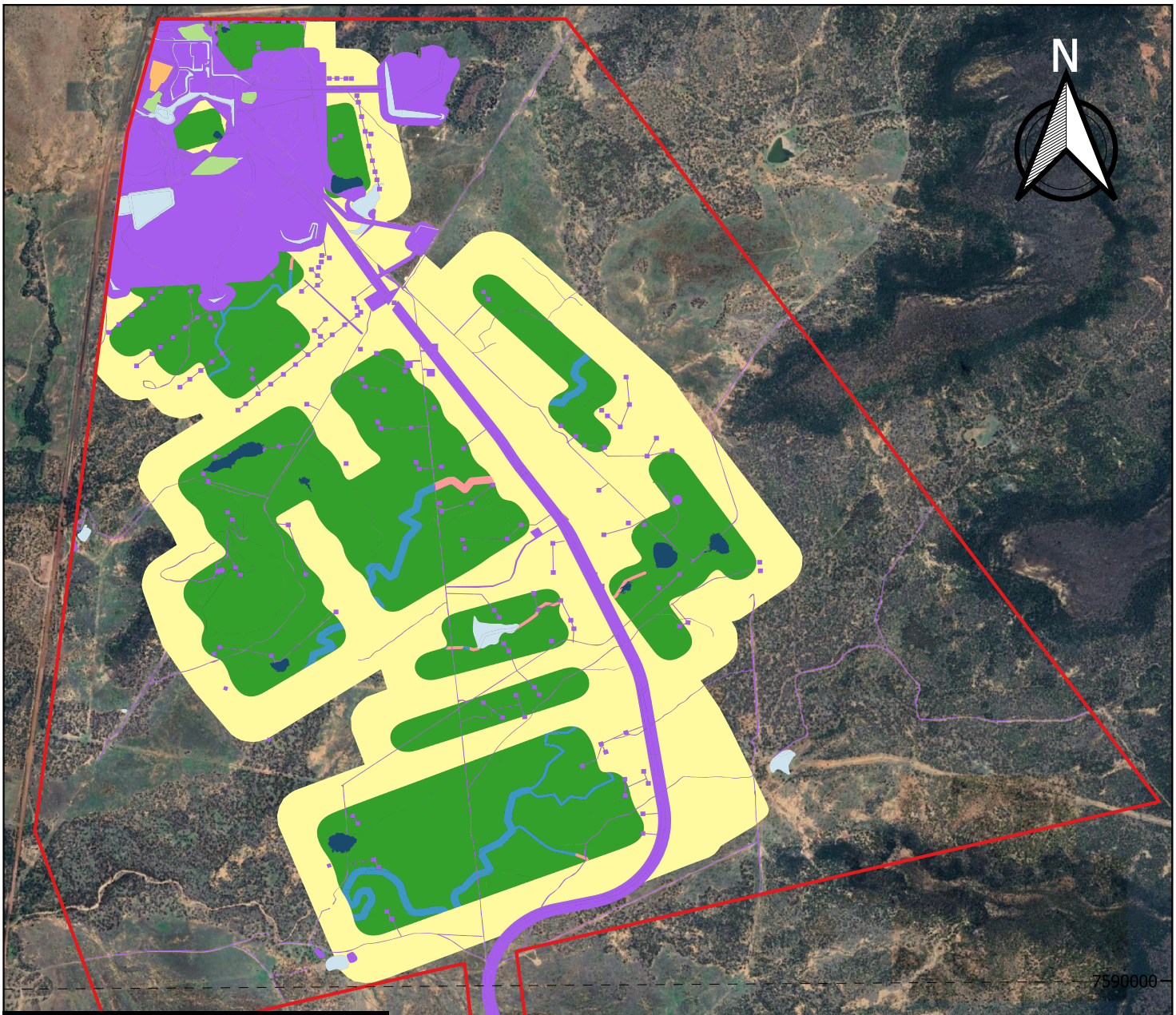
- ML 700024
- 0.1 % AEP floodplain
- Maximum disturbance footprint
- Undisturbed (grazing)
- Grazing
- Grazing that incorporates natural watercourse features
- Intermittent stock watering

Scale 1 : 30 000

0 1 2 km

SGME

Client: Fitzroy Australia Resources	Project: Ironbark Progressive Rehabilitation and Closure Plan
Design: SGME Pty Limited 03.04.2025 Scale: 1 : 30,000 CRS: GDA 2020	Title: Final site design Figure: 1



LEGEND

- Mining leases
- RA1 - boxcut void
- RA2 - infrastructure areas
- RA3 - water infrastructure
- RA4 - stockpiles
- RA5 - subsidence not beneath a watercourse or drainage line
- RA6 - subsidence beneath a watercourse or drainage line
- RA7 - subsidence beneath a watercourse with pre-disturbance natural features
- RA8 - ponded areas not beneath a watercourse or drainage line
- RA9 - gas drainage areas

Scale 1 : 16 000

0 0.5 1 km

Haul road - southern extent

SGME

Client: Fitzroy Australia Resources

Project: Ironbark Progressive Rehabilitation and Closure Plan

Design: SGME Pty Limited 02.05.2025
Scale: 1 : 16,000
CRS: GDA 2020

Title: Reference Map

Figure: 2

Section D – Post mining land uses

(RA1) Rehabilitation area 1

Post-mining land uses (PMLU)				
Rehabilitation area	RA1			
Relevant activities	Boxcut void			
Total rehabilitation area size (ha)	1.9			
Commencement of first milestone: RM1	10/12/2042			
PMLU	Grazing			
Date area is available	10/12/2042			
Cumulative area available (ha)	1.9	1.9	1.9	1.9
Milestone completed by	10/12/2043	10/12/2044	10/12/2049	10/12/2054
Milestone Reference	**Cumulative area achieved (ha)**			
RM1	1.9			
RM3	1.9			
RM4		1.9		
RM5		1.9		
RM6		1.9		
RM7			1.9	
RM8				1.9

(RA2) Rehabilitation area 2

Post-mining land uses (PMLU)								
Rehabilitation area	RA2							
Relevant activities	Infrastructure							
Total rehabilitation area size (ha)	355.8							
Commencement of first milestone: RM1	10/12/2042							
PMLU	Grazing							
Date area is available	10/12/42	10/12/43						
Cumulative area available (ha)	282.4	355.8	355.8	355.8	355.8	355.8	355.8	355.8
Milestone completed by	10/12/2043	10/12/2044	10/12/2045	10/12/2046	10/12/2050	10/12/2051	10/12/2055	10/12/2056
Milestone Reference	**Cumulative area achieved (ha)**							
RM1	282.4	355.8						
RM2	282.4	355.8						
RM3	282.4	355.8						
RM4			282.4	355.8				
RM5			282.4	355.8				
RM6			282.4	355.8				
RM7					282.4	355.8		
RM8							282.4	355.8

(RA3) Rehabilitation area 3

Post-mining land uses (PMLU)				
Rehabilitation area	RA3			
Relevant activities	Water infrastructure/Infrastructure			
Total rehabilitation area size (ha)	24.6			
Commencement of first milestone: RM1	10/12/2042			
PMLU	Grazing			
Date area is available	10/12/2042			
Cumulative area available (ha)	24.6	24.6	24.6	24.6
Milestone completed by	10/12/2043	10/12/2044	10/12/2049	10/12/2054
Milestone Reference	**Cumulative area achieved (ha)**			
RM1	24.6			
RM2	24.6			
RM3	24.6			
RM4		24.6		
RM5		24.6		
RM6		24.6		
RM7			24.6	
RM8				24.6

(RA4) Rehabilitation area 4

Post-mining land uses (PMLU)				
Rehabilitation area	RA4			
Relevant activities	Stockpiles			
Total rehabilitation area size (ha)	5.4			
Commencement of first milestone: RM1	10/12/2042			
PMLU	Grazing			
Date area is available	10/12/2042			
Cumulative area available (ha)	5.4	5.4	5.4	5.4
Milestone completed by	10/12/2043	10/12/2043	10/12/2048	10/12/2053
Milestone Reference	**Cumulative area achieved (ha)**			
RM1	5.4			
RM3	5.4			
RM4		5.4		
RM5		5.4		
RM6		5.4		
RM7			5.4	
RM8				5.4

(RA5) Rehabilitation area 5

Post-mining land uses (PMLU)																											
Rehabilitation area	RA5																										
Relevant activities	Subsidence not beneath a watercourse or drainage line																										
Total rehabilitation area size (ha)	584.3																										
Commencement of first milestone: RM1	10/12/2026																										
PMLU	Grazing																										
Date area is available	10/12/2026	10/12/2027	10/12/2028	10/12/2029	10/12/2030	10/12/2031	10/12/2032	10/12/2033	10/12/2034	10/12/2035	10/12/2036	10/12/2037	10/12/2038	10/12/2039	10/12/2040	10/12/2041											
Cumulative area available (ha)	10.8	17.0	17.9	54.3	85.5	123.6	219.3	265.8	314.0	341.6	357.6	397.2	419.6	427.2	509.3	584.3	584.3	584.3	584.3	584.3	584.3	584.3	584.3	584.3	584.3	584.3	584.3
Milestone completed by	10/12/2027	10/12/2028	10/12/2029	10/12/2030	10/12/2031	10/12/2032	10/12/2033	10/12/2034	10/12/2035	10/12/2036	10/12/2037	10/12/2038	10/12/2039	10/12/2040	10/12/2041	10/12/2042	10/12/2043	10/12/2044	10/12/2045	10/12/2046	10/12/2047	10/12/2048	10/12/2049	10/12/2050	10/12/2051	10/12/2052	10/12/2053
Milestone Reference	**Cumulative area achieved (ha)**																										
RM1	10.8	17.0	17.9	54.3	85.5	123.6	219.3	265.8	314.0	341.6	357.6	397.2	419.6	427.2	509.3	584.3											
RM3	10.8	17.0	17.9	54.3	85.5	123.6	219.3	265.8	314.0	341.6	357.6	397.2	419.6	427.2	509.3	584.3											
RM4		10.8	17.0	17.9	54.3	85.5	123.6	219.3	265.8	314.0	341.6	357.6	397.2	419.6	427.2	509.3	584.3										
RM5		10.8	17.0	17.9	54.3	85.5	123.6	219.3	265.8	314.0	341.6	357.6	397.2	419.6	427.2	509.3	584.3										
RM6		10.8	17.0	17.9	54.3	85.5	123.6	219.3	265.8	314.0	341.6	357.6	397.2	419.6	427.2	509.3	584.3										
RM7							10.8	17.0	17.9	54.3	85.5	123.6	219.3	265.8	314.0	341.6	357.6	397.2	419.6	427.2	509.3	584.3					
RM8												10.8	17.0	17.9	54.3	85.5	123.6	219.3	265.8	314.0	341.6	357.6	397.2	419.6	427.2	509.3	584.3

(RA6) Rehabilitation area 6

Post-mining land uses (PMLU)				
Rehabilitation area	RA6			
Relevant activities	Subsidence beneath a watercourse or drainage line			
Total rehabilitation area size (ha)	3.7			
Commencement of first milestone: RM1	10/12/2029			
PMLU	Grazing			
Date area is available	10/12/2029			
Cumulative area available (ha)	3.7	3.7	3.7	3.7
Milestone completed by	10/12/2030	10/12/2031	10/12/2036	10/12/2041
Milestone Reference	**Cumulative area achieved (ha)**			
RM1	3.7			
RM3	3.7			
RM4		3.7		
RM5		3.7		
RM6		3.7		
RM7			3.7	
RM8				3.7

(RA7) Rehabilitation area 7

Post-mining land uses (PMLU)																							
Rehabilitation area	RA7																						
Relevant activities	Subsidence beneath a watercourse with pre-disturbance natural features																						
Total rehabilitation area size (ha)	28.6																						
Commencement of first milestone: RM1	10/12/2029																						
PMLU	Grazing that incorporates natural watercourse features																						
Date area is available	10/12/2029	10/12/2030	10/12/2031	10/12/2032	10/12/2033	10/12/2034	10/12/2035	10/12/2036	10/12/2037	10/12/2038	10/12/2039	10/12/2040	10/12/2041										
Cumulative area available (ha)	2	2.5	2.5	2.6	8.4	12.5	13.5	14	14	15.7	16.5	18.8	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
Milestone completed by	10/12/2030	10/12/2031	10/12/2032	10/12/2033	10/12/2034	10/12/2035	10/12/2036	10/12/2037	10/12/2038	10/12/2039	10/12/2040	10/12/2041	10/12/2042	10/12/2043	10/12/2044	10/12/2045	10/12/2046	10/12/2047	10/12/2048	10/12/2049	10/12/2050	10/12/2051	10/12/2052	10/12/2053
Milestone Reference	**Cumulative area achieved (ha)**																						
RM1	2	2.5	2.5	2.6	8.4	12.5	13.5	14	14	15.7	16.5	18.8	28.6										
RM3	2	2.5	2.5	2.6	8.4	12.5	13.5	14	14	15.7	16.5	18.8	28.6										
RM4		2	2.5	2.5	2.6	8.4	12.5	13.5	14	14	15.7	16.5	18.8	28.6									
RM5		2	2.5	2.5	2.6	8.4	12.5	13.5	14	14	15.7	16.5	18.8	28.6									
RM6		2	2.5	2.5	2.6	8.4	12.5	13.5	14	14	15.7	16.5	18.8	28.6									
RM7							2	2.5	2.5	2.6	8.4	12.5	13.5	14	14	15.7	16.5	18.8	28.6				
RM8												2	2.5	2.5	2.6	8.4	12.5	13.5	14	14	15.7	16.5	18.8	28.6

(RA8) Rehabilitation area 8

Post-mining land uses (PMLU)																				
Rehabilitation area	RA8																			
Relevant activities	Ponded areas not beneath a watercourse or drainage line																			
Total rehabilitation area size (ha)	10.67																			
Commencement of first milestone: RM1	10/12/2025																			
PMLU	Intermittent stock watering																			
Date area is available	10/12/2025	10/12/2026	10/12/2027	10/12/2029	10/12/2030	10/12/2031	10/12/2032	10/12/2033	10/12/2034	10/12/2035	10/12/2036	10/12/2037	10/12/2039							
Cumulative area available (ha)	0.15	0.36	0.36	1.93	4.58	4.85	4.85	5.5	5.5	5.79	9	9	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Milestone completed by	10/12/2026	10/12/2027	10/12/2028	10/12/2030	10/12/2031	10/12/2032	10/12/2033	10/12/2034	10/12/2035	10/12/2036	10/12/2037	10/12/2038	10/12/2040	10/12/2041	10/12/2042	10/12/2043	10/12/2045	10/12/2046	10/12/2047	10/12/2048	10/12/2051
Milestone Reference	**Cumulative area achieved (ha)**																			
RM1	0.15	0.36		1.93	4.58	4.85		5.5		5.79	9		10.67							
RM3	0.15	0.36		1.93	4.58	4.85		5.5		5.79	9		10.67							
RM4		0.15	0.36		1.93	4.58	4.85		5.5		5.79	9		10.67						
RM5		0.15	0.36		1.93	4.58	4.85		5.5		5.79	9		10.67						
RM6		0.15	0.36		1.93	4.58	4.85		5.5		5.79	9		10.67						
RM7						0.15	0.36			1.93	4.58	4.85	5.5		5.79	9		10.67		
RM8											0.15	0.36		1.93	4.58	4.85	5.5		5.79	9	10.67

(RA9) Rehabilitation area 9

Post-mining land uses (PMLU)				
Rehabilitation area	RA9			
Relevant activities	Gas drainage			
Total rehabilitation area size (ha)	754.9			
Commencement of first milestone: RM1	10/12/2042			
PMLU	Grazing			
Date area is available	10/12/2042			
Cumulative area available (ha)	754.9	754.9	754.9	754.9
Milestone completed by	10/12/2043	10/12/2044	10/12/2049	10/12/2054
Milestone Reference	**Cumulative area achieved (ha)**			
RM1	754.9			
RM2	754.9			
RM3	754.9			
RM4		754.9		
RM5		754.9		
RM6		754.9		
RM7			754.9	
RM8				754.9

Rehabilitation area milestones

Milestone reference	Rehabilitation milestone	Milestone criteria
RM1	Infrastructure decommissioning and removal	With the exception of any infrastructure required for rehabilitation or where infrastructure is consistent with the PMLU and is agreed to be retained by the landholder as evidenced by a signed landholder agreement, the following are complete: (1.1) All services disconnected, terminated and removed off-site. (1.2) All buildings and associated infrastructure are demolished and removed off-site. (1.3) All hardstand, concrete areas and roads (bitumen, blue metal, aggregate, etc) are demolished and removed off-site. (1.4) All pipelines are drained and removed. (1.5) All fencing is removed. (1.6) All waste removed. (1.7) All surface water drainage infrastructure removed. (1.8) All dams dewatered, desilted and backfilled. (1.9) Power station infrastructure is decommissioned and removed. (1.10) All other remaining infrastructure is demolished and removed. (1.11) All machinery and equipment removed from site. (1.12) Certification of the following by an Appropriately Qualified Person (AQP) that: (a) all exploration drill holes and monitoring bores that have not been converted to water bores have been rehabilitated in accordance with the latest edition of *Minimum Construction Requirements for Water Bores in Australia* (National Uniform Drillers Licensing Committee 2020) [1]. (b) all exploration drill holes and monitoring bores that have been converted to a water bore have been converted in accordance with the latest edition of *Minimum Construction Requirements for Water Bores in Australia* (National Uniform Drillers Licensing Committee 2020) [1] . (1.13) Regulated structures are decommissioned in accordance with the current operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings. (1.14) Recommendation by AQP that Regulated Dam status can be rescinded. (1.15) Risk assessment completed by an AQP and provided in a report to ensure that the site is safe and all infrastructure has been decommissioned appropriately. (1.16) An independent AQP has certified the achievement of **RM1.1** to **RM1.15** (inclusive).
RM2	Gas drainage infrastructure decommissioning and removal	(2.1) Gas wells plugged and abandoned in accordance with the latest version of the *Code of Practice: For the construction and abandonment of petroleum wells and associated bores in Queensland* (State of Queensland 2019)[2]. (2.2) AQP verifies isolation of aquifers and proper sealing to prevent gas or water migration. (2.3) Pipelines and associated infrastructure, gas compressors, turbines and auxiliary systems and other gas drainage infrastructure removed and disposed of appropriately off-site. (2.4) An independent AQP has certified the achievement of **RM2.1** to **RM2.3** (inclusive).
RM3	Identification, remediation and removal of contaminated land	(3.1) Preliminary and intrusive contaminated land investigations completed by a Suitably Qualified Person (SQP), findings from which have been detailed in a site investigation report and, where required, a Validation Report and/or a draft Site Management Plan, as required under *the Environmental Protection Act 1994*. (3.2) Contaminated and hazardous material, including that associated with gas drainage infrastructure and the power plant, has been either remediated in-situ or removed/transported to an approved landfill for disposal and waste tracking information recorded and submitted. (3.3) ROM pad has been stripped, and all coal material has been placed in the box cut void above the expected long-term equilibrium groundwater level. (3.4) Validation testing has been conducted by an SQP to confirm that contaminated and hazardous materials have been remediated or removed/transported to an approved landfill for disposal and waste tracking information recorded and submitted. (3.5) Certification from an SQP that all contaminated land has been remediated or removed and disposed of in accordance with relevant legislation.

[1] National Uniform Drillers Licensing Committee, (2020). *Minimum Construction Requirements for Water Bores in Australia*. Braeside. Victoria.
[2] State of Queensland (2019). *Code of Practice: For the construction and abandonment of petroleum wells and associated bores in Queensland*. Accessed via https://www.resources.qld.gov.au/__data/assets/pdf_file/0006/1461093/code-of-practice-petroleum-wells-bores.pdf

Milestone reference	Rehabilitation milestone	Milestone criteria
RM4	Landform development and reshaping / re-profiling	(4.1) All major earthworks (including reshaping, pushing/trimming) are completed in accordance with the design specification provided by an AQP. (4.2) Erosion and sediment controls have been installed and are functioning as per design specifications. (4.3) Contour banks, channel linings, surface armour, engineered drop structures or any other engineered structures are in place and functioning. (4.4) Slopes are no greater than 10%. (4.5) As constructed landform is geotechnically stable with a factor of safety (FoS) ≥1.5, which includes consideration of flood stress. (4.6) An "As-Constructed Report" prepared which details the works undertaken, and details and justifies all variations to the design, including a certification that such variations will not affect the design performance. (4.7) Independent AQP has surveyed the final landform and certified that **RM4.1** to **RM4.20** (inclusive) have been achieved. **Additional criteria for underground workings and openings** (4.8) Sealing of drifts and other access to the underground mine completed in accordance with the *Technical Guidelines for Environmental Management of Exploration and Mining in Queensland* (DME 1995) [3] or any subsequent guideline. (4.9) Construction and backfilling of underground openings met the design intent. (4.10) Underground openings are safe. (4.11) The long-term stability of the underground bord and pillar mining areas, tailgates and maingates is a minimum FOS of 2.1. **Additional criteria for Boxcut Void (RA1 only)** (4.12) All coal material is disposed of within the Boxcut Void above the expected long-term equilibrium groundwater level, or above 298mAHD, whichever is higher in the final landform. (4.13) Backfilling of box cut to surface level completed to form a free draining final surface. **Additional criteria for subsidence and ponding areas (RA2, RA3, RA4, RA5, RA6, RA7 and RA8)** (4.14) Any erosion or effects of subsidence remediated as per the latest version of the Subsidence Management Plan and to ensure maintenance of the baseline condition (latest assessed) as determined under condition **PRCP16**. (4.15) Survey of subsidence cracking completed to locate individual cracks and determine the method of rehabilitation required . (4.16) Subsidence cracks greater than 50 mm in width or 1m long within named watercourses affected by mining have been infilled with a suitable material. (4.17) Instances of surface soil buckling have been treated via re-grading. (4.18) Areas of subsidence, on which authorised ponding is negatively impact the surrounding environment or the achievement of the grazing PMLU, are backfilled as recommended by an AQP to minimise impacts to environmental values. (4.19) Disturbance to native vegetation during rehabilitation works is minimised, and mature trees avoided. **Additional criteria for flood protection features** (4.20) Any flood protection features have been constructed, which must be: (a) constructed in accordance with the landform design report(s) required by condition **PRCP17** and reflected in associated certified 'as constructed' drawings; and (b) meet the performance requirements required by condition **PRCP18**.

[3] DME (1995). *Technical guidelines for the environmental management of exploration and mining in Queensland.* https://qldgov.softlinkhosting.com.au:443/liberty/OpacLogin?mode=BASIC&openDetail=true&corporation=DERM&action=search&queryTerm=uuid%3D%226746b155c0a81431018daefb4bf76b55%22&editionUuid=6746b155c0a81431018daefb4bf76b55&operator=OR&url=%2Fopac%2Fsearch.do

Milestone reference	Rehabilitation milestone	Milestone criteria
RM5	Surface preparation	(5.1) Assessment of growth media characteristics and the development of an amelioration and physical treatment plan is completed by an AQP (5.2) Ameliorant and physical treatments such as fertiliser, lime, gypsum and/or organic matter are applied as identified in criteria RM5.1. (5.3) Growth media health and suitability is assessed and documented by an AQP to confirm soil is suitable for the PMLU and target vegetation establishment. (5.4) Placement of a minimum of 100 mm of topsoil / growth medium on disturbed areas[4]. (5.5) Deep ripping of compacted areas, at least 300 mm (or refusal) into soil/subsoil profile along contour of slopes. (5.6) Following amelioration as per **RM5.1** and **RM5.2**, representative soil testing of growth media confirms: (a) pH 6.0-8.4. (b) Electrical Conductivity (EC) (saturated extract) < 2,000 µS/cm. (c) organic matter 1.0-10.0 %w/w. (d) Cation Exchange Capacity (CEC) 12.0-15.0 meq/100g. (e) Exchangeable Sodium Percentage (ESP) ≤ 6 %. (f) Total Nitrogen (N) > 1,500 mg/kg. (g) Total Phosphorous (P) >8mg/kg. (h) EAT class: >3. (5.7) Where soil assessment results identify that the characteristics specified in **RM5.6** have not been met, soil has been treated with ameliorants and / or fertilisers as per recommendations made by an AQP. (5.8) Surface and groundwater monitoring is underway (at least one year of sampling undertaken). (5.9) Independent AQP has certified the achievement of **RM5.1** to **RM5.8** (inclusive).
RM6	Revegetation	(6.1) Completed seeding with a selection of species and rates listed in **Appendix 1 – Seed Mix Species List**. Minimum seeding rates of 16kg/ha of coated pasture seed and 4 kg/ha of uncoated legume seed will be used, unless adjusted by an AQP based on results of rehabilitation monitoring. (6.2) Livestock are excluded from newly seeded areas via installation of stock fencing. (6.3) Independent AQP has certified the achievement of **RM6.1** to **RM6.4** (inclusive). **Subsidence areas beneath a watercourse with pre-disturbance natural features (RA7 only)** (6.4) Completed seeding of topsoiled surfaces for disturbed areas[4] using a seed mix that aligns with the species composition identified in the baseline condition assessment as described by **PRCP16.**

[4] Disturbed area is defined as any area where activities authorised under Environmental Authority EA0001299 has resulted in ground disturbance. Disturbance may include removal of vegetation, groundcover or soil material from an area.

Milestone reference	Rehabilitation milestone	Milestone criteria
RM7	Achievement of surface requirements	**All Rehabilitation Areas** (7.1) Species used in revegetation remain present and show evidence of natural recruitment. Evidence of flora recruitment from rehabilitation monitoring data. (7.2) Erosion monitoring completed which demonstrates an average erosion rate of ≤ 5 tonnes per hectare per year (t/ha/yr). (7.3) No evidence of erosion classified as 'moderate' or 'severe' as defined **by Appendix 2 - Erosion classification framework**. (7.4) Erosion requiring intervention has been remediated and does not impact achievement of the PMLU. (7.5) Any erosion present will not compromise the achievement of the PMLU to a stable condition. (7.6) Weed presence is a maximum of 5% of total vegetative cover confirmed by an AQP in annual monitoring. (7.7) Category 3 restricted invasive plants (as defined in the *Biosecurity Act 2014*) comprise less than 5% of vegetation cover. (7.8) Corrective action arising from the routine inspections program have been undertaken to include weed control, erosion repair, livestock management. (7.9) The growth media (topsoil and subsoil) physical, chemical and biological properties does not limit vegetation cover performance or restrict the potential effective depth of rooting. (7.10) Growth media testing confirms: (a) EC (saturated extract) ≤2,000 µS/cm. (b) pH 6.0-8.4. (c) ESP ≤6%. (d) EAT class: >3. (7.11) Drainage follows appropriate drainage paths. (7.12) Vegetation groundcover ≥70 %(or 50 % if rocks, logs or other features of cover are present). (7.13) No bare surfaces (a) >20 m^2 in area (b) >10 m in length down slope. (7.14) Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur. (7.15) Surface water runoff collected under RM 7.14 complies with **Appendix 3 – Surface water quality limits**. (7.16) Independent AQP certifies achievement of RM 7.1 to 7.20 (inclusive). **Additional criteria for subsidence and ponding areas (RA2, RA3, RA4, RA5, RA6, RA7 and RA8)** (7.17) No areas of active subsidence. (7.18) There are no surface cracks greater than 50 mm in width. (7.19) No evidence of surface soil buckling. (7.20) No bed or bank erosion within drainage lines or watercourses as a result of subsidence or subsidence management.
RM8	Achievement of PMLU to a stable condition	**All Rehabilitation Areas** (8.1) Safety hazards in the rehabilitation area are not significantly different to surrounding unmined landscapes subject to the same land use. (8.2) The land is structurally and erosionally stable. (8.3) The as-constructed final landform is geotechnically stable and has achieved a FoS of greater than or equal to 1.5. (8.4) Species used in revegetation under **RM6** remain present and showing evidence of natural recruitment in rehabilitation monitoring data. (8.5) The rehabilitated land meets land suitability Class 3 or better for grazing according to the *Guidelines for agricultural land evaluation in Queensland* (DSITI & DNRM, 2015)[5]. (8.6) No evidence of erosion classified as 'moderate' or 'severe' as defined **by Appendix 2 - Erosion classification framework.** (8.7) Absence of ecosystem altering weeds. (8.8) Risk to stock, and people undertaking management activities associated with stock, is as low as reasonably practicable (ALARP) in accordance with the latest version of AS/NZS ISO 31000:2009 Risk Management. (8.9) Land maintenance requirements are comparable to surrounding land. (8.10) Slopes are no greater than 10%. (8.11) Soil testing of the growth media confirms the topsoil and subsoil physical, chemical and biological properties are not limiting vegetation cover performance (e.g. nutrient availability, drought stress). (8.12) Surface water runoff complies with **Appendix 3 – Surface water quality limits**. (8.13) Surface water quality results monitored within 48 hours of any flow event at, but not limited to, downstream locations specified in **Appendix 4 - Surface water monitoring locations**, must not exceed the limits in **Appendix 3 – Surface water quality limits**, for a minimum of five (5) consecutive years.

[5] DSITI & DNRM (Department of Science, Information Technology and Innovation and Department of Natural Resources and Mines) (2015). *Guidelines for agricultural land evaluation in Queensland* (2nd edn.). Queensland Government: Brisbane, Queensland.

Milestone reference	Rehabilitation milestone	Milestone criteria
		(8.14) If the surface water quality exceeds criteria RM 8.13, the applicable upstream location must be compared to the downstream location result; and quality result measured at a downstream location must be equal to or less than the quality result measured at the applicable upstream location[6]. (8.15) For a minimum of 5 consecutive years, groundwater quality must be monitored quarterly at, but not limited to, bores specified in **Appendix 5 - Groundwater monitoring bores**, for all quality characteristics listed in **Appendix 6 - Groundwater quality limits**. (8.16) Groundwater quality results for compliance bores must not exceed the limits in **Appendix 6 - Groundwater quality limits**, for three (3) consecutive results. (8.17) Groundwater level is monitored quarterly and for a minimum of 10 consecutive years. (8.18) Groundwater level results must not exceed the Level Thresholds determined by **PRCP24**, for a minimum of 10 consecutive years[7]. (8.19) Infrastructure required for rehabilitation has been removed in accordance with **RM1** and a final landform survey confirms no built structures remain other than those that form part of a landholder agreement. (8.20) All fencing used to prevent stock access to revegetation has been removed, unless consistent with the PMLU and otherwise agreed to be retained by the landholder as evidenced by a signed landholder agreement. (8.21) Independent AQP certifies achievement of **RM8.1** to **RM8.39** (inclusive). **Additional criteria for subsidence and ponding areas (RA2, RA3, RA4, RA5, RA6, RA7 and RA8)** (8.22) Subsidence within the rehabilitation area does not present a safety hazard in the context of the PMLU. (8.23) The rehabilitation area is safe for human access and use. (8.24) No tunnel erosion or fissures present in areas subject to subsidence. (8.25) Land affected by subsidence / ponding does not impact flows of watercourse or drainage lines. (8.26) Any erosion or effects of subsidence has been remediated as per the latest version of the Subsidence Management Plan. (8.27) Watercourses and drainage lines in subsidence areas are in a stable condition. (8.28) No evidence of surface soil buckling. (8.29) Bed and banks of subsidence drainage structures are stable. (8.30) No bed and bank erosion within drainage structures or watercourses, as a result of or associated with subsidence or subsidence management. (8.31) No cracking or destabilisation present in bed or banks of drainage structures or watercourses, as a result of subsidence or subsidence management. (8.32) Excavated drainage structures do not expose highly erodible material. (8.33) Subsidence areas and drainage structures that may be subject to flooding are designed to withstand flood stresses compromising structural or erosional stability. (8.34) Drainage structures do not require ongoing maintenance. (8.35) If ponds are connected to the receiving environment (have drainage structures or intercept with a watercourse) – the water quality must not exceed the receiving environment water quality limits (**Appendix 3 – Surface water quality limits**.), for a minimum of 5 consecutive years. (8.36) If ponds are not connected to the receiving environment, water must be of a suitable quality for native wildlife and/or livestock ingestion and must not exceed the stock water guidelines (ANZECC 2000), for a minimum of 5 consecutive years. **Additional criteria for subsidence areas beneath a watercourse with pre-disturbance natural features (RA7 only)** (8.37) No change to baseline vegetation species composition and structure to the latest baseline condition that has been assessed under condition **PRCP16**. (8.38) Vegetation species composition and structure maintained in accordance with the closure requirements of the latest version of the Subsidence Management Plan, and with reference to the baseline condition (latest assessed) under **PRCP16**. **Additional criteria for subsidence areas beneath a watercourse (RA6 and RA7)** (8.39) Areas of subsidence under watercourses: (a) incorporate pre-existing natural features of watercourses ((including geomorphic), as far as practicable. (b) attain pre-existing hydrologic characteristics of surface water and groundwater systems for the area in which the watercourses are located, as far as practicable. (c) attain the hydraulic characteristics of the watercourses that are equivalent to other local watercourses and are suitable for the subsided areas of Spade Creek, Alpha Creek and Bullock Creak (East), without using artificial structures that require on-going maintenance. (d) attain sediment transport and water quality regimes that allow the watercourses to be self-sustaining, while minimising any impacts to upstream and downstream water quality, geomorphology and/or vegetation. (e) attain equilibrium and functionality in all substrate conditions at the location of the watercourses.

[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 (≥) 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 (≤) the downstream location.
[7] Groundwater level data collection must commence 10 years prior to scheduled completion of final milestone RM8 (i.e., five (5) years must be collected in earlier RM7 and five (5) years during RM8).

Section E - Appendices

Appendix 1 – Seed Mix Species List and seeding rate

Species	Common Name	Seeding rate (kg/ha)
Bothriochloa bladhii	Forest Bluegrass	3
Bothriochloa ewartiana	Desert Bluegrass	3
Capillipedium parviflorum	Scented Top	1
Desmanthus spp.	Desmanthus	2
Dichanthium queenslandicum	King bluegrass	1
Dichanthium sericeum	Queensland Bluegrass	2
Heteropogon contortus	Black Speargrass	2
Heteropogon triticeus	Giant Spear Grass	3
Macroptilium bracteatum	Burgundy Bean	3
Panicum decompositum	Native millet	3
Sorghum spp.	Silk Sorgum	1
Stylosanthes spp.	Townsville Stylos	2

Appendix 2 – Erosion classification framework

Erosion classification	Minor	Moderate	Severe
Sheet erosion	Shallow soil deposits downslope.	Partial exposure of roots; moderate soil deposits downslope.	Loss of surface horizon; subsoil exposure, root exposure, substantial soil deposits downslope.
Rill / gully erosion	<15 rills per transect* and < 0.3 m deep	15-30 rills per transect* and < 0.3 m deep	>30 rills per transect* and / or < 0.3 m deep
Tunnel erosion	Absent	Absent	Present
Mass movement	Absent	Absent	Present

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

*Transect 100 m 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.

Appendix 3 – Receiving surface water quality limits

Quality characteristic (units)	Limit	Comment on limit (1), (2), (3)
pH	6.5-8.5	Upper Isaac River catchment waters WQO (4)
Electrical Conductivity (µS/cm)	220 µS/cm	Locally derived
Turbidity (NTU)	50	Upper Isaac River catchment waters WQO (4)
Sulfate (mg/L)	25	Upper Isaac River catchment waters WQO (4)
Aluminium - dissolved (µg/L)	55	ANZG 2018 (5)
Arsenic - dissolved (µg/L)	13	ANZG 2018 (5)
Iron - dissolved (µg/L)	300	ANZECC & ARMCANZ 2000 (6)
Lead - dissolved (µg/L)	3.4	ANZG 2018 (5)
Manganese - dissolved (µg/L)	1,900	ANZG 2018 (5)
Molybdenum - dissolved (µg/L)	34	ANZG 2018 (5)
Selenium - dissolved (µg/L)	5	ANZG 2018 (5)
Zinc - dissolved (µg/L)	8	ANZG 2018 (5)
Total recoverable hydrocarbons (C6-C9) (µg/L)	20	For aquatic ecosystem protection, based on LOR
Total recoverable hydrocarbons (C10-C36) (µg/L)	100	For aquatic ecosystem protection, based on LOR
Major ions (mg/L) Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	For interpretation purposes only	-
Hardness (mg/L)	For interpretation purposes only	-

Notes:

(1) All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample) and total (unfiltered).
(2) Limits for metals and metalloids apply to dissolved results.
(3) LOR = limit of reporting. Typical reporting for method stated.
(4) EHP (2011). *Environmental Protection (Water) Policy 2009 Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Isaac River Sub-basin (including Connors River)*.
(5) ANZG (2018) Aquatic ecosystem protection for moderately disturbed system (95% protection).
(6) ANZECC & ARMCANZ (2000). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*.

Appendix 4 - Surface water monitoring locations

Monitoring Locations	Receiving waters location description	Latitude (decimal degree, GDA2020)	Longitude (decimal degree, GDA2020)
Upstream monitoring locations (1)			
3	Bullock Creek East Upstream	-21.73473	148.16759
New 5	Spade Creek upstream	-21.74810	148.18613
7	Alpha Creek upstream	-21.77655	148.21178
Downstream monitoring locations			
4	Bullock Creek East downstream	-21.75985	148.15535
New	Within the diverted flow (**Figure 4.1 – Surface water Monitoring Locations**)	-21.74462	148.16298
6	Spade Creek downstream	-21.78218	148.15742
8	Alpha Creek downstream	-21.78280	148.15892

Table notes:

(1) The data from background monitoring points should not be used where they are affected by releases from other mines.

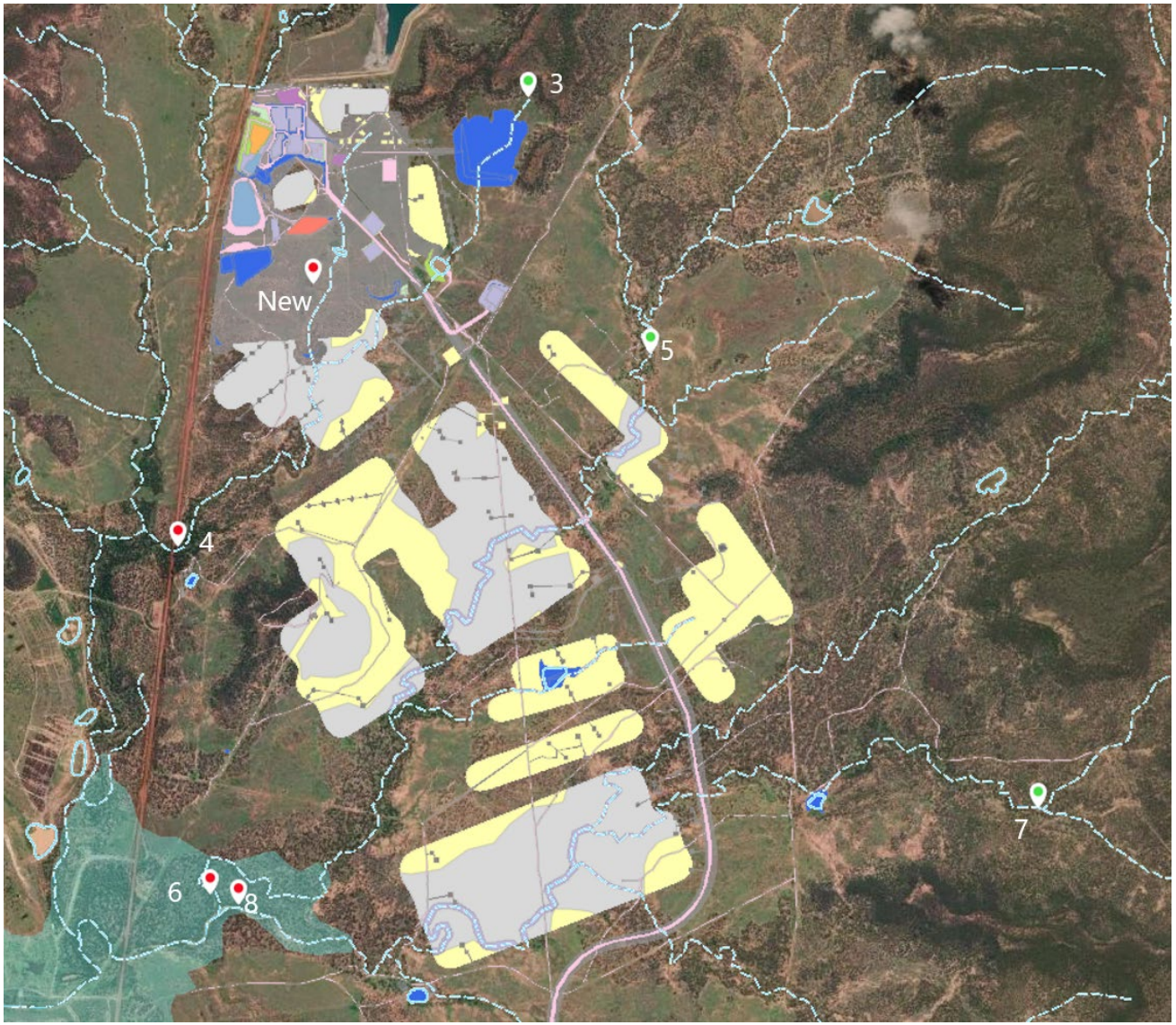


Figure 4.1 – Surface water Monitoring Locations

Appendix 5 - Groundwater monitoring bores

Bore ID^	Latitude (GDA2020)	Longitude (GDA2020)	Aquifer
Interpretation Bores			
IBGWR1	-21.745805	148.194893	Rewan Formation (Triassic)
IBGWR2	-21.822756	148.185527	Alluvium
Compliance Bores			
EFGW1S	-21.784698	148.154893	Alluvium
EFGW2D	-21.775457	148.195632	Triassic
EFGW4D	-21.75585	148.159458	Triassic
PT1	-21.737044	148.169459	Permian/ Leichardt seam
EFGW3D	-21.755153	148.182544	Triassic
EFGW4S	-21.755896	148.159265	Alluvium
EFGW5D	-21.741964	148.168590	Triassic
IBGW006	-21.788069	148.182756	Permian/ Leichardt seam

Table notes:
^ Monitoring bore locations as illustrated in **Figure 5.1 – Groundwater Monitoring Bore Locations**.

Figure 5.1 – Groundwater Monitoring Bore Locations

Appendix 6 – Groundwater quality limits

Quality characteristics (units)	EFGW1S	EFGW2D	EFGW4D	PT1	EFGW4S	EFGW3D	EFGW5D	IBGW006
pH (pH Units)	7.1 - 7.9	7.4 - 8.1	6.8 - 7.8	7.5 - 8.1	7 - 8	7 - 8	7 - 8	7 - 8
Electrical Conductivity (µS/cm)	6,669	9,430	28,800	11,495	8,910 [B]	8,910 [B]	16,000[C]	16,000[C]
Sulfate (mg/L)	77	8	726	2	25	25	25	25
Aluminium - Dissolved (µg/L)	20	55[A]	25	55 [A]	55 [A]	55 [A]	55 [A]	55 [A]
Arsenic - Dissolved (µg/L)	20	13 [A]	30	13 [A]	13 [A]	13 [A]	13 [A]	13 [A]
Iron - Dissolved (µg/L)	200	60	4,720	760	140 [B]	140 [B]	246 [C]	246 [C]
Lead - Dissolved (µg/L)	3.4 [A]	3.4 [A]	3.4 [A]	3.4 [A]	3.4 [A]	3.4 [A]	3.4 [A]	3.4 [A]
Manganese - Dissolved (µg/L)	1,973	1,130	994	73	160 [B]	160 [B]	291 [C]	291 [C]
Mercury – dissolved (µg/L)	0.06 [A]	0.06 [A]	0.06 [A]	0.06 [A]	0.06 [A]	0.06 [A]	0.06 [A]	0.06 [A]
Molybdenum - dissolved (µg/L)	34 [A]	34 [A]	34 [A]	34 [A]	34 [A]	34 [A]	34 [A]	34 [A]
Zinc - Dissolved (µg/L)	77	91	265	48	60 [B]	60 [B]	317 [C]	317 [C]
Total Petroleum Hydrocarbons C6-C9 (µg/L)[E]	20[D]	20 [D]	20 [D]	20 [D]	20 [D]	20 [D]	20 [D]	20 [D]
Total recoverable hydrocarbons (C10-C36) (µg/L)[D]	50[E]	50 [E]	50 [E]	50 [E]	50 [E]	50 [E]	50 [E]	50 [E]
Major ions (mg/L) Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	Interpretation							

Notes:

A. ANZG (2018) Default guideline value for ecosystem protection of 95% of freshwater aquatic species.
B. 80th percentile Zone 34 deep aquifer water quality objectives (aquatic ecosystem) sourced from the *Environmental Protection (Water) Policy 2009 Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Isaac River Sub-basin (including Connors River)* (EHP 2011).
C. 80th percentile Zone 34 shallow aquifer water quality objectives (aquatic ecosystem) sourced from the *Environmental Protection (Water) Policy 2009 Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Isaac River Sub-basin (including Connors River)* (EHP 2011).
D. Limit of reporting value for total petroleum hydrocarbons C10 - C36 (µg/L).
E. Limit of reporting value for total petroleum hydrocarbons C6 - C9 (µg/L).

END OF **PRCP** SCHEDULE