PRCP schedule – Moranbah North Coal Mine

Environmental Protection Act 1994

PRCP Schedule P-PRCP-101043442

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

PRCP schedule: P-PRCP-101043442

PRCP schedule holder(s)

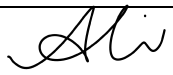
Name(s)	Registered address
Shinsho Moranbah Coal Pty Ltd	Level 12, 124 Walker Street NORTH SYDNEY NSW 2060
JFEMA Moranbah North Pty Ltd	Suite 3B Level 33, 52 Martin Place SYDNEY NSW 2000
NS Moranbah North Pty Ltd	Level 5, 20 Hunter St SYDNEY NSW 2000
Mitsui Moranbah North Investment Pty Ltd	Level 24, 480 Queen Street BRISBANE CITY QLD 4000
NS Coal (Moranbah North) Pty Ltd	Level 9, 10 Market Street BRISBANE CITY QLD 4000
Moranbah North Coal Pty Ltd	Level 11, 201 Charlotte Street BRISBANE QLD 4000

Location details

Location(s)
ML70108; ML700042; PPL191.

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.

	2 March 2026
Signature	Date

Alison Cummings

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
- 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

There are no conditions beyond those contained in section 206A of the *Environmental Protection Act 1994* that apply to this PRCP schedule.

General conditions

PRCP1	All mining disturbance authorised under environmental authority EPML00738813 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'; (b) Describe in the notification why or why not it considers that it would be reasonable and appropriate to apply to the administering authority to amend this schedule; and (c) Unless otherwise agreed to by the administering authority in writing, apply to the administering authority within sixty (60) days of the notification to amend this schedule in a way that maximises the progressive rehabilitation 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 a nominally 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.
PRCP4	Where an area achieves a rehabilitation milestone, the holder must continue to achieve the milestone for that rehabilitation milestone until: (a) A progressive certification area has satisfied the provisions of section 318ZB (4) of the EP Act; and (b) 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 (PMLU); (b) sufficient improvement for non-use management areas (NUMA); and (c) how the risks are being managed or minimised.
PRCP6	The risk register (PRCP5) must be reviewed every three (3) years and include consideration of the outcomes of PRCP monitoring data.
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 (PRC Plan version 3.0 - 25 February 2026); (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 or management 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.
PRCP9	Records made under **PRCP8** must be kept until the relevant environmental authority has been surrendered or progressive rehabilitation certification is achieved.
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	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 condition which includes achieving the relevant post mining land use for the disturbance location as detailed in **Figure 1 – Final Site Design**.
PRCP12	**Subsidence record** The holder must keep a record of all longwall panels mined from **1 January 2027** 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, informed by the latest version of the rehabilitation planning part and where relevant, the Subsidence Management Plan and including at a minimum: i. Site hydrology and fluvial networks; ii. Soil types, properties and productivity; iii. Flora species composition and structure; iv. Land stability (pre-existing degradation/erosion and predisposition to ongoing stability issues); v. Regional ecosystem details if remnant vegetation; vi. Baseline monitoring data and condition assessment with methodology to be developed and submitted to the regulator by **31 August 2028**; and; 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. Where the information required under **PRCP12(a)** to **(e)** inclusive is available from previously submitted plans/reports/applications, if still valid and confirmed as suitable by an independent AQP, this information may be used to satisfy this condition. The register must be provided to the administering authority upon request.
PRCP13	An up-to-date closure numerical groundwater and water balance model (calibrated once data becomes available) must be maintained with predictions rerun at least every **five years**, from the date of approval of the PRCP and within a year of any surrender application.
PRCP14	**Co-disposal Area (CDA) Closure Design Report** By **30 January 2035**, the holder must provide to the administering authority an AQP prepared and peer reviewed, landform closure design report for the CDA structure, which includes detailed engineering designs.
PRCP15	**Landform Closure Design Report** The Landform Closure Design Report for the CDA structure at a minimum includes: (a) Design aims and objectives of the final landform, including cover system and batters. (b) Design life for all components: cover, plateau, batters, access points, water management features, and monitoring network.

	(c) Quality assurance and quality control measures during construction. (d) Demonstration of cover system performance. (e) Measures to achieve geotechnical and erosional stability. (f) Incorporation of geochemical analysis of mine waste and contamination risk. (g) Design features ensuring water-shedding and that seepage quality and quantity is non-polluting. (h) Review adequacy of existing monitoring network with consideration to updated design. (i) How the design supports achievement of the nominated post-mining land use (PMLU). (j) Where assumed or inferred material properties are used, include assessment of uncertainty impacts on performance, and management strategies for uncertainties. A peer review by an AQP confirms the closure design is fit for purpose and achieves stable condition. Any changes to the design as a result of the peer-review must be clearly incorporated in the final design and a copy provided to the administering authority upon request.
PRCP16	**Flood Assessment Report** By **30 January 2030**, the holder must submit a flood assessment report. The report must: (a) Be prepared by an appropriately qualified person (AQP). (b) Evaluate hydraulic interactions between subsidence ponds, the Isaac River, Teviot Brook floodplain, the CDA, and adjacent landforms under floods up to the PMF. (c) Demonstrate all landforms, including any flood protection measures required, are stable and able to withstand hydraulic interaction with floodwaters. (d) Be peer-reviewed by an AQP, and any recommendations incorporated into the final landform design.
PRCP17	By **30 November 2027**, the holder must submit to the administering authority a report that includes an AQP review of the adequacy of the rehabilitation monitoring methodology and reference sites listed in **Attachment 3 – Rehabilitation Reference Sites** which must at a minimum consider: (a) The location of the reference sites (outside of mining impact area); (b) The number of reference sites nominated; and (c) Justification for the suitability of each nominated reference site. (d) Revised rehabilitation monitoring method, if required.
PRCP18	The holder must, by **30 June 2027**, submit a report to the administering authority that proposes soil quality criteria for inclusion in **Attachment 1 – Soil Quality Criteria** based on site specific data.
PRCP19	The holder must, by **30 June 2027**, submit a report to the administering authority that: (a) Proposes a revised surface water monitoring network for inclusion in **Attachment 6 – Surface Water Monitoring Locations**; (b) Proposes surface water quality limits for inclusion in **Attachment 7 – Surface water quality limits** based on site-specific data;

	(c) Proposes a revised groundwater monitoring network for inclusion in **Attachment 8 – Groundwater monitoring locations**, including a minimum of: i. Two bores upgradient of the CDA in the Alluvium and Tertiary Sediments where present, and ii. Two bores downgradient of the CDA in the Alluvium and Tertiary Sediments above Basalt hydrogeological units; (d) Proposes groundwater quality limits for inclusion **Attachment 9 – Groundwater quality limits** based on site-specific data.
PRCP20	By **31 August 2028**, the holder must submit a report to the administering authority proposing site-specific values for subsidence pond water quality where values exceed ANZECC (2000) livestock drinking water quality.

END OF CONDITIONS

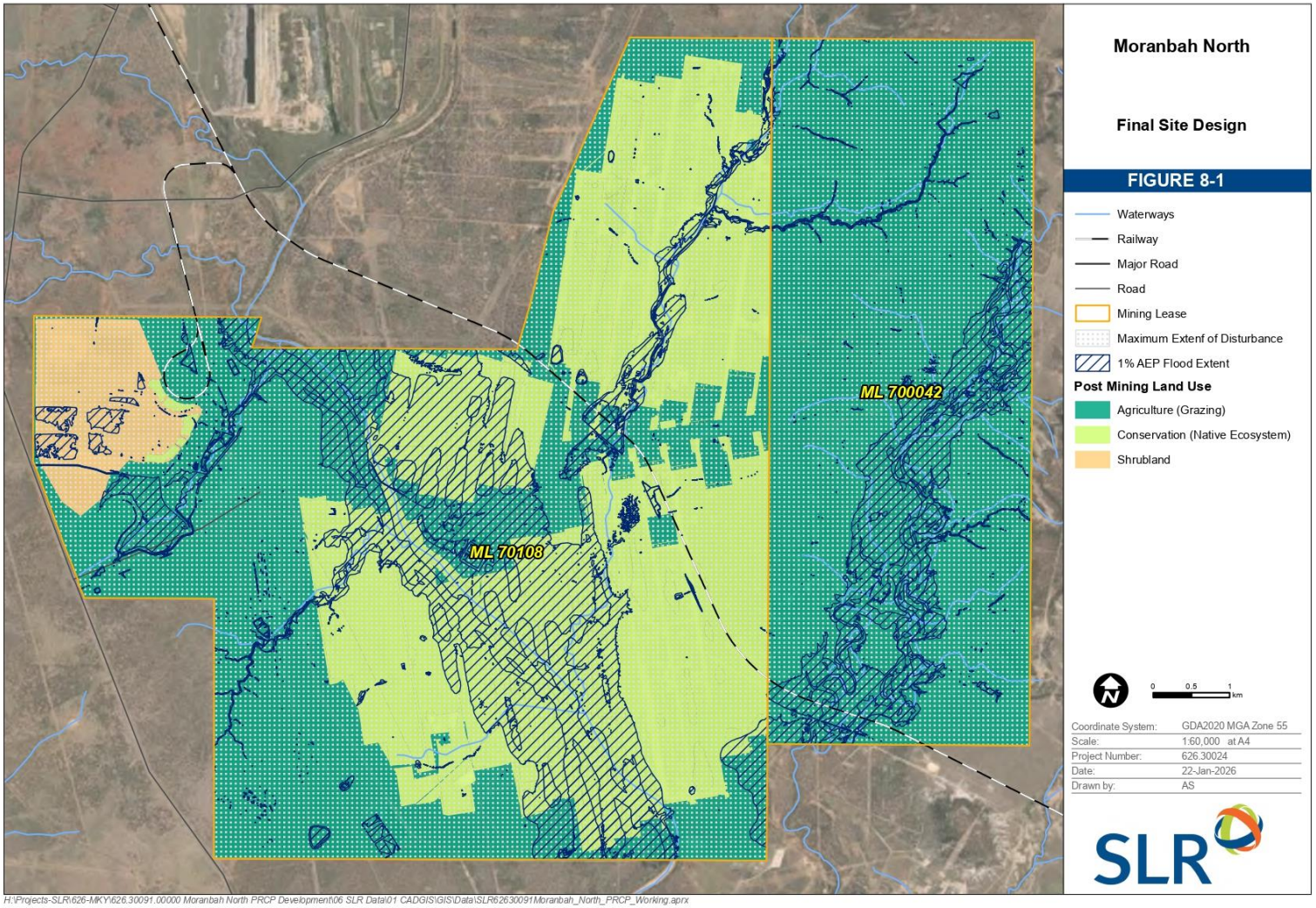
2 Section B - Definitions

3P grass	A grass species that is perennial, palatable and productive.
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.
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.
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.
Contaminated Land Auditor	A contaminated land auditor is responsible for auditing the work of the suitably qualified person (SQP) by evaluating and certifying site investigation and validation reports and drafting the site management plans that are submitted for a decision on a land contamination matter.
Environmentally problematic material	means material that will negatively impact water quality and stability or vegetation growth.
Exploration, Ancillary and other authorised activities	Includes the following activities: (a) Exploration; and (b) Ancillary activities such as roads, fences, underground services, telecommunications facilities, pipelines, electrical infrastructure, storage depots, laydown or shutdown pads and monitoring stations and bores. *Rehabilitation milestones applicable to RA8 Exploration, Ancillary and other authorised activities only applicable where activities have been undertaken.
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

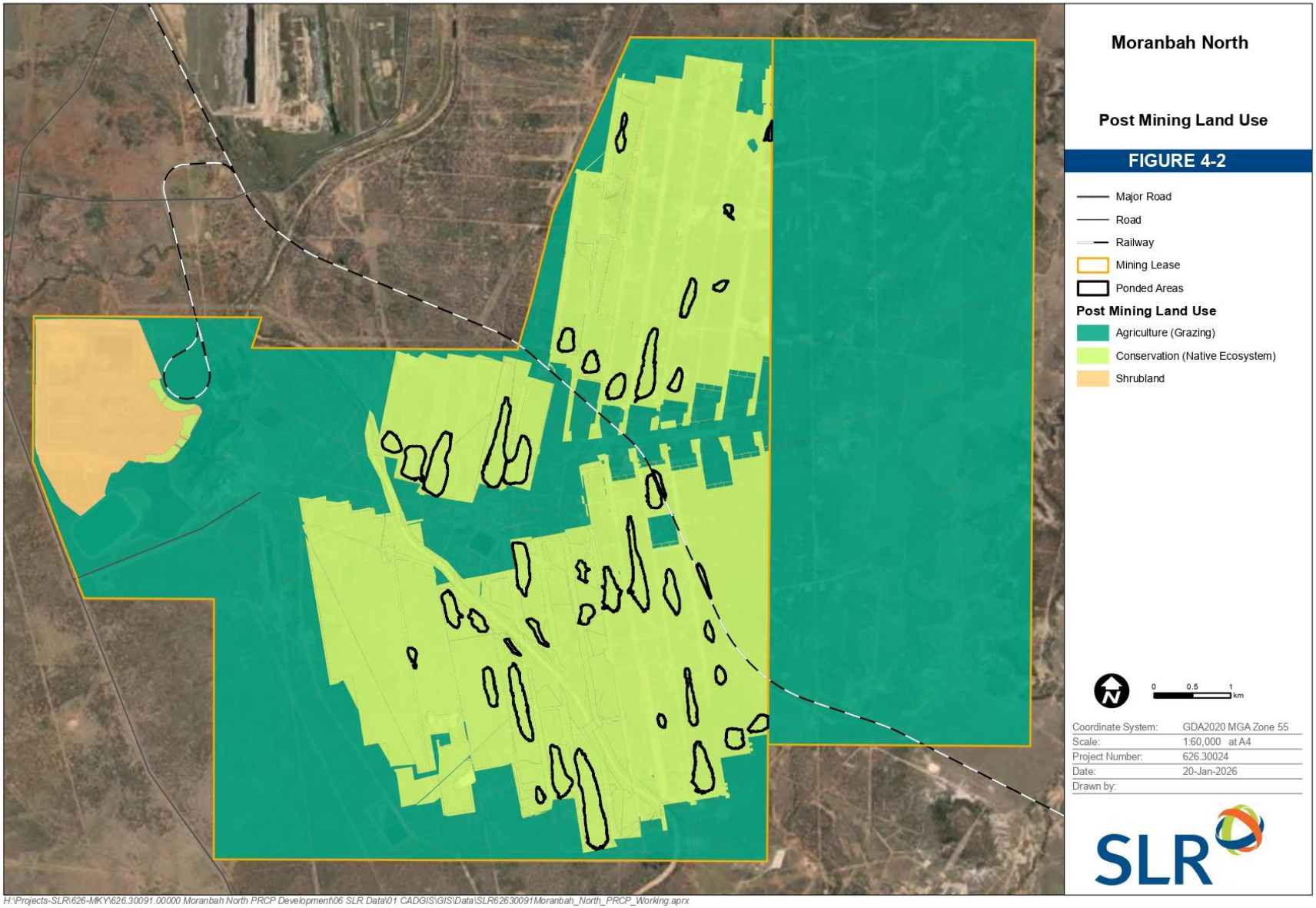
	and provide and justify site-specific landform performance (SMART) criteria.
Potentially acid forming (PAF)	means material with either a Net Acid Producing Potential of greater than 5 kg of H_2SO_4/tonne or a Net Acid Generation oxidation pH of less than 4.5 (pH unit).
Relevant structure	To be defined during the assessment and listed here. Typically includes TSF and higher risk structures, including WRDs.
Rill	A rill is a channel excavated by water, less than 0.3 m deep.
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
Weed	Weed includes: • Category 3 restricted invasive plant species, defined by the *Biosecurity Act 2014*; and • Weeds of National Significance, defined by Invasive Plants and Animals Committee 2016, Australian Weeds Strategy 2017 to 2027, Australian Government Department of Agriculture and Water Resources, Canberra.

3 Section C - Final site design and reference maps

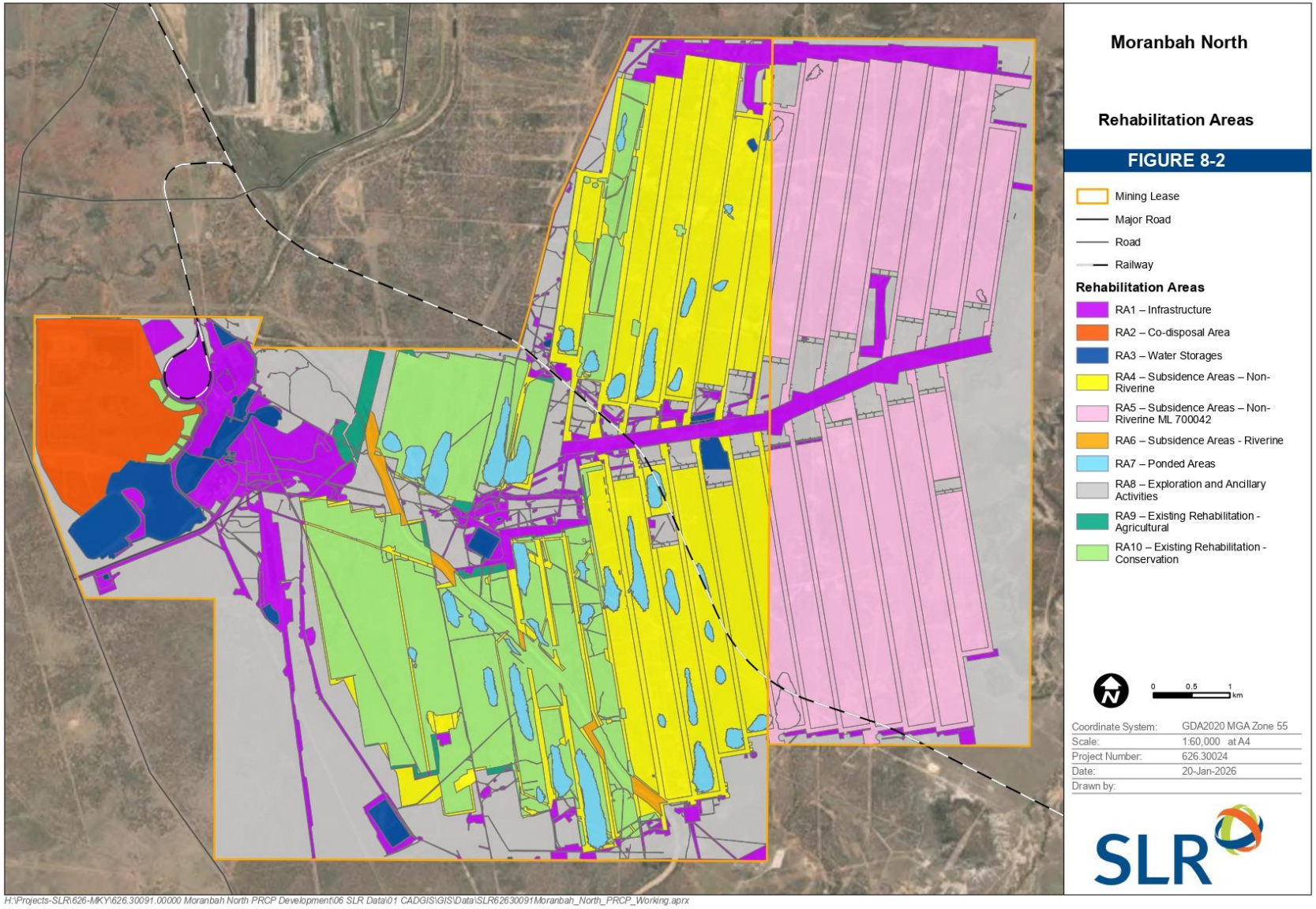
3.1 Figure 1 – Final Site Design



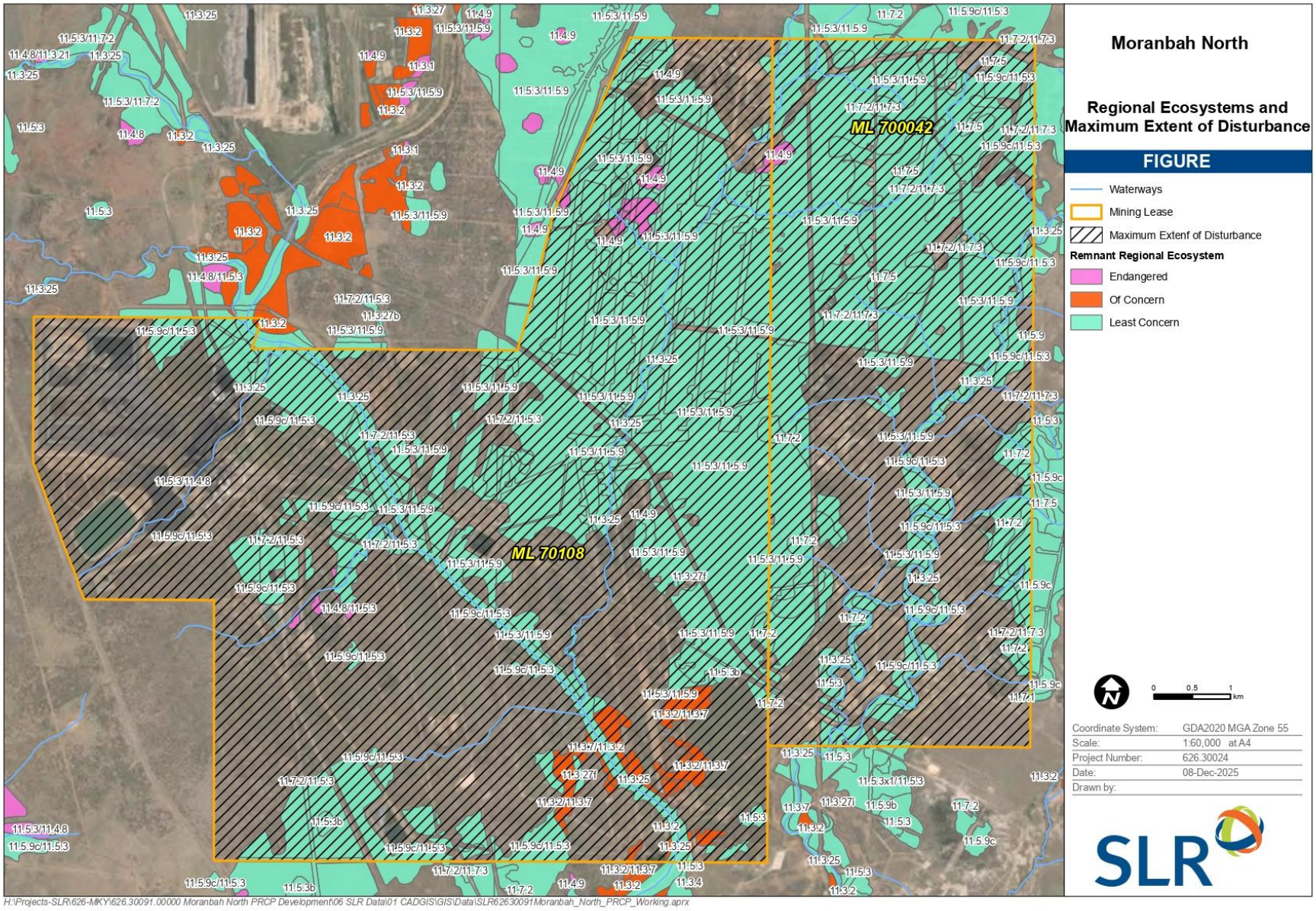
3.2 Figure 2 – Post Mining Land Use



3.3 Figure 3 - Rehabilitation Areas



3.4 Figure 4 – Remnant Vegetation



4 Section D – Post mining land uses

Milestone reference	Rehabilitation milestone	Rehabilitation Area									
		RA1	**RA2**	**RA3**	**RA4**	**RA5**	**RA6**	**RA7**	**RA8**	**RA9**	**RA10**
		Infrastructure	Co-Disposal Area	Water Storages (not retained)	Subsidence Areas - Non-Riverine	Subsidence Areas - Non-Riverine ML700042	Subsidence Areas - Riverine	Ponded Areas	Ancillary Activities and Exploration within the RA	Existing Rehabilitation (Grazing)	Existing Rehabilitation (Conservation)
RM1	Infrastructure decommissioning and removal										
RM2	Identification, remediation and removal of contaminated land										
RM3	Landform development and reshaping										
RM4	Stabilisation of subsidence areas										
RM5	Surface preparation										
RM6	Revegetation										
RM7	Achievement of surface requirement										
RM8	Achievement of post-mining land use to a stable condition										
RM9	Achievement of post-mining land use water quality										

4.1 (RA1) Rehabilitation area 1

Post-mining land uses (PMLU)										
Rehabilitation area	RA1									
Relevant activities	Infrastructure									
Total rehabilitation area size (ha)	979									
Commencement of first milestone: RM1	10/12/2055									
PMLU	Agricultural (Grazing)									
Date area is available	10/12/2055	10/12/2060								
Cumulative area available (ha)	800	979								
Milestone completed by	10/12/2060	10/12/2065	10/12/2070	10/12/2075	10/12/2080	10/12/2090				
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	800	979								
RM2	200	979								
RM3		200	979							
RM5			979							
RM6			979							
RM7				979						
RM8					979					
RM9						979				

4.2 (RA2) Rehabilitation area 2

Post-mining land uses (PMLU)										
Rehabilitation area	RA2									
Relevant activities	Co-Disposal Area									
Total rehabilitation area size (ha)	353									
Commencement of first milestone: RM1	10/12/2050									
PMLU	Shrubland									
Date area is available	10/12/2050									
Cumulative area available (ha)	353									
Milestone completed by	10/12/2055	10/12/2060	10/12/2065	10/12/2075	10/12/2080	10/12/2090				
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	353									
RM2		353								
RM3		353								
RM5			353							
RM6			353							
RM7				353						
RM8					353					
RM9						353				

4.3 (RA3) Rehabilitation area 3

Post-mining land uses (PMLU)							
Rehabilitation area	RA3						
Relevant activities	Water Storages (not retained)						
Total rehabilitation area size (ha)	227						
Commencement of first milestone: RM1	10/12/2052						
PMLU	Grazing						
Date area is available	10/12/2052						
Cumulative area available (ha)	227						
Milestone completed by	10/12/2057	10/12/2062	10/12/2067	10/12/2072	10/12/2077	10/12/2082	10/12/2090
Milestone Reference	**Cumulative area achieved (ha)**						
RM1	227						
RM2		227					
RM3			227				
RM5				227			
RM6				227			
RM7					227		
RM8						227	
RM9							227

4.4 (RA4) Rehabilitation area 4

Post-mining land uses (PMLU)											
Rehabilitation area	RA4										
Relevant activities	Subsidence Areas - Non-Riverine										
Total rehabilitation area size (ha)	1909										
Commencement of first milestone: RM1	10/12/2030										
PMLU	Conservation (Native Ecosystem)										
Date area is available	10/12/2030	10/12/2035	10/12/2040	10/12/2045	10/12/2050						
Cumulative area available (ha)	643	1587	1587	1587	1909						
Milestone completed by	10/12/2035	10/12/2040	10/12/2045	10/12/2050	10/12/2055	10/12/2060	10/12/2065	10/12/2070	10/12/2075	10/12/2080	10/12/2090
Milestone Reference	**Cumulative area achieved (ha)**										
RM1	643	1587				1909					
RM3		643	1587				1909				
RM4			442	1404				1909			
RM6			300	1264				1909			
RM7				300	1264				1909		
RM8					300	1264				1909	
RM9						1264					1909

4.5 (RA5) Rehabilitation area 5

Post-mining land uses (PMLU)										
Rehabilitation area	RA5									
Relevant activities	Subsidence Areas - Non-Riverine ML700042									
Total rehabilitation area size (ha)	2146									
Commencement of first milestone: RM1	10/12/2035									
PMLU	Agricultural (Grazing)									
Date area is available	10/12/2035	10/12/2045	10/12/2050							
Cumulative area available (ha)	224	1395	2146							
Milestone completed by	10/12/2040	10/12/2050	10/12/2055	10/12/2060	10/12/2065	10/12/2070	10/12/2075	10/12/2080	10/12/2085	10/12/2090
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	224	1395	2146							
RM3		312	1071	1907	2146					
RM4			60	780	1576	2146				
RM6				468	1253	2006	2146			
RM7						468	1253	2006	2146	
RM8							468	1253	2006	2146
RM9										2146

4.6 (RA6) Rehabilitation area 6

Post-mining land uses (PMLU)										
Rehabilitation area	RA6									
Relevant activities	Subsidence Areas - Riverine									
Total rehabilitation area size (ha)	43									
Commencement of first milestone: RM1	10/12/2031									
PMLU	Conservation (Native Ecosystem)									
Date area is available	10/12/2031									
Cumulative area available (ha)	43									
Milestone completed by	10/12/2038	10/12/2043	10/12/2049	10/12/2050	10/12/2055	10/12/2060	10/12/2090			
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	43									
RM3		43								
RM4			43							
RM6				43						
RM7					43					
RM8						43				
RM9							43			

4.7 (RA7) Rehabilitation area 7

Post-mining land uses (PMLU)										
Rehabilitation area	RA7									
Relevant activities	Ponded Areas									
Total rehabilitation area size (ha)	271									
Commencement of first milestone: RM1	10/12/2030									
PMLU	Conservation (Native Ecosystem)									
Date area is available	10/12/2030	10/12/2040								
Cumulative area available (ha)	266	271								
Milestone completed by	10/12/2040	10/12/2045	10/12/2050	10/12/2055	10/12/2090					
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	266	271								
RM4	211	266	271							
RM8		211	266	271						
RM9					271					

4.8 (RA8) Rehabilitation area 8

Post-mining land uses (PMLU)										
Rehabilitation area	RA8									
Relevant activities	Ancillary Activities and Exploration within the RA*									
Total rehabilitation area size (ha)	2568									
Commencement of first milestone: RM1	10/12/2055									
PMLU	Agricultural (Grazing)									
Date area is available	10/12/2055									
Cumulative area available (ha)	2568									
Milestone completed by	10/12/2060	10/12/2065	10/12/2070	10/12/2075	10/12/2080	10/12/2085	10/12/2090			
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	2568									
RM2		2568								
RM3			2568							
RM5				2568						
RM6				2568						
RM7					2568					
RM8						2568				
RM9							2568			

* Note: Within the extent authorised under the EA.

4.9 (RA9) Rehabilitation area 9

Post-mining land uses (PMLU)										
Rehabilitation area	RA9									
Relevant activities	Existing Rehabilitation									
Total rehabilitation area size (ha)	60									
Commencement of first milestone: RM8	10/12/2025									
PMLU	Agricultural (Grazing)									
Date area is available	10/12/2025									
Cumulative area available (ha)	60									
Milestone completed by	10/12/2040	10/12/2090								
Milestone Reference	**Cumulative area achieved (ha)**									
RM8	60									
RM9		60								

4.10 (RA10) Rehabilitation area 10

Post-mining land uses (PMLU)										
Rehabilitation area	RA10									
Relevant activities	Existing Rehabilitation									
Total rehabilitation area size (ha)	1376									
Commencement of first milestone: RM8	10/12/2025									
PMLU	Conservation (Native Ecosystem)									
Date area is available	10/12/2025									
Cumulative area available (ha)	1376									
Milestone completed by	10/12/2040	10/12/2090								
Milestone Reference	**Cumulative area achieved (ha)**									
RM8	1376									
RM9		1376								

4.11 Rehabilitation area milestones

Milestone reference	Rehabilitation milestone	Applicant's criteria	
RM1	Infrastructure decommissioning and removal	**Built Infrastructure**	
		1.1	With the exception of any infrastructure to remain as part of the 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 terminated; (b) All infrastructure has been decommissioned and removed from site; (c) All roads have been removed; (d) All fencing has been removed; (e) All demolition and hazardous waste has been treated and/or disposed of; (f) Machinery and equipment not required for rehabilitation have been removed; (g) All pipelines decommissioned; and (h) All waste removed and/or disposed of as per EA EPML00738813; and (i) For dams: i. Dewatered and water treated appropriately; and ii. Any contaminated silt and sediment, removed, appropriately treated and disposed of; and iii. HDPE liners are removed.
		Gas Drainage Boreholes	
		1.2	All tailgate boreholes are grouted and/or plugged.
		1.3	All tailgate boreholes are cut and capped >1m below surface.

		1.4	The decommissioning of all boreholes has been completed in accordance with the Code of Practice for the Construction and Abandonment of Petroleum wells and associated bores in Queensland (Queensland Government, 2019) or latest edition.
		Surface to Seam Boreholes	
		1.5	For all surface to seam boreholes (including but not limited to, exploration bores, water monitoring bores, dewatering bores and bores with diameter up to 300mm): (a) Boreholes grouted and/or plugged. (b) Boreholes capped 0.5m below surface. (c) Decommission of exploration bores completed in accordance with 'Eligibility Criteria and Standard Conditions for Exploration and Mineral Development Projects'.
RM2	Remediation of contaminated land	2.1	Contaminated land investigation completed in accordance with the *Environmental Protection Act 1994*, including a site investigation report, and, where required, a Validation Report and/or a draft Site Management Plan by a suitably qualified person (SQP).
		2.2	SQP has certified that all measures required by the contaminated land investigation report(s) have been implemented.
		2.3	Contaminated land assessment indicates that no contamination unsuitable for the PMLU remains or is occurring.
		All RAs except RA2	
		2.4	Onsite remediation of hydrocarbon contaminated soils has been completed.
		2.5	Removal and appropriate disposal or in-situ treatment of any contaminated and hazardous materials has been completed.
RM3	Landform development and reshaping/reprofiling	3.1	Where required, all major earthworks completed, slopes and general reshaping and pushing/trimming completed in accordance with the design specification provided by an AQP.
		3.2	Surface topography is comparable with surrounding landscape.
		3.3	Drainage works within rehabilitation areas are completed to design specifications.

		3.4	Disturbed natural watercourse bed and banks returned to a natural condition with profile similar to pre-disturbance condition.
		CDA (RA2)	
		3.5	Placement of co-disposal material in accordance with the final landform configuration has been established.
		3.6	Maximum height of 50 metres and maximum final slope is: (a) 1V:3H (33%) on batters on the mining lease boundary; and (b) 1V:4H (25%) on internal* batters *note, this refers to batters not on the mining lease boundary side of structure
		3.7	Confirmation by an AQP that an appropriate cover system as per condition PRCP15 is: (a) Designed to achieve a safe, stable and non-polluting final landform able to maintain the rehabilitation outcomes for the PMLU; (b) Installed as per the design and displays erosional stability, is geotechnically stable and supports the PMLU; (c) Effective in minimising seepage and mitigating the potential for migration of contaminants from the co-disposal area to the receiving environment.
		3.8	All capping and cover material used on the CDA is non-dispersive or has been ameliorated to achieve an exchangeable sodium percentage (ESP) of <6 (confirmed by representative sampling).
		3.9	Landform is externally draining and designed to be water shedding.
		ROM Pad	
		3.10	All coal fine material has been removed.
		3.11	Reshape of the ROM pad is completed.
		3.12	Capping material (inert) has been used for reshaping where required.
		Mine Affected Water Dams	

		3.13	Dams are stabilised and reshaped so as not to contain ponded water with slopes consistent with surrounding landscape.
		Shafts, Drifts/Adits	
		3.14	Construction of seal from surface into the underground workings complies with regulation 325 of the Queensland Coal Mining Safety and Health Regulations 2020 (CMSHR) and Registered Professional Engineer of Queensland (RPEQ) design.
		3.15	Type E seal (ventilation control device capable of withstanding an overpressure of 70 kPa (CMSHR, 2020)) installed.
		3.16	Construction of the seal and backfilling of underground openings has been completed in accordance with the design.
		3.17	An AQP has assessed and certifies the achievement of **RM3.14-3.16**.
RM4	Stabilisation of subsidence areas **Applicable RAs with additional criteria where specified**	4.1	Subsidence cracks do not exceed 50 mm wide and 1 m long in subsided areas.
		4.2	Areas of buckling ≥ 150 mm vertical displacement are regraded.
		4.3	For riverine subsidence areas stabilisation works, rock armouring and/or pile fields have been installed as per AQP site specific recommendations.
		4.4	Inspections by AQP of longwall surface conditions after underground mining operations cease and ground has settled.
		4.5	Any erosion or effects of subsidence remediated: e.g. shallow rip to infill surface cracks.
		4.6	Drainage channels are installed to allow free drainage, where required.
		4.7	Seeding completed where rapid groundcover is required to control erosion (e.g. creek bank).
		Subsidence Area (RA5)	
		4.8	Drainage works completed to ensure free draining landform (no ponding) on ML700042.
RM5	Surface preparation	5.1	Prior to placement of soil material for rehabilitation, assessment of growth media characteristics and the development of an amelioration and physical treatment plan to achieve the criteria in **Attachment 1 – Soil Quality Data** is completed by an AQP.

	Applicable RAs with additional criteria where specified	5.2	Amelioration and physical treatments such as fertiliser, lime, gypsum and/or organic matter applied as per AQP recommendation.
		5.3	Growth media spread to ≥100 mm, where topsoil stripping has occurred.
		5.4	Ripping to a minimum depth of 200 mm has been completed.
		CDA (RA2)	
		5.5	Surface preparation must not adversely disturb the function of the CDA capping layer.
RM6		6.1	Non-native seed must not be used for the revegetation of riverine areas (except sterile cover crops).
	Revegetation **Applicable RAs with additional criteria where specified**	**Agricultural (Grazing) (RA1, RA3, RA5 and RA8)**	
		6.2	Seeding completed in accordance with **Attachment 2 – Seed Species Selection - Table 1 Pasture Species List**, with more than 50% being 3P pasture species.
		6.3	Seeding of pasture grasses and legumes at a rate >20kg/ha on topsoiled areas or as recommended by an AQP.
		Conservation – Native Ecosystem (RA4)	
		6.4	Seeding completed in accordance with **Attachment 2 – Seed Species Selection - Table 2 Native Species Selection**.
		6.5	Seeding of species at a rate >15kg/ha on topsoiled areas or as recommended by an AQP.
		6.6	For areas requiring rehabilitation within mapped regional ecosystems, species consistent with that regional ecosystem should be preferred.
		Conservation – Native Ecosystem (Riparian Zone RA6)	
		6.7	Seeding completed in accordance with **Attachment 2 – Seed Species Selection - Table 3 Riparian Species Selection**.
		6.8	Seeding of species at a rate >10kg/ha of trees/shrubs and >5kg/ha of grasses on topsoiled areas or as recommended by an AQP.

		CDA (RA2)	
		6.9	Seeding completed in accordance with **Attachment 2 – Seed Species Selection - Table 3 CDA Shrubland Species**.
		6.10	Shrubland Mix - Seeding of species at a rate >10kg/ha of shrubs and >5kg/ha of grasses on capped and topsoiled areas or as recommended by an AQP.
RM7	Achievement of surface requirements **Applicable RAs with additional criteria where specified**	7.1	Vegetation groundcover is ≥50% except on RA2.
		7.2	Weeds are <10% of total vegetative groundcover.
		7.3	An AQP certifies that there is no erosion classified as 'moderate' or 'severe' as defined by **Attachment 4 – Erosion Classification Framework**.
		7.4	Despite **RM7.3** erosion is acceptable in the achievement of surface requirements provided an AQP certifies that all active erosion has been identified, and remediation activities have been completed.
		7.5	There is no evidence of saline, metalliferous or acid mine drainage from landforms to the receiving environment.
		7.6	No evidence of significant scouring, overtopping, sedimentation or destabilisation in or associated with engineered drainage structures.
		CDA (RA2)	
		7.7	Vegetative groundcover is: (a) >15% slopes must achieve ≥70% groundcover (rock, leaf litter, vegetation etc), consisting of at least 25% vegetative groundcover. (b) ≤15% slopes must achieve ≥50% groundcover (rocks, leaf litter, vegetation etc), consisting of at least 25% vegetative groundcover.
		PMLU Agricultural (Grazing) (RA1, RA3, RA5, RA8 and RA9)	
		7.8	Vegetation groundcover is ≥50% established and self-sustaining vegetation groundcover, of which at least 50% of dry matter yield is 3P pasture species.

		Conservation – Native Ecosystem (RA4 and RA6)	
		7.9	Vegetation cover, height and species richness (for each stratum), and organic litter (%) in the rehabilitation area is >50% of relevant reference sites. Consideration to be given to baseline vegetation status recorded as part of PRCP12.
RM8	Achievement of PMLU to a stable condition **ALL RAs with additional criteria where specified**	8.1	An AQP certifies that there is no erosion classified as 'moderate' or 'severe' as defined by **Attachment 4 – Erosion Classification Framework**.
		8.2	Surface water runoff to the receiving environment complies with **Attachment 7 – Surface water quality limits** as collected from representative areas of rehabilitation when surface flows occur.
		8.3	Where engineered drainage structures are to be retained as permanent features (e.g. contour banks, bench drains, rock drains), it must be designed and certified by an AQP that the structures are stable and can be expected to remain stable and functional in the long-term.
		8.4	Hazard assessment completed by an AQP to confirm safety hazards in the rehabilitation area are not significantly different to surrounding unmined landscapes subject to the same land use.
		8.5	Mass movement and tunnel erosion are absent.
		8.6	Despite **RM8.1**, gullies are acceptable on the final landform provided they meet the following criteria: (a) Do not exceed 1m in depth at any point; (b) Do not expose environmentally problematic materials; (c) The cause of the gully is known and has been resolved; (d) Have established and persistent vegetation cover or rock mulch at the head of the gullies; (e) Are in a stabilised state, demonstrated by monitoring data over a 5 year period; (f) Do not provide a safety hazard within the context of the PMLU; and (g) Do not impact the stability or performance of engineered drainage features.

		8.7	Growth media physical, chemical and biological properties do not limit the suitability of the land for applicable PMLU or limit vegetation cover performance (e.g. nutrient availability, drought stress).
		8.8	Areas have access to water sources for stock watering purposes.
		8.9	Weeds presence is < 10% of total vegetative groundcover confirmed by an AQP in annual monitoring. Less than 5% of total vegetative groundcover is declared weeds (as defined in the *Biosecurity Act 2014*).
		PMLU Agricultural (Grazing) (RA1, RA3, RA5, RA8)	
		8.10	Land suitability class assessed by an AQP that the land has achieved a post-mining land suitability class of ≤3 for cattle grazing, or not different from pre-mining class if it is class 4 (as shown in **Attachment 5 - Land Suitability and PMLU**).
		8.11	≥70% established and self-sustaining vegetative groundcover.
		8.12	Minimum vegetation composition of: (a) Three species of 3P native pasture species; and (b) Two legume species.
		PMLU Shrubland (CDA - RA2)	
		8.13	Vegetative groundcover is: (a) >15% slopes must achieve ≥80% groundcover (rock, leaf litter, vegetation etc), consisting of at least 25% vegetative groundcover. (b) ≤15% slopes must achieve ≥60% groundcover (rocks, leaf litter, vegetation etc), consisting of at least 50% vegetative groundcover.
		8.14	Stock exclusion fencing is effective to ensure no grazing occurs in the area.
		PMLU Conservation (Native Ecosystem) (RA4 and RA6)	
		8.15	Vegetation cover, height and species richness (for each stratum), and organic litter (%) in the rehabilitation area is >70% of relevant reference sites.

			Consideration to be given to baseline vegetation status recorded as part of PRCP12
		Subsidence Areas (RA4, RA5 and RA6)	
		8.16	Subsidence within the rehabilitation area does not present a safety hazard in the context of the PMLU.
		8.17	The rehabilitation area is safe for human access and use.
		8.18	There is no erosion resulting from mining activities/subsidence classified as 'moderate' or 'severe' as defined by **Attachment 4 – Erosion Classification Framework**.
		8.19	Bed and banks of subsidence drainage structures are stable.
		8.20	No unapproved impacts to existing regional ecosystems from subsidence.
		8.21	No cracking or destabilisation present in bed or banks of drainage structures or watercourses from subsidence or subsidence management.
		8.22	Excavated drainage structures appropriately mitigate the exposure of highly erodible material.
		8.23	Subsidence drainage structures that may be subject to flooding are designed to withstand flood stresses compromising structural or erosional stability.
		8.24	Disturbance to native vegetation during rehabilitation works is minimised, and mature trees avoided where possible.
		Subsidence areas beneath a watercourse (RA6)	
		8.25	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 Isaac River and Teviot Brook, 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.
		Subsidence Ponding Areas (RA7)	
		8.26	Permanent subsidence pond water must meet the livestock drinking water guidelines (ANZECC 2000).
		8.27	Subsidence ponds with a continuous presence of ponded water for 90 or more consecutive days per year for 50% or more modelled years to be sampled in wet season following rainfall events.
		Existing Rehabilitation (RA9 and RA10)	
		8.28	For Grazing PMLU (RA9): (a) ≥70% established and self-sustaining vegetative groundcover (b) Three species of 3P pasture species For Conservation (Native Ecosystem) PMLU (RA10): (a) Vegetation cover, height and species richness (for each stratum), and organic litter (%) in the rehabilitation area is >50% of relevant reference sites.
		8.29	Minor maintenance activities have been undertaken in accordance with the Maintenance and Management Program, where required.
RM9	Surface water and groundwater demonstrate non-polluting landform **ALL RAs**	9.1	Surface water runoff is non-polluting to receiving waters and complies with **Attachment 7 – Surface water quality limits**.
		9.2	Surface water quality results monitored monthly during flow at, but not limited to, locations specified in **Attachment 6 – Surface Water Quality Monitoring Locations**, must not exceed the limits in **Attachment 7 – Surface water quality limits**, for a minimum of **five (5)** consecutive years immediately prior to surrender.

		9.3	If the surface water quality exceeds **RM9.2**, the applicable upstream site must be compared to the downstream site result; and quality result measured at a downstream site must be equal to or less than the quality result measured at the applicable upstream site[1].
		9.4	Where the surface water quality at the downstream site exceeds the upstream site result for **RM9.3**, an AQP must complete an assessment of the cause and risk of rehabilitation not achieving a stable condition within the schedule timeframe and: (a) Where there is a low risk to achieving a stable condition from the mining tenure (ML70108; ML700042; PPL191), then no further action is to be taken; or (b) Where there is a risk greater than low to achieve a stable condition, then an assessment of potential environment harm and any changes or rectification actions to rehabilitation activities must be determined and implemented.
		9.5	The assessment/s under **RM9.4** must be completed and provided to the administering authority by 1 November each year.
		9.6	For a minimum of **five (5)** consecutive years groundwater quality must be monitored quarterly at, but not limited to, bores specified in **Attachment 8 - Groundwater Monitoring Locations**, for all quality characteristics listed in **Attachment 9 – Groundwater Quality Limits**.
		9.7	Groundwater quality results must not exceed the limits in **Attachment 9 – Groundwater Quality Limits**, for **three (3)** consecutive results within the **five-year** period immediately prior to surrender.

[1] 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.

5 Section E – Attachments

5.1 Attachment 1 – Soil Quality Criteria

Parameter	Criteria
	RM5
pH	6-9
$EC_{1:5}$ (µS/cm)	≤1,500
Exchangeable Sodium Percentage [ESP] (%)	<6.0
Total Organic Carbon (%)	>1.0
Plant Available Water Capacity [PAWC] (mm/m)	>75
Emerson aggregate class (AS1289.3.8.1)	≥4

5.2 Attachment 2 – Seed Species Selection

Table 1 Pasture Species Selection

Scientific name	Common name
3P Grasses	
Themeda triandra	Kangaroo Grass
Astrebla elymoides	Hoop mitchell grass
Astrebla lappacea	Curly Mitchell grass
Astrebla pectinata	Barley mitchell grass
Astrebla squarrosa	Bull mitchell grass
Bothriochloa bladhii	Forest Bluegrass
Bothriochloa ewartiana	Desert Bluegrass
Dicanthium sericeum	Queensland Bluegrass
Heteropogon contortus	Black speargrass
Panicum decompositum	Native Millet
Other native grasses	
Aristida calycina	Dark wiregrass
Brachyachne convergens	Native couch grass
Chloris pectinata	Comb chloris
Cymbopogon refractus	Barbed-wire grass
Iseilema vaginiflorum	Red flinders grass

Sporobolus caroli	Fairy Grass
Legumes	
Rhynchosia minima var. minima	Rhyncho
Glycine tabacina	Glycine Pea

Table 2 Native Species Selection

Canopy cover – Trees and Shrubs (RA4 only)	
Trees	
Eucalyptus crebra	Narrow-leaved ironbark
Eucalyptus melanophloia	Silver-leaved ironbark
Corymbia citriodora	Lemon-scented gum
Corymbia clarksoniana	Clarkson's bloodwood
Eucalyptus populnea	Poplar box
Shrubs	
Acacia holocericea	Soapbush Wattle
Alphitonia excelsa	Soap tree
Atalaya hemiglauca	Whitewood
Atriplex nummularia	Old Man Saltbush
Petalostigma pubescens	Quinine bush
Eremophila mitchellii	False sandalwood
Geijera parviflora	Wilga

Grasses	
Bothriochloa bladhii	Forest Bluegrass
Dichanthium sericeum	Queensland Bluegrass
Cymbopogon refractus	Barbed wire grass
Heteropogon contortus	Black Speargrass
Eriochloa crebra;	Cup grass
Eriochloa procera	Slender cup grass
Themeda triandra	Kangaroo Grass
Aristida personata	Purple Wire grass
Panicum effusum	Hairy panic
Panicum laevinode	Pepper grass
Sporobolus mitchellii	Rat's tail couch
Sporobolus creber	Slender rat's tail grass
Arundinella nepalensis	Reedgrass
Paspalidium distans	Shotgrass
Paspalidium jubiflorum	Warrego grass
Imperata cylindrica	Blady grass
Chrysopogon filipes	Australian vetiver grass
Forbs	
Atriplex nummularia	Old Man Saltbush
Enchylaena tomentosa	Ruby Saltbush

Table 3 Riparian Species Selection

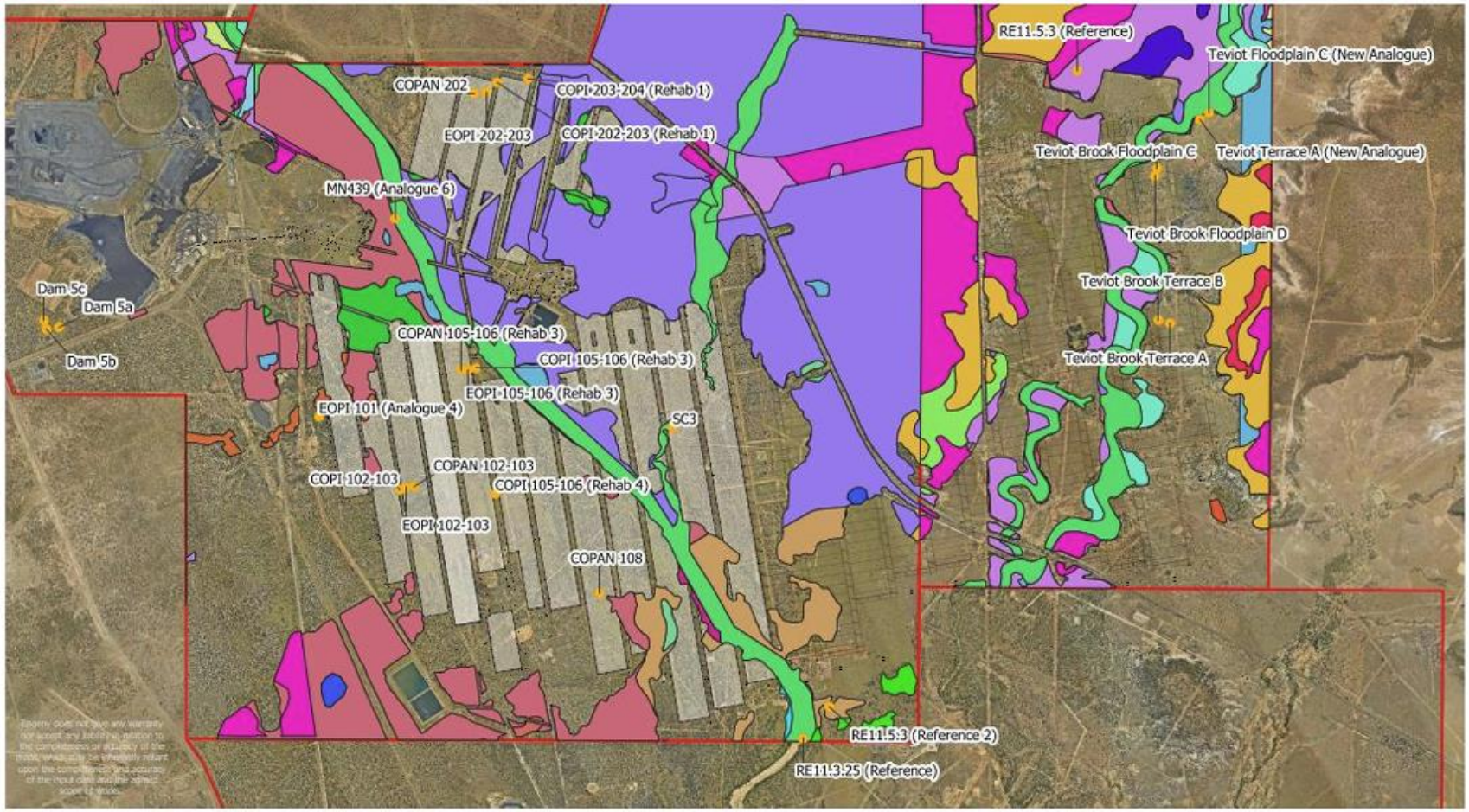
Vegetation Zone	Average Basal Area (m^2/ha)	Average Number of Trees & Shrubs (stems/ha)	Average Number of Species per Site	Species Diversity
Riparian fringe (0-7 m)	43.2	1,008	3.8	*Melaleuca bracteata*
				Casuarina cunninghamiana
				Eucalyptus populnea
				Acacia salicina
Riparian boundary (7-approx 40 m)	14.4	700	9.3	*Acacia salicina*
				Cassia brewsteri
				Lysiphyllum carronii
				Eucalyptus tereticornis
				Corymbia tessellaris (
				Casuarina cunninghamiana
				Eucalyptus populnea
				Alphitonia excelsa
				Atalaya hemiglauca
				Corymbia dallachiana
				Erythroxylon australe

Table 4 Shrubland Species Selection

3P Grasses		**Minimum Application Rate (kg/ha)**
Themeda triandra	Kangaroo Grass	3-6 species from the list with a bulked seed weight of 5 kg/ha.
Astrebla elymoides	Hoop mitchell grass	
Astrebla lappacea	Curly Mitchell grass	
Astrebla pectinata	Barley mitchell grass	
Astrebla squarrosa	Bull mitchell grass	
Bothriochloa bladhii	Forest Bluegrass	
Bothriochloa ewartiana	Desert Bluegrass	
Dicanthium sericeum	Queensland Bluegrass	
Heteropogon contortus	Black speargrass	
Panicum decompositum	Native Millet	
Other native grasses		
Aristida calycina	Dark wiregrass	3-6 species from the list with a bulked seed at 5 kg/ha.
Brachyachne convergens	Native couch grass	
Chloris pectinata	Comb chloris	
Cymbopogon refractus	Barbed-wire grass	
Iseilema vaginiflorum	Red flinders grass	
Sporobolus caroli	Fairy Grass	
Legumes		
Rhynchosia minima var. minima	Rhyncho	2 species from the list with bulk seed at 1 kg/ha subject to availability of seed stock for shrubs.
Glycine tabacina	Glycine Pea	

Shrubs		
Acacia holocericeaexcelsa	Soapbush Wattle	Between 3-5 species from the list with bulk seed at 5 kg/ha subject to availability of seed stock for shrubs.
Alphitonia excelsa	Soap tree	
Atalaya hemiglauca	Whitewood	
Atriplex nummularia	Old Man Saltbush	
Clerodendrum floribundum	Lolly bush	
Corchorus trilocularis	Wild jute	
Dodonaea viscosa	Hopbush	
Eremophila bignoniiflora	Bignonia emu-bush	
Eremophila mitchellii	False sandalwood	
Geijera parviflora	Wilga	
Petalostigma pubescens	Quinine bush	
Senna artemisioides	*Silver Cassia*	
Cover Crops		
Echinochloa esculenta (sterile)	Japanese Millet (cover crop)	As required for erosion control and soil organic matter improvement.
Lolium multiflorum	Annual Rye (cover crop)	
Echinochloa utilis	Shirohie Millet (cover crop)	

5.3 Attachment 3 – Rehabilitation Reference Sites



Monitoring Point	RE	Intended PMLU	Land Suitability Class	Easting (GDA94)	Northing (GDA94)
Analogue (COPI 102-103)	RE11.5.3	Conservation	4	(s) 601723 (e) 601773	(s) 7577169 (e) 7577164
Analogue (EOPI 102-103)	RE11.5.3	Conservation	4	(s) 601775 (e) 601824	(s) 7577187 (e) 7577189
Analogue (COPAN 102-103)	RE11.5.3	Conservation	4	(s) 601858 (e) 601900	(s) 7577199 (e) 7577180
RE11.5.3 (Reference)	RE11.5.3	Conservation	4	(s) 608400 (e) 608384	(s) 7581302 (e) 7581267
RE11.5.3 (Reference 2)	11.3.7	Conservation	3	(s) 605955 (e) 605994	(s) 7575027 (e) 7575057
Analogue (Dam 5a)	RE11.4.8	Conservation	3	(s) 598364 (e) 598382	(s) 7578772 (e) 7578815
Analogue (Dam 5b)	RE11.4.8	Conservation	3	(s) 598237 (e) 598261	(s) 7578750 (e) 7578794
Analogue (Dam 5c)	RE11.5.3	Conservation	4	(s) 598213 (e) 598197	(s) 7578838 (e) 7578884
Analogue 3 (COPAN 108)	RE11.5.9	Conservation	4	(s) 603690 (e) 603687	(s) 7576106 (e) 7576150
Analogue 4 (EOPI 101)	RE11.5.3	Conservation	4	(s) 600927 (e) 600897	(s) 7577891 (e) 7577930
Analogue 5 (SC3)	RE11.4.8	Conservation	3	(s) 604415 (e) 604465	(s) 7577783 (e) 7577784
RE11.3.25 (Reference)	RE11.3.25	Conservation	3	(s) 605695 (e) 604465	(s) 7574714 (e) 7577779

Monitoring Point	RE	Intended PMLU	Land Suitability Class	Easting (GDA94)	Northing (GDA94)
Analogue 6 (MN439)	RE11.5.9	Conservation	4	(s) 601680 (e) 601700	(s) 7579844 (e) 7579799
Teviot Brook Terrace A (New Analogue)	RE11.5.9c / 11.5.3	Agricultural	4	(s) 609609 (e) 609561	(s) 7580819 (e) 7580793
Teviot Brook Floodplain C (New Analogue)	RE11.5.9c / 11.5.3	Agricultural	4	(s) 609699 (e) 609653	(s) 7580885 (e) 7580863

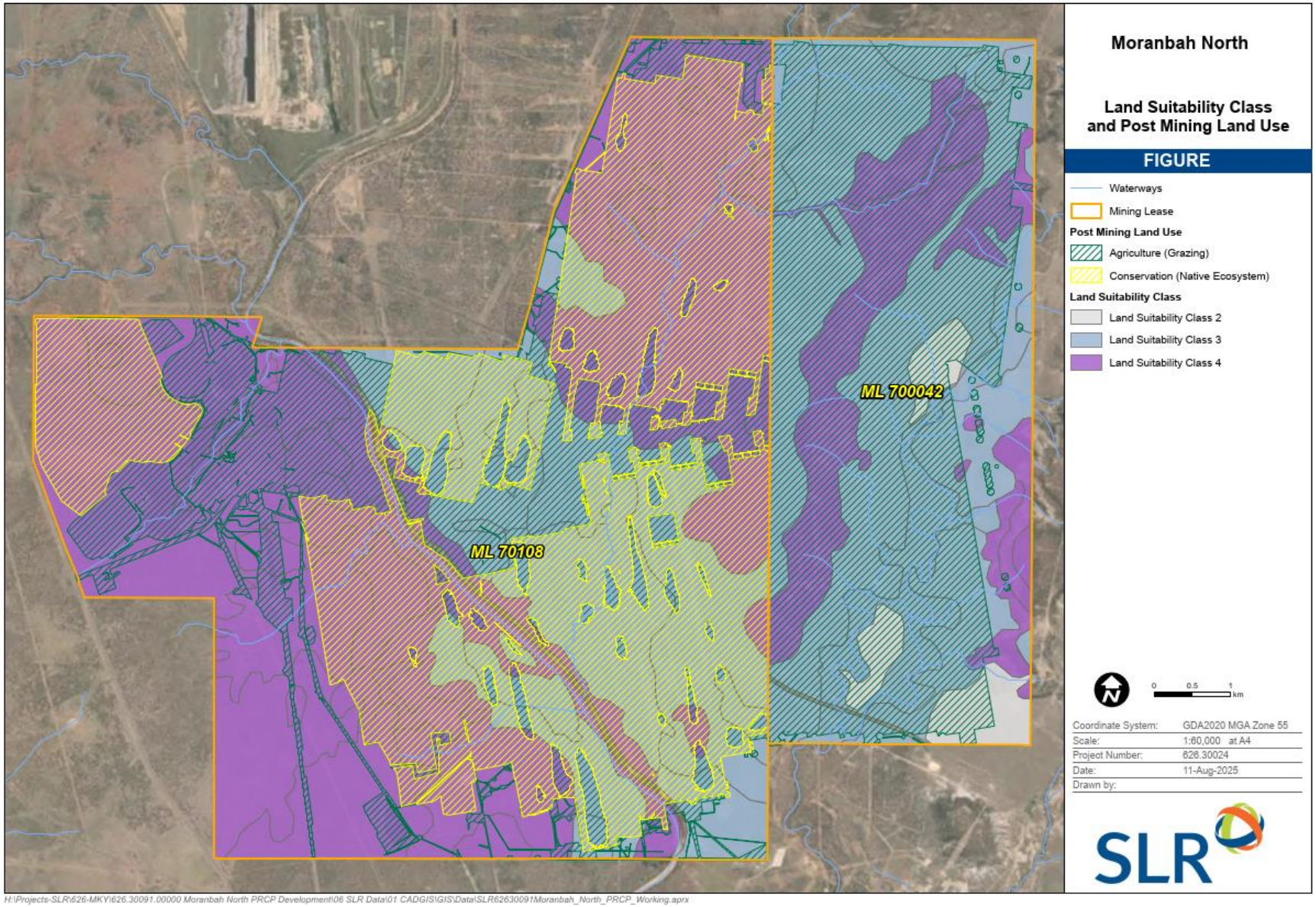
5.4 Appendix 4 – Erosion Classification Framework

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 erosion <0.3m deep	Occasional rills <15 rills/transect*	Common rills 15-30 rills/transect*	Numerous rills forming corrugated ground surface >30 rills/transect*
Gully erosion >0.3m deep	Absent	Absent	Present
Tunnel erosion	Absent	Absent	Present
Mass movement	Absent	Absent	Present

Source: NCST (2024) Australian Soil and Land Survey Field Handbook, 4th edition. The National Committee on Soil and Terrain. CSIRO Publishing, Collingwood, Australia.

**Transect linear 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)*

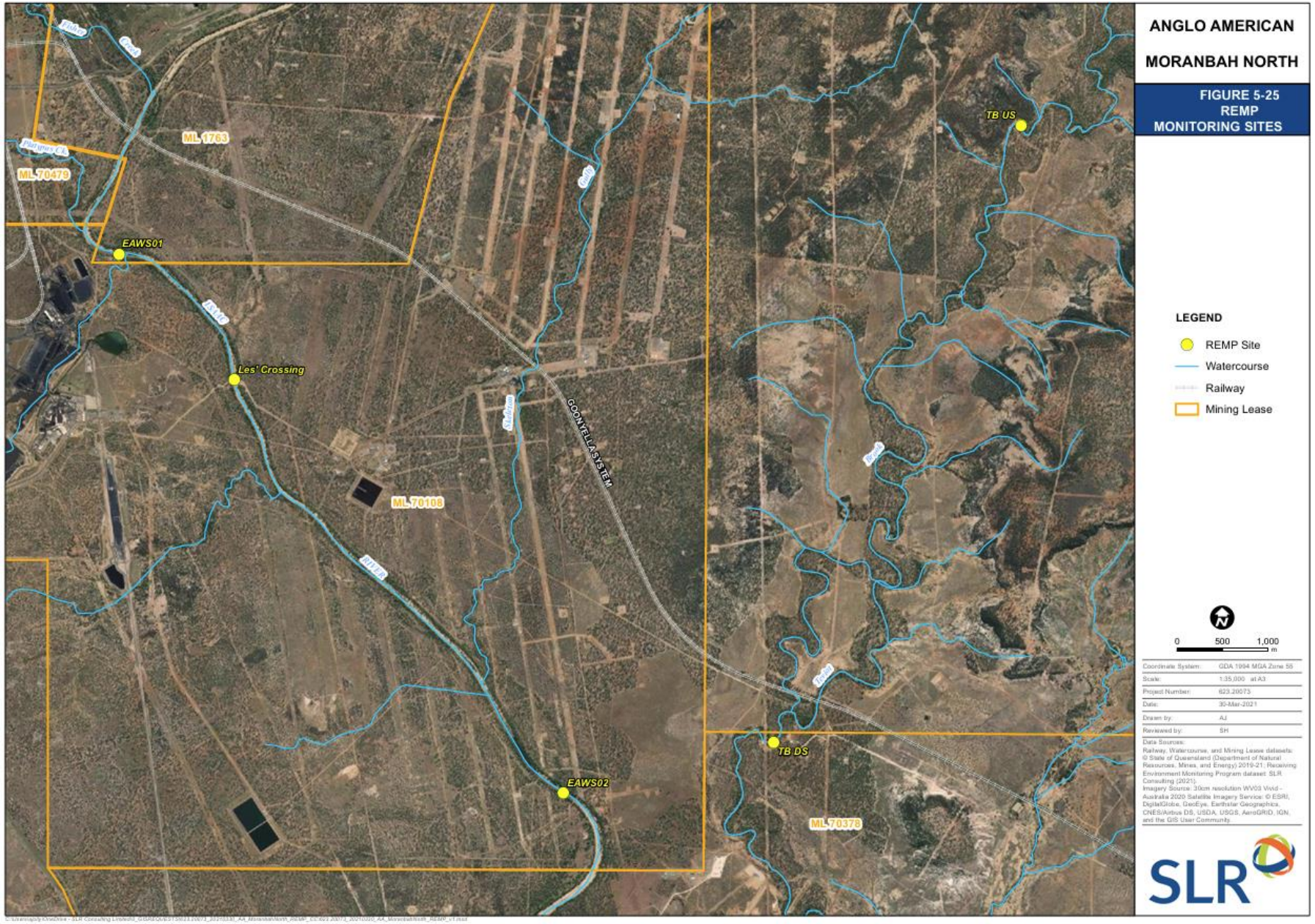
5.5 Attachment 5 – Land Suitability Class and PMLU



5.6 Attachment 6 – Surface Water Monitoring Locations

Watercourse	Site	Sampling regime	Description	Latitude (GDA2020)	Longitude (GDA2020)
Isaac River	New	Upstream	Isaac River upstream of mining impact area	TBA*	TBA*
	EAWS01	Upstream	Upstream site north of upstream automated water station	-21.86803	147.97107
	Les' Crossing	Downstream	Downstream site at Les' Crossing	-21.8803	147.98409
	EAWS02	Downstream	Downstream site south of downstream automated water station	-21.92131	148.01941
Teviot Brook	TBUS	Upstream	Baseline site	-21.85460	148.06766
	TBDS	Downstream	Located approximately 12.4km downstream of TBUS and 100m upstream of powerlines that cross water course	-21.91614	148.04176

*To be provided under condition PRCP19.


ANGLO AMERICAN
MORANBAH NORTH
FIGURE 5-25
REMP
MONITORING SITES
LEGEND
REMP Site
Watercourse
Railway
Mining Lease
0
500
1,000
m
ML 1763
ML 70479
ML 70108
ML 70378
EAWS01
EAWS02
Les' Crossing
TB US
TB DS
GOONYELLA SYSTEM
Coordinate System: GDA 1994 MGA Zone 55
Scale: 1:35,000 at A3
Project Number: 623.20073
Date: 30-Mar-2021
Drawn by: AJ
Reviewed by: SH
SLR

5.7 Attachment 7 – Surface water quality limits

Quality characteristic (units)	Limit	Source
pH (field)	7.0-8.5	Site-specific
Electrical Conductivity (µS/cm) - field	650	Site-specific
Sulfate (mg/L)	32	Site-specific
Fluoride (mg/L)	0.2	Site-specific
Turbidity (NTU)	500	Site-specific
Nitrate as N (mg/L)	0.5	Site-specific
Aluminium - Dissolved (µg/L)	Monitor	
Arsenic - Dissolved (µg/L)	13	ANZG 2018
Boron - Dissolved (µg/L)	85	Site-specific
Cadmium - Dissolved (ug/L)	0.2	ANZG 2018
Cobalt - Dissolved (ug/L)	1.4	ANZG 2018
Copper - Dissolved (ug/L)	3	Site-specific
Iron - Dissolved (ug/L)	For interpretation purposes	
Lead - dissolved (ug/L)	3.4	ANZG 2018
Manganese - Dissolved (ug/L)	190	Site-specific
Mercury - Dissolved (ug/L)	0.06	ANZG 2018
Molybdenum - Dissolved (ug/L)	2	Site-specific
Nickel - Dissolved (ug/L)	11	ANZG 2018
Selenium - Dissolved (ug/L)	5	ANZG 2018

Silver - Dissolved (ug/L)	0.05	ANZG 2018
Uranium - Dissolved (ug/L)	0.5	ANZG 2018
Vanadium - Dissolved (ug/L)	6	ANZG 2018
Zinc - Dissolved (ug/L)	8	ANZG 2018
TRH C6 – C9 Fraction (ug/L)	20	
TRH C10 – C36 Fraction (ug/L)	100	
Major ions (mg/L) Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	For interpretation purposes	
Hardness (mg/L)	For interpretation purposes	

Notes:

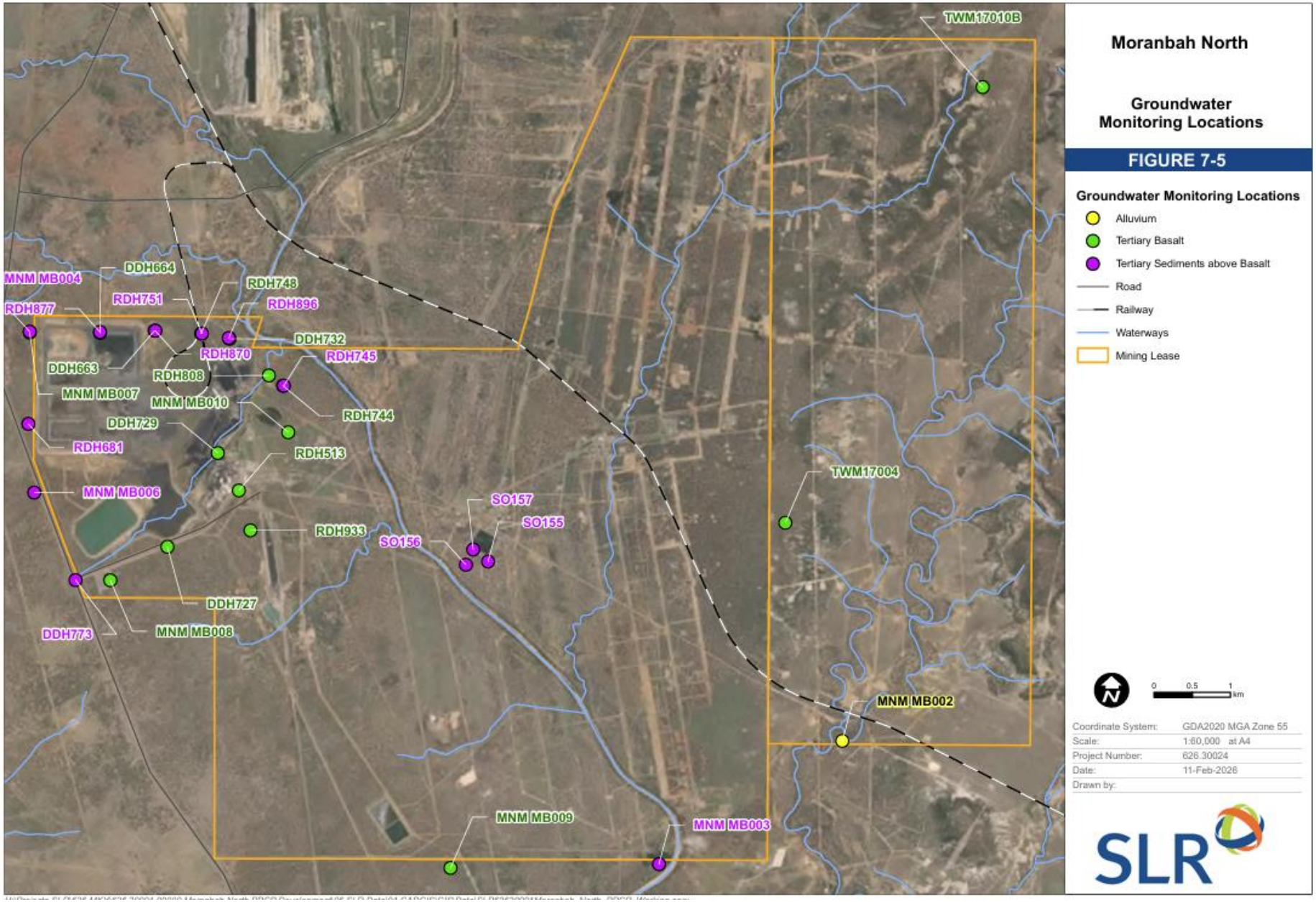
- *All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample) and total (unfiltered).*
- *Limits for metals and metalloids apply to dissolved results.*
- *ANZG (2018) Aquatic ecosystem protection for moderately disturbed system (95% protection).*

5.8 Attachment 8 – Groundwater monitoring locations

Monitoring Points	Hydrogeological unit	Latitude (Decimal Degree, GDA2020)	Longitude (Decimal Degree, GDA2020)	Frequency
MNM MB002	Alluvium	-21.9147	148.0439	Monthly
DDH773	Tertiary Sediments above Basalt	-21.8963	147.9467	Monthly
MNM MB003	Tertiary Sediments above Basalt	-21.9294	148.0208	Monthly
MNM MB004	Tertiary Sediments above Basalt	-21.8670	147.9407	Monthly
MNM MB006	Tertiary Sediments above Basalt	-21.8860	147.9414	Monthly
RDH681	Tertiary Sediments above Basalt	-21.8779	147.9406	Monthly
RDH745	Tertiary Sediments above Basalt	-21.8732	147.9729	Monthly
RDH751	Tertiary Sediments above Basalt	-21.8671	147.9625	Monthly
RDH870	Tertiary Sediments above Basalt	-21.8668	147.9566	Monthly
RDH877	Tertiary Sediments above Basalt	-21.8670	147.9496	Monthly
RDH891	Tertiary Sediments above Basalt	-21.8923	147.9583	Monthly
RDH893	Tertiary Sediments above Basalt	-21.8812	147.9646	Monthly
RDH896	Tertiary Sediments above Basalt	-21.8676	147.9659	Monthly
SO155	Tertiary Sediments above Basalt	-21.8938	147.9989	Quarterly

Monitoring Points	Hydrogeological unit	Latitude (Decimal Degree, GDA2020)	Longitude (Decimal Degree, GDA2020)	Frequency
SO156	Tertiary Sediments above Basalt	-21.8942	147.9961	Quarterly
SO157	Tertiary Sediments above Basalt	-21.8924	147.9970	Quarterly
DDH663	Tertiary Basalt	-21.8668	147.9565	Monthly
DDH664	Tertiary Basalt	-21.8671	147.9496	Monthly
DDH727	Tertiary Basalt	-21.8923	147.9583	Monthly
DDH729	Tertiary Basalt	-21.8812	147.9646	Monthly
DDH732	Tertiary Basalt	-21.8677	147.9660	Monthly
MNM MB007	Tertiary Basalt	-21.8671	147.9407	Monthly
MNM MB008	Tertiary Basalt	-21.8963	147.9511	Monthly
MNM MB009	Tertiary Basalt	-21.9300	147.9944	Monthly
MNM MB010	Tertiary Basalt	-21.8787	147.9735	Monthly
RDH513	Tertiary Basalt	-21.8856	147.9673	Quarterly
RDH744	Tertiary Basalt	-21.8732	147.9728	Monthly
RDH748	Tertiary Basalt	-21.8671	147.9624	Monthly
RDH808	Tertiary Basalt	-21.8720	147.9710	Monthly
RDH933	Tertiary Basalt	-21.8903	147.9688	Monthly

Monitoring Points	Hydrogeological unit	Latitude (Decimal Degree, GDA2020)	Longitude (Decimal Degree, GDA2020)	Frequency
TWM17004	Tertiary Basalt	-21.8890	148.0365	Quarterly
TWM17010B	Tertiary Basalt	-21.8374	148.0611	Quarterly


TWM17010B
Moranbah North
Groundwater Monitoring Locations
FIGURE 7-5
Groundwater Monitoring Locations
Alluvium
Tertiary Basalt
Tertiary Sediments above Basalt
Road
Railway
Waterways
Mining Lease
MNM MB004
DDH664
RDH751
RDH748
RDH896
RDH877
DDH732
RDH870
RDH745
DDH663
RDH808
MNM MB007
MNM MB010
RDH744
DDH729
RDH681
RDH513
MNM MB006
SO157
SO155
RDH933
SO156
DDH727
DDH773
MNM MB008
TWM17004
MNM MB002
MNM MB009
MNM MB003
0 0.5 1 km
Coordinate System: GDA2020 MGA Zone 55
Scale: 1:60,000 at A4
Project Number: 626.30024
Date: 11-Feb-2026
Drawn by:
SLR

5.9 Attachment 9 – Groundwater quality limits

Monitoring Point	Hydrogeological unit	Electrical Conductivity (µS/cm) - field	Sulfate (mg/L)	Iron - Dissolved (µg/L)
MNM MB002, New Bore 1, New Bore 3	Alluvium	8,910	318	140
DDH773	Tertiary Sediments	8,910	318	140
MNM MB003, New Bore 2, New Bore4	Tertiary Sediments	350	28	140
MNM MB004	Tertiary Sediments	12,000	436	140
MNM MB006	Tertiary Sediments	12,000	800	140
RDH681	Tertiary Sediments	8,910	318	140
RDH745	Tertiary Sediments	24,000	741	1,500
RDH751	Tertiary Sediments	25,000	1,300	300
RDH870	Tertiary Sediments	14,550	320	140
RDH877	Tertiary Sediments	8,910	318	140
RDH891	Tertiary Sediments	8,910	318	140
RDH893	Tertiary Sediments	8,910	318	140
RDH896	Tertiary Sediments	19,000	1,000	140
SO155	Tertiary Sediments	5,600	55	140
SO156	Tertiary Sediments	5,600	55	140
SO157	Tertiary Sediments	5,600	55	140
DDH663	Tertiary Basalt	2,000	100	110
DDH664	Tertiary Basalt	3,000	116	55
DDH727	Tertiary Basalt	16,000	398	140
DDH729	Tertiary Basalt	16,000	398	140
DDH732	Tertiary Basalt	1,400	14	140
MNM MB007	Tertiary Basalt	16,000	430	140
MNM MB008	Tertiary Basalt	9,100	650	140

Monitoring Point	Hydrogeological unit	Electrical Conductivity (µS/cm) - field	Sulfate (mg/L)	Iron - Dissolved (µg/L)
MNM MB009	Tertiary Basalt	16,000	398	140
MNM MB010	Tertiary Basalt	21,000	760	140
RDH513	Tertiary Basalt	22,980	614	140
RDH744	Tertiary Basalt	20,000	606	140
RDH748	Tertiary Basalt	3,265	50	25
RDH808	Tertiary Basalt	7,900	100	180
RDH933	Tertiary Basalt	16,000	398	140
TWM17004	Tertiary Basalt	10,690	217	1,500
TWM17010B	Tertiary Basalt	20,545	759	1,500

Where site-specific data was not available, Groundwater Zone 34 WQOs were applied. Shallow for Alluvium and Tertiary sediments and deep for tertiary basalt.

Quality characteristic (units)	Bores	Limit	Source
pH (field)	All bores	6.0-8.5	Site-specific
Fluoride (mg/L)	All bores	0.5	WQO
Nitrate as N (mg/L)	All bores	1.1	ANZG 2018
Aluminium - Dissolved (µg/L)	All bores	80	Site-specific
Arsenic - Dissolved (µg/L)	All bores	13	ANZG 2018
Boron - Dissolved (µg/L)	All bores	970	ANZG 2018
Cadmium - Dissolved (ug/L)	All bores	0.2	ANZG 2018
Cobalt - Dissolved (ug/L)	All bores	1.4	ANZG 2018

Copper - Dissolved (ug/L)	All bores	4	Site-specific
Lead - dissolved (ug/L)	All bores	3.4	ANZG 2018
Manganese - Dissolved (ug/L)	All bores	1,900	ANZG 2018
Mercury - Dissolved (ug/L)	All bores	0.06	ANZG 2018
Molybdenum - Dissolved (ug/L)	All bores	4	Site-specific
Nickel - Dissolved (ug/L)	All bores	11	ANZG 2018
Selenium - Dissolved (ug/L)	All bores	6	Site-specific
Silver - Dissolved (ug/L)	All bores	0.05	ANZG 2018
Uranium - Dissolved (ug/L)	All bores	0.5	ANZG 2018
Vanadium - Dissolved (ug/L)	All bores	6	ANZG 2018
Zinc - Dissolved (ug/L)	All bores	8	ANZG 2018
Major ions (mg/L) Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	All bores	For interpretation purposes	
Hardness (mg/L)	All bores	For interpretation purposes	
Water Level (mAHD)	All bores	For interpretation purposes	

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).*

END OF PRCP SCHEDULE