PRCP schedule

Environmental Protection Act 1994

PRCP schedule P- PRCP- 100733385

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-100733385_V1

PRCP schedule holder(s)

Name(s)	Registered address
BHP COAL PTY LTD QCT Management Pty Limited Mitsubishi Development Pty Ltd Umal Consolidated Pty Ltd QCT MINING PTY. LTD. QCT INVESTMENT PTY. LTD. BHP Queensland Coal Investments Pty Ltd	Level 14, 480 Queen Street Brisbane, QLD 4000

Location details

Location(s)
ML1782, ML70126, ML70127, ML70325, ML70328, ML70350, ML70369, ML70370, ML70410

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.

30/09/2025

Date

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

Enquiries:
Business Centre Coal
PO Box 3028, Emerald QLD 4720
Phone: (07) 4987 9320
Email: CRMining@detsi.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

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

Pursuant to section 285 of the EP Act:

- the holder of a PRCP schedule must commission an audit of the schedule by a rehabilitation auditor for the following periods (each an audit period) —

  (a) the 3-year period starting on the day the schedule takes effect

  (b) each 3-year period starting on the day after the previous audit period ended.

- the holder must, within 4 months after the end of each audit period, give the administering authority -

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

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

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

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

PRCP schedule

The PRCP schedule incorporates the following sections:

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

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 Mining disturbance authorised under environmental authority EPML00865013 cannot be undertaken until an associated rehabilitation or improvement outcome has been provided in the PRCP Schedule.

PRCP2 The holder must, for each rehabilitation and improvement area, achieve the rehabilitation or management 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/improvement more than five year earlier than the nominated 'Date area is available' in this schedule, the holder must:

a) notify the administering authority in writing within 30 days of the land becoming 'available for rehabilitation'; and
b) whether or not it considers that it would be reasonable and appropriate to apply to the administering authority to amend this schedule in a way that maximises the progressive rehabilitation to a stable condition.

Note:
1) Reference to "earlier than the nominated date in the schedule" means a date that is greater than 5 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 The holder must maintain a risk register that identifies the risks to not achieving:

a) a stable condition for post-mining land uses;
b) sufficient improvement for non-use management areas; and
c) how the risks are being managed or minimised.

PRCP5 The risk register (**PRCP4**) must be reviewed 5-yearly and include consideration of the outcomes of PRCP monitoring data.

PRCP6 Where an area achieves a rehabilitation or management milestone, the holder must continue to achieve the milestone criteria for that area until:

a) a progressive certification area has satisfied the provisions of section 318ZB (4) of the EP Act; or
b) a surrender is approved.

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 version Saraji South 'BMA-SSM-PRCP-v3' 26, September 2025 or more recent version of the PRC plan relating to this schedule;
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 until the final milestone criteria has been met or progressive rehabilitation certification has been achieved, up to date records on:

a) achievement and maintenance of each rehabilitation/improvement milestone criteria of this schedule;
b) rehabilitation/improvement activities and the results of these activities (including but not limited to, actions taken, date, location, methods, data collected and additional records where relevant e.g. QA/QC, photos, waste tracking and disposal records, appropriately qualified person details and assumptions);
c) maintenance of rehabilitation/improvement and the results of maintenance activities;
d) monitoring of rehabilitation/improvement 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/improvement 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/improvement milestones or milestone criteria;
h) landholder agreements; and
i) details of community consultation in the community consultation register relating to rehabilitation/improvement and closure activities.

PRCP9 A summary report of key records under **PRCP8** is maintained 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 or a longer duration as agreed by the administering authority.

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 condition and achieves the pre-disturbance land use as detailed in **Figure 1 – Final Site Design**.

PRCP13 With respect to groundwater:

a) The monitoring bores listed in **PRCP schedule appendix 11: Groundwater monitoring locations** must be installed by 2050;
b) The holder must develop site-specific groundwater quality limits by 2055 for the bores listed in **PRCP schedule appendix 11**: **Groundwater monitoring locations** to update the **PRCP schedule Appendix 12: Interim groundwater quality limits**;
c) Following monitoring bore installation as per PRCP13.a), groundwater quality must be monitored six monthly at, but not limited to, bores specified in **PRCP schedule appendix 11**: **Groundwater monitoring locations**, for all quality characteristics listed in the **PRCP schedule Appendix 12: Interim groundwater quality limits** as an interim measure till PRCP13.b) fulfilled; and
d) The groundwater model and water balance model must be recalibrated, and predictions rerun at least every five years commencing from 2050.

PRCP14 With respect to groundwater:

a) Groundwater quality results for compliance bores have not exceeded the site-specific groundwater quality limits specified in the **PRCP schedule Appendix 12: Interim groundwater quality limits**, for 3 consecutive results within the five-year period immediately prior to surrender; and
b) Predictive groundwater modelling as per the Australian Groundwater Modelling Guidelines (current version), undertaken at the completion of all mining, confirms the network of residual voids will collectively develop into groundwater sinks and prevent environmental harm through the release of contaminants from the void lakes beyond the tenure boundary post-closure.

PRCP15 With respect to surface water:

a) The holder must install monitoring equipment at the relevant surface water monitoring locations specified in **PRCP schedule appendix 9**: **Surface water monitoring locations** by 2080;
b) The holder must develop site-specific surface water quality limits by 2055 for the watercourses listed in **PRCP schedule appendix 9**: **Surface water monitoring locations** to update the **PRCP schedule Appendix 10: Interim surface water quality limits**;
c) Following completion of **PRCP15.a)**, surface water quality must be monitored at least once per month during flow at downstream locations specified in **PRCP schedule appendix 9**: **Surface water monitoring locations** when flows at the downstream gauging station record $1m^3$/second, when safe to collect samples; and
d) Surface water quality monitoring as per **PRCP15.c)** be carried out for all parameters listed in the **PRCP schedule Appendix 10: Interim surface water quality limits** as an interim measure till **PRCP15.b)** is fulfilled.

PRCP16 With respect to surface water:

a) Surface water quality monitored as per **PRCP15.c)** must not exceed the site-specific surface water quality limits as per **PRCP schedule Appendix 10: Interim surface water quality limits**, within the 5-year period immediately prior to surrender; and
b) If the surface water quality exceeds criteria **PRCP16.a)**, 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. The exception being surface water quality results from PRCPSW08 on Rolf Creek which is to be compared to the water quality at other downstream monitoring sites.

PRCP17 Where the surface water quality at the downstream site exceeds the upstream site result as per **PRCP16.b)**, an AQP must complete an assessment of the cause of the exceedance and risk of rehabilitation not achieving a stable condition within the schedule timeframe and:

a) where there is low risk to achieving a stable condition from the mining tenure (ML1782, ML70126, ML70127, ML70325, ML70328, ML70350, ML70369, ML70370, ML70410), then no further action is to be taken;

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;
c) the EA holder will be non-compliant with **PRCP16.a)**, if **PRCP17.b)** is triggered more than 3 times over 5 consecutive years prior to surrender and **PRCP16.a)** is reset; and
d) the assessment/s under **PRCP17** must be completed and provided to the administering authority within 6 months of receiving the relevant sampling results.

PRCP18 With respect to improvement areas (IA1) and (IA2), the EA holder must develop a 'Groundwater Level Monitoring Network' (GLMN) inclusive of following steps:

a) identify by 2094 (or 4-years prior the end of mining), relevant regional aquifers (hydrogeological units) likely to be affected/connected individually or collectively by each residual void in Improvement Area (IA1) and IA2;
b) identify by 2094 (or 4-years prior the end of mining), relevant existing groundwater bores (from **PRCP schedule Appendix 11: Groundwater monitoring locations**) and new additional groundwater monitoring bores if determined by an AQP as required to ensure sufficient monitoring coverage for each regional aquifer mapped in accordance with **PRCP18.a)**;
c) Independent AQP endorse the proposed GLMN as per **PRCP18.a)** and **PRCP18.b)** is fit for purpose that is, to monitor and support predictions of residual voids behaviour as a sink;
d) for existing groundwater monitoring bores identified in accordance with **PRCP18.b)** and approved as per **PRCP18.c)**, update the **PRCP schedule Appendix 11: Groundwater monitoring locations** before end of 2097 (or within 3 years of completion of **PRCP18.b**) to reflect water level (mAHD) for the relevant bores; and
e) depending on outcomes of **PRCP18.b) and PRCP18.c)**, update the **PRCP schedule Appendix 11: Groundwater monitoring locations** before end of 2097 (or within 3 years of completion of **PRCP18.b)** with new additional groundwater monitoring bores location co-ordinates, hydrogeological unit and water level (mAHD).

PRCP19 The GLMN developed in accordance with **PRCP18**, must be implemented by the EA holder by 2098 or at the end of mining whichever is earlier, inclusive of new groundwater bore installation as per **PRCP18**, and groundwater level monitoring.

PRCP20 Groundwater level must be monitored annually, at the bores identified under the GLMN (**PRCP18** and **PRCP19**), starting from 2098 or within 1 year of end of mining whichever is earlier.

PRCP21 The holder may develop site-based criteria with which to assess tunnel erosion within 5 years of the approval of the PRCP schedule. Criteria should be sufficient to quantify where tunnel erosion exists within the landscape which would not pose risk to final landform stability. The criteria should be supported by evidence and, reviewed and approved by an AQP.

END OF CONDITIONS

Section B - Final site design and reference maps

Figure 1 – Final Site Design

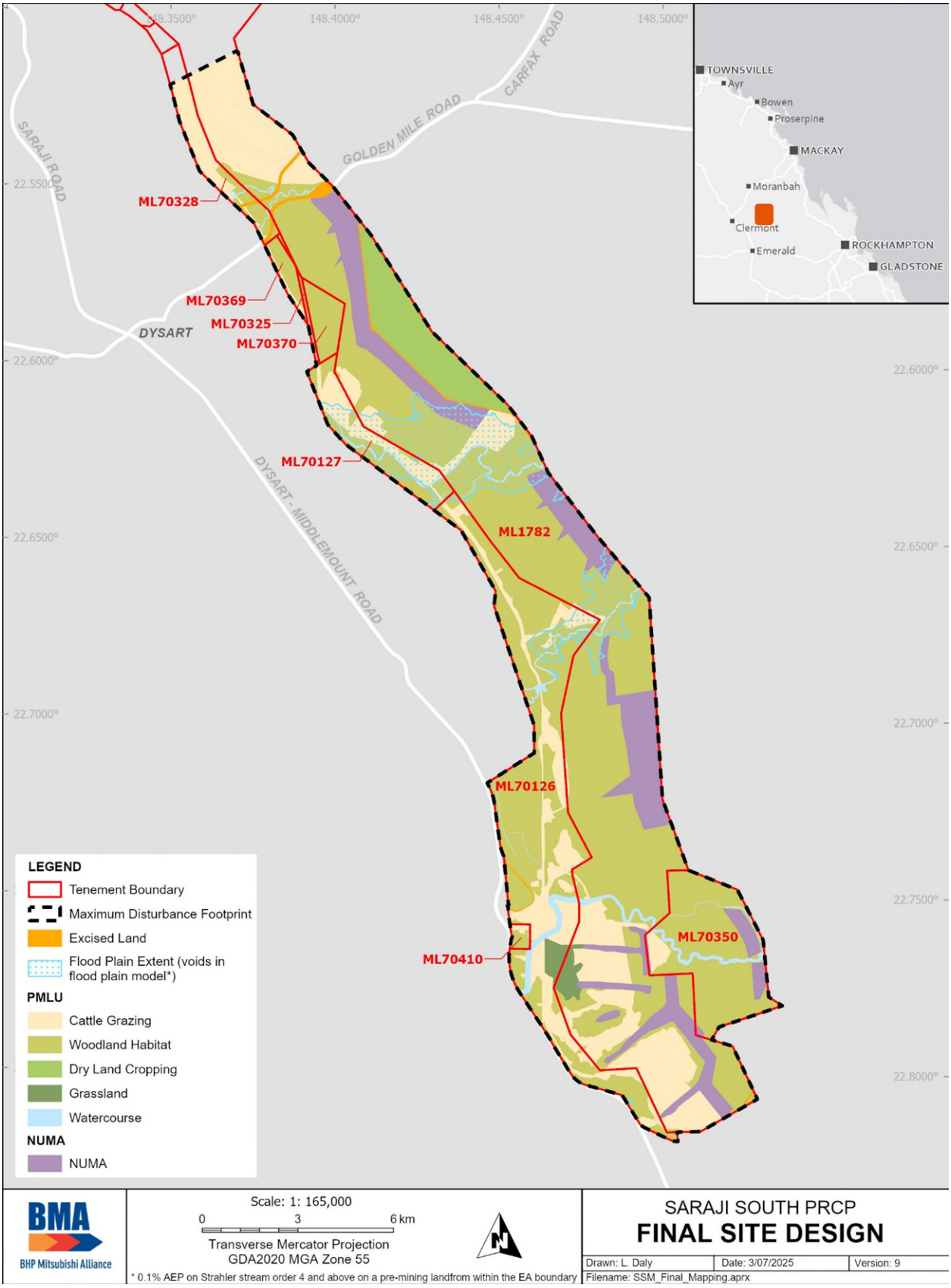
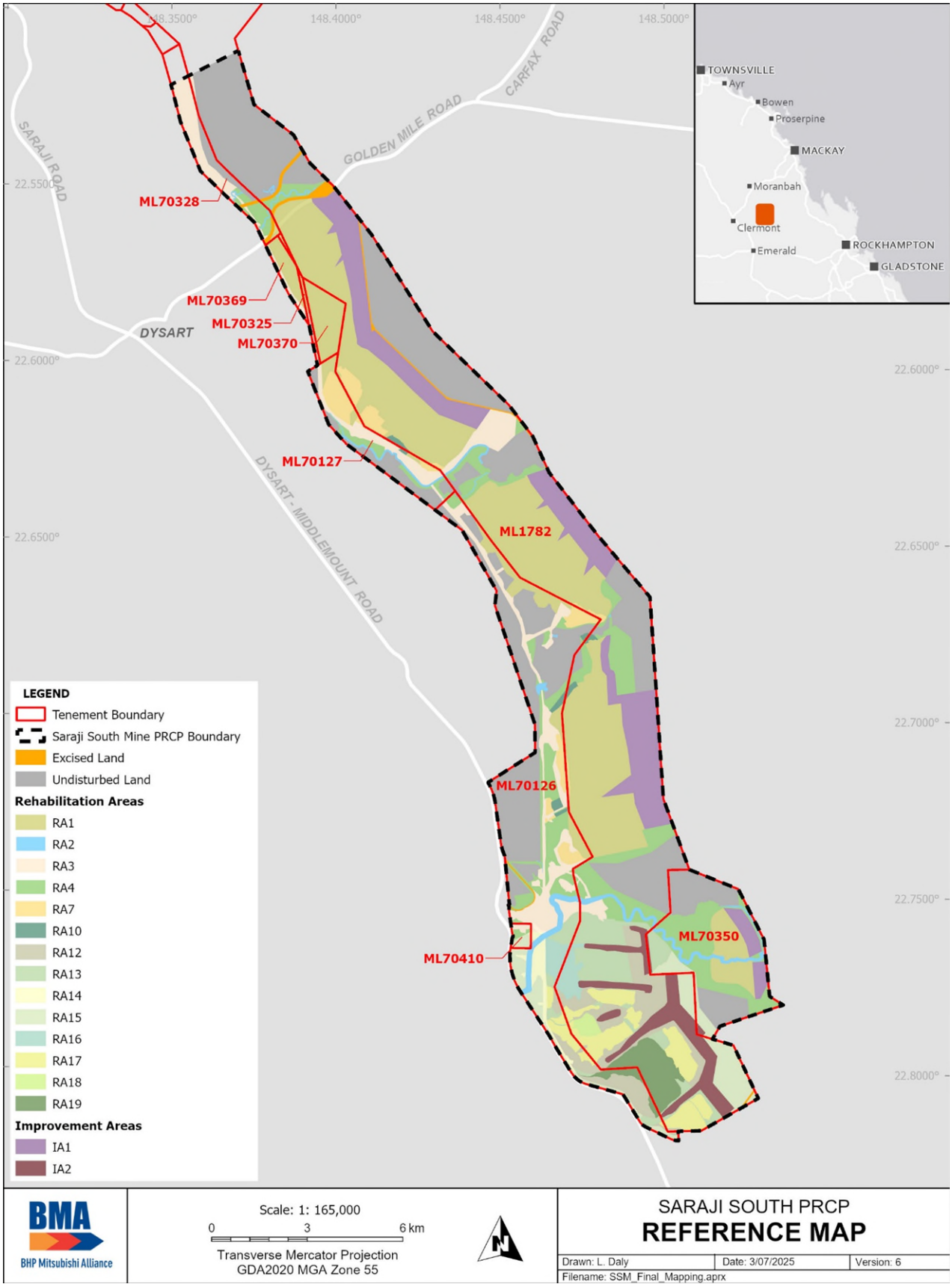


Figure 2 – Rehabilitation Areas (PMLU) and Improvement Areas (NUMA)



Section C – Definitions

3P grasses	Perennial, productive and palatable grasses
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.
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.
Contaminated Land Investigation Document	as defined in section 387 of the *Environmental Protection Act 1994* (Qld) (EP Act).
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
Groundcover	anything in contact with the soil surface, for example, live cover, standing dry cover, organic litter (including leaves, hay, woody debris) or rocks
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, and has not previously provided advice on the matter the subject of the review.
Index of Diversion Condition modified method	For watercourse rehabilitation not within a diversion (i.e. crossings/culverts), a modified IDC method with a reduced number of monitoring points within each reach will be used
Minor ancillary activities	Includes roads, access tracks and culverts, fences, underground services, low-impact telecommunication facilities, electrical sub-stations and switch yards, transmission grid works and supply network works, storage depots, pipelines and pumps, groundwater bores, gas drainage bores, monitoring and investigation works and exploration activities.

Representative	Representative means a sample set that covers the variance in monitoring or other data due to either natural changes or operational phases of the mining activities.
Unacceptable risk of environmental harm	means as defined in section 14 (1) and (2) of the *Environmental Protection Act* 1994 (Qld).
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 Fourth Edition).
Stable condition	As defined in section 111A of the *Environmental Protection Act 1994:* Land is in a stable condition if— • the land is safe and structurally stable, and • there is no environmental harm being caused by anything on or in the land, and • the land can sustain a PMLU.
Suitably qualified 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.
Vegetation groundcover	means plants, plant litter, tree leaf litter, twigs and woody debris capable of protecting the soil surface from erosion

Section D – Post mining land uses

(RA1) Rehabilitation area 1

Post-mining land uses (PMLU)											
Rehabilitation area	RA1										
Relevant activities	Spoil Dumps										
Total rehabilitation area size (ha)	3824										
Commencement of first milestone: RM3	10/12/2024										
PMLU	Woodland Habitat										
Date area is available	10/12/2024	10/12/2029	10/12/2034	10/12/2039	10/12/2044	10/12/2049	10/12/2054	10/12/2059	10/12/2064	10/12/2069	10/12/2074
Cumulative area available (ha)	172	365	557	636	737	855	979	1085	1205	1340	1518
Milestone completed by	10/12/2029	10/12/2034	10/12/2039	10/12/2044	10/12/2049	10/12/2054	10/12/2059	10/12/2064	10/12/2069	10/12/2074	10/12/2079
Milestone Reference	**Cumulative area achieved (ha)**										
RM3	172	365	557	636	737	855	979	1085	1205	1340	1518
RM5	172	365	557	636	737	855	979	1085	1205	1340	1518
RM8	172	365	557	636	737	855	979	1085	1205	1340	1518
RM11			172	365	557	636	737	855	979	1085	1205
RM14					172	365	557	636	737	855	979
Date area is available	10/12/2079	10/12/2084	10/12/2089	10/12/2094	10/12/2099						
Cumulative area available (ha)	1755	1875	2095	2958	3824						
Milestone completed by	10/12/2084	10/12/2089	10/12/2094	10/12/2099	10/12/2104	10/12/2109	10/12/2114	10/12/2119	10/12/2124		
Milestone Reference	**Cumulative area achieved (ha)**										
RM3	1755	1875	2095	2958	3824						
RM5	1755	1875	2095	2958	3824						
RM8	1755	1875	2095	2958	3824						
RM11	1340	1518	1755	1875	2095	2958	3824				
RM14	1085	1205	1340	1518	1755	1875	2095	2958	3824		

(RA2) Rehabilitation area 2

Post-mining land uses (PMLU)												
Rehabilitation area	RA2											
Relevant activities	Creek Diversions and Crossings											
Total rehabilitation area size (ha)	261											
Commencement of first milestone: RM1	10/12/2057											
PMLU	Watercourse											
Date area is available	10/12/2057	10/12/2060					10/12/2099	10/12/2102				
Cumulative area available (ha)	180	197					250	261				
Milestone completed by	10/12/2060	10/12/2063	10/12/2070	10/12/2073	10/12/2080	10/12/2083	10/12/2102	10/12/2104	10/12/2112	10/12/2114	10/12/2122	10/12/2124
Milestone Reference	**Cumulative area achieved (ha)**											
RM1	180	197					250	261				
RM3	180	197					250	261				
RM6	180	197					250	261				
RM9	180	197					250	261				
RM12			180	197					250	261		
RM15					180	197					250	261

(RA3) Rehabilitation area 3

Post-mining land uses (PMLU)												
Rehabilitation area	RA3											
Relevant activities	Infrastructure Areas - MIA, workshop, dams, roads and general infrastructure											
Total rehabilitation area size (ha)	1070											
Commencement of first milestone: RM1	10/12/2098											
PMLU	Cattle Grazing											
Date area is available	10/12/2098	10/12/2101										
Cumulative area available (ha)	717	1070										
Milestone completed by	10/12/2101	10/12/2103	10/12/2111	10/12/2113	10/12/2115	10/12/2121	10/12/2123	10/12/2125	10/12/2128	10/12/2130	10/12/2133	10/12/2138
Milestone Reference	**Cumulative area achieved (ha)**											
RM1	717	1070										
RM2			598	951		1070						
RM3				598	951		1070					
RM4				598	951		1070					
RM7				598	951		1070					
RM10							598	951			1070	
RM13									598	951		1070

(RA4) Rehabilitation area 4

Post-mining land uses (PMLU)												
Rehabilitation area	RA4											
Relevant activities	Roads, creek corridor areas, exploration and general infrastructure											
Total rehabilitation area size (ha)	1549											
Commencement of first milestone: RM1	10/12/2034											
PMLU	Woodland Habitat											
Date area is available	10/12/2034				10/12/2059				10/12/2099			
Cumulative area available (ha)	356				543				1549			
Milestone completed by	10/12/2036	10/12/2039	10/12/2049	10/12/2059	10/12/2076	10/12/2079	10/12/2089	10/12/2099	10/12/2100	10/12/2103	10/12/2113	10/12/2123
Milestone Reference	**Cumulative area achieved (ha)**											
RM1	356				543				1549			
RM3		356				543				1549		
RM5		356				543				1549		
RM8		356				543				1549		
RM11			356				543				1549	
RM14				356				543				1549

(RA7) Rehabilitation area 7

Post-mining land uses (PMLU)		
Rehabilitation area	RA7	
Relevant activities	Existing Rehabilitation	
Total rehabilitation area size (ha)	361	
Commencement of first milestone: RM10	10/12/2024	
PMLU	Cattle Grazing	
Date area is available	10/12/2024	
Cumulative area available (ha)	361	
Milestone completed by	10/12/2034	10/12/2039
Milestone Reference	**Cumulative area achieved (ha)**	
RM10	361	
RM17		361

(RA10) Rehabilitation area 10

Post-mining land uses (PMLU)						
Rehabilitation area	RA10					
Relevant activities	Existing Rehabilitation					
Total rehabilitation area size (ha)	63					
Commencement of first milestone: RM8	11/12/2024					
PMLU	Woodland Habitat					
Date area is available	10/12/2024	10/12/2024				
Cumulative area available (ha)	46	63				
Milestone completed by	10/12/2024	10/12/2026	10/12/2034	10/12/2036	10/12/2044	10/12/2046
Milestone Reference	**Cumulative area achieved (ha)**					
RM8	46	63				
RM11			46	63		
RM18					46	63

(RA12) Rehabilitation area 12

Post-mining land uses (PMLU)										
Rehabilitation area	RA12									
Relevant activities	Roper area - Spoil Dumps									
Total rehabilitation area size (ha)	557									
Commencement of first milestone: RM2	10/12/2034									
PMLU	Woodland Habitat									
Date area is available	10/12/2034									
Cumulative area available (ha)	557									
Milestone completed by	10/12/2042	10/12/2045	10/12/2052	10/12/2055	10/12/2062	10/12/2065				
Milestone Reference	**Cumulative area achieved (ha)**									
RM2	263	557								
RM3	263	557								
RM5	263	557								
RM8	263	557								
RM11			263	557						
RM14					263	557				

(RA13) Rehabilitation area 13

Post-mining land uses (PMLU)										
Rehabilitation area	RA13									
Relevant activities	Roper area - Spoil Dumps									
Total rehabilitation area size (ha)	542									
Commencement of first milestone: RM2	10/12/2034									
PMLU	Cattle Grazing									
Date area is available	10/12/2034	10/12/2042								
Cumulative area available (ha)	246	542								
Milestone completed by	10/12/2042	10/12/2045	10/12/2052	10/12/2055	10/12/2057	10/12/2060				
Milestone Reference	**Cumulative area achieved (ha)**									
RM2	246	542								
RM3	246	542								
RM4	246	542								
RM7	246	542								
RM10			246	542						
RM13					246	542				

(RA14) Rehabilitation area 14

Post-mining land uses (PMLU)										
Rehabilitation area	RA14									
Relevant activities	Roper area - Infrastructure Areas - Murphy's dam, haul road and general infrastructure									
Total rehabilitation area size (ha)	90									
Commencement of first milestone: RM1	10/12/2034									
PMLU	Cattle Grazing									
Date area is available	10/12/2034									
Cumulative area available (ha)	90									
Milestone completed by	10/12/2037	10/12/2057	10/12/2060	10/12/2070	10/12/2075					
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	90									
RM2		90								
RM3			90							
RM4			90							
RM7			90							
RM10				90	90					
RM13					90					

(RA15) Rehabilitation area 15

Post-mining land uses (PMLU)										
Rehabilitation area	RA15									
Relevant activities	Roper area - Roads, creek corridor areas, exploration and general infrastructure									
Total rehabilitation area size (ha)	515									
Commencement of first milestone: RM1	10/12/2034									
PMLU	Woodland Habitat									
Date area is available	10/12/2034									
Cumulative area available (ha)	515									
Milestone completed by	10/12/2036	10/12/2039	10/12/2049	10/12/2059						
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	515									
RM3		515								
RM5		515								
RM8		515								
RM11			515							
RM14				515						

(RA16) Rehabilitation area 16

Post-mining land uses (PMLU)										
Rehabilitation area	RA16									
Relevant activities	Roper area - Tailings Storage Facility and Coal Rejects Dump									
Total rehabilitation area size (ha)	157									
Commencement of first milestone: RM1	10/12/2034									
PMLU	Grassland									
Date area is available	10/12/2034									
Cumulative area available (ha)	157									
Milestone completed by	10/12/2037	10/12/2057	10/12/2062	10/12/2072	10/12/2077					
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	157									
RM2		157								
RM3			157							
RM4			157							
RM7			157							
RM19				157						
RM20					157					

(RA17) Rehabilitation area 17

Post-mining land uses (PMLU)										
Rehabilitation area	RA17									
Relevant activities	Roper area - Existing Rehabilitation									
Total rehabilitation area size (ha)	483									
Commencement of first milestone: RM10	10/12/2024									
PMLU	Cattle Grazing									
Date area is available	10/12/2024									
Cumulative area available (ha)	483									
Milestone completed by	10/12/2034	10/12/2039								
Milestone Reference	**Cumulative area achieved (ha)**									
RM10	483									
RM17		483								

(RA18) Rehabilitation area 18

Post-mining land uses (PMLU)										
Rehabilitation area	RA18									
Relevant activities	Roper area - Existing Rehabilitation									
Total rehabilitation area size (ha)	43									
Commencement of first milestone: RM8	10/12/2024									
PMLU	Woodland Habitat									
Date area is available	10/12/2024									
Cumulative area available (ha)	43									
Milestone completed by	10/12/2026	10/12/2036	10/12/2046							
Milestone Reference	**Cumulative area achieved (ha)**									
RM8	43									
RM11		43								
RM18			43							

(RA19) Rehabilitation area 19

Post-mining land uses (PMLU)												
Rehabilitation area	RA19											
Relevant activities	Progressively Certified Rehabilitation											
Total rehabilitation area size (ha)	294											
Commencement of first milestone: RM	Rehabilitation has been progressively certified by DESI											
PMLU	Cattle Grazing											
Date area is available												
Cumulative area available (ha)												
Milestone completed by												
Milestone Reference	**Cumulative area achieved (ha)**											
RM												
RM												
RM												

Rehabilitation area milestones

Milestone reference	Rehabilitation milestone	Milestone criteria
RM1	Infrastructure decommissioning and removal	1.1 All infrastructure to be retained onsite must be safe, stable and not cause environmental harm. 1.2 All infrastructure and services to be retained onsite must have a signed landholder statement, declaring that they will accept responsibility for the infrastructure (except for those items in RM1.3). 1.3 Below-ground infrastructure, services and waste (as per the Environmental Authority (EPML00865013) waste schedule) deeper than 0.5m in relation to the final landform surface can be retained provided it can meet the following: a) All pipelines have been drained. b) All below-ground infrastructure (installed after the approval date of this transitional PRCP) to be retained must be mapped. c) The intended PMLU is not compromised. 1.4 With the exception of RM1.2 and RM1.3 above, the following are complete: a) All services disconnected, terminated and removed; b) All buildings and associated infrastructure dismantled and removed; c) All hardstand, concrete areas and roads (bitumen, blue metal, aggregate) removed; d) All pipelines drained and removed; e) All waste, not authorised under the Environmental Authority (EPML00865013) waste schedule, removed; f) All surface water drainage infrastructure removed;

		g) All drillholes, bores, sediment ponds and sumps decommissioned; h) All machinery and equipment not required for rehabilitation works removed from site; i) Mine water dams are decommissioned; j) Watercourse crossings and culverts removed. 1.5 Assessment of mine water dams to be retained post closure is completed by an AQP and identified sediment and water management actions to ensure the dams are safe and stable for post mine use are completed.
RM2	Remediation and/or management of contaminated land	1.1 Contaminated Land Investigation Document 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. 1.2 The Contaminated Land Investigation Document confirms the area within the mining leases (ML1782, ML70126, ML70127, ML70325, ML70328, ML70350, ML70369, ML70370, ML70410) does not present an unacceptable risk to the post-mining land use. 1.3 Despite RM2.1 and RM2.2, where contaminated land investigations are undertaken for individual areas of progressive rehabilitation that do not cover an entire Lot on Plan, the investigations will be undertaken by a Suitably Qualified Person to a standard, that at the time of investigation, would be suitable to form part of a future *Environmental Protection Act 1994* (Qld) compliant Contaminated Land Investigation Document for that property, and does not need to achieve all requirements for a contaminated land submission to the administering authority.
RM3	Landform development and reshaping	**All rehabilitation areas**

		3.1 Erosion and sediment control systems are designed by an AQP, installed, and fit for purpose. 3.2 Appropriate mitigative measures in place for outer landform slopes that interact with flood waters up to a 0.1% AEP, as modelled on the closure landform, and designed by an AQP to minimise potential instability of the landforms from interaction with floodwaters. 3.3 The reshaped landforms are geotechnically stable with RA1, RA12, RA13, RA16 achieving FoS ≥1.5. **Cattle grazing** 3.4 Landforms RA3, RA13, RA14 are reshaped with slopes: ≤12%. **Grassland (RA16) -** Installation of cover 3.5 An AQP to determine appropriate detailed cover design for installation based on geochemical and geotechnical characterisation of Roper TSF area, which at minimum achieves the following: a) Tailings and rejects to be capped with at least 2m of competent benign spoil; b) Reduces risk of upward movement of contaminants into the topsoil layer above the cover and reduce risk of environmental harm from contaminated seepage; c) Landforms are reshaped with slopes ≤30%; d) >15% slopes to be covered with minimum 0.5m rock, unless an alternative is justified by an AQP; and e) Landform surface to be free draining. 3.6 An independent AQP to endorse installation of the cover system as per RM3.5.

		Woodland Habitat 3.7 Landforms reshaped with: a) RA1, RA12: ≤30% slopes, with >15% slopes covered with minimum 0.5m rock. b) RA1, RA12: Runoff to be restricted from the top of the landform onto the batter slopes if required using appropriate measures of erosion control as advised and designed by an AQP. c) RA4, RA15: ≤15% slopes. **Watercourses (RA2)** 3.8 Disturbed natural watercourse bed and banks returned to a profile similar to the pre-disturbance condition. **Retained water structure** 3.9 Water storages are safe for stock access and have vegetated banks.
RM4	Surface preparation (cattle grazing and grassland)	4.1 Topsoil placed at minimum depth of 150mm in areas where topsoil has previously been removed. 4.2 Assessment of growth media characteristics is completed by an AQP: a) To target land suitability class ≤3 as per PRCP schedule **Appendix 6: Regional land suitability framework for beef cattle grazing PMLU rehabilitation in the Bowen Basin** (Short, 2025) (RA3, RA13, RA14); and b) For target vegetation establishment suitable for designated PMLU (RA16). 4.3 Ameliorant and physical treatments are applied as identified in criteria RM4.2.

		4.4 Rip at least 300mm into soil/subsoil profile along contour of slopes.
RM5	Surface preparation (woodland habitat)	5.1 Topsoil placed at minimum depth of 100mm or alternative growth media at minimum depth of 300mm, in areas where topsoil has previously been removed. 5.2 Assessment of growth media characteristics is completed by an AQP for target vegetation establishment suitable for designated PMLU. 5.3 Ameliorant and physical treatments are applied as identified in RM5.2. 5.4 Rip at least 300mm into soil/subsoil profile along contour of slopes.
RM6	Surface preparation (watercourse)	6.1 Topsoil placed at minimum depth of 150mm in areas where topsoil has previously been removed. 6.2 Assessment of growth media characteristics is completed by an AQP for target vegetation establishment suitable for designated PMLU. 6.3 Ameliorant and physical treatments are applied as identified in criteria RM6.2. 6.4 Rip at least 300mm into soil/subsoil profile along contour of slopes.
RM7	Revegetation (cattle grazing and grassland)	7.1 Completed seeding in accordance with PRCP schedule **Appendix 1: Recommended species list and seeding rates for cattle grazing and grassland PMLUs.** 7.2 For cattle grazing PMLU, at least four species of 3P grasses and two species of legumes from PRCP schedule **Appendix 1**: **Recommended species list and seeding rates for cattle grazing and grassland PMLUs.** 7.3 Stock exclusion has been established to prevent stock from grassland PMLU (RA16).

RM8	Revegetation (woodland habitat)	8.1 Completed seeding in accordance with PRCP schedule **Appendix 2**: **Recommended species list and seeding rates for woodland habitat PMLU** (RA1, RA10, RA12, RA18)*, or as recommended by an AQP where vegetation is targeting a specific regional ecosystem (RA4, RA15)[1]. **If recommended species are not available, substitute with species from RE 11.4.2, RE 11.4.13, RE 11.5.2, RE 11.5.3 and RE 11.10.7.*
RM9	Revegetation (watercourse)	9.1 Completed seeding in accordance with PRCP schedule **Appendix 3: Recommended species list and seeding rates for watercourse PMLU – upper and mid banks** and PRCP schedule **Appendix 4: Recommended species list and seeding rates for watercourse revegetation PMLU – lower banks**. 9.2 Species chosen for seeding in RM9.1 reflects riparian vegetation.
RM10	Achievement of surface requirements (cattle grazing)	10.1 >50% vegetation groundcover (for RA7, RA17), of which ≥50% of dry matter yield is 3P pasture species as listed in PRCP schedule **Appendix 1: Recommended species list and seeding rates for cattle grazing and grassland PMLUs (for RA3, RA13, RA14).** 10.2 With respect to erosion in rehabilitated landforms: a) All erosion inclusive of tunnel erosion as per PRCP schedule **Appendix 8: Erosion classification framework** is assessed by an AQP and repaired if assessed as requiring intervention to ensure the stable PMLU achieved, and evidence that it is repaired as per AQP advice; and b) Mass movement and tunnel erosion are absent.

[1] Seed application may not be required in all RA4 and RA15 areas.

		10.3 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so, and the results are not significantly different to upstream values for pH, EC, turbidity (RA3, RA13, RA14).
RM11	Achievement of surface requirements (woodland habitat)	11.1 Groundcover: a) >15% slopes must achieve ≥80% groundcover. b) ≤15% slopes must achieve ≥50% groundcover. 11.2 Vegetation meets the following (RA10, RA18)**:** a) Species richness: i. ≥2 native trees; ii. ≥3 native shrubs; and iii. ≥4 grass species (native or exotic). 11.3 BioCondition score of ≥18/60 based on the benchmarks for the representative regional ecosystems as listed in PRCP schedule **Appendix 7: BioCondition benchmarks and scoring of site-based attributes for representative regional ecosystems** and as assessed by an AQP using the modified 'BioCondition Assessment Manual' (version 2.2) methodology (RA1, RA4, RA12, RA15). 11.4 With respect to erosion in rehabilitated landforms: a) All erosion inclusive of tunnel erosion as per PRCP schedule **Appendix 8: Erosion classification framework** is assessed by an AQP and repaired if assessed as requiring intervention to ensure the stable PMLU achieved, and evidence that it is repaired as per AQP advice; and b) Mass movement is absent.

		11.5 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so, and the results are not significantly different to upstream values for pH, EC, turbidity (RA1, RA4, RA12, RA15).
RM12	Achievement of surface requirements (watercourse)	12.1 Groundcover: a) >15% slopes must achieve ≥80% groundcover. b) ≤15% slopes must achieve ≥50% groundcover. 12.2 Geomorphic index score: greater than or equal to upstream or downstream values (Index of Diversion Condition method). 12.3 Vegetation meets the following: a) Species richness: I. ≥2 native trees; II. ≥2 native shrubs representative of riparian vegetation RE 11.3.25; and III. ≥2 grasses (exotic or native). 12.4 With respect to erosion in rehabilitated landforms: a) All erosion inclusive of tunnel erosion as per PRCP schedule **Appendix 8: Erosion classification framework** is assessed by an AQP and repaired if assessed as requiring intervention to ensure the stable PMLU achieved and evidence that it is repaired as per AQP advice; and b) Mass movement and tunnel erosion are absent.
RM13	Achievement of post-mining land use to a stable condition (cattle grazing – RA3, RA13, RA14)	13.1 Hazard assessment completed by an AQP to confirm safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use. 13.2 Rehabilitation is assessed as geotechnically stable by an AQP with FoS ≥1.5 (RA13).

		13.3 With respect to erosion in rehabilitated landforms: a) No evidence of erosion classified as moderate or severe as defined by PRCP schedule **Appendix 8: Erosion classification framework**; and b) Mass movement and tunnel erosion are absent. c) An AQP determines that any erosion present will not compromise the achievement of a PMLU to a stable condition. 13.4 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so, and the results are not significantly different to upstream values for pH, EC, turbidity. 13.5 Final landform survey confirms no built infrastructure remains other than those that form part of landholder agreement and meets exception as per RM1.3. 13.6 Groundcover: >50% vegetation groundcover, of which ≥50% of dry matter yield is 3P pasture species as listed in PRCP schedule **Appendix 1: Recommended species list and seeding rates for cattle grazing and grassland PMLUs**. 13.7 Achievement of land suitability class ≤3 as per PRCP schedule **Appendix 6: Regional land suitability framework for beef cattle grazing PMLU rehabilitation in the Bowen Basin (Short, 2025),** or ≥4 if not different to pre-mining land class**.** 13.8 *Leucaena leucocephala* plants >2m high do not exceed stem density of 250 stems per hectare (1 per 40m^2) mean of total area. 13.9 Restricted invasive plants (as defined in the *Biosecurity Act 2014*) comprise ≤5% of vegetation groundcover, with the exception of *Parthenium hysterophorus* which must not exceed 10% vegetation groundcover and assessed by an AQP as appropriately managed.

		Retained infrastructure/ Water storage 13.10 Infrastructure to be transitioned to a future landholder is deemed fit for purpose, safe and stable by AQP and accepted, by signed agreement with the future landholder. 13.11 All retained dams are safe, stable for native animals and stock access and have vegetated banks. 13.12 Water storages monitored for water quality annually must meet ANZECC 2000 stock water guideline values, for a minimum of 5 consecutive years.
RM14	Achievement of post-mining land use to a stable condition (woodland habitat – RA1, RA4, RA12, RA15)	14.1 Hazard assessment completed by an AQP to confirm safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use. 14.2 Rehabilitation is assessed as geotechnically stable by an AQP with FoS ≥1.5 (RA1, RA12). 14.3 With respect to erosion in rehabilitated landforms: a) No evidence of erosion classified as moderate or severe as defined by PRCP schedule **Appendix 8: Erosion classification framework**; b) Mass movement is absent; and c) An AQP determines that any erosion including tunnel erosion if present will not compromise the achievement of a PMLU to a stable condition. 14.4 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so, and the results are not significantly different to upstream values for pH, EC, turbidity.

		14.5 Final landform survey confirms no built infrastructure remains other than those that form part of landholder agreement and meets exception as per RM1.3. 14.6 Groundcover: a) >15% slopes: ≥80% groundcover. b) ≤15% slopes: ≥50% groundcover. 14.7 BioCondition score of ≥35/60 based on the benchmarks for the representative regional ecosystems as listed in PRCP schedule **Appendix 7: BioCondition benchmarks and scoring of site-based attributes for representative regional ecosystems** and as assessed by an AQP using the modified 'BioCondition Assessment Manual' (version 2.2) methodology. 14.8 Restricted invasive plants (as defined in the *Biosecurity Act 2014*) comprise ≤5% of vegetation groundcover, with the exception of *Parthenium hysterophorus* which must not exceed 10% vegetation groundcover and assessed by an AQP as appropriately managed.
RM15	Achievement of post-mining land use to a stable condition (watercourse – RA2)	15.1 Hazard assessment completed by an AQP to confirm safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use. 15.2 With respect to erosion in rehabilitated landforms: a) No evidence of erosion classified as moderate or severe as defined by PRCP schedule **Appendix 8: Erosion classification framework**; b) Mass movement and tunnel erosion are absent; and c) An AQP determines that any erosion present will not compromise the achievement of a PMLU to a stable condition. 15.3 Final landform survey confirms no built infrastructure remains other than those that form part of landholder agreement and meets exception as per RM1.3.

		15.4 Geomorphic index score: greater than or equal to upstream or downstream values (Index of Diversion Condition method). 15.5 Watercourse vegetation meets the following: a) Riparian vegetation index score: greater than or equal to upstream or downstream values (Index of Diversion Condition method). b) Species richness: I. ≥2 native trees; II. ≥2 native shrubs; and III. ≥2 grass species (native or exotic). c) Tree canopy cover ≥13%. 15.6 Restricted invasive plants (as defined in the *Biosecurity Act 2014*) comprise ≤5% of vegetation groundcover, with the exception of *Parthenium hysterophorus* which must not exceed 10% vegetation groundcover and assessed by an AQP as appropriately managed. 15.7 Diversion has an IDC score >10 as defined in 'Criteria for functioning river landscape units in mining and post-mining landscapes' (ACARP Project number C20017). 15.8 AQP must consider the following in closure design determination for diversions being retained in the landform: a) Incorporate natural features (including geomorphic and vegetation) present at the location of the diversion; b) Maintain the pre-existing hydrologic characteristics of surface water for the area in which the watercourse diversion is located; c) Maintain the hydraulic characteristics of the local watercourses without requiring on-going maintenance;

		d) Maintain sediment transport and water quality regimes that allow the diversion to be self-sustaining, while minimising any impacts to upstream and downstream water quality, geomorphology, or vegetation; e) Maintain equilibrium and functionality in all substrate conditions at the location of the diversion; and f) Geotechnically and erosionally stable.
RM17	Achievement of post-mining land use to a stable condition (cattle grazing existing rehabilitation – RA7, RA17)	17.1 Hazard assessment completed by an AQP to confirm safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use. 17.2 With respect to erosion in rehabilitated landforms: a) No evidence of erosion classified as moderate or severe as defined by PRCP schedule **Appendix 8: Erosion classification framework**; b) Mass movement and tunnel erosion are absent; and c) An AQP determines that any erosion present will not compromise the achievement of a PMLU to a stable condition. 17.3 Final landform survey confirms no built infrastructure remains other than those that form part of landholder agreement and meets exception as per RM1.3. 17.4 Groundcover: >50% vegetation groundcover, comprising ≥50% dry matter yield is 3P pasture species. 17.5 Land condition: assessed as Good (A) or Fair (B) condition using PRCP schedule **Appendix 5: Grazing Land Management ABCD Land Condition Framework**. 17.6 *Leucaena leucocephala* plants >2m high do not exceed stem density of 250 stems per hectare (1 per 40m^2) mean of total area.

		17.7 Restricted invasive plants (as defined in the *Biosecurity Act 2014*) comprise ≤5% of vegetation groundcover, with the exception of *Parthenium hysterophorus* which must not exceed 10% vegetation groundcover and assessed by an AQP as appropriately managed.
RM18	Achievement of post-mining land use to a stable condition (woodland habitat existing rehabilitation – RA10, RA18)	18.1 Hazard assessment completed by an AQP to confirm safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use. 18.2 With respect to erosion in rehabilitated landforms: a) No evidence of erosion classified as moderate or severe as defined by PRCP schedule **Appendix 8: Erosion classification framework**; b) Mass movement is absent; and c) An AQP determines that any erosion including tunnel erosion if present will not compromise the achievement of a PMLU to a stable condition. 18.3 Groundcover: a) >15% slopes: ≥80% groundcover. b) ≤15% slopes: ≥50% groundcover. 18.4 Woodland habitat vegetation meets the following: a) Species richness: I. ≥2 native trees; II. ≥3 native shrubs; III. ≥4 grasses (native or exotic). b) Tree canopy cover: ≥16%. 18.5 Restricted invasive plants (as defined in the *Biosecurity Act 2014*) comprise ≤5% of vegetation groundcover, with the exception of *Parthenium hysterophorus* which must not exceed 10% vegetation groundcover and assessed by an AQP as appropriately managed.

RM19	Achievement of surface requirements (grassland)	19.1 Groundcover: (a) >15% slopes: ≥80% groundcover. (b) ≤15% slopes: ≥50% groundcover. (c) ≤5% slopes: ≥50% groundcover, consisting of at least 50% vegetation groundcover. 19.2 With respect to erosion in rehabilitated landforms: a) All erosion inclusive of tunnel erosion as per PRCP schedule **Appendix 8: Erosion classification framework** is assessed by an AQP and repaired if assessed as requiring intervention to ensure the stable PMLU achieved and evidence that it is repaired as per AQP advice; and b) Mass movement and tunnel erosion are absent. 19.3 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur, and it is safe to do so and the results are not significantly different to upstream values for pH, EC, turbidity.
RM20	Achievement of post-mining land use to a stable condition (grassland - RA16)	20.1 Hazard assessment completed by an AQP to confirm safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use. 20.2 Rehabilitation is assessed as geotechnically stable by an AQP with FoS ≥1.5. 20.3 With respect to erosion in rehabilitated landforms: a) No evidence of erosion classified as moderate or severe as defined by PRCP schedule **Appendix 8: Erosion classification framework**; and b) Mass movement and tunnel erosion are absent; c) An AQP determines that any erosion present will not compromise the achievement of a PMLU to a stable condition.

		20.4 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so, and the results are not significantly different to upstream values for pH, EC, turbidity. 20.5 Groundcover: a) >15% slopes: ≥80% groundcover; b) ≤15% slopes: ≥50% groundcover; and c) ≤5% slopes: ≥50% groundcover, consisting of at least 50% vegetation groundcover. 20.6 Vegetation: ≥2 grass species (exotic or native). 20.7 Restricted invasive plants (as defined in the *Biosecurity Act 2014*) comprise ≤5% of vegetation groundcover, with the exception of *Parthenium hysterophorus* which must not exceed 10% vegetation groundcover and assessed by an AQP as appropriately managed.

Section E – Non-use management areas

(IA1) Improvement area 1

Non-use management area (NUMA)									
Improvement area	IA1								
Relevant activities	Residual Voids								
Total size (ha)	1481								
Commencement of first milestone: MM1	10/12/2094								
NUMA	NUMA								
Date area is available	10/12/2094	10/12/2096	10/12/2098	10/12/2100					
Cumulative area available (ha)	265	538	655	1481					
Milestone completed by	10/12/2096	10/12/2098	10/12/2100	10/12/2102	10/12/2138				
Milestone Reference	**Cumulative area achieved (ha)**								
MM1	265	538	655	1481					
MM2	265	538	655	1481					
MM3					1481				

(IA2) Improvement area 2

Non-use management area (NUMA)		
Rehabilitation area	IA2	
Relevant activities	Residual Voids	
Total rehabilitation area size (ha)	454	
Commencement of first milestone: MM1	10/12/2098	
PMLU	NUMA	
Date area is available	10/12/2098	
Cumulative area available (ha)	454	
Milestone completed by	10/12/2100	10/12/2138
Milestone Reference	**Cumulative area achieved (ha)**	
MM1	454	
MM2	454	
MM3		454

Improvement area milestones

Milestone reference	Management milestone	Milestone criteria
MM1	Achievement of structural stability	1.1 Highwall landforms must: a) Prevent surface flow of floodwater into the void b) Be geotechnically stable when floodwater is against the creek-side batter c) Prevent seepage flow of floodwater into the void d) Not be constructed with dispersive material e) Have maximum 30% slopes with rock for scour protection f) Minimum height to include appropriate freeboard for flood heights and materials. 1.2 The final design for highwall landform must be completed by an AQP based on the latest flood modelling and materials data prior to construction. 1.3 Final residual voids are not subject to inundation from floodwaters up to and including the 0.1% AEP. 1.4 The high-wall, end-wall and low-wall achieve a FoS ≥1.5 within the NUMA extents as determined by an AQP. 1.5 A minimum distance of 50m is to be designed between the residual void crest and the toe of the safety bund, where against an external perimeter mining lease (ML1782, ML70126, ML70127, ML70325, ML70328, ML70350, ML70369, ML70370, ML70410), boundary or a watercourse. 1.6 The location of the voids and associated safety bunds does not cause instability or degradation to the land outside of the mining lease (ML1782, ML70126, ML70127, ML70325, ML70328, ML70350, ML70369, ML70370, ML70410) boundary. 1.7 Low-walls are free-draining into the void lake with a maximum 37-degree slopes. 1.8 Residual voids must not overtop. 1.9 Flood mitigation as per MM1.3 have appropriate scour protection to sustain flood velocities. 1.10 Residual voids collectively act as groundwater sinks within the relevant mining lease (ML1782, ML70126, ML70127, ML70325, ML70328, ML70350, ML70369, ML70370, ML70410) boundary post closure as demonstrated by groundwater modelling defined in condition PRCP14.
MM2	Achievement of	2.1 Competent safety bund or equivalent landform in place around the perimeter of the residual void to prevent access

	surface requirements	to the residual void, at the geotechnical set-back distance. 2.2 Fencing erected, where required to prevent access to the residual void, around the perimeter of the safety bund. 2.3 Warning signage placed along the fence line (nominally one sign every 100m). 2.4 A minimum distance of 25m is to be designed between the residual void low-wall crest within the NUMA and the safety bund or equivalent landform in MM2.1.
MM3	Achievement of sufficient improvement	3.1 Certification from an AQP that: a) The residual void is safe to humans and livestock. b) Residual voids are monitored for water level annually, in accordance with condition PRCP20 to shown to be on a trajectory to the establishment of a residual void sink, at surrender. c) The water level and quality in the void will not cause environmental harm to the surrounding environment, as demonstrated by residual void water level, groundwater level, quality monitoring and modelling. d) Voids retain flood immunity, supported by flood modelling re-run at end of life and calibrated against the final landform. e) The highwall landform has been constructed in accordance with the final design as per MM1.2. f) Erosion and sediment control measures have been installed and are operating as per design. g) Appropriate safety infrastructure at the geotechnical set-back distance has been installed to prevent access to the NUMA. h) The residual void will not present an unacceptable risk of environmental harm outside of the relevant external perimeter mining lease (ML1782, ML70126, ML70127, ML70325, ML70328, ML70350, ML70369, ML70370, ML70410) boundary. i) Erosion of the landform within the NUMA area will not negatively impact on the stability of any adjacent rehabilitation areas, or their ability to sustain their PMLU. 3.2 Monitoring and maintenance of exclusion fences and bunds to be carried out to ensure they remain effective.

List of Appendices

Appendix 1: Recommended species list and seeding rates for cattle grazing and grassland PMLUs.

Scientific name	Common name	Topsoil suitability		Seeding rate (kg/ha)	
		Clay	Sand /loams	Cattle grazing	Grassland
Grass species					
Astrebla lappulacea, A, squarrosa, A. elymoides	Mitchell grasses (curly, bull and hoop)	✓	-	2[c] (per species)	5[c] (per species)
Bothriochloa bladhii	forest bluegrass	-	✓	4[c]	5[c]
Bothriochloa insculpta cvv. Bisset*	Bisset creeping bluegrass	✓	✓	4[c]	5[c]
*Chloris gayana cvv. Callide**	Callide Rhodes grass	✓	✓	4[c]	5[c]
*Chloris gayana cvv. Katambora**	Katambora Rhodes grass	✓	✓	4[c]	5[c]
Dichanthium sericeum subsp. sericeum	Queensland bluegrass	✓	-	4[c]	5[c]
Digitaria brownii	cotton panic	-	✓	2[c]	5[c]
Heteropogon contortus	black spear grass	✓	✓	2[c]	5[c]
*Megathyrsus maximus var. pubiglumis**	green panic	-	✓	4[c]	5[c]
*Panicum coloratum var. makarikariense**	bambatsi panic	✓	-	4[c]	5[c]
*Setaria incrassata**	purple pigeon	✓	-	4[c]	5[c]
*Urochloa mosambicensis**	Sabi grass	-	✓	4[c]	5[c]
Grass species - Total seed weight (coated)				**16[c]**	**25[c]**
Legume species					
Chamaecrista rotundifolia	Wynn cassia	-	✓	2	-
*Macroptilium bracteatum**	burgundy bean	✓	-	2	-
Rhynchosia minima var. australis	rhynchosia	✓	✓	2	-
Rhynchosia minima var. minima	rhynchosia	✓	✓	2	-
*Stylosanthes hamata**	shrubby stylo	-	✓	2	-
*Stylosanthes seabrana**	stylo	✓	-	2	-
Legume species - Total seed weight (uncoated)				**4**	**0**
Cover Crop					
Echinochloa esculenta	Japanese millet	✓	✓	5	10

Appendix 2: Recommended species list and seeding rates for woodland habitat PMLU (RA1, RA10, RA12, RA18)

Species* name	Common name	Life form and functional group code	Clay topsoil	Sand/loam topsoil, ameliorated spoil	Seed rates (kg/ha - uncoated weight)
Framework tree species					
Acacia rhodoxylon	rosewood	LLA	-	✓	0.3 – 1
Allocasuarina luehmannii	bull oak	NE/NA	-	✓	0.3 – 0.5
Alphitonia excelsa	red ash	NE/NA	✓	✓	0.3 – 0.5
Angophora leiocarpa	smooth barked apple	E/C	-	✓	0.3 – 0.5
Atalaya hemiglauca	whitewood	NE/NA	✓	✓	0.3 – 0.5
Callitris glaucophylla	cypress pine	NE/NA	✓	✓	0.3 – 0.5
Casuarina cristata	belah	NE/NA	✓	✓	0.3 – 0.5
*Corymbia citriodora subsp. citriodora***	lemon scented gum	E/C	✓	✓	1 – 2
Corymbia clarksoniana	Clarkson's bloodwood	E/C	✓	✓	0.3 – 0.5
Corymbia dallachiana	Dallachy's gum	E/C	✓	✓	0.3 – 0.5
Corymbia erythrophloia	red bloodwood	E/C	✓	✓	0.3 – 0.5
Corymbia trachyphloia	brown bloodwood	E/C	✓	✓	0.2 – 0.5
Eucalyptus crebra	narrow leafed ironbark	E/C	✓	✓	1 – 2
Eucalyptus melanophloia	silver leaved ironbark	E/C	✓	✓	0.3 – 1
Eucalyptus orgadophila	mountain coolabah	E/C	✓	✓	0.3 – 0.5
Eucalyptus populnea	poplar box	E/C	✓	✓	0.3 – 0.5
Lysiphyllum carronii	red bauhinia	NE/NA	✓	✓	0.3 – 0.5
Framework tree species - total seed weight (uncoated)					6
Woody understory species					
Acacia conferta	crowded-leaf wattle	SU	-	✓	0.3 – 0.5
Acacia crassa	curracabah	ILA	-	✓	0.3 – 0.5
Acacia excelsa	ironwood wattle	LLA	✓	✓	0.3 – 0.5
Alstonia constricta	bitterbark	SU/NE/NA	✓	✓	0.3 – 0.5
Breynia oblongifolia	coffee bush	SU	✓	✓	0.3 – 0.5
Capparis lasiantha, C. canescens, C. loranthifolia.	wait-a-while	V/C	✓	✓	0.2 – 0.5
Carissa ovata	currant bush	GCS	✓	✓	0.3 – 1
*Cassia brewsteri***	Leichhardt bean	SU	✓	✓	0.3 – 0.5
Denhamia cunninghamii	yellow berry bush	SU	✓	✓	0.3 – 0.5

Species* name	Common name	Life form and functional group code	Clay topsoil	Sand/loam topsoil, ameliorated spoil	Seed rates (kg/ha - uncoated weight)
*Dodonaea viscosa***	sticky hop bush	SU	✓	✓	0.3 – 0.5
Eremophila mitchellii	false sandalwood	SU/NE/NA	✓	✓	0.3 – 0.5
Erythroxylon australe	cocaine tree	SU	✓	✓	0.2 – 0.5
Geijera parvifolia	wilga	SU	✓	✓	0.2 – 0.5
Grevillea striata	beefwood	SU/NE/NA	-	✓	0.3 – 0.5
Grewia latifolia	dogs balls	SU	✓	✓	0.3 – 0.5
Jasminum didymum	native jasmine	V/C	✓	✓	0.3 – 0.5
Owenia acidula	emu apple	SU	✓	✓	0.3 – 0.5
Petalostigma pubescens	quinine	SU/NE/NA	✓	✓	0.3 – 0.5
Pittosporum angustifolium	Gumby Gumby	SU/NE/NA	✓	✓	0.3 – 0.5
Woody understory species - total seed weight (uncoated)					4
Grass species					
Aristida spp (i.e. A. calycina, A. latifolia, A. ramosa, A. caput-medusae, A. jerichoensis, A. personata, A. calycina)	three awned spear grass	NG	-	✓	1 – 2
Bothriochloa decipiens var. decipiens	pitted blue grass	NG	✓	✓	1 – 2
Bothriochloa ewartiana	desert bluegrass	NG	✓	✓	1 – 2
Chrysopogon fallax	golden beard grass	NG	✓	✓	1 – 2
Cymbopogon refractus	barbwire grass	NG	✓	✓	1 – 2
Cynodon dactylon var. *dactylon***	couch	IG	✓	✓	2
Dichanthium sericeum subsp. sericeum	Queensland bluegrass	NG	✓	✓	1 – 2
Eulalia aurea	silky brown top	NG	✓	✓	1 – 2
Panicum effusum	hairy panic	NG	✓	✓	1 – 2
Panicum queenslandicum	Yabila grass	NG	✓	-	1 – 2
Themeda triandra	kangaroo grass	NG	✓	✓	1 – 2
Grass species - total seed weight (uncoated)					10
Cover Crop					
Echinochloa esculenta	Japanese millet	Cover crop	✓	✓	5

Appendix 3: Recommended species list and seeding rates for watercourse PMLU – upper and mid banks

Species name	Common name	Life form and functional group code	Seed rate (kg/ha - uncoated weight)
Framework tree species			
*Acacia stenophylla**	river myall	LLA	0.5 - 1
Alphitonia excelsa	red ash	NE/NA	0.5 - 1
Angophora floribunda	rough barked apple	E/C	0.5 - 1
Angophora leiocarpa	smooth barked apple	E/C	0.5 - 1
Angophora subvelutina	broadleaf apple	E/C	0.5 - 1
*Casuarina cristata**	belah	E/C	0.5 - 1
*Casuarina cunninghamiana**	river she oak	NE/NA	0.5 - 1
*Corymbia tessellaris**	Moreton Bay ash	NE/NA	0.5 - 1
*Eucalyptus camaldulensis subsp. obtusa**	river red gum	E/C	1 - 2
Eucalyptus coolabah subsp. coolabah	Coolabah	E/C	1 - 2
Eucalyptus melanophloia	silver leaved ironbark	E/C	0.5 - 1
Eucalyptus populnea	poplar box	E/C	0.5 - 1
*Eucalyptus tereticornis subsp. tereticornis**	Queensland blue gum	E/C	0.5 - 1
Lysiphyllum hookeri	white bauhinia	NE/NA	0.5 - 1
*Melaleuca bracteata**	black tea tree	NE/NA	0.5 - 1
Terminalia oblongata	yellowwood	NE/NA	0.5 - 1
Framework tree species - total seed weight (uncoated)			6
Woody understorey species			
Acacia excelsa	ironwood wattle	ILA	0.5 - 1
Acacia fasciculifera	scaly bark	ILA	0.5 - 1
*Cassia brewsteri**	Leichardt bean	SU	0.5 - 1
Carissa ovata	current bush	GCS	0.5 - 1
Dodonaea viscosa	sticky hop bush	SU	0.5 - 1
Eremophila mitchellii	false sandalwood	SU	0.5 - 1
Erythroxylum australe	cocaine tree	SU	0.5 - 1
Ficus coronata	creek sandpaper fig	SU	0.5 - 1
Ficus fraseri	white sandpaper fig	SU	0.5 - 1
Ficus opposita	sandpaper fig	SU	0.5 - 1
Grevillea striata	beefwood	SU	0.5 - 1
Grewia latifolia	dogs balls	SU	0.5 - 1
Hakea lorea	bootlace oak	SU	0.5 - 1

Species name	Common name	Life form and functional group code	Seed rate (kg/ha - uncoated weight)
Mallotus philippensis	red kamala	SU	0.5 - 1
Petalostigma pubescens	quinine	SU	0.5 - 1
Woody understorey species - total seed weight (uncoated)			4
Ground species			
Bothriochloa bladhii	forest blue grass	NG	1 - 2
Capillipedium spicigerum	scented top	NG	1 - 2
Cymbopogon refractus	barbwire grass	NG	1 - 2
*Cynodon dactylon**	couch	IG	2
Dichanthium sericeum subsp. sericeum	Queensland bluegrass	NG	1 - 2
Digitaria brownii	cotton panic	NG	1 - 2
Eulalia aurea	silky brown top	NG	1 - 2
Eustrephus latifolius	wombat vine	V/C	1 - 2
Heteropogon contortus	bunched speargrass	NG	1 - 2
Jasminum simplicifolium subsp. australiense	stiff jasmine	V/C	0.2 - 0.5
Lomandra longifolia	mat rush	NG	0.2 - 0.5
Panicum effusum	hairy panic	NG	1 - 2
Paspalidium distans	shot grass	NG	1 - 2
Rhynchosia minima	Rhynchosia	V/C	1 - 2
Themeda triandra	kangaroo grass	NG	1 - 2
Ground species - total seed (uncoated)			10
Cover Crop			
Echinochloa esculenta	Japanese millet	Cover crop	5

Appendix 4: Recommended species list and seeding rates for watercourse PMLU – lower banks.

Species name	Common name	Life form and functional group code	Seed rate (kg/ha - uncoated weight)
Framework tree species			
*Casuarina cunninghamiana**	river she oak	NE/NA	0.5 - 1
Lophostemon suaveolens	swamp box	NE/NA	0.5 - 1
*Melaleuca bracteata**	black tea tree	NE/NA	0.5 - 1
Melaleuca fluviatilis	weeping tea-tree	NE/NA	0.5 - 1
*Melaleuca leucadendra**	broad-leaved tea tree	NE/NA	0.5 - 1
*Melaleuca linariifolia**	snow in summer	NE/NA	0.5 - 1
Melaleuca trichostachya	flax-leaf paperbark	NE/NA	0.5 - 1
*Melaleuca viminalis**	red bottlebrush	NE/NA	0.5 - 1
Framework tree species - total seed weight (uncoated)			5
Ground species			
Bothriochloa bladhii subsp. bladhii	forest blue grass	NG	1 - 2
Cymbopogon refractus	barbwire grass	NG	0.5 - 1
*Cynodon dactylon**	couch	IG	2 - 3
*Cyperus spp. (C. gracilis, C. polystachyos)***	sedge	NG	2 - 3
Dichanthium sericeum subsp. sericeum	Queensland bluegrass	NG	1 - 2
Eustrephus latifolius	wombat vine	V/C	0.5 - 1
Lomandra longifolia	spiny-headed mat rush	NG	2 - 3
Themeda triandra	kangaroo grass	NG	0.5 - 1
Ground species - total seed weight (uncoated)			10
Cover Crop			
Echinochloa esculenta	Japanese millet	Cover crop	5

Appendix 5: Grazing Land Management ABCD Land Condition Framework (DES, 2022a)

Land Condition	Land Condition Features
Good – A	A condition land has all of the following features: • most land types in good condition will typically have at least 50% and often above 70% ground cover at the end of the dry season • good density of perennial grasses dominated by those species considered to be 3P grasses for that land type, little bare ground (less than 30 % in most years) • few weeds and no significant infestations • good soil condition: no erosion, good surface condition
Fair – B	B condition land has at least one or more of the following features, but otherwise is similar to A condition land: • land types will typically have at least 50% ground cover and less than 70% in most years at the end of the dry season • some decline of grasses that are 3P grasses, increase in other species (less favoured grasses, weeds) and/or bare ground (more than 30% but less than 50% in most years) • some decline in soil condition, some signs of previous erosion and current susceptibility to erosion
Poor – C	C condition land has one or more of the following features, but otherwise is similar to B condition land: • land with poor or degraded condition will typically have less than 50% ground cover at the end of the dry season • general decline of grasses that are 3P grasses, large amounts of less favoured species and/or bare ground (greater than 50% in most years) • obvious signs of past erosion and/or current susceptibility to erosion is high
Degraded – D	D condition land has one or more of the following features: • generally less than 20% ground cover • general lack of any perennial grasses or forbs • severe erosion or scalding, resulting in hostile environment for plant growth • often no long-term ability to carry stock

Appendix 6: Regional land suitability framework for beef cattle grazing PMLU rehabilitation in the Bowen Basin (Short, 2025)

Limitation	Indicator	Suitable			Unsuitable	
		Class 1	Class 2	Class 3	Class 4	Class 5
Water availability	Soil water storage (mm)	>75	75 - 60	<60 - 40	<40 - 30	<30
Nutrient deficiency	Available-P (mg/kg) in 0 - 0.1m depth increment	>20	20 - 14	<14 - 8	<8 - 4	<4
Nutrient availability and toxicity	pH in 0 - 0.1m depth increment	7.3 - 6.6	< 6.6 - 6.0 >7.3 - 7.9	<6.0 - 5.6 >7.9 - 8.4	<5.6 - 5.0 >8.4 - 9.0	<5.0 >9.0
Surface condition	Surface condition	Fine (peds <10mm)	Coarse (peds >10mm)	Surface crust	Very hard setting	Massive
Salinity	ECe (dS/m) in effective rooting depth (ERD) (0-0.6m depth increment)	<2	2 - 4	>4 - 10	>10 - 16	>16
Rockiness	Gravel, 20 - 60mm (%) Cobble, 60 - 200mm (%) Stone, 200 - 600mm (%) Boulders, >600mm (%)	<20 <10 <2 0	20 - 50 10 - 20 2 - 10 <2	>50 - 70 >20 - 50 >10 - 20 2 - 10	>70 - 85 >50 - 75 >20 - 50 >10 - 20	>85 >75 >50 >20
Slope gradient	Slope gradient (%)	<5	5 - 10	<10 - 15	>15 - 20	>20
Microrelief	Vertical (m)	0	<0.2	0.2 - 0.4	>0.4 - 0.6	>0.6
Water erosion	Slope (%), ESP <6 (%) in 0-0.1m soil depth increment Slope (%), ESP >6 - 14 (%) in 0-0.1m soil depth increment Slope (%), ESP >14 (%) in 0-0.1m soil depth increment	<5 <3 <1	5 - 8 3 - 6 1 - 2	> 8 - 12 >6 - 10 >2 - 4	>12 - 18 >10 - 12 >4 - 6	>18 >12 >6
Sub-soil erosion	ESP (%) at 0.5m depth	<6	6 - 14	> 14 - 23	>23 - 34	>34
Potentially acid forming materials	Strongly acid conditions (pH < 4.5) within (x) m depth	>3	3 - 2	<2 - 0.9	<0.9 - 0.6	<0.6

Short. (2025). *Rehabilitated mined land suitability for beef cattle grazing in the Bowen Basin: Technical Paper.* Office of the Queensland Mine Rehabilitation Commissioner, Queensland Government, Brisbane.

Appendix 7: BioCondition benchmarks and scoring of site-based attributes for representative regional ecosystems

Site-based attributes	Maximum Score for attributes	Benchmarks* for representative REs				Averaged benchmarks
		RE 11.4.2	RE 11.5.2	RE 11.5.3	RE 11.10.7	Combined REs
Recruitment of dominate canopy species (%)	5	100	100	100	100	100
Native plant species richness - trees (#)	5	4	5	6	6	5
Native plant species richness - shrubs (#)	5	5	10	6	6	7
Native plant species richness - grasses (#)	5	8	9	6	7	8
Native plant species richness - forbs/other (#)	5	7	16	10	9	11
Tree canopy height (m)	5	20	20	16	18	19
Tree canopy cover (%)	5	25	24	20	40	20#
Shrub layer cover (%)	5	13	7	3	8	8
Native perennial grass cover (%)	5	16	38	19	20	23
Litter cover (%)	5	30	25	20	53	32
Non-native plant cover (%)	10	0	0	0	0	0
Maximum Site Score	**60**					

** Benchmarks for each applicable site-based attribute for each RE* (State of Queensland, 2024)

#Value reduced to 20% as agreed with the administrating authority

Appendix 8: Erosion classification framework

Erosion classification[2]	Minor	Moderate	Severe
Sheet erosion	Shallow soil deposits downslope	Partial exposure of roots; moderate soil deposits downslope, etc	Loss of surface horizon; root exposure; moderate substantial soil deposits downslope
Rill erosion (≤0.3m deep)	<15 rills pre transect* or Occasional rills	15-30 rills per transect* or Common rills	>30 rills per transect* or Numerous rills forming corrugated ground surface.
Gully erosion (>0.3m deep)	Gullies are isolated, linear, discontinuous and restricted to primary or minor drainage lines; less than 1.5m maximum depth	Gullies are linear, continuous, and restricted to primary and minor draining lines; maximum depth of 1.5m-3m	Gullies are continuous or discontinuous and either tend to branch away from primary drainage lines and on to foot slopes, or have multiple branches within primary drainage features; greater than 3m maximum depth.

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)*

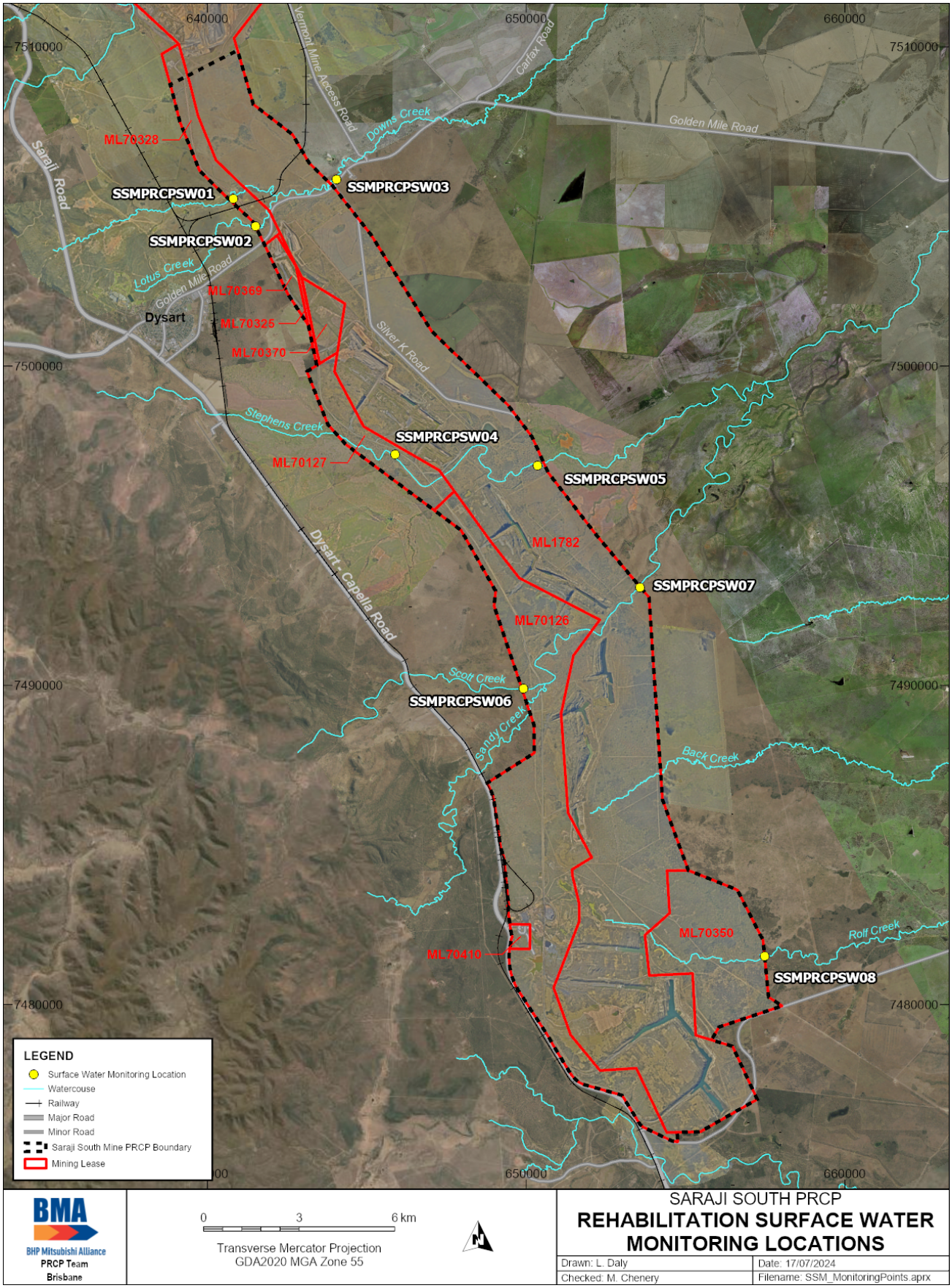
[2] *Erosion classification definitions* (CSIRO, 2009)

Appendix 9: Surface water monitoring locations

Monitoring Locations	Receiving waters location description	Approximate Latitude (GDA2020)	Approximate Longitude (GDA2020)
Upstream monitoring locations			
PRCP SW01	Downs Creek Upstream of the haul road culvert within ML70328.	-22.553697	148.369401
PRCP SW02	Lotus Creek Upstream of haul road adjacent to ML70328 boundary	-22.561432	148.376373
PRCP SW04	Stephens Creek Upstream, adjacent to haul road on ML70127	-22.625562	148.419653
PRCP SW06	Scott Creek Upstream, existing monitoring point UMP1 on ML70126	-22.691516	148.459471
Downstream monitoring locations			
PRCP SW03	Downs Creek Adjacent to Golden Mile Road and down-stream of ML1782	-22.547817	148.400887
PRCP SW05	Stephens Creek Downstream, existing monitoring point DMP2 on ML1782	-22.628386	148.463143
PRCP SW07	Scott Creek Downstream ML1782 boundary adjacent to overhead power easement.	-22.662532	148.494791
*PRCP SW08	Rolf Creek Downstream ML70350 boundary	-22.766386	148.533901

***Note:** PRCP SW08 does not have a suitable accessible on lease upstream location as such, for compliance purposes refer to PRCP16.b).*

Appendix 9.1: Surface water monitoring locations



Appendix 10: Interim surface water quality limits

Quality characteristic (units)	Limit	Comment on limit
pH	6.5-8.5	Upper Isaac River WQO.
Electrical Conductivity (µS/cm)	320	Site-specific 95th percentile value.
Turbidity (NTU)	50	Upper Isaac River WQO.
Sulphate (mg/L)	19	Site-specific 95th percentile value.
Aluminium - dissolved (µg/L)	372	Site-specific REMP & EA trigger.
Antimony - dissolved (µg/L)	9.0	ANZG 2018.
Arsenic – dissolved (µg/L)	13	ANZG 2018.
Cobalt - dissolved (µg/L)	1.4	ANZG 2018.
Chromium - dissolved (µg/L)	1.0	ANZG 2018.
Copper - dissolved (µg/L)	3.0	Site-specific REMP & EA trigger.
Iron – dissolved (µg/L)	485	Site-specific REMP & EA trigger.
Manganese - dissolved (µg/L)	1,900	ANZG 2018.
Mercury- dissolved (µg/L)	0.1	Limit of reporting (LoR).
Molybdenum - dissolved (µg/L)	34	ANZG 2018.
Nickel - dissolved (µg/L)	11	ANZG 2018.
Selenium - dissolved (µg/L)	5.0	ANZG 2018.
Silver – dissolved (µg/L)	0.1	ANZG 2018.
Uranium - dissolved (µg/L)	0.5	ANZG 2018.
Vanadium - dissolved (µg/L)	6.0	ANZG 2018.
Zinc - dissolved (µg/L)	8	ANZG 2018.
Nitrate (µg/L)	1100	
Total recoverable hydrocarbons (C6-C9) (µg/L)	20	LoR
Total recoverable hydrocarbons (C10-C36) (µg/L)	100	LoR
Major ions (mg/L) Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	N/A	For interpretation purposes only
Hardness (mg/L)	N/A	For interpretation purposes only

Notes:

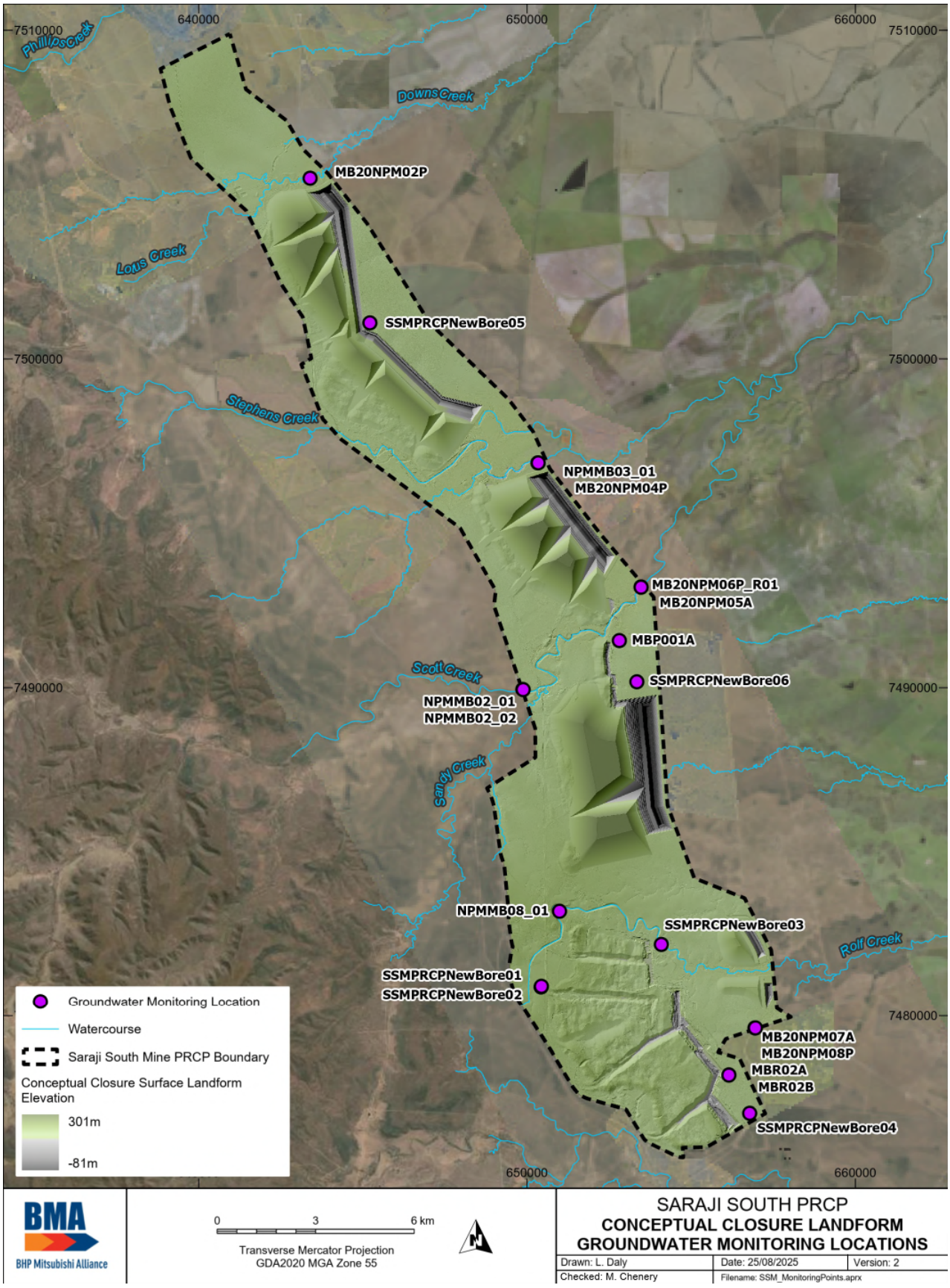
- *All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample) and total (unfiltered).*
- *Limits for metals and metalloids apply to dissolved results.*
- *Upper Isaac River WQOs: Environmental Protection (Water) Policy 2009 Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Isaac River Sub-basin (including Connors River)*
- *Data used for site-specific values sourced from WaTERS (July 2025) - Water Tracking and Electronic Reporting System (https://waters.des.qld.gov.au/)*
- *ANZG (2018) Default guideline values: Aquatic ecosystem protection for slightly to moderately disturbed system (95% protection or best available values)*
- *[a] CCREM 1987. Canadian water quality guidelines. Canadian Council of Resource and Environment Ministers, Ontario. Listed as an indicative working level in the ANZECC & ARMCANZ (2000) guidelines. Iron in freshwater and marine water*

Appendix 11: Groundwater monitoring locations

Monitoring Bore	Hydrogeological Unit			Location		
		Water quality (Y/N)	Water level (Y/N)	Approximate latitude (GDA2020)	Approximate longitude (GDA2020)	Description
Interpretation Bores						
NPMMB02_01	Permian Interburden (*screen top to base elevation 127-121 mAHD*)	Y	Y	-22.691070	148.459118	Adjacent to Scott Creek in the proximity of the western EA boundary.
NPMMB02_02	Tertiary Basalt (*screen top to base elevation 122-116 mAHD*)	Y	Y	-22.691018	148.459009	Located adjacent to Scott Creek in the proximity of the western EA boundary.
Compliance Bores						
MB20NPM02P	Permian Moranbah Coal Measures H Seam (*screen top to base elevation 89-83 mAHD*)	Y	Y	-22.551125	148.394544	Adjacent to Downs Creek and to the north of Lotus/Campbell residual void.
SSMPRCP New Bore 05	Permian Moranbah Coal Measures H/D Seam	Y	Y	-22.590716	148.412651	To the east of the Lotus/Campbell residual void.
NPMMB03_01	Permian Interburden (*screen top to base elevation 165 -159 mAHD*)	Y	Y	-22.628733	148.462826	Adjacent to Stephens Creek in the proximity of the eastern EA boundary. North of Gilbert residual void.
MB20NPM04P	Permian Moranbah Coal Measures H Seam (*screen top to base elevation 101-98 mAHD*)	Y	Y	-22.628728	148.462916	Adjacent to Stephens Creek to the north of Gilbert Pit.
MB20NPM06P_R01	Permian (*unknown screen elevation)*	Y	Y	-22.662538	148.493744	Located adjacent to Scott Creek in the proximity of the eastern EA boundary. South of Gilbert residual void.
MB20NPM05A	Tertiary/Alluvial (*screen top to base elevation 170-166 mAHD*)	Y	Y	-22.662605	148.493766	Located adjacent to Scott Creek in the proximity of the eastern EA boundary. South of Gilbert residual void.
SSMPRCP New Bore 06	Permian Moranbah Coal Measures H/D Seam	Y	Y	-22.688607	148.492783	To the east of Price Pit and to the north of Leichardt residual void.

Monitoring Bore	Hydrogeological Unit			Location		Description
		Water quality (Y/N)	Water level (Y/N)	Approximate latitude (GDA2020)	Approximate longitude (GDA2020)	
MBP001A	Tertiary	Y	Y	-22.677331	148.487481	To the east of Price Pit and to the north of Leichardt residual void.
NPMMB08_01	Tertiary (*screen top to base elevation 194-188 mAHD*)	Y	Y	-22.751855	148.470543	Located to the north of the Roper voids in proximity of the MIA.
SSMPRCP New Bore 01	Tertiary	Y	Y	-22.772710	148.465287	To the west of the Roper spoil Dumps in the proximity of the Murphy Dams to the south of the MIA.
SSMPRCP New Bore 02	Permian Back Creek Group	Y	Y	-22.772521	148.465386	To the west of the Roper spoil Dumps in the proximity of the Murphy Dams to the south of the MIA.
SSMPRCP New Bore 03	Permian Moranbah Coal Measures H/D Seam	Y	Y	-22.760692	148.500835	Located between the Roper 1 residual void and East Pit residual void. Located adjacent to Rolf Creek.
MB20NPM07A	Permian Interburden (*screen top to base elevation 163-154 mAHD*)	Y	Y	-22.783578	148.528853	To the east of the Roper residual voids and to the south of East Pit residual voids.
MB20NPM08P	Permian Moranbah Coal Measures P Seam (*screen top to base elevation 142-139 mAHD*)	Y	Y	-22.783577	148.528980	To the east of the Roper residual voids and to the south of East Pit residual voids.
MBR02A	Permian Moranbah Coal Measures D Seam (*screen top to base elevation 114-108 mAHD*)	Y	Y	-22.796491	148.521256	To the east of the Roper residual voids and west of the EA boundary.
MBR02B	Tertiary (*screen top to base elevation 173-167 mAHD*)	Y	Y	-22.796545	148.521266	To the east of the Roper residual voids and west of the EA boundary.
PRCP New Bore 04	Permian Moranbah Coal Measures H/D Seam	Y	Y	-22.806935	148.527547	To the east of Roper 4 in the south-eastern corner of the EA area.

Appendix 11.1: Groundwater monitoring locations



Appendix 12: Interim groundwater quality limits

Monitoring Bore(s)	Hydrogeological Unit	Electrical conductivity (EC) (µS/cm)	Sulphate (mg/L)	Comment
MB20NPM05A, NPMMB08_01, SSMPRCP New Bore 01, MBR02B & New Tertiary or Alluvial compliance bore/s	Tertiary/Alluvial	3,540	335	95th percentile of P3 Tertiary bore, based on a limited data set
Permian MCM and interburden compliance bores	Permian	8,132	1,213	95th percentile of MB31 Permian bore (Saraji CM PRCP)

Quality characteristic (units)	Monitoring Bore	**Limit** - compliance bores	Comment
pH (pH units)	All bores	6.5-8.5	WQO
Aluminium - dissolved (µg/L)	All bores	55	ANZG 2018.
Antimony - dissolved (µg/L)	All bores	9.0	ANZG 2018.
Arsenic - dissolved (µg/L)	All bores	13	ANZG 2018.
Chromium – dissolved (µg/L)	All bores	1.0	ANZG 2018.
Cobalt - dissolved (µg/L)	All bores	1.4	ANZG 2018.
Copper – dissolved (µg/L)	All bores	3.0	Site-specific.
Iron– dissolved (µg/L)	All bores	300	Based on Canadian guideline.
Manganese - dissolved (µg/L)	All bores	1,900	ANZG 2018.
Mercury- dissolved (µg/L)	All bores	0.1	LoR.
Molybdenum - dissolved (µg/L)	All bores	34	ANZG 2018.
Nickel - dissolved (µg/L)	All bores	11	ANZG 2018.
Selenium - dissolved (µg/L)	All bores	5.0	ANZG 2018.
Silver – dissolved (µg/L)	All bores	0.1	ANZG 2018.
Uranium - dissolved (µg/L)	All bores	0.5	ANZG 2018.
Vanadium - dissolved (µg/L)	All bores	6.0	ANZG 2018.

Quality characteristic (units)	**Monitoring Bore**	**Limit** - compliance bores	**Comment**
Zinc - dissolved (µg/L)	All bores	8	ANZG 2018.
Total recoverable hydrocarbons (C6-C9) (µg/L)	All bores	20	LoR
Total recoverable hydrocarbons (C10-C36) (µg/L)	All bores	100	LoR
Major ions (mg/L) - calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	All bores	For interpretation purposes only	
Hardness (mg/L)			
Water Level (mAHD)			

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)*
- *WQO 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)*
- *Data used for site-specific values sourced from WaTERS (July 2025) - Water Tracking and Electronic Reporting System (https://waters.des.qld.gov.au/)*
- *ANZG (2018) Default guideline values: Aquatic ecosystem protection for slightly to moderately disturbed system (95% protection or best available values)*
- *[a] CCREM 1987. Canadian water quality guidelines. Canadian Council of Resource and Environment Ministers, Ontario. Listed as an indicative working level in the ANZECC & ARMCANZ (2000) guidelines. Iron in freshwater and marine water*

END OF **PRCP** SCHEDULE