BHP Mitsubishi Alliance

# Appendix L

## SRM PRCP Schedule

# PRCP schedule

***Environmental Protection Act 1994***

## PRCP schedule P-PRCP-100734616

*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-100734616

### PRCP schedule holder(s)

| Name(s) | Registered address |
|---|---|
| BHP COAL PTY LTD | Level 14, 480 Queen Street BRISBANE CITY QLD 4000 Australia |
| Mitsubishi Development Pty Ltd | Level 16, 480 Queen Street BRISBANE CITY QLD 4000 |
| QCT INVESTMENT PTY. LTD. | Level 16, 480 Queen Street BRISBANE CITY QLD 4000 |
| Umal Consolidated Pty Ltd | Level 14, 480 Queen Street BRISBANE CITY QLD 4000 Australia |
| QCT Resources Pty Limited | Level 16, 480 Queen Street BRISBANE CITY QLD 4000 |
| QCT MINING PTY. LTD. | Level 16, 480 Queen Street BRISBANE CITY QLD 4000 |
| BHP Queensland Coal Investments Pty Ltd | Level 14, 480 Queen Street BRISBANE CITY QLD 4000 Australia |

### Location details

| Location(s) |
|---|
| ML1775, ML1782, ML1784, ML2360, ML2410, ML70142, ML70294, ML70298, ML70328, ML700021. |

#### 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.

| | |
|---|---|
|  | 4 October 2024 |
| Signature | Date |

Juliana McCosker
Department of Environment, 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 - Final site design and reference maps
- Section C - Post mining land uses
- Section D - 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** The holder must for each rehabilitation area, achieve the 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.

**PRCP2** Where land becomes 'available for rehabilitation' earlier than the date nominated in this schedule, the holder must:

a) notify the administering authority in writing within 30 days of the land becoming 'available for rehabilitation'. The written notification must include precise details of the relevant land area and the date when that land became 'available for rehabilitation'; and

b) within 90 days of the land becoming 'available for rehabilitation', apply to the administering authority to amend this schedule in a way that maximises the progressive rehabilitation of the land to a stable condition, including bring forward achievement of relevant milestones and criteria.

**PRCP3** Where an area achieves a rehabilitation milestone, the holder must maintain achievement of that milestone until a surrender is approved.

**PRCP4** The holder must carry out monitoring of the **rehabilitation activities** in the rehabilitation areas in accordance with:

(i) the monitoring and maintenance program described in the rehabilitation planning part relating to this PRCP schedule; and

(ii) any requirement under this schedule; and

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

**PRCP5** The holder must make and keep records to demonstrate achievement and maintenance of achievement of each rehabilitation milestone criteria of this schedule.

**PRCP6** The holder must make and keep records on relevant matters which document the condition of each rehabilitation area with respect to environmental performance, rehabilitation milestone criteria and compliance obligations of this schedule.

Relevant matters for this condition include, but are not limited to, the following:

a) Rehabilitation activities and the results of those activities;

b) Maintenance activities and the results of maintenance activities;

c) Monitoring activities and the results of monitoring;

d) Designs, drawings, specifications or any similar documents relating to a rehabilitation activity; and

e) Certifications, assessments, investigations, inspections, audits or any similar processes carried out in relation to rehabilitation milestones or milestone criteria.

**PRCP7** Records required under **PRCP 5** and **6** must be kept until the relevant area is surrendered.

**PRCP8** Records required under **PRCP 5** and **6** must be provided to the administering authority in the specified format within 10 business days of a written request.

**PRCP9** 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**.

**PRCP10** Monitoring for the PRCP must demonstrate that surface and groundwater quality is on trajectory to meet water quality criteria and **conditions PRCP12 and PRCP14** prior to the final milestone for the PMLU.

**PRCP11** With respect to groundwater:

a) The monitoring bores listed in **Appendix 3 – Groundwater Monitoring Locations** must be installed by 2050;

b) Following monitoring bore installation, groundwater quality must be monitored quarterly at, but not limited to, bores specified in **Appendix 3 – Groundwater Monitoring Locations**, for all quality characteristics listed in **Appendix 4 – Groundwater Quality Limits**; and

c) The groundwater model and water balance model must be recalibrated and predictions rerun at least every five years commencing from 2050.

**PRCP12** With respect to groundwater the following must be demonstrated prior to surrender:

a) Groundwater quality results for compliance bores have not exceeded the limits in **Appendix 4 – Groundwater Quality Limits**, for 3 consecutive results within the five-year period immediately prior to surrender; and

b) There is no environmental harm beyond the boundaries of the mining leases (ML1775, ML1782, ML1784, ML2360, ML2410, ML70142, ML70294, ML70298, ML70328, ML700021); and

c) 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 boundaries post-closure.

**PRCP13** With respect to surface water:

a) The holder must install monitoring equipment at the relevant surface water monitoring locations specified in **Appendix 1 – Receiving Environment Surface**

**Water Monitoring Locations** and undertake at least one year of surface water quality monitoring prior to the completion of surface preparations for the entire site; and

b) Surface water quality must be monitored at the locations specified in **Appendix 1 – Receiving Environment Surface Water Monitoring Locations** at least once per month when flows at the downstream gauging station record 1m$^3$/second for Phillips Creek and Hughes Creek and 0.5m$^3$/second for One Mile Creek, when safe to collect samples.

**PRCP14** With respect to surface water the following must be demonstrated prior to surrender:

a) Surface water quality must not exceed the limits specified in **Appendix 2 – Surface Water Quality Limits** within the five-year period immediately prior to surrender;

b) If the surface water quality exceeds criteria a), the applicable upstream/reference 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/reference site.

**PRCP15** Where the surface water quality at the downstream site exceeds the upstream site result as per PRCP14b), an AQP must complete an assessment of the cause of the exceedance and risk of rehabilitation not achieving a stable condition (PRCP 14) within the schedule timeframe and:

a) Where there is a low risk to achieving a stable condition from the mining tenure (ML1775, ML1782, ML1784, ML2360, ML2410, ML70142, ML70294, ML70298, ML70328, ML700021), 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.

**PRCP16** The assessment/s under PRCP15 must be completed and provided to the administering authority within 3 months of receiving the relevant sampling results.

**PRCP17** Despite PRCP14, PRCP15a) can be triggered 3 times over 5 consecutive years prior to surrender.

**PRCP18** If PRCP15b) is triggered, the 5 year timeframe under PRCP14a) is reset.

**PRCP19** The holder must ensure that each management milestone criterion is achieved for each improvement area:

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

b) by the milestone completion date specified in this schedule

**PRCP20** The holder must make and keep records to demonstrate achievement of each management milestone criteria of this schedule for each improvement area until a surrender application is approved.

**PRCP21** The holder must develop site-based criteria with which to assess sheet, rill, gully and tunnel erosion within 5 years of the approval of the PRCP schedule.

**END OF CONDITIONS**

**Definitions**

**Appropriately qualified person (AQP)** means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

**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.

**Rehabilitation activity** means any activity that the holder is required to carry out in relation to this PRCP schedule.

## Section B - Final site design and reference maps

### Figure 1 - Final Site Design

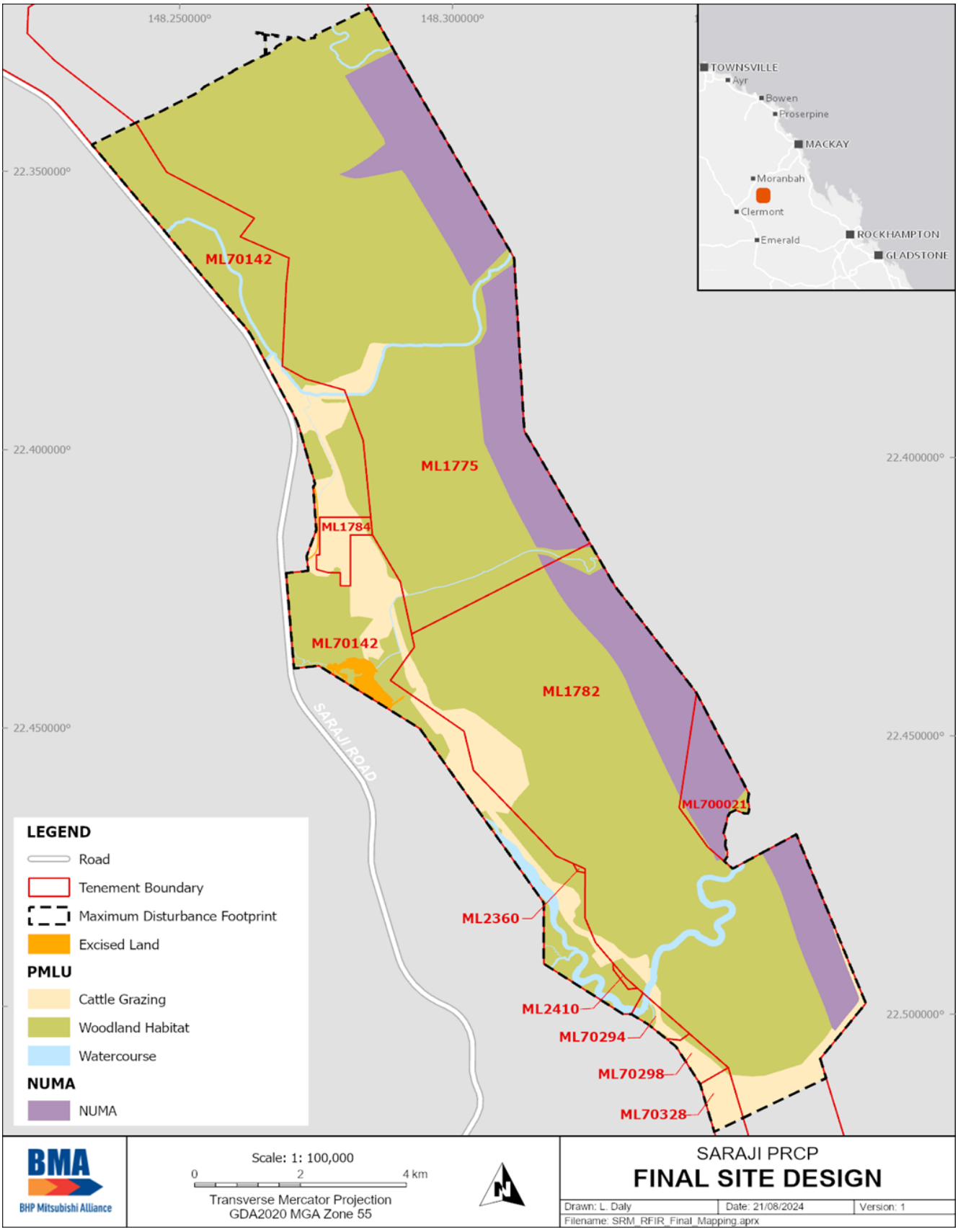


**Figure 2 – Rehabilitation Areas (PMLU) and Improvement Areas (NUMA)**

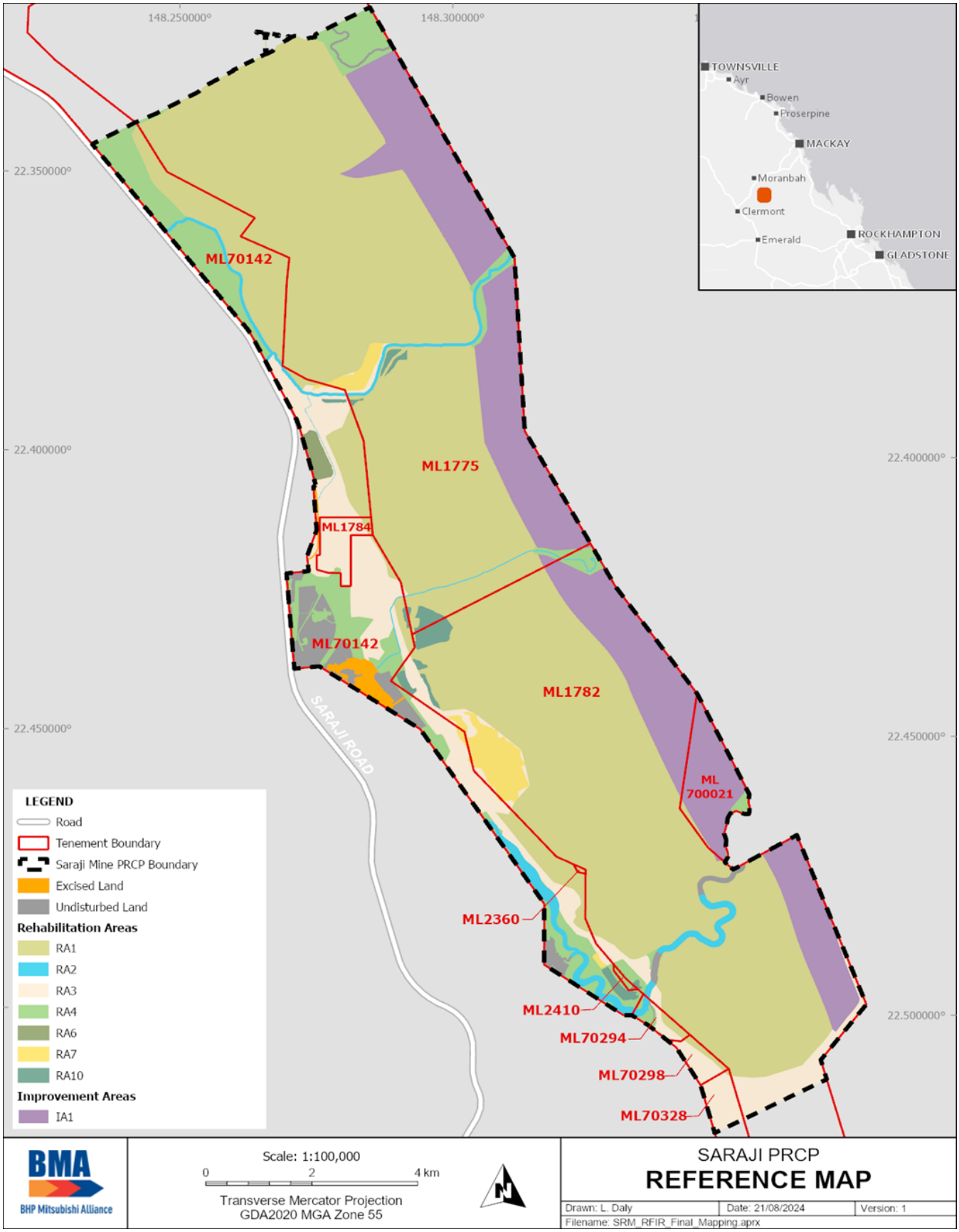
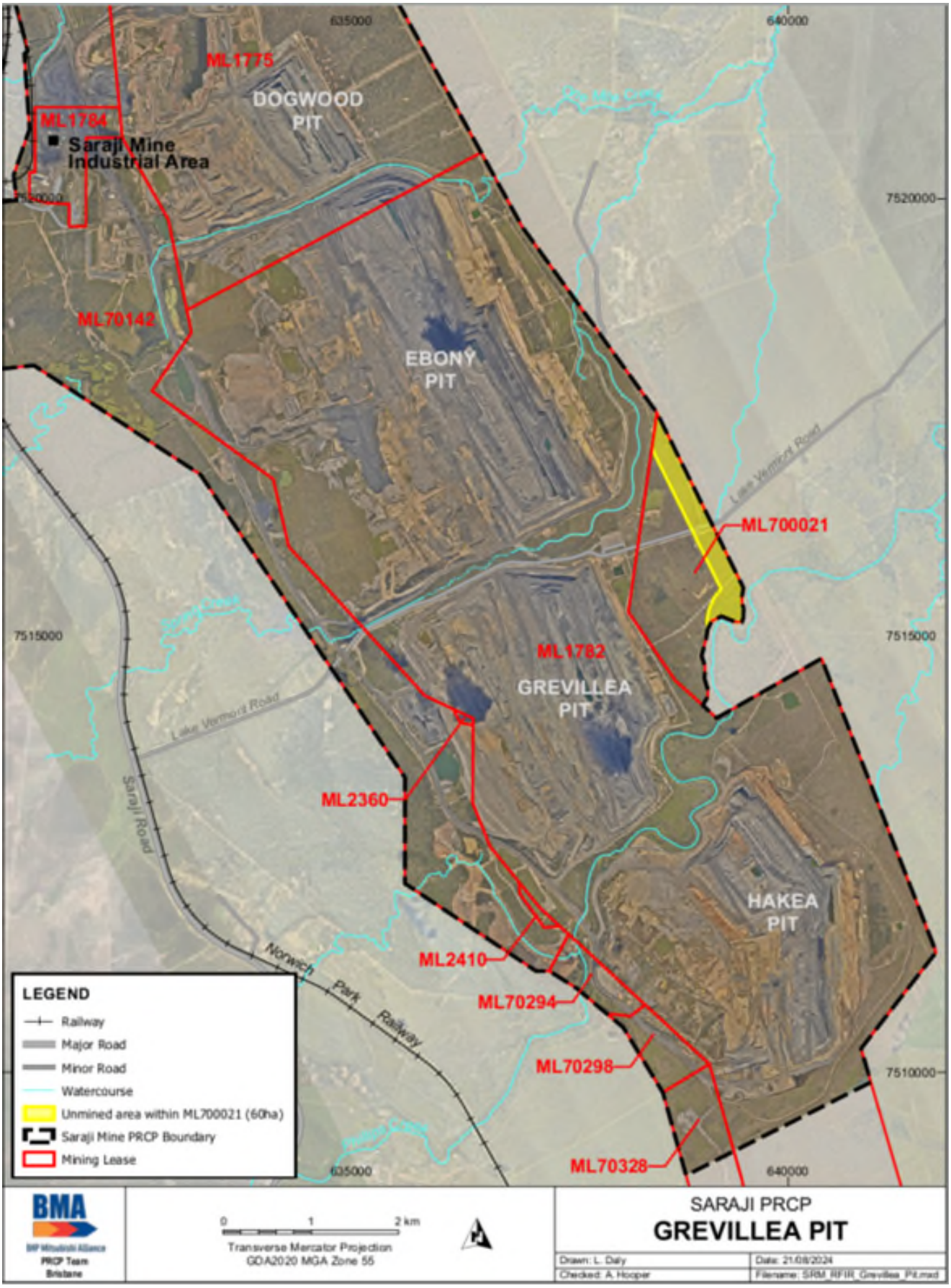


**Figure 3 – Area to remain undisturbed (60ha) on ML700021** *(refer criteria IA2.5)*



## Section C – Post mining land uses

### (RA1) Rehabilitation area 1

| Post-mining land uses (PMLU) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA1 | | | | | | | | | | |
| **Relevant activities** | Spoil Dumps and<br>Tailings Storage Facilities (TSF) (Ramp 2/3, Ramp 6, TSF no. 2, TSF no. 4) | | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 6775 | | | | | | | | | | |
| **Commencement of first milestone: RM2** | 10/12/2023 | | | | | | | | | | |
| **PMLU** | Woodland Habitat | | | | | | | | | | |
| **Date area is available** | 10/12/2023 | 10/12/2028 | 10/12/2033 | 10/12/2038 | 10/12/2043 | 10/12/2048 | 10/12/2053 | 10/12/2058 | 10/12/2063 | 10/12/2068 | 10/12/2073 |
| **Cumulative area available (ha)** | 51 | 193 | 431 | 582 | 794 | 1030 | 1303 | 1703 | 2343 | 2743 | 3143 |
| **Milestone completed by** | 10/12/2028 | 10/12/2033 | 10/12/2038 | 10/12/2043 | 10/12/2048 | 10/12/2053 | 10/12/2058 | 10/12/2063 | 10/12/2068 | 10/12/2073 | 10/12/2078 |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | | |
| **RM2** | 51 | 193 | 431 | 582 | 794 | 1030 | 1303 | 1703 | 2343 | 2743 | 3143 |
| **RM3** | | 51 | 193 | 431 | 582 | 794 | 1030 | 1303 | 1703 | 2343 | 2743 |
| **RM5** | | 51 | 193 | 431 | 582 | 794 | 1030 | 1303 | 1703 | 2343 | 2743 |
| **RM8** | | 51 | 193 | 431 | 582 | 794 | 1030 | 1303 | 1703 | 2343 | 2743 |
| **RM11** | | | | 51 | 193 | 431 | 582 | 794 | 1030 | 1303 | 1703 |
| **RM14** | | | | | | 51 | 193 | 431 | 582 | 794 | 1030 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date area is available** | 10/12/2078 | 10/12/2083 | 10/12/2088 | 10/12/2093 | 10/12/2098 | | | | | | |
| **Cumulative area available (ha)** | 3663 | 4722 | 5161 | 5461 | 6775 | | | | | | |
| **Milestone completed by** | 10/12/2083 | 10/12/2088 | 10/12/2093 | 10/12/2098 | 10/12/2103 | 10/12/2108 | 10/12/2113 | 10/12/2118 | 10/12/2123 | 10/12/2128 | 10/12/2133 |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | | |
| **RM2** | 3663 | 4722 | 5161 | 5461 | 6775 | | | | | | |
| **RM3** | 3143 | 3663 | 4722 | 5161 | 5461 | 6123 | 6775 | | | | |
| **RM5** | 3143 | 3663 | 4722 | 5161 | 5461 | 6123 | 6775 | | | | |
| **RM8** | 3143 | 3663 | 4722 | 5161 | 5461 | 6123 | 6775 | | | | |
| **RM11** | 2343 | 2743 | 3143 | 3663 | 4722 | 5161 | 5461 | 6123 | 6775 | | |
| **RM14** | 1303 | 1703 | 2343 | 2743 | 3143 | 3663 | 4722 | 5161 | 5461 | 6123 | 6775 |

**(RA2) Rehabilitation area 2**

| Post-mining land uses (PMLU) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA2 | | | | | | | | | | |
| **Relevant activities** | Creek diversions and crossings | | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 211 | | | | | | | | | | |
| **Commencement of first milestone: RM1** | 10/12/2042 | | | | | | | | | | |
| **PMLU** | Watercourse | | | | | | | | | | |
| **Date area is available** | 10/12/2042 | 10/12/2052 | 10/12/2062 | 10/12/2065 | 10/12/2079 | 10/12/2082 | 10/12/2085 | 10/12/2099 | 11/12/2104 | | |
| **Cumulative area available (ha)** | 41 | 89 | 128 | 128 | 176 | 176 | 176 | 178 | 211 | | |
| **Milestone completed by** | 10/12/2045 | 10/12/2055 | 10/12/2065 | 10/12/2075 | 10/12/2082 | 10/12/2085 | 10/12/2092 | 10/12/2102 | 10/12/2107 | 10/12/2112 | 10/12/2117 |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | | |
| **RM1** | 41 | 89 | 128 | | 176 | | | 178 | 211 | | |
| **RM3** | 41 | 89 | 128 | | 176 | | | 178 | 211 | | |
| **RM6** | 41 | 89 | 128 | | 176 | | | 178 | 211 | | |
| **RM9** | 41 | 89 | 128 | | 176 | | | 178 | 211 | | |
| **RM12** | | 41 | 89 | 128 | | | 176 | | | 178 | 211 |
| **RM15** | | | 41 | 89 | | 128 | | 176 | | | |
| **Date area is available** | | | | | | | | | | | |
| **Cumulative area** | | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **available (ha)** | | | | | | | | | | | |
| **Milestone completed by** | 10/12/2122 | 10/12/2127 | | | | | | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | | |
| **RM1** | | | | | | | | | | | |
| **RM3** | | | | | | | | | | | |
| **RM6** | | | | | | | | | | | |
| **RM9** | | | | | | | | | | | |
| **RM12** | | | | | | | | | | | |
| **RM15** | 178 | 211 | | | | | | | | | |

**(RA3) Rehabilitation area 3**

| Post-mining land uses (PMLU) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA3 | | | | | | | | | | | | |
| **Relevant activities** | Infrastructure Areas - CHPP, MIA, workshop, dams, coal stockpiles, roads, general infrastructure | | | | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 916 | | | | | | | | | | | | |
| **Commencement of first milestone: RM1** | 10/12/2099 | | | | | | | | | | | | |
| **PMLU** | Cattle Grazing | | | | | | | | | | | | |
| **Date area is available** | 10/12/2099 | 10/12/2104 | | | | | | | | | | | |
| **Cumulative area available (ha)** | 693 | 915 | | | | | | | | | | | |
| **Milestone completed by** | 10/12/2102 | 10/12/2107 | 10/12/2112 | 10/12/2114 | 10/12/2117 | 10/12/2119 | 10/12/2122 | 10/12/2124 | 10/12/2127 | 10/12/2129 | 10/12/2134 | 10/12/2139 | 10/12/2144 |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | | | | |
| **RM1** | 693 | 916 | | | | | | | | | | | |
| **RM2** | | | 665 | | 870 | | 898 | | 916 | | | | |
| **RM3** | | | | 665 | | 870 | | 898 | | 916 | | | |
| **RM4** | | | | 665 | | 870 | | 898 | | 916 | | | |
| **RM7** | | | | 665 | | 870 | | 898 | | 916 | | | |
| **RM10** | | | | | | | | 665 | | 870 | 898 | 916 | |
| **RM13** | | | | | | | | | | 665 | 870 | 898 | 916 |

**(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)** | 707 | | | | | | | | | | | |
| **Commencement of first milestone: RM1** | 10/12/2026 | | | | | | | | | | | |
| **PMLU** | Woodland Habitat | | | | | | | | | | | |
| **Date area is available** | 10/12/2026 | 10/12/2028 | 10/12/2031 | 10/12/2036 | 10/12/2099 | 10/12/2101 | 10/12/2104 | | | | | |
| **Cumulative area available (ha)** | 105 | | | | 448 | | 707 | | | | | |
| **Milestone completed by** | 10/12/2028 | 10/12/2031 | 10/12/2041 | 10/12/2051 | 10/12/2101 | 10/12/2104 | 10/12/2106 | 10/12/2109 | 10/12/2114 | 10/12/2119 | 10/12/2124 | 10/12/2129 |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | | | |
| **RM1** | 105 | | | | 448 | | 707 | | | | | |
| **RM3** | | 105 | | | | 448 | | 707 | | | | |
| **RM5** | | 105 | | | | 448 | | 707 | | | | |
| **RM8** | | 105 | | | | 448 | | 707 | | | | |
| **RM11** | | | 105 | | | | | | 448 | 707 | | |
| **RM14** | | | | 105 | | | | | | | 448 | 707 |

**(RA6) Rehabilitation area 6**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA6 | | | | | | | | | |
| **Relevant activities** | Tailing Storage Facility (TSF) no. 3 | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 31 | | | | | | | | | |
| **Commencement of first milestone: RM1** | 10/12/2023 | | | | | | | | | |
| **PMLU** | Woodland Habitat | | | | | | | | | |
| **Date area is available** | 10/12/2023 | 10/12/2033 | 10/12/2036 | 10/12/2046 | 10/12/2104 | | | | | |
| **Cumulative area available (ha)** | 18 | | | | 31 | | | | | |
| **Milestone completed by** | 10/12/2033 | 10/12/2036 | 10/12/2046 | 10/12/2056 | 10/12/2106 | 10/12/2116 | 10/12/2119 | 10/12/2129 | 10/12/2139 | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM1** | 18 | | | | 31 | | | | | |
| **RM2** | 18 | | | | | 31 | | | | |
| **RM3** | | 18 | | | | | 31 | | | |
| **RM5** | | 18 | | | | | 31 | | | |
| **RM8** | | 18 | | | | | 31 | | | |
| **RM11** | | | 18 | | | | | 31 | | |
| **RM14** | | | | 18 | | | | | 31 | |

**(RA7) Rehabilitation area 7**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA7 | | | | | | | | | |
| **Relevant activities** | Existing Rehabilitation – spoil dumps | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 161 | | | | | | | | | |
| **Commencement of first milestone: RM10** | 10/12/2023 | | | | | | | | | |
| **PMLU** | Cattle Grazing | | | | | | | | | |
| **Date area is available** | 10/12/2023 | | | | | | | | | |
| **Cumulative area available (ha)** | 161 | | | | | | | | | |
| **Milestone completed by** | 10/12/2033 | 10/12/2038 | | | | | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM10** | 161 | | | | | | | | | |
| **RM17** | | 161 | | | | | | | | |

**(RA10) Rehabilitation area 10**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA10 | | | | | | | | | |
| **Relevant activities** | Existing Rehabilitation | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 96 | | | | | | | | | |
| **Commencement of first milestone: RM8** | 10/12/2023 | | | | | | | | | |
| **PMLU** | Woodland Habitat | | | | | | | | | |
| **Date area is available** | 10/12/2023 | | | | | | | | | |
| **Cumulative area available (ha)** | 96 | | | | | | | | | |
| **Milestone completed by** | 10/12/2023 | 10/12/2025 | 10/12/2033 | 10/12/2035 | 10/12/2038 | 10/12/2043 | 10/12/2045 | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM8** | 54 | 96 | | | | | | | | |
| **RM11** | 49 | | 54 | 96 | | | | | | |
| **RM18** | | | | | 49 | 54 | 96 | | | |

**Rehabilitation area milestones**

| Milestone reference | Rehabilitation milestone | Milestone criteria |
|---|---|---|
| **RM1** | Infrastructure decommissioning and removal | 1.1 All infrastructure and services to be retained onsite must be safe, stable and not cause environmental harm.<br>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 1.4).<br>1.3 If the underlying landholder is also the EA holder (or a parent corporation or a subsidiary corporation), consent to retain the infrastructure is required from the administering authority (except for those items in 1.4). In seeking consent the holder must justify how the infrastructure will provide a benefit or improvement to the use of the land and/or community once mining has ceased.<br>1.4 Below-ground infrastructure, services and waste (as per the Environmental Authority EPML00862313 waste schedule) deeper than 0.5m in relation to the final landform surface can be retained provided it can meet the following:<br>a) All pipelines have been drained; and<br>b) All below-ground infrastructure (installed after the approval date of this transitional PRCP) to be retained must be mapped; and<br>c) The intended PMLU is not compromised; and<br>d) There is no ongoing risk of environmental harm.<br>1.5 With the exception of 1.2, 1.3 and 1.4 above, the following are complete:<br>a) All services disconnected, terminated and removed.<br>b) All buildings and associated infrastructure dismantled and removed.<br>c) All hardstand, concrete areas and roads (bitumen, blue metal, aggregate etc) removed.<br>d) All pipelines drained and removed.<br>e) All waste, not authorised under the Environmental Authority EPML00862313 waste schedule, removed.<br>f) All surface water drainage infrastructure removed.<br>g) All drillholes, bores, sediment ponds and sumps decommissioned.<br>h) All machinery and equipment removed from site.<br>i) Mine water dams are decommissioned.<br>j) Watercourse crossings and culverts removed. |

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| | | 1.6 Assessment of mine water dams is completed by an Appropriately Qualified Person (AQP) and identified sediment and water management actions are completed. |
| **RM2** | Remediation and/or management of contaminated land | 2.1 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.<br>2.2 The Contaminated Land Investigation Document confirms the area within the mining leases (ML1775, ML1782, ML1784, ML2360, ML2410, ML70142, ML70294, ML70298, ML70328, ML700021) does not present an unacceptable risk to the post-mining land use.<br>2.3 Despite 2.1 and 2.2, 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* 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 | 3.1 Earthworks are consistent with the final site layout (**Figure 1 – Final Site Design**) and have associated design plans.<br>3.2 Erosion and sediment control systems are installed as per the construction design and verified by an AQP.<br>3.3 AQP certifies that as constructed landform achieves design criteria for geotechnical stability with a Factor of Safety (FOS) ≥ 1.5 (RA1, RA6).<br><br><u>Spoil Dumps (RA1)</u><br>3.4 Landforms are constructed such that there will be no runoff from landform tops onto batter slopes.<br>3.5 Landforms reshaped with maximum 30% slopes.<br>3.6 Tertiary spoil to be covered with minimum 1m Permian spoil for slopes >5% and for slopes >15% at least 0.5m of the upper 1m Permian cover is to be competent rock.<br>3.7 Permian spoil to be covered with minimum 0.5m competent rock on >15% slopes.<br><br><u>Tailings Storage Facilities (RA1 and RA6)</u><br>3.8 Tailings to be capped with at least 2 metres of competent benign spoil.<br>3.9 All TSFs will achieve a non-ponding landform. |

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| | | <u>Watercourse diversions (RA2)</u><br>3.10 Disturbed natural watercourse bed and banks returned to a profile similar to the pre-disturbance condition.<br><br><u>Infrastructure areas (RA3 and RA4)</u><br>3.11 Landforms are reshaped to be free-draining with slopes not exceeding 12%. |
| **RM4** | Surface preparation (cattle grazing) | 4.1 Topsoil placed at minimum depth of 150mm in areas where topsoil has previously been removed.<br>4.2 Assessment of growth media characteristics and the development of an amelioration and physical treatment plan is completed by an AQP and reviewed and endorsed by a third party AQP, to ensure growth media is suitable for target vegetation establishment, the PMLU and stability of the landform.<br>4.3 Ameliorant and physical treatments such as fertiliser, gypsum and/or organic matter are applied as identified in criteria 4.2.<br>4.4 Deep 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 in areas where topsoil has previously been removed.<br>5.2 Assessment of growth media characteristics and the development of an amelioration and physical treatment plan is completed by an AQP and reviewed and endorsed by a third party AQP, to ensure growth media is suitable for target vegetation establishment, the PMLU and stability of the landform.<br>5.3 Ameliorant and physical treatments such as fertiliser, gypsum and/or organic matter are applied as identified in criteria 5.2.<br>5.4 Deep 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.<br>6.2 Assessment of growth media characteristics and the development of an amelioration and physical treatment plan is completed by an AQP and reviewed and endorsed by a third party AQP, to ensure growth media is suitable for target vegetation establishment, the PMLU and stability of the landform.<br>6.3 Ameliorant and physical treatments such as fertiliser, gypsum and/or organic matter are applied as identified in 6.2. |

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| | | 6.4 Deep rip at least 300mm into soil/subsoil profile along contour of slope. |
| **RM7** | Revegetation (cattle grazing) | 7.1 Completed seeding in accordance with recommended pasture mixes and seeding rates as shown in **Appendix 5 – Recommended species list and seeding rates for cattle grazing PMLU**.<br>7.2 At least four species of 3P pasture species and two legumes, including at least two native pasture species, from **Appendix 5 – Recommended species list and seeding rates for cattle grazing PMLU** are to be applied per application area.<br>7.3 Minimum seeding rates of 16kg/ha of coated pasture seed and 4 kg/ha of uncoated legume seed will be used, unless adjusted by an AQP based on results of rehabilitation monitoring. |
| **RM8** | Revegetation (woodland habitat) | 8.1 Completed seeding in accordance with recommended woodland habitat species mix and seeding rates in **Appendix 6 – Recommended species list and seeding rates for woodland habitat PMLU** (RA1, RA6)[1], or as recommended by an AQP if vegetation is already established to achieve the target regional ecosystem (RA4)[2].<br>8.2 Minimum seeding rates of 6kg/ha of tree species, 4 kg/ha of woody understory species and 10 kg/ha of grasses will be used, unless adjusted by an AQP based on results of rehabilitation monitoring.<br>8.3 Non-native seed must not be used for the revegetation of woodland habitat PLMU (except when sterile cover crops or *Cynodon dactylon* are used). |
| **RM9** | Revegetation (watercourse) | 9.1 Completed seeding in accordance with recommended watercourse species mix and seeding rates in **Appendix 7 – Recommended species list and seeding rates for watercourse PMLU (upper and mid banks)** and **Appendix 8 – Recommended species list and seeding rates for watercourse PMLU (lower banks)**.<br>9.2 Species chosen should reflect regional ecosystem 11.3.25.<br>9.3 Minimum seeding rates of:<br>a) For the upper and mid banks – 6 kg/ha uncoated trees species, 4 kg/ha uncoated woody understorey species and 10 kg/ha uncoated grasses and other groundcover species.<br>b) For the lower banks – 5 kg/ha of uncoated tree species, 10 kg/ha uncoated ground species.<br>9.4 Non-native seed must not be used for the revegetation of watercourse PLMU (except when sterile cover crops *or Cynodon dactylon* are used). |

[1] *If recommended species are not available, substitute with species from RE 11.5.3, RE 11.5.9, RE 11.10.1 or RE 11.10.3.*

[2] *Seed application may not be required in all RA4 areas.*

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| **RM10** | Achievement of surface requirements (cattle grazing) | 10.1 Vegetation meets the following:<br>a) >50% established and self-sustaining vegetation groundcover, of which at least 50% of dry matter yield is 3P pasture species as listed in **Appendix 5 – Recommended species list and seeding rates for cattle grazing PMLU**.<br>b) Minimum composition of three species of 3P grasses (RA3) and two species of 3P grasses (RA7) present per hectare (averaged).<br>10.2 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so. The representative samples comply with **Appendix 2 – Surface water quality limits** (RA3).<br>10.3 AQP certifies that:<br>a) There is no moderate or severe sheet, rill or gully erosion present (as defined in **Appendix 10 – Erosion classifications**); and<br>b) Mass movement and tunnel erosion are absent; and<br>c) All other erosion requiring intervention has been remediated and does not impact achieving the PMLU.<br>10.4 Despite criteria 10.3, gullies are acceptable on the final landform provided they meet the following criteria, as certified by an AQP:<br>a) Do not exceed 1m in depth at any point; and<br>b) Do not expose environmentally problematic materials; and<br>c) The cause of the gully is known and has been resolved; and<br>d) Have established and persistent vegetation cover at the head of the gullies; and<br>e) Are in a stabilised[3] state, demonstrated by monitoring data over a 2 year period; and<br>f) Do not provide a safety hazard within the context of the PMLU; and<br>g) Do not impact the stability or performance of engineered drainage features. |
| **RM11** | Achievement of surface requirements (woodland habitat) | 11.1 Groundcover:<br>a) >15% slopes must achieve ≥80% groundcover, consisting of at least 50% vegetation groundcover[4]<br>b) ≤15% slopes must achieve ≥50% groundcover, consisting of at least 50% vegetation groundcover[4].<br>11.2 Woodland habitat vegetation meets the following: |

[3] ***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)*

[4] ***Vegetation groundcover:*** *Means plants, plant litter, tree leaf litter, twigs and woody debris that protect the soil surface from erosion.*

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| | | a) BioCondition score of ≥18/60 based on the averaged benchmarks for the representative regional ecosystems as listed in **Appendix 9 – 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), or<br>b) Species richness of ≥2 native trees, ≥3 native shrubs and ≥4 grasses (exotic and native species) (RA6, RA10).<br>11.3 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so. The representative samples comply with **Appendix 2 – Surface water quality limits** (RA1, RA4, RA6).<br>11.4 AQP certifies that:<br>a) There is no moderate or severe sheet, rill or gully erosion present (as defined in **Appendix 10 – Erosion classifications**); and<br>b) Mass movement and tunnel erosion are absent; and<br>c) All other erosion requiring intervention has been remediated and does not impact achieving the PMLU.<br>11.5 Despite criteria 11.4, gullies are acceptable on the final landform provided they meet the following criteria, as certified by an AQP:<br>a) Do not exceed 1m in depth at any point; and<br>b) Do not expose environmentally problematic materials; and<br>c) The cause of the gully is known and has been resolved; and<br>d) Have established and persistent vegetation cover at the head of the gullies; and<br>e) Are in a stabilised[3] state, demonstrated by monitoring data over a 2 year period; and<br>f) Do not provide a safety hazard within the context of the PMLU; and<br>g) Do not impact the stability or performance of engineered drainage features. |
| **RM12** | Achievement of surface requirements (watercourse) | 12.1 Groundcover:<br>a) >15% slopes must achieve ≥80% groundcover, consisting of at least 50% vegetation groundcover[4].<br>b) ≤15% slopes must achieve ≥50% groundcover, consisting of at least 50% vegetation groundcover[4].<br>12.2 Watercourse vegetation meets the following:<br>a) Species richness:<br>• ≥2 native trees, ≥2 native shrubs representative of RE 11.3.25; |

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| | | • ≥2 grass species (exotic and native species);<br>b) Tree canopy cover ≥ 13%.<br>12.3 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so. The representative samples comply with **Appendix 2 – Surface water quality limits**.<br>12.4 AQP certifies that:<br>a) There is no moderate or severe sheet, rill or gully erosion present (as defined in **Appendix 10 – Erosion classifications**); and<br>b) Mass movement and tunnel erosion are absent; and<br>c) All other erosion requiring intervention has been remediated and does not impact achieving the PMLU.<br>12.5 Despite criteria 12.4, gullies are acceptable on the final landform provided they meet the following criteria, as certified by an AQP:<br>a) Do not exceed 1m in depth at any point; and<br>b) Do not expose environmentally problematic materials; and<br>c) The cause of the gully is known and has been resolved; and<br>d) Have established and persistent vegetation cover at the head of the gullies;<br>e) Are in a stabilised[3] state, demonstrated by monitoring data over a 2 year period;<br>f) Do not provide a safety hazard within the context of the PMLU; and<br>g) Do not impact the stability or performance of engineered drainage features. |
| **RM13** | Achievement of post-mining land use to a stable condition (cattle grazing – RA3) | 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.<br>13.2 Vegetation meets the following criteria:<br>a) >50% established and self-sustaining vegetation groundcover<br>b) At least 60% of pasture dry matter yield consists of preferred, palatable and productive (3P) grasses with a minimum composition of three 3P grass species present per hectare (averaged).<br>c) 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.<br>13.3 Land suitability class assessed by an AQP and certified that the land has achieved a post-mining land suitability class of 3 or better for cattle grazing, or not |

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| | | different from pre-mining class if it is class 4; where assessment of rehabilitation is in accordance with Short (2023). Class 4 is only accepted if the limitations are water availability, soil nutrient[5] or sub-soil erosion.<br>13.4 For any Class 4 land suitability areas, land condition is assessed as Good (A) condition for non-grazed areas, or Good (A) or Fair (B) condition for grazed areas, for 5 consecutive years using the Grazing Land Management ABCD land condition framework.<br>13.5 AQP certifies that:<br>a) There is no moderate or severe sheet, rill or gully erosion present (as defined in **Appendix 10 – Erosion classifications**); and<br>b) Mass movement and tunnel erosion are absent.<br>13.6 Despite criteria 13.5, gullies are acceptable on the final landform provided they meet the following criteria, as certified by an AQP:<br>a) Do not exceed 1m in depth at any point; and<br>b) Do not expose environmentally problematic materials; and<br>c) The cause of the gully is known and has been resolved; and<br>d) Have established and persistent vegetation cover at the head of the gullies; and<br>e) Are in a stabilised[3] state, demonstrated by monitoring data over a 5 year period; and<br>f) Do not provide a safety hazard within the context of the PMLU; and<br>g) Do not impact the stability or performance of engineered drainage features.<br>13.7 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so. The representative samples comply with **Appendix 2 – Surface water quality limits**.<br>13.8 Verification by a suitably qualified person through a site inspection, records review and aerial imagery to confirm:<br>a) Requirements of any Site Management Plan have been met;<br>b) Notifiable activities have not been undertaken post completion of RM2 that would impact the use of the land for the intended PMLU; and<br>c) There is no evidence indicating an adverse change to the contaminated land status has occurred post the completion of RM2. |

[5] *Only applies when soil nutrient status cannot reasonably be ameliorated, as determined by an AQP.*

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| **RM14** | Achievement of post-mining land use to a stable condition (woodland habitat – RA1, RA4, RA6) | 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.<br>14.2 AQP certifies that:<br>a) There is no moderate or severe sheet, rill or gully erosion present (as defined in **Appendix 10 – Erosion classifications**); and<br>b) Mass movement and tunnel erosion are absent.<br>14.3 Despite criteria 14.2, gullies are acceptable on the final landform provided they meet the following criteria, as certified by an AQP:<br>a) Do not exceed 1m in depth at any point; and<br>b) Do not expose environmentally problematic materials; and<br>c) The cause of the gully is known and has been resolved; and<br>d) Have established and persistent vegetation cover at the head of the gullies; and<br>e) Are in a stabilised[3] state, demonstrated by monitoring data over a 5 year period; and<br>f) Do not provide a safety hazard within the context of the PMLU; and<br>g) Do not impact the stability or performance of engineered drainage features.<br>14.4 Rehabilitation is assessed as geotechnically stable by an AQP with FoS≥1.5 (RA1, RA6).<br>14.5 Groundcover:<br>a) >15% slopes must achieve ≥80% groundcover, consisting of at least 50% vegetation groundcover[4].<br>b) ≤15% slopes must achieve ≥50% groundcover, consisting of at least 50% vegetation groundcover[4]<br>14.6 Woodland habitat vegetation meets the following:<br>a) BioCondition score of ≥35/60 based on the averaged benchmarks for the representative regional ecosystems as listed in **Appendix 9 – 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<br>b) 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. |

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| | | 14.7 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so. The representative samples comply with **Appendix 2 – Surface water quality limits**.<br>14.8 Verification by a suitably qualified person through a site inspection, records review and aerial imagery to confirm:<br>a) Requirements of any Site Management Plan have been met;<br>b) Notifiable activities have not been undertaken post completion of RM2 that would impact the use of the land for the intended PMLU; and<br>c) There is no evidence indicating an adverse change to the contaminated land status has occurred post the completion of RM2. |
| **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.<br>15.2 AQP certifies that:<br>a) There is no moderate or severe sheet, rill or gully erosion present (as defined in **Appendix 10 – Erosion classifications**); and<br>b) Mass movement and tunnel erosion are absent.<br>15.3 Despite criteria 15.2, gullies are acceptable on the final landform provided they meet the following criteria, as certified by an AQP:<br>a) Do not exceed 1m in depth at any point; and<br>b) Do not expose environmentally problematic materials; and<br>c) The cause of the gully is known and has been resolved; and<br>d) Have established and persistent vegetation cover at the head of the gullies; and<br>e) Are in a stabilised[3] state, demonstrated by monitoring data over a 5 year period; and<br>f) Do not provide a safety hazard within the context of the PMLU; and<br>g) Do not impact the stability or performance of engineered drainage features.<br>15.4 Geomorphic index score: greater than or equal to upstream and downstream values (Index of Diversion Condition method[6]).<br>15.5 Assessment by an AQP that the watercourse diversion has an Index of Diversion Condition score >10. |

[6] *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.*

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| | | 15.6 Watercourse vegetation meets the following:<br>a) Riparian vegetation index score: greater than or equal to upstream and downstream values (Index of Diversion Condition method[6]).<br>b) Species richness:<br>• ≥2 native trees, and<br>• ≥2 native shrubs<br>c) Tree canopy cover ≥20%<br>d) Median tree canopy height ≥10m<br>e) Recruitment of at least two woody perennial species in ecological dominant layer<br>f) Restricted invasive plants (as defined in the *Biosecurity Act 2014*) comprise less than ≤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.<br>15.7 Surface water runoff has been collected across representative areas of rehabilitation when surface flows occur and it is safe to do so. The representative samples comply with **Appendix 2 – Surface water quality limits**.<br>15.8 Verification by a suitably qualified person through a site inspection, records review and aerial imagery to confirm:<br>a) Requirements of any Site Management Plan have been met;<br>b) Notifiable activities have not been undertaken post completion of RM2 that would impact the use of the land for the intended PMLU; and<br>c) There is no evidence indicating an adverse change to the contaminated land status has occurred post the completion of RM2. |
| **RM17** | Achievement of post-mining land use to a stable condition (cattle grazing - existing rehabilitation – RA7) | 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.<br>17.2 Vegetation must achieve:<br>a) >50% established and self-sustaining vegetation groundcover on slopes ≤15%, comprising at least 50% dry matter yield 3P pasture species<br>b) >70% established and self-sustaining vegetation groundcover on slopes >15%, comprising at least 50% dry matter yield 3P pasture species.<br>c) Consists of at least two species of 3P grasses per hectare (averaged) |

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| | | d) 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<br>e) *Leucaena leucocephala* must be actively managed to ensure plants >2m high do not exceed a stem density of 250 stems per hectare (1 per 40m$^2$) mean of total area.<br>17.3 AQP certifies that:<br>a) There is no moderate or severe sheet, rill or gully erosion present (as defined in **Appendix 10 – Erosion classifications**); and<br>b) Mass movement and tunnel erosion are absent.<br>17.4 Despite criteria 17.3, gullies are acceptable on the final landform provided they meet the following criteria, as certified by an AQP:<br>a) Do not exceed 1m in depth at any point; and<br>b) Do not expose environmentally problematic materials; and<br>c) The cause of the gully is known and has been resolved; and<br>d) Have established and persistent vegetation cover at the head of the gullies; and<br>e) Are in a stabilised[3] state, demonstrated by monitoring data over a 5 year period; and<br>f) Do not provide a safety hazard within the context of the PMLU; and<br>g) Do not impact the stability or performance of engineered drainage features.<br>17.5 Land condition: assessed as Good (A) condition for non-grazed areas, or Good (A) or Fair (B) condition for grazed areas, for 5 consecutive years using the Grazing Land Management ABCD land condition framework.<br>17.6 Verification by a suitably qualified person through a site inspection, records review and aerial imagery to confirm:<br>a) Requirements of any Site Management Plan have been met;<br>b) Notifiable activities have not been undertaken post completion of RM2 that would impact the use of the land for the intended PMLU; and<br>c) There is no evidence indicating an adverse change to the contaminated land status has occurred post the completion of RM2. |

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| **RM18** | Achievement of post-mining land use to a stable condition (woodland habitat - existing rehabilitation – RA10) | 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.<br>18.2 Woodland habitat vegetation meets the following:<br>a) species richness:<br>• ≥2 native trees,<br>• ≥3 native shrubs, and<br>• ≥4 grasses (exotic and native species)<br>b) Tree canopy cover ≥16%<br>c) 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.<br>18.3 Groundcover:<br>a) >15% slopes must achieve ≥80% groundcover, consisting of at least 50% vegetation groundcover;<br>b) ≤15% slopes must achieve ≥50% groundcover, consisting of at least 50% vegetation groundcover.<br>18.4 AQP certifies that:<br>a) There is no moderate or severe sheet, rill or gully erosion present (as defined in **Appendix 10 – Erosion classifications**); and<br>b) Mass movement and tunnel erosion are absent.<br>18.5 Despite criteria 18.4, gullies are acceptable on the final landform provided they meet the following criteria, as certified by an AQP:<br>a) Do not exceed 1m in depth at any point; and<br>b) Do not expose environmentally problematic materials; and<br>c) The cause of the gully is known and has been resolved; and<br>d) Have established and persistent vegetation cover at the head of the gullies; and<br>e) Are in a stabilised[3] state, demonstrated by monitoring data over a 5 year period; and<br>f) Do not provide a safety hazard within the context of the PMLU; and<br>g) Do not impact the stability or performance of engineered drainage features.<br>18.6 Verification by a suitably qualified person through a site inspection, records review and aerial imagery to confirm:<br>a) Requirements of any Site Management Plan have been met; |

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| | | b) Notifiable activities have not been undertaken post completion of RM2 that would impact the use of the land for the intended PMLU; and<br>c) There is no evidence indicating an adverse change to the contaminated land status has occurred post the completion of RM2. |

## Section D – Non-use management areas

### (IA1) Improvement area 1

| Non-use management area (NUMA) | | | | | | | | | | |
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| **Improvement area** | IA1 | | | | | | | | | |
| **Relevant activities** | Voids and set-backs:<br>Jacaranda/Bauhinia – Void (396ha) and setback (107ha)<br>Coolibah/Dogwood – Void (363ha) and set-back (93ha)<br>Ebony/Grevillea – Void (518ha) and set-back (106ha)<br>Hakea – Void (156ha) and set-back (99ha) | | | | | | | | | |
| **Total size (ha)** | 1838 | | | | | | | | | |
| **Commencement of first milestone: MM1** | 10/12/2085 | | | | | | | | | |
| **NUMA** | NUMA | | | | | | | | | |
| **Date area is available** | 10/12/2085 | 10/12/2087 | 10/12/2098 | 10/12/2105 | | | | | | |
| **Cumulative area available (ha)** | 624 | 1080 | 1335 | 1838 | | | | | | |
| **Milestone completed by** | 10/12/2087 | 10/12/2089 | 10/12/2100 | 10/12/2107 | 10/12/2144 | | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **MM1** | 624 | 1080 | 1335 | 1838 | | | | | | |
| **MM2** | 624 | 1080 | 1335 | 1838 | | | | | | |
| **MM3** | | | | | 1838 | | | | | |

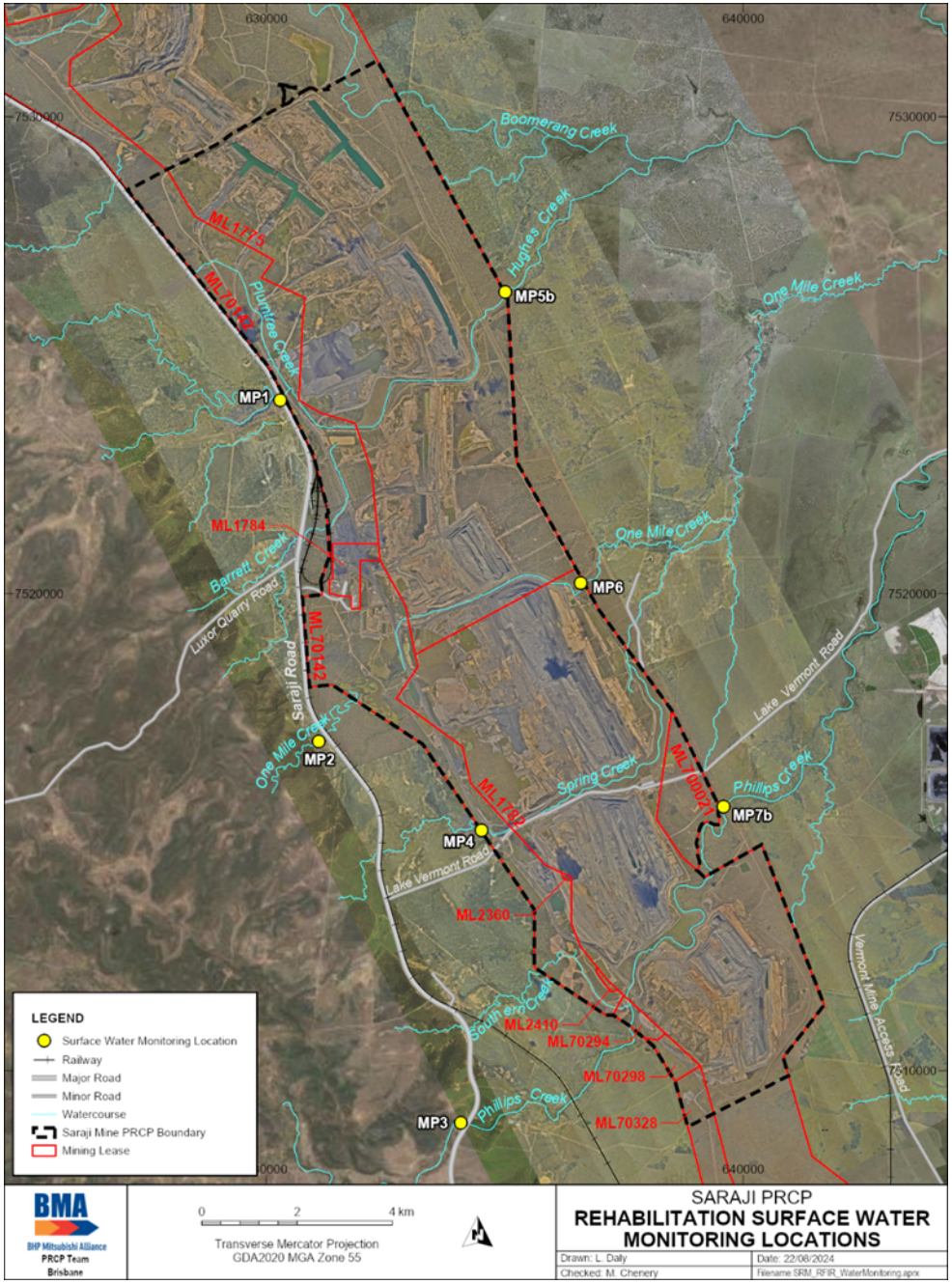
**Improvement area milestones**

| Milestone reference | Management milestone | Milestone criteria |
|---|---|---|
| **MM1** | Achievement of structural stability | IA1.1 Acacia Pit to be fully backfilled.<br><br>Residual voids (Jacaranda/Bauhinia, Coolibah/Dogwood, Ebony/Grevillea and Hakea) meet the following criteria:<br><br>IA1.2 Void backfill will be completed at the end of mining for flood mitigation at:<br>a) The northern and southern end-walls of Jacaranda/Bauhinia void.<br>b) The northern and southern end-walls of Coolibah/Dogwood void.<br>c) The northern and southern end-walls of Ebony/Grevillea void.<br>d) The northern and southern end-walls of Hakea void.<br>IA1.3 Highwall landforms must:<br>a) prevent surface flow of floodwater into the void<br>b) Be geotechnically stable when floodwater is against the creek-side batter<br>c) Prevent seepage flow of floodwater into the void<br>d) Not be constructed with dispersive material<br>e) Have maximum 30% slopes with rock for scour protection.<br>IA1.4 The final design for highwall landform must be completed by an AQP based on the latest flood modelling and materials data prior to construction.<br>IA1.5 Final residual voids are not subject to inundation from floodwaters up to and including the 0.1% AEP.<br>IA1.6 The high-wall, end-wall and low-wall achieve a FoS ≥1.5 within the NUMA extents as determined by an AQP.<br>IA1.7 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 (ML1775, ML1782, ML1784, ML2360, ML2410, ML70142, ML70294, ML70298, ML70328, ML700021) boundary.<br>IA1.8 The location of the voids and associated safety bunds does not cause instability or degradation to the land outside of the mining lease (ML1775, ML1782, ML1784, ML2360, ML2410, ML70142, ML70294, ML70298, ML70328, ML700021) boundary.<br>IA1.9 Low-walls are free-draining into the void lake with a maximum of 37 degree slopes.<br>IA1.10 Residual voids must not overtop.<br>IA1.11 Residual voids collectively act as groundwater sinks within the tenure boundary post-closure as demonstrated by groundwater modelling defined in condition PRCP12. |

| | | |
|---|---|---|
| **MM2** | Achievement of surface requirements | IA2.1 Competent safety bund or equivalent landform in place to prevent access to the residual void, at the geotechnical set-back distance.<br>IA2.2 Fencing erected, where required to prevent access to the residual void, around the perimeter of the safety bund.<br>IA2.3 Warning signage placed along the fence line (nominally one sign every 100m)<br>IA2.4 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 IA2.1.<br>IA2.5 An area of 60ha of undisturbed land is retained between Grevillea residual void and the eastern boundary of mining lease ML700021, as shown in **Reference Maps - Figure 3**.<br>IA2.6 Despite IA2.5, the safety bund can be positioned within the 60ha area and located as close to the high wall as necessary to enable the eastern side of the bund wall to retain its current land use. |
| **MM3** | Achievement of sufficient improvement | IA3.1 Certification from an AQP that:<br>a) the residual void is safe to humans and livestock.<br>b) The water level and quality in the void do not and will not cause environmental harm to the surrounding environment, as demonstrated by groundwater level, quality monitoring and modelling<br>c) Voids retain flood immunity, supported by flood modelling re-run at end of life and calibrated against the final landform<br>d) The highwall landform has been constructed in accordance with the final design<br>e) Appropriate safety infrastructure at the geotechnical set-back distance has been installed to prevent access to the NUMA.<br>f) the residual void will not present an unacceptable risk of environmental harm outside of the relevant external perimeter mining lease (ML1775, ML1782, ML1784, ML2360, ML2410, ML70142, ML70294, ML70298, ML70328, ML700021) boundary.<br>g) 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.<br>IA3.2 Monitoring and maintenance of exclusion fences and bunds to be carried out to ensure they remain effective. |

## Appendix 1 – Receiving Environment Surface Water Monitoring Locations

| Monitoring Locations | Receiving waters location description | Easting (GDA2020, MGA Zone 55) | Northing (GDA2020, MGA Zone 55) |
|---|---|---|---|
| ***Upstream monitoring locations*** | | | |
| MP1 | Hughes Creek upstream adjacent to Dysart – Moranbah Road | 630290 | 7524051 |
| MP2 | One Mile Creek upstream adjacent to Dysart – Moranbah Road | 631096 | 7516901 |
| MP3 | Phillips Creek upstream adjacent to Dysart – Moranbah Road | 634068 | 7508901 |
| MP4 | Spring Creek upstream | 634503 | 7515043 |
| ***Downstream monitoring locations*** | | | |
| MP5b | Hughes Creek downstream adjacent to lease boundary. | 635008 | 7526316 |
| MP6 | One Mile Creek downstream adjacent to lease boundary and existing creek crossing | 636583 | 7520215 |
| MP7b | Phillips Creek downstream adjacent to lease boundary. | 639579 | 7515541 |


630000
640000
7530000
7520000
7510000
Boomerang Creek
Hughes Creek
One Mile Creek
Plumtree Creek
ML1775
ML70442
MP1
MP5b
MP6
ML1784
Barrett Creek
Luxor Quarry Road
Saraji Road
ML70427
One Mile Creek
MP2
Lake Vermont Road
Spring Creek
ML70007
Phillips Creek
MP7b
MP4
ML1782
ML2360
Vermont Mine Access Road
South Creek
ML2410
ML70294
ML70298
ML70328
MP3
Phillips Creek
LEGEND
Surface Water Monitoring Location
Railway
Major Road
Minor Road
Watercourse
Saraji Mine PRCP Boundary
Mining Lease
BMA
BHP Mitsubishi Alliance
PRCP Team
Brisbane
0
2
4 km
Transverse Mercator Projection
GDA2020 MGA Zone 55
SARAJI PRCP
REHABILITATION SURFACE WATER MONITORING LOCATIONS
Drawn: L. Daly
Date: 22/08/2024
Checked: M. Chenery
Filename:SRM_RFIR_WaterMonitoring.aprx

## Appendix 2 – Surface water quality limits

| Quality characteristic (units) | Limit | Comment on limit |
|---|---|---|
| pH | 6.5-8.5 | WQO for Upper Isaac River catchment waters applied |
| Electrical Conductivity (µS/cm) | 670 | Site-specific. 95$^{th}$ percentile of upstream data. |
| Turbidity (NTU) | 50 | No data. Therefore, WQO for Upper Isaac River catchment waters applies. |
| Sulphate (mg/L) | 26 | Site-specific. 95$^{th}$ percentile of upstream data, excluding outlier (MP3 8/2/2020) |
| Aluminium - dissolved (µg/L) | 430 | Site-specific. 95$^{th}$ percentile of downstream data (upstream > downstream) |
| Arsenic - dissolved (µg/L) | 13 | All data < ANZG 2018. Therefore, ANZG 2018 applies |
| Cobalt - dissolved (µg/L) | 1.4 | No data. Therefore, ANZG 2018 applies |
| Chromium – dissolved (µg/L) | 1 | All data < ANZG 2018. Therefore, ANZG 2018 applies |
| Copper – dissolved (µg/L) | 2 | Site-specific |
| Iron – dissolved (µg/L) | 310 | Site-specific. 95$^{th}$ percentile of downstream data (upstream > downstream) |
| Manganese – dissolved (µg/L) | 1900 | No data. Therefore, ANZG 2018 applies |
| Molybdenum - dissolved (µg/L) | 34 | No data. Therefore, ANZG 2018 applies |
| Nickel - dissolved (µg/L) | 11 | No data. Therefore, ANZG 2018 applies |
| Selenium - dissolved (µg/L) | 5 | All data < ANZG 2018. Therefore, ANZG 2018 applies |
| Uranium - dissolved (µg/L) | 0.5 | Less than 8 data points > ANZG 2018. Therefore, ANZG 2018 applies. |
| Zinc - dissolved (µg/L) | 8 | With 2 outliers removed, all other data < ANZG 2018 |
| Nitrate (µg/L) | 1100 | |
| Total recoverable hydrocarbons (C6-C9) (µg/L) | 20 | Limit of reporting (LoR) |
| Total recoverable hydrocarbons (C10-C36) (µg/L) | 100 | Limit of reporting (LoR) |
| Major ions (mg/L)<br>Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate | For interpretation purposes only | |
| Hardness (mg/L) | For interpretation purposes only | |

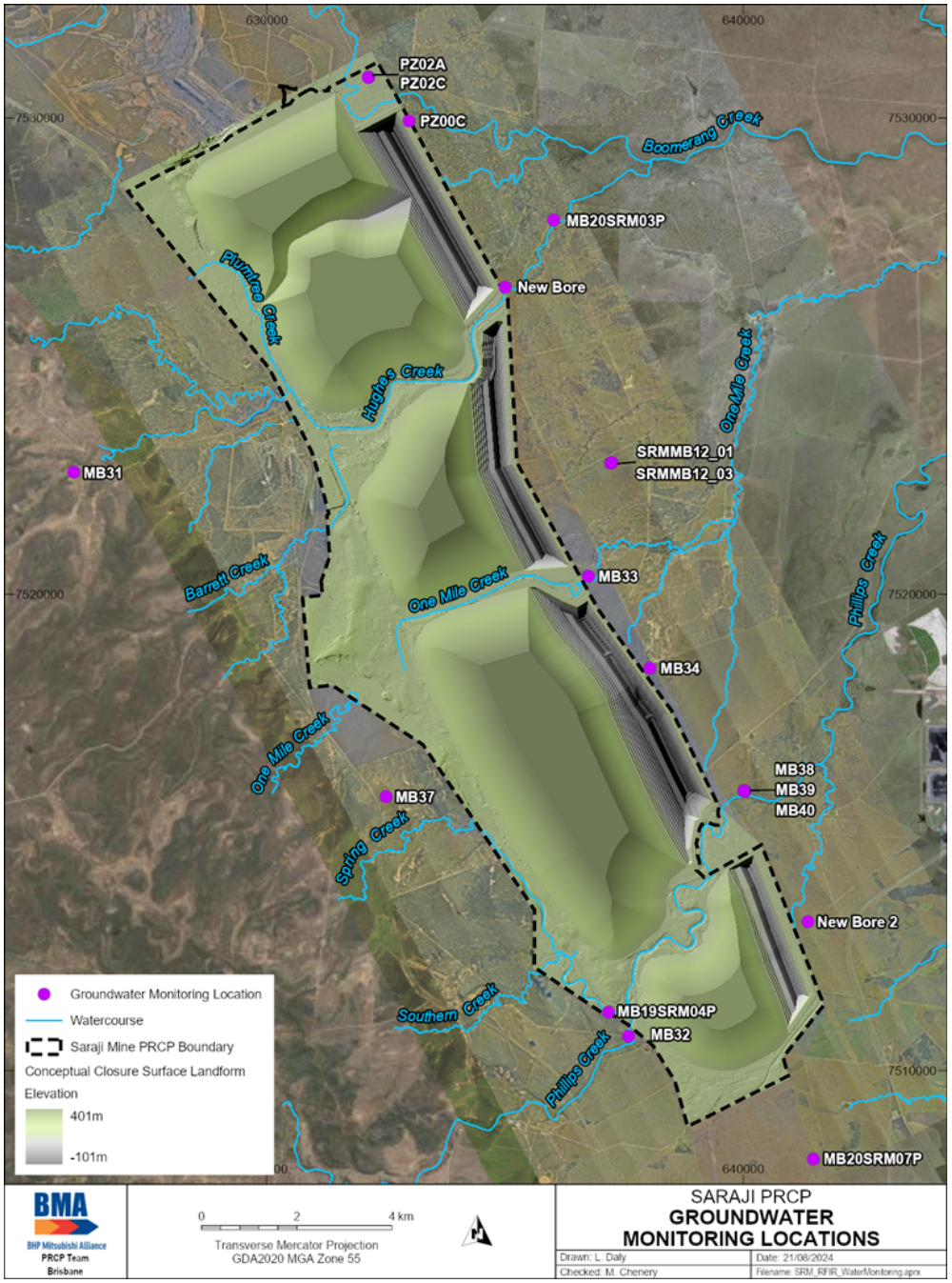
Notes:

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

## Appendix 3 – Groundwater monitoring locations

| Monitoring Bore | Hydrogeological Unit | Location | | |
|---|---|---|---|---|
| | | **Easting** (GDA2020, MGA Zone 55) | **Northing** (GDA2020, MGA Zone 55) | **Description** |
| ***Interpretation Bores*** | | | | |
| MB31 | Back Creek Group - Permian Coal Seam | 625943 | 7522561 | West of Jacaranda/Bauhinia and Coolabah/Dogwood voids |
| MB37 | Back Creek Group - Overburden | 632504 | 7515753 | West of Ebony/Grevillea |
| MB32 | Alluvium | 637596 | 7510717 | Phillips Creek upstream |
| MB19SRM04P | Interburden - Moranbah Coal Measures | 637169 | 7511225 | West of Hakea Void |
| ***Compliance Bores*** | | | | |
| PZ02A | Tertiary sediments | 632134 | 7530857 | North of the Jacaranda/Bauhinia Void |
| PZ02C | D Seam - Moranbah Coal Measures | 632128 | 7530854 | North-eastern corner, to the north-east of the Jacaranda/Bauhinia Void |
| PZ00C | Tertiary sediments | 632986 | 7529936 | Immediately to the east of the Jacaranda/Bauhinia Void |
| MB20SRM03P | P Seam – Moranbah Coal Measures | 636021 | 7527857 | East of Jacaranda/Bauhinia Void |
| SRMMB12_01 | Tertiary Sediments | 637219 | 7522753 | East of Coolabah/Dogwood Void |
| SRMMB12_03 | P Seam – Moranbah Coal Measures | 637241 | 7522760 | East of Coolabah/Dogwood Void |
| MB33 | Q Seam - Moranbah Coal Measures | 636755 | 7520381 | West of Ebony/Grevillea |
| MB34 | P Seam - Moranbah Coal Measures | 638041 | 7518451 | West of Ebony/Grevillea |
| MB38 | Alluvium | 640033 | 7515861 | Phillips Creek downstream |
| MB39 | R Seam - Moranbah Coal Measures | 640019 | 7515877 | East of Ebony/Grevillea and Hakea voids and immediately north of Phillips Creek |

| Monitoring Bore | Hydrogeological Unit | Location | | |
|---|---|---|---|---|
| | | **Easting** (GDA2020, MGA Zone 55) | **Northing** (GDA2020, MGA Zone 55) | **Description** |
| MB40 | Tertiary sediments | 640027 | 7515868 | Adjacent to Philips Creek downstream of SRM |
| MB20SRM07P | D Seam - Moranbah Coal Measures | 641475 | 7508140 | South of Hakea Void |
| New Bore 1 | D Seam - Moranbah Coal Measures | 635005 | 7526450 | East of Bauhinia Pit |
| New Bore 2 | D Seam - Moranbah Coal Measures | 641354 | 7513125 | East of Hakea Void |


630000
640000
7530000
7520000
7510000
PZ02A
PZ02C
PZ00C
Boomerang Creek
MB20SRM03P
New Bore
Plumtree Creek
Hughes Creek
One Mile Creek
SRMMB12_01
SRMMB12_03
MB31
Barrett Creek
MB33
One Mile Creek
Phillips Creek
MB34
MB38
MB39
MB40
MB37
Spring Creek
New Bore 2
Southern Creek
MB19SRM04P
MB32
Phillips Creek
MB20SRM07P
Groundwater Monitoring Location
Watercourse
Saraji Mine PRCP Boundary
Conceptual Closure Surface Landform Elevation
401m
-101m
BMA
BHP Mitsubishi Alliance
PRCP Team
Brisbane
0
2
4 km
Transverse Mercator Projection
GDA2020 MGA Zone 55
SARAJI PRCP
GROUNDWATER
MONITORING LOCATIONS
Drawn: L. Daly
Date: 21/08/2024
Checked: M. Chenery
Filename: SRM_RFIR_WaterMonitoring.aprx

## Appendix 4 – Groundwater quality limits

| Compliance Bores | Hydrogeological Unit | Electrical conductivity (µS/cm) | Sulfate (mg/L) | Iron – dissolved (µg/L) | Comment |
|---|---|---|---|---|---|
| PZ02A | Undifferentiated weathered material | 15,360 | 1,830 | 190 | 95$^{th}$ percentile of MB37 Tertiary bore |
| PZ02C | Permian Coal Measures | 8,132 | 1,213 | 1,880 | 95$^{th}$ percentile of MB31 Permian bore |
| PZ00C | Tertiary sediments | 15,360 | 1,830 | 190 | 95$^{th}$ percentile of MB37 Tertiary bore |
| MB20SRM03P | Permian Coal Measures | 8,132 | 1,213 | 1,880 | 95$^{th}$ percentile of MB31 Permian bore |
| SRMMB12_01 | Undifferentiated weathered material | 15,360 | 1,830 | 190 | 95$^{th}$ percentile of MB37 Tertiary bore |
| SRMMB12_03 | Permian Coal Measures | 8,132 | 1,213 | 1,880 | 95$^{th}$ percentile of MB31 Permian bore |
| MB33 | Permian Coal Measures | 24,807 | 2,210 | 3,320 | 95$^{th}$ percentile of bore data |
| MB34 | Permian Coal Measures | 30,513 | 68 | 940 | 95$^{th}$ percentile of bore data |
| MB38 | Alluvium | 1,422 | 66 | 2,930 | 95$^{th}$ percentile of MB32 alluvium bore |
| MB39 | Permian Coal Measures | 10,243 | 317 | 120 | 95$^{th}$ percentile of bore data |
| MB40 | Tertiary sediments | 2,680 | 100 | 1,926 | 95$^{th}$ percentile of bore data |
| MB20SRM07P | Permian Coal Measures | 8,132 | 1,213 | 1,880 | 95$^{th}$ percentile of MB31 Permian bore |
| New Bore 1 | Permian Coal Measures | 8,132 | 1,213 | 1,880 | 95$^{th}$ percentile of MB31 Permian bore |
| New Bore 2 | Permian Coal Measures | 8,132 | 1,213 | 1,880 | 95$^{th}$ percentile of MB31 Permian bore |

| Quality characteristic (units) | Monitoring Bore | Limit | Comment |
|---|---|---|---|
| pH (pH units) | All compliance bores | 6.5 – 8.5 | WQO |
| Aluminium - dissolved (µg/L) | All compliance bores | 55 | All data < ANZG 2018. Therefore, ANZG 2018 applies.<br>95$^{th}$ percentile of all data is 46.5ug/L |
| Arsenic - dissolved (µg/L) | All compliance bores | 13 | All data < ANZG 2018. Therefore, ANZG 2018 applies.<br>95$^{th}$ percentile of all data is 6ug/L |
| Cobalt - dissolved (µg/L) | All compliance bores | 1.4 | No data. Therefore, ANZG 2018 applies |
| Chromium - dissolved (µg/L) | All compliance bores | 6 | Site-specific. 95$^{th}$ percentile of all data, excluding outliers |
| Copper - dissolved (µg/L) | All compliance bores | 5 | Site-specific. 95$^{th}$ percentile of all data, excluding outliers |
| Manganese – dissolved (µg/L) | All compliance bores | 1900 | No data. Therefore, ANZG 2018 applies |

| Quality characteristic (units) | Monitoring Bore | Limit | Comment |
|---|---|---|---|
| Molybdenum - dissolved (µg/L) | All compliance bores | 34 | No data. Therefore, ANZG 2018 applies |
| Nickel - dissolved (µg/L) | All compliance bores | 11 | No data. Therefore, ANZG 2018 applies |
| Selenium - dissolved (µg/L) | All compliance bores | 5 | All data < ANZG 2018. Therefore, ANZG 2018 applies |
| Uranium - dissolved (µg/L) | All compliance bores | 4 | Site-specific. 95$^{th}$ percentile of all data, except MB40 |
| Uranium - dissolved (µg/L) | MB40 | 15 | Site-specific. 95$^{th}$ percentile of all MB40 data. |
| Zinc - dissolved (µg/L) | All compliance bores | 50 | Site-specific. 95$^{th}$ percentile of all data, excluding outliers |
| Major ions (mg/L)<br>Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate | All bores | For interpretation purposes only | |
| Hardness (mg/L) | All bores | For interpretation purposes only | |
| Level (m AHD) | All bores | For interpretation purposes only | |

*NOTES:*

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

## Appendix 5 – Species list and seeding rates for cattle grazing PMLU

| Scientific name | Common name | Cracking clays & heavy loams/clays | Light loams/sands | Seeding rate (kg/ha) |
|---|---|---|---|---|
| **Grass species** | | | | |
| *Astrebla lappulacea, A, squarrosa, A. elymoides* | Mitchell grasses (curly, bull and hoop) | ✓ | - | 2[c] (per species) |
| *Bothriochloa bladhii* | Forest blue grass | - | ✓ | 4[c] |
| *Bothriochloa insculpta* cvv. Bisset* | Bisset creeping blue grass | ✓ | ✓ | 4[c] |
| *Chloris gayana* cvv. Callide* | Callide Rhodes grass | ✓ | ✓ | 4[c] |
| *Chloris gayana* cvv. Katambora* | Katambora Rhodes grass | ✓ | ✓ | 4[c] |
| *Dichanthium sericeum subsp. sericeum* | Queensland blue grass | ✓ | - | 4[c] |
| *Digitaria brownii* | Cotton panic | - | ✓ | 2[c] |
| *Heteropogon contortus* | Black spear grass | ✓ | ✓ | 2 |
| *Megathyrsus maximus* var. *pubiglumis** | Green panic | - | ✓ | 4[c] |
| *Panicum coloratum var. makarikariense** | Bambatsi Panic | ✓ | - | 4[c] |
| *Setaria incrassata** | Purple pigeon | ✓ | - | 4[c] |
| *Urochloa mosambicensis** | Sabi grass | - | ✓ | 4[c] |
| **Grass species - Total seed weight coated** | | | | **16** |
| **Legume species** | | | | |
| *Stylosanthes seabrana** | Stylo | ✓ | - | 2 |
| *Macroptilium bracteatum** | Burgundy bean | ✓ | - | 2 |
| *Stylosanthes hamata** | Shrubby stylo | - | ✓ | 2 |

| | | | | |
|---|---|---|---|---|
| *Chamaecrista rotundifolia* | Wynn cassia | - | ✓ | 2 |
| *Rhynchosia minima var. minima* | Rhynchosia | ✓ | ✓ | 2 |
| *Rhynchosia minima var. australis* | Rhynchosia | ✓ | ✓ | 2 |
| **Legume species - Total seed weight uncoated** | | | | **4** |
| **Cover crop** | | | | |
| *Echinochloa esculenta* | Japanese millet | ✓ | ✓ | 5 [c] |

*[c] Assumes seed is coated. If not coated, use half prescribed rate; [*] Naturalised exotic pasture species*

## Appendix 6 – Recommended species list* and seeding rates for woodland habitat PMLU

| Species name | Common name | Life form and functional group code | Cracking clays & heavy loams/clays | Light loams/sands | Seed rates (kg/ha – uncoated weight) |
|---|---|---|---|---|---|
| **Tree species** | | | | | |
| *Acacia rhodoxylon* | Rosewood | LLA | - | ✓ | 0.3 - 1 |
| *Acacia shirleyi* | Lancewood | LLA | - | ✓ | 0.3 – 1 |
| *Allocasuarina littoralis* | Black she oak | NE/NA | - | ✓ | 0.3 – 0.5 |
| *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 | ✓ | ✓ | 0.6 - 2 |
| *Corymbia clarksoniana* | Clarkson's bloodwood | E/C | ✓ | ✓ | 0.3 - 1 |
| *Corymbia dallachiana* | Dallachy's gum | E/C | ✓ | ✓ | 0.3 – 0.5 |
| *Corymbia erythrophloia* | Red bloodwood | E/C | ✓ | ✓ | 0.3 - 1 |
| *Eucalyptus crebra* | Narrow leafed ironbark | E/C | ✓ | ✓ | 0.6 - 2 |
| *Eucalyptus decorticans* | Gum-top ironbark | E/C | - | ✓ | 0.3 – 0.5 |
| *Eucalyptus exserta* | Queensland peppermint | E/C | - | ✓ | 0.3 – 0.5 |

| | | | | | |
|---|---|---|---|---|---|
| *Eucalyptus melanophloia* | Silver leaved ironbark | E/C | ✓ | ✓ | 0.3 - 1 |
| *Eucalyptus populnea* | Poplar box | E/C | ✓ | ✓ | 0.3 – 0.5 |
| *Lysiphyllum carronii* | Red bauhinia | NE/NA | ✓ | ✓ | 0.3 – 0.5 |
| *Lysiphyllum hookeri* | White bauhinia | NE/NA | ✓ | - | 0.2 – 0.5 |
| *Terminalia oblongata* | Yellowwood | NE/NA | ✓ | - | 0.2 – 0.5 |
| **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 |
| *Acacia flavescens* | Yellow wattle | LLA | - | ✓ | 0.3 – 0.5 |
| *Acacia sericophylla* | Desert oak | ILA | - | ✓ | 0.3 – 0.5 |
| *Alstonia constricta* | Bitterbark | SU/NE/NA | ✓ | ✓ | 0.3 – 0.5 |
| *Capparis lasiantha, C. canescens, C. loranthifolia.* | Wait-a-while | V/C | ✓ | ✓ | 0.2 – 0.5 |
| *Breynia oblongifolia* | Coffee bush | SU | ✓ | ✓ | 0.3 – 0.5 |
| *Carissa ovata* | Currant bush | GCS | ✓ | ✓ | 0.3 – 1 |
| *Cassia brewsteri*** | Leichhardt bean | SU | ✓ | ✓ | 0.3 – 0.5 |
| *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* | Dog's balls | SU | ✓ | ✓ | 0.3 – 0.5 |

| | | | | | |
|---|---|---|---|---|---|
| *Hakea lorea* | Bootlace oak | SU/NE/NA | ✓ | ✓ | 0.3 – 0.5 |
| *Jasminum didymum* | Native jasmine | V/C | ✓ | ✓ | 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 |
| *Senna artemisioides* | Silver cassia | SU | ✓ | ✓ | 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 |
| *Panicum effusum* | Hairy panic | NG | ✓ | ✓ | 1 - 2 |
| *Paspalidium distans* | Shot 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 |

** If recommended species are not available, substitute species from RE 11.5.3, RE 11.5.9, RE 11.10.1 or RE 11.10. **Species adapted to moderate to high salinity tolerance (DERM, 2011)*

## Appendix 7 – 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) |
|---|---|---|---|
| **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 |
| **Tree species - total seed weight uncoated** | | | **6** |
| **Woody understorey species** | | | |
| *Carissa ovata* | Currant bush | GCS | 0.5 - 1 |

| | | | |
|---|---|---|---|
| *Acacia excelsa* | Ironwood wattle | ILA | 0.5 - 1 |
| *Acacia fasciculifera* | Scaly bark | ILA | 0.5 - 1 |
| *Cassia brewsteri*** | Leichardt bean | SU | 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* | Dog's balls | SU | 0.5 - 1 |
| *Hakea lorea* | Bootlace oak | SU | 0.5 - 1 |
| *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** | | | |
| *Cymbopogon refractus* | Barbwire grass | NG | 1 - 2 |
| *Bothriochloa bladhii* | Forest blue grass | NG | 1 - 2 |
| *Capillipedium spicigerum* | Scented top | 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* | Black 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 weight uncoated** | | | **10** |
| **Cover crop** | | | **5** |
| *Echinochloa esculenta* | Japanese millet | Cover crop | 5 |

** If recommended species are not available, substitute species from RE 11.3.25. **Species adapted to moderate to high salinity tolerance (DERM, 2011)*

## Appendix 8 – 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) |
|---|---|---|---|
| **Tree species** | | | |
| *Casuarina cunninghamiana*** | River she oak | 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 linariifolia*** | Snow in summer | NE/NA | 0.5 -1 |
| *Melaleuca leucadendra*** | Broad-leaved tea tree | NE/NA | 0.5 -1 |
| *Melaleuca viminalis*** | Red bottlebrush | NE/NA | 0.5 -1 |
| *Melaleuca trichostachya* | Flax-leaf paperbark | NE/NA | 0.5 -1 |
| *Lophostemon suaveolens* | Swamp box | NE/NA | 0.5 -1 |
| **Tree species - total seed weight uncoated** | | | **5** |
| **Ground species** | | | |
| *Cymbopogon refractus* | Barbwire grass | NG | 0.5 -1 |
| *Dichanthium sericeum subsp. sericeum* | Queensland bluegrass | NG | 1 - 2 |
| *Themeda triandra* | Kangaroo grass | NG | 0.5 -1 |
| *Bothriochloa bladhii subsp. bladhii* | Forest blue grass | NG | 1 - 2 |
| *Lomandra longifolia* | Spiny-headed mat rush | NG | 2 - 3 |
| *Eustrephus latifolius* | Wombat vine | V/C | 0.5 - 1 |
| *Cyperus spp. (C. gracilis, C. polystachyos)*** | Sedge | NG | 2 - 3 |
| *Cynodon dactylon** | Couch | IG | 2 - 3 |
| **Ground species - total seed weight uncoated** | | | **10** |
| **Cover crop (kg/ha)** | | | |
| *Echinochloa esculenta* | Japanese millet | Cover crop | 5 |

** If recommended species are not available, substitute species from RE 11.3.25. **Species adapted to moderate to high salinity tolerance (DERM, 2011)*

**Appendix 9 – BioCondition benchmarks and scoring of site-based attributes for representative regional ecosystems**

| SRM Representative REs | Maximum Score for Attributes | Benchmarks* | | | | Averaged Benchmarks |
|---|---|---|---|---|---|---|
| | | RE 11.5.3 | RE 11.5.9 | RE 11.10.1 | RE 11.10.3 | Combined REs |
| Recruitment of dominate canopy species (%) | 5 | 100 | 100 | 100 | 100 | 100 |
| Native plant species richness - trees (#) | 5 | 6 | 3 | 4 | 3 | 4 |
| Native plant species richness - shrubs (#) | 5 | 6 | 6 | 4 | 4 | 5 |
| Native plant species richness - grasses (#) | 5 | 6 | 9 | 9 | 7 | 8 |
| Native plant species richness – forbs/other (#) | 5 | 10 | 11 | 17 | 9 | 12 |
| Tree canopy height (m) | 5 | 16 | 17 | 24 | 15 | 18 |
| Tree canopy cover (%) | 5 | 20 | 25 | 30 | 41 | 29 |
| Shrub layer cover (%) | 5 | 3 | 10 | 13 | 3 | 7 |
| Native perennial grass cover (%) | 5 | 19 | 26 | 16 | 23 | 21 |
| Litter cover (%) | 5 | 20 | 30 | 50 | 32 | 33 |
| Non-native plant cover (%) | 10 | 0 | 0 | 0 | 0 | 0 |
| **Maximum Site Score** | **60** | | | | | |

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

## Appendix 10 – Erosion classifications

Extracted from Australian Soil and Land Survey Field Handbook, Third Edition (p. 134-137)

| Erosion form | Minor | Moderate | Severe |
|---|---|---|---|
| Sheet erosion | Indicators may include shallow soil deposits in downslope sediment traps (fencelines, farm dams). Often very difficult to assess as evidence may be lost with cultivation, pedoturbation or revegetation. | Indicators may include partial exposure of roots, moderate soil deposits in downslope sediment traps (fencelines, farm dams). | Indicators may include loss of surface horizons, exposure of subsoil horizons, pedestalling, root exposure, substantial soil deposits in downslope sediment traps (fencelines, farm dams). |
| Rill erosion | Occasional rills. | Common rills. | Numerous rills forming corrugated ground surface. |
| Gully erosion | Gullies are isolated, linear, discontinuous and restricted to primary or minor drainage lines. | Gullies are linear, continuous and restricted to primary and minor drainage lines. | Gullies are continuous or discontinuous and either tend to branch away from primary drainage lines and on to footslopes, or have multiple branches within primary drainage lines. |

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

END OF **PRCP** SCHEDULE