# PRCP schedule

***Environmental Protection Act 1994***

## PRCP Schedule PRCP_P- EA-100265081_V1

*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: PRCP_P-EA-100265081_V1

### PRCP schedule holder(s)

| Name(s) | Registered address |
|---|---|
| Queensland Coking Coal Pty Ltd | Level 6, Suite 2, 12 Creek Street, Brisbane QLD 4000 |
| Qld Coal Aust No.1 Pty Ltd | |

### Location details

| Location(s) |
|---|
| Mining Lease (ML) 700073 |

**Take effect**

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

| Signature | Date |
|---|---|
| | 5 April 2024 |

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Department of Environment, Science and Innovation
Delegate of the administering authority
*Environmental Protection Act 1994*

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Queensland Government

**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 - Attachments
- Section E - Definitions

## Section A - Conditions of PRCP schedule

Pursuant to section 206A of the EP Act:

- it is a condition of this PRCP schedule that, in carrying out a relevant activity under the schedule, the holder must comply with a requirement stated in the environmental authority relevant to carrying out the activity.
- it is a condition of this PRCP schedule that the holder must comply with the following matters stated in the schedule -

    (a) each rehabilitation milestone and management milestone

    (b) when each rehabilitation milestone and management milestone is to be achieved

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

**General conditions**

**PRCP1** Prior to any significant disturbance occurring within the mining lease, the holder must nominate in writing to the administering authority, a commencement date for the authorised activities.

*Note: that for the purposes of this condition, significant disturbance means disturbance of the land surface or clearing of vegetation but does not include access tracks for land management, fire breaks or disturbance associated with environmental monitoring.*

**PRCP2** The holder must comply with each milestone criteria stated in the schedule.

**PRCP3** Where land becomes available for rehabilitation earlier than the nominated 'Date area is available', progressive rehabilitation for that land must commence as soon as practicable. Progressive rehabilitation commenced early under this condition must be carried out in accordance with the milestones and criteria in this schedule, except that each of the dates by which milestones are to be completed is brought forward by the same amount of time as the commencement was brought forward.

**PRCP4** The holder must keep records in relation to relevant matters for a minimum of five years and provide such records to the administering authority on request.

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

i) Rehabilitation activities and the results of these activities;

ii) Maintenance activities and the results of maintenance activities;

iii) Monitoring activities and the results of monitoring;

iv) Designs, drawings, specifications or any similar documents required under the PRCP schedule; and

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

**PRCP5** Where an area achieves a rehabilitation milestone, it must be maintained and continue to comply with the rehabilitation milestone criteria for that rehabilitation milestone.

**PRCP6** Where an area has achieved the final rehabilitation milestone, it must be maintained and continue to comply with the rehabilitation milestone criteria for the final milestone and continue to be in a stable condition, until the area is progressively certified according to the requirements of the EP Act, or that area is surrendered.

**PRCP7** By **1 December 2024**, or prior to significant disturbance as per condition **PRCP1** (whichever is the earlier), the holder must submit a PRCP amendment application to the administering authority which:

i) Proposes monitoring locations and hydrogeological units to replace all 'TBD' values in **Attachment 6 - Groundwater Monitoring Locations**; and

ii) Considers the requirements of the administering authority's, or its successor's, most recent edition of the Guideline: "Using monitoring data to assess the groundwater quality and potential environmental impacts" (DES, 2021).

**PRCP8** The holder must provide to the Department, bore specific limits for quality characteristics identified in PRCP schedule **Attachment 7 - Groundwater Quality Limits** before completion of the first rehabilitation milestone due on **31 December 2026**.

**PRCP9** Groundwater monitoring must demonstrate the baseline groundwater quality is within the trigger values listed in **Attachment 7 - Groundwater Quality Limits** at the locations listed in **Attachment 6 – Groundwater Monitoring Locations** for a minimum of 5 consecutive years after achievement of the final rehabilitation milestone.

**PRCP10** Disturbance due to exploration activities in areas not authorised to be mined must be rehabilitated in accordance with the provisions detailed in the *'Eligibility criteria and standard conditions for exploration and mineral development projects'* or its successor, with the exception that land must be rehabilitated to a stable condition that achieves the relevant PMLU as indicated by Figure 1 Final Site Design. Stable condition is defined by s111A of the EP Act. Stable condition is defined by s111A of the EP Act.

**PRCP11** Monitoring and maintenance must be carried out 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 PRCP schedule.

Note: The areas prescribed for each rehabilitation area and that depicted in the figures of this schedule provide for areas of buffer in which the activities may occur provided for flexibility. Where there is an inconsistency in the areas or locations depicted in the environmental authority **P-EA-100265081** and this PRCP Schedule, the environmental authority prevails to the extent of the inconsistency. The total area of authorised disturbance is that prescribed in **Table A1 – Maximum disturbance area** for each mining area of environmental authority **P-EA-100265081**.

**END OF CONDITIONS**

## Section B - Final site design and reference maps

### Figure 1 – Final Site Design

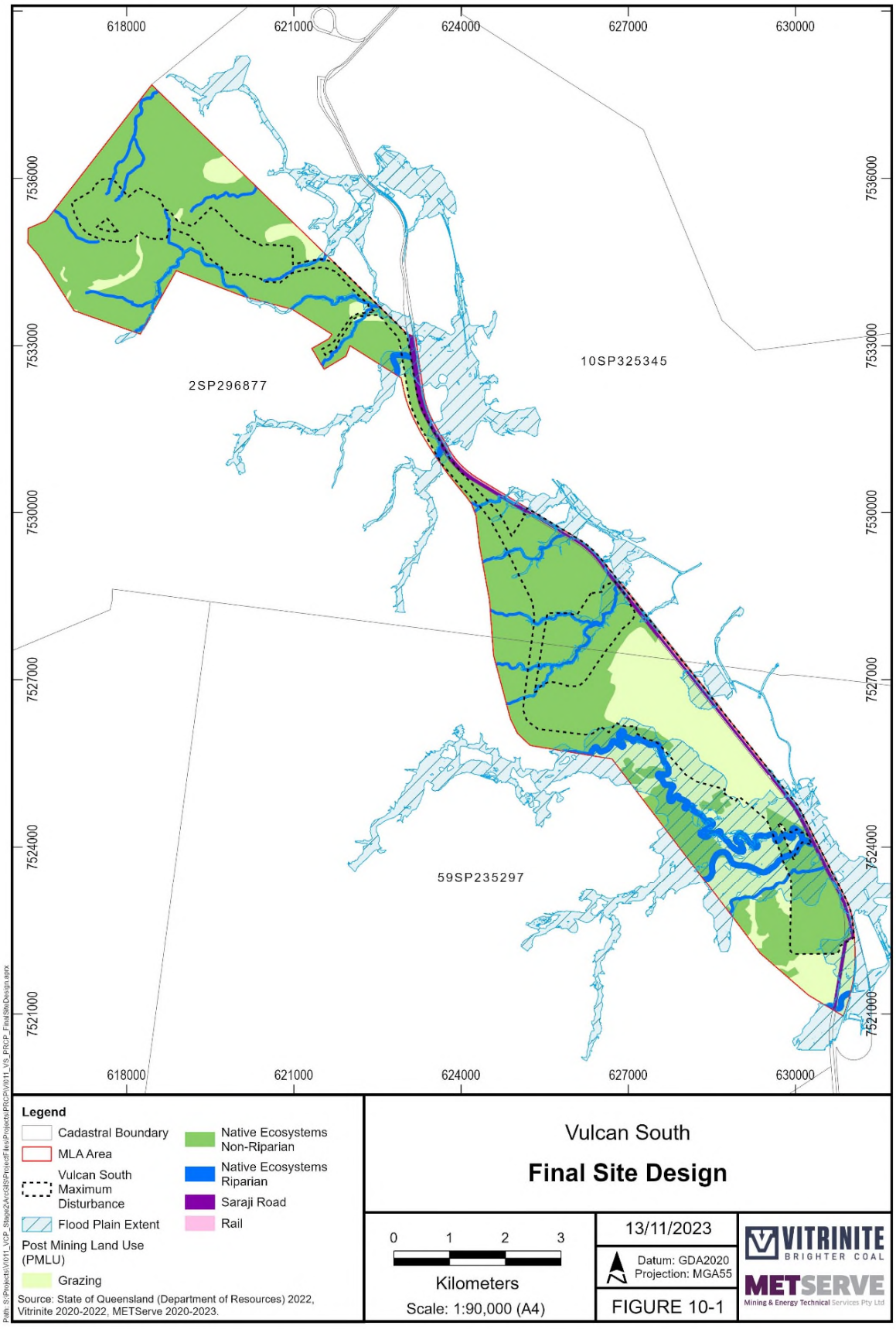


**Figure 2 – Rehabilitation areas – northern section**

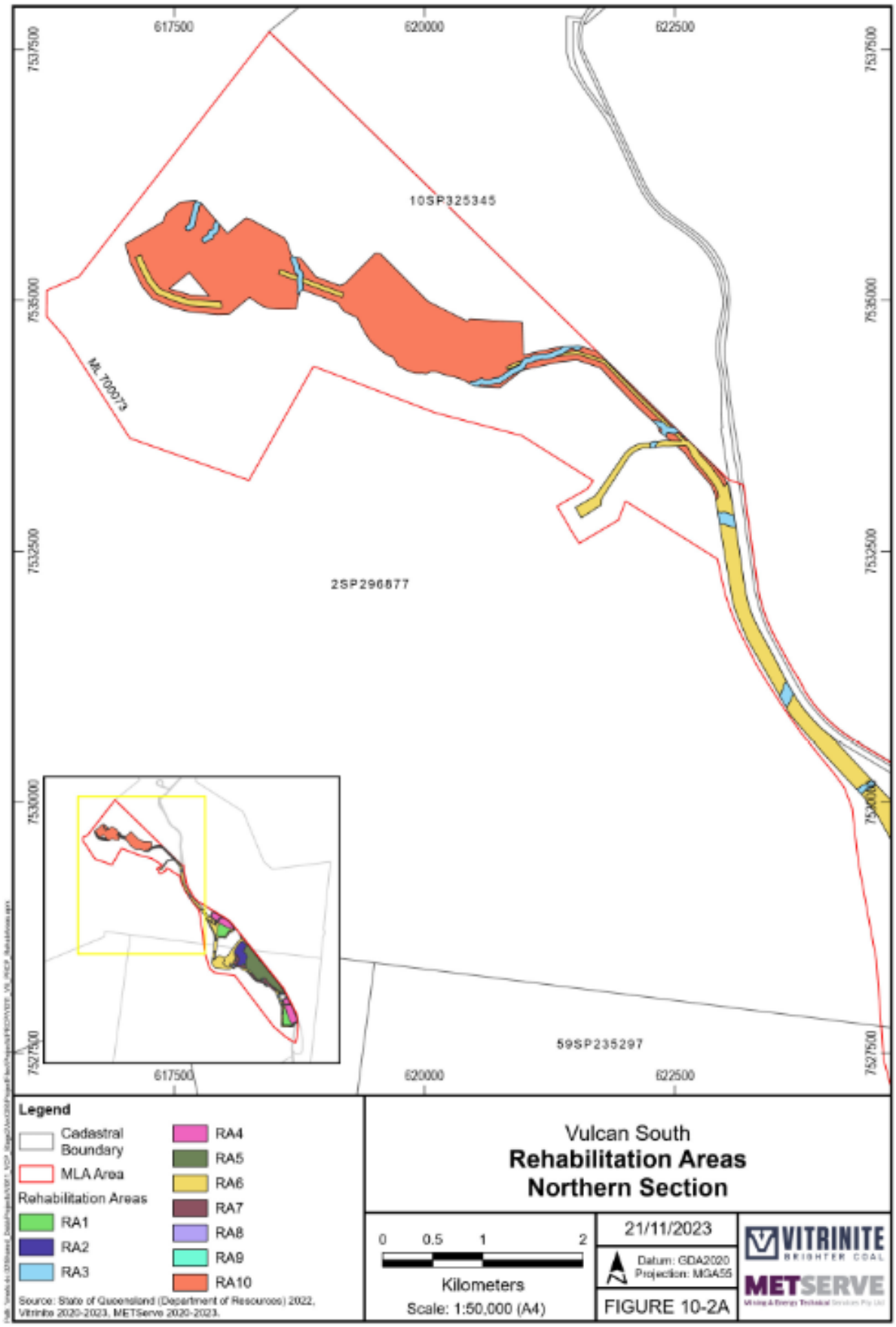


**Figure 3 – Rehabilitation areas – southern section**

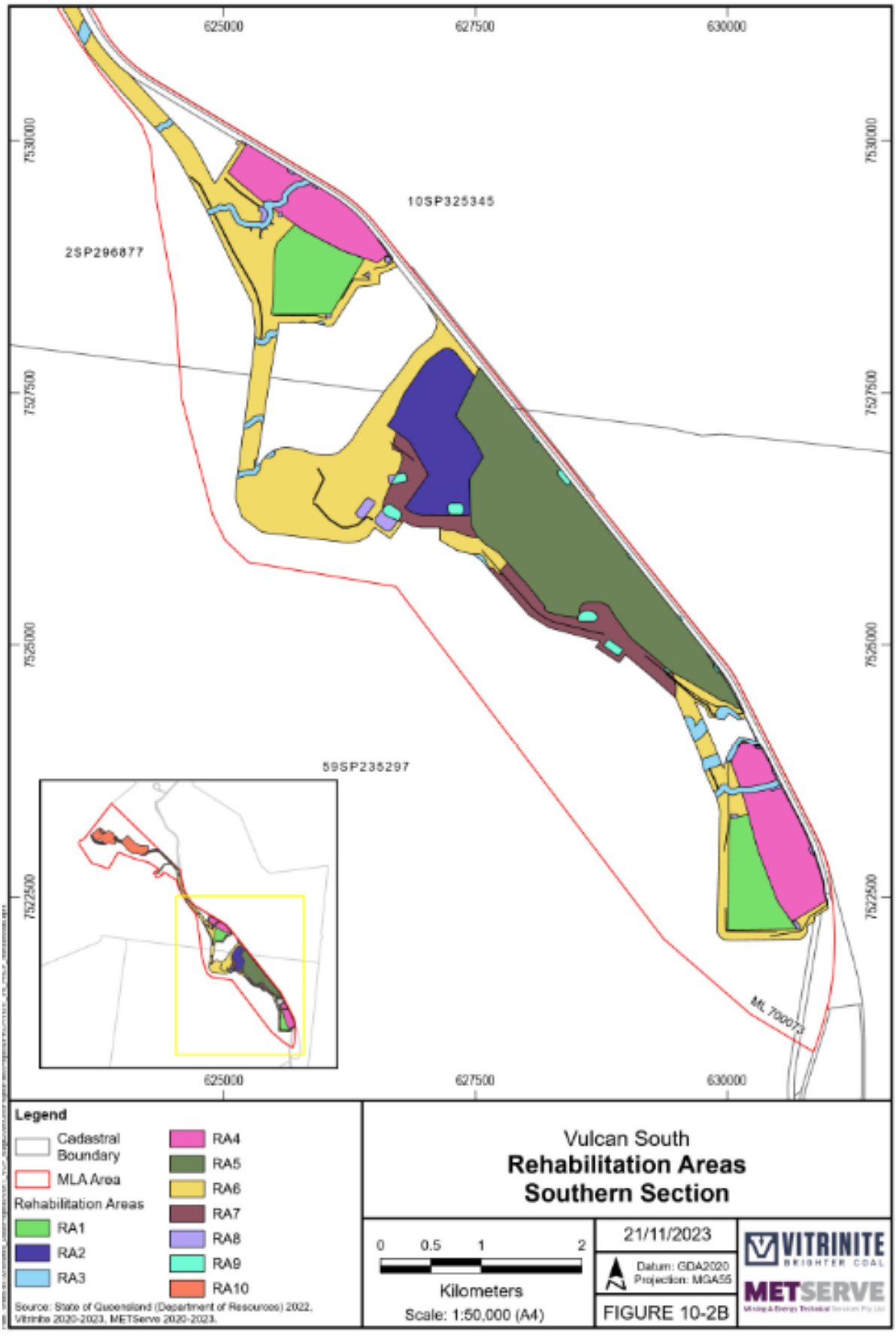
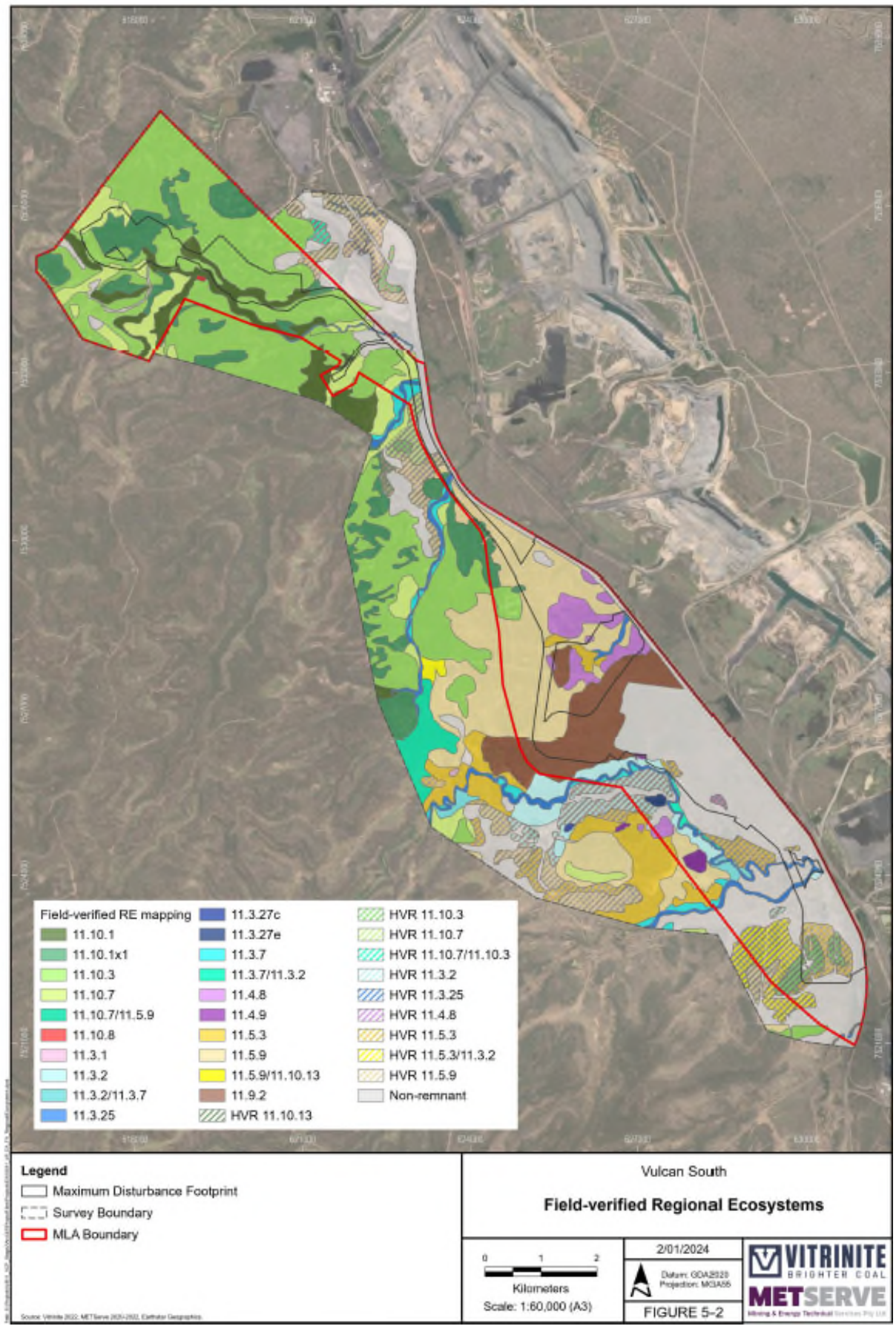


**Figure 4 – Spatial extent of regional ecosystems to be established post-mining**



## Section C – Post mining land uses

### (RA1) Rehabilitation area 1

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA1 | | | | | | | | | |
| **Relevant activities** | North and South Ex-Pit Waste Rock Dump | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 100.6 ha | | | | | | | | | |
| **Commencement of first milestone: RM3** | 1-Aug-26 | | | | | | | | | |
| **PMLU** | Native Ecosystem (RE11.4.8, 11.5.3 and 11.10.3) | | | | | | | | | |
| **Date area is available** | 31/07/26 | 10/12/27 | 31/07/30 | 10/12/31 | 10/12/32 | 10/12/38 | | | | |
| **Cumulative area available (ha)** | 56 | 56 | 100.6 | 100.6 | 100.6 | 100.6 | | | | |
| **Milestone completed by** | 10/12/27 | 10/12/28 | 10/12/31 | 10/12/32 | 10/12/38 | 10/12/42 | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM3** | 56 | 56 | 100.6 | | | | | | | |
| **RM4** | | 56 | 56 | 100.6 | | | | | | |
| **RM5** | | 56 | 56 | 100.6 | 100.6 | | | | | |
| **RM6** | | | | | 56 | 100.6 | | | | |
| **RM10** | | | | | 56 | 100.6 | | | | |

**(RA2) Rehabilitation area 2**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA2 | | | | | | | | | |
| **Relevant activities** | Main Ex-pit Waste Rock Dump | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 91.1 ha | | | | | | | | | |
| **Commencement of first milestone: RM3** | 1-Aug-27 | | | | | | | | | |
| **PMLU** | Low-intensity cattle grazing | | | | | | | | | |
| **Date area is available** | 31/07/27 | 10/12/28 | 10/12/29 | | | | | | | |
| **Cumulative area available (ha)** | 91.1 | 91.1 | 91.1 | | | | | | | |
| **Milestone completed by** | 10/12/28 | 10/12/29 | 10/12/39 | | | | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM3** | 91.1 | | | | | | | | | |
| **RM4** | | 91.1 | | | | | | | | |
| **RM5** | | 91.1 | | | | | | | | |
| **RM6** | | | 91.1 | | | | | | | |
| **RM10** | | | 91.1 | | | | | | | |

**(RA3) Rehabilitation area 3**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA3 | | | | | | | | | |
| **Relevant activities** | Reinstated Watercourses | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 46.1 | | | | | | | | | |
| **Commencement of first milestone: RM3** | 1-Aug-34 | | | | | | | | | |
| **PMLU** | Native ecosystems – riparian (RE11.3.25) | | | | | | | | | |
| **Date area is available** | 31/07/34 | 31/07/35 | 10/12/36 | 10/12/37 | 10/12/46 | | | | | |
| **Cumulative area available (ha)** | 23.1 | 46.1 | 46.1 | 46.1 | 46.1 | | | | | |
| **Milestone completed by** | 10/12/35 | 10/12/36 | 10/12/37 | 10/12/46 | 10/12/47 | | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM3** | 23.1 | 46.1 | | | | | | | | |
| **RM4** | | 23.1 | 46.1 | | | | | | | |
| **RM5** | | 23.1 | 46.1 | 46.1 | | | | | | |
| **RM8** | | | | 23.1 | 46.1 | | | | | |
| **RM9** | | | | 23.1 | 46.1 | | | | | |

**(RA4) Rehabilitation area 4**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA4 | | | | | | | | | |
| **Relevant activities** | North and South In-pit Dumps | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 135.4 ha | | | | | | | | | |
| **Commencement of first milestone: RM2** | 1-Aug-25 | | | | | | | | | |
| **PMLU** | Native ecosystems (RE11.4.8, 11.5.3 and 11.10.3) | | | | | | | | | |
| **Date area is available** | 31/07/25 | 31/07/26 | 31/07/30 | 31/07/31 | 10/12/32 | 10/12/33 | 10/12/37 | 10/12/41 | 10/12/42 | |
| **Cumulative area available (ha)** | 32.7 | 62.1 | 92.4 | 135.4 | 135.4 | 135.4 | 135.4 | 135.4 | 135.4 | |
| **Milestone completed by** | 10/12/26 | 10/12/27 | 10/12/31 | 10/12/32 | 10/12/33 | 10/12/37 | 10/12/41 | 10/12/42 | 10/12/43 | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM2** | 32.7 | 62.1 | 92.4 | 135.4 | | | | | | |
| **RM3** | 32.7 | 62.1 | 92.4 | 135.4 | | | | | | |
| **RM4** | | 32.7 | 62.1 | 92.4 | 135.4 | | | | | |
| **RM5** | | 32.7 | 62.1 | 92.4 | 135.4 | 135.4 | 135.4 | 135.4 | | |
| **RM7** | | | | | | 32.7 | 62.1 | 92.4 | 135.4 | |
| **RM9** | | | | | | 32.7 | 62.1 | 92.4 | 135.4 | |

**(RA5) Rehabilitation area 5**

| Post-mining land uses (PMLU) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA5 | | | | | | | | | | |
| **Relevant activities** | Main In-pit Waste Rock Dump | | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 264.7 ha | | | | | | | | | | |
| **Commencement of first milestone: RM2** | 1-Aug-26 | | | | | | | | | | |
| **PMLU** | Low-intensity cattle grazing | | | | | | | | | | |
| **Date area is available** | 31/07/26 | 31/07/28 | 31/07/29 | 31/07/30 | 31/07/31 | 10/12/32 | 10/12/33 | 10/12/39 | 10/12/40 | 10/12/41 | 10/12/42 |
| **Cumulative area available (ha)** | 39.9 | 134.8 | 178.6 | 220.4 | 264.7 | 264.7 | 264.7 | 264.7 | 264.7 | 264.7 | 264.7 |
| **Milestone completed by** | 10/12/27 | 10/12/29 | 10/12/30 | 10/12/31 | 10/12/32 | 10/12/33 | 10/12/39 | 10/12/40 | 10/12/41 | 10/12/42 | 10/12/43 |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | | |
| **RM2** | 39.9 | 134.8 | 178.6 | 220.4 | 264.7 | | | | | | |
| **RM3** | 39.9 | 134.8 | 178.6 | 220.4 | 264.7 | | | | | | |
| **RM4** | | 39.9 | 134.8 | 178.6 | 220.4 | 264.7 | | | | | |
| **RM5** | | 39.9 | 134.8 | 178.6 | 220.4 | 264.7 | 264.7 | 264.7 | 264.7 | 264.7 | |
| **RM6** | | | | | | | 39.9 | 134.8 | 178.6 | 220.4 | 264.7 |
| **RM10** | | | | | | | 39.9 | 134.8 | 178.6 | 220.4 | 264.7 |

**(RA6) Rehabilitation area 6**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA6 | | | | | | | | | |
| **Relevant activities** | Previously wooded infrastructure areas (infrastructure, haul roads, offices, stockpiles, train load-out, rail loop CHPP, MIA and magazine) | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 398.7 | | | | | | | | | |
| **Commencement of first milestone: RM1** | 1-Aug-32 | | | | | | | | | |
| **PMLU** | Native ecosystems (RE11.9.2, 11.5.9, 11.5.3, 11.10.1, 11.10.3, and 11.4.8) | | | | | | | | | |
| **Date area is available** | 31/07/32 | 31/07/33 | 31/07/34 | 31/07/35 | 10/12/36 | 10/12/37 | 10/12/44 | 10/12/45 | 10/12/46 | |
| **Cumulative area available (ha)** | 99.7 | 199.4 | 299.1 | 398.7 | 398.7 | 398.7 | 398.7 | 398.7 | 398.7 | |
| **Milestone completed by** | 10/12/33 | 10/12/34 | 10/12/35 | 10/12/36 | 10/12/37 | 10/12/44 | 10/12/45 | 10/12/46 | 10/12/47 | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM1** | 99.7 | 199.4 | 299.1 | 398.7 | | | | | | |
| **RM2** | 99.7 | 199.4 | 299.1 | 398.7 | | | | | | |
| **RM3** | 99.7 | 199.4 | 299.1 | 398.7 | | | | | | |
| **RM4** | | 99.7 | 199.4 | 299.1 | 398.7 | | | | | |
| **RM5** | | 99.7 | 199.4 | 299.1 | 398.7 | | | | | |
| **RM7** | | | | | | 99.7 | 199.4 | 299.1 | 398.7 | |
| **RM9** | | | | | | 99.7 | 199.4 | 299.1 | 398.7 | |

**(RA7) Rehabilitation area 7**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA7 | | | | | | | | | |
| **Relevant activities** | Previously cleared infrastructure areas (haul roads) | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 68.0 ha | | | | | | | | | |
| **Commencement of first milestone: RM1** | 1-Aug-35 | | | | | | | | | |
| **PMLU** | Low-intensity cattle grazing | | | | | | | | | |
| **Date area is available** | 31/07/35 | 10/12/36 | 10/12/37 | | | | | | | |
| **Cumulative area available (ha)** | 68 | 68 | 68 | | | | | | | |
| **Milestone completed by** | 10/12/36 | 10/12/37 | 10/12/47 | | | | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM1** | 68 | | | | | | | | | |
| **RM2** | 68 | | | | | | | | | |
| **RM3** | 68 | | | | | | | | | |
| **RM4** | | 68 | | | | | | | | |
| **RM5** | | 68 | | | | | | | | |
| **RM6** | | | 68 | | | | | | | |
| **RM10** | | | 68 | | | | | | | |

**(RA8) Rehabilitation area 8**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA8 | | | | | | | | | |
| **Relevant activities** | Water management infrastructure in previously wooded areas | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 14.1 ha | | | | | | | | | |
| **Commencement of first milestone: RM1** | 1-Aug-32 | | | | | | | | | |
| **PMLU** | Native ecosystems - non-riparian (RE11.9.2, 11.5.9, 11.5.3, 11.10.1, 11.10.3,11.4.8, and 11.3.25) | | | | | | | | | |
| **Date area is available** | 31/07/32 | 10/12/33 | 10/12/34 | | | | | | | |
| **Cumulative area available (ha)** | 14.1 | 14.1 | 14.1 | | | | | | | |
| **Milestone completed by** | 10/12/33 | 10/12/34 | 10/12/44 | | | | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM1** | 14.1 | | | | | | | | | |
| **RM2** | 14.1 | | | | | | | | | |
| **RM3** | 14.1 | | | | | | | | | |
| **RM4** | | 14.1 | | | | | | | | |
| **RM5** | | 14.1 | | | | | | | | |
| **RM7** | | | 14.1 | | | | | | | |
| **RM9** | | | 14.1 | | | | | | | |

**(RA9) Rehabilitation area 9**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA9 | | | | | | | | | |
| **Relevant activities** | Water management infrastructure in previously cleared areas | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 10.1 ha | | | | | | | | | |
| **Commencement of first milestone: RM1** | 1-Aug-32 | | | | | | | | | |
| **PMLU** | Low-intensity cattle grazing | | | | | | | | | |
| **Date area is available** | 31/07/32 | 10/12/32 | 10/12/33 | | | | | | | |
| **Cumulative area available (ha)** | 10.1 | 10.1 | 10.1 | | | | | | | |
| **Milestone completed by** | 10/12/32 | 10/12/33 | 10/12/43 | | | | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM1** | 10.1 | | | | | | | | | |
| **RM2** | 10.1 | | | | | | | | | |
| **RM3** | 10.1 | | | | | | | | | |
| **RM4** | | 10.1 | | | | | | | | |
| **RM5** | | 10.1 | | | | | | | | |
| **RM6** | | | 10.1 | | | | | | | |
| **RM10** | | | 10.1 | | | | | | | |

**(RA10) Rehabilitation area 10**

| Post-mining land uses (PMLU) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rehabilitation area** | RA10 | | | | | | | | | |
| **Relevant activities** | Highwall Mining Area (bench, dams, ex-pit WRD) | | | | | | | | | |
| **Total rehabilitation area size (ha)** | 266.1 ha | | | | | | | | | |
| **Commencement of first milestone: RM1** | 1-Aug-25 | | | | | | | | | |
| **PMLU** | Native ecosystems - non-riparian (RE11.10.1 and 11.10.3) | | | | | | | | | |
| **Date area is available** | 31/07/25 | 10/12/26 | 10/12/27 | | | | | | | |
| **Cumulative area available (ha)** | 266.1 (48.0)* | 266.1 (48.0)* | 266.1 (48.0)* | | | | | | | |
| **Milestone completed by** | 10/12/26 | 10/12/27 | 10/12/37 | | | | | | | |
| **Milestone Reference** | **Cumulative area achieved (ha)** | | | | | | | | | |
| **RM1** | 266.1 | | | | | | | | | |
| **RM2** | 266.1 | | | | | | | | | |
| **RM3** | 266.1 | | | | | | | | | |
| **RM4** | | 266.1 | | | | | | | | |
| **RM5** | | 266.1 | | | | | | | | |
| **RM7** | | | 266.1 | | | | | | | |
| **RM9** | | | 266.1 | | | | | | | |

*266.1ha is the disturbance area of the entire highwall trial area (including all underground panels). 48ha is the surface disturbance area associated with the highwall trial area.

**Rehabilitation area milestones**

| Milestone reference | Rehabilitation milestone | Milestone criteria |
|---|---|---|
| **RM1** | Infrastructure decommissioning and removal (RA6, RA7, RA8, RA9 and RA10) | With the exception of any infrastructure to remain as part of the post-mining land use (PMLU) or where infrastructure is agreed to be retained by the landholder as evidenced by a signed landholder agreement, the following are complete:<br>RM1.1 All services disconnected, terminated and removed;<br>RM1.2 All hardstand, concrete areas and road materials (bitumen, gravel) removed;<br>RM1.3 All pipelines (above- and below- ground) drained and removed;<br>RM1.4 All fencing that is not part of the post mining land use (PMLU) removed;<br>RM1.5 All buildings demolished and removed;<br>RM1.6 All machinery and equipment removed;<br>RM1.7 All surface water drainage infrastructure that is not required in the PMLU is removed;<br>RM1.8 All rubbish removed;<br>RM1.9 All waste is to be transported, disposed of, and handled in accordance with relevant waste legislature; and<br>RM1.10 All drifts, shafts, tunnels, boreholes, and other openings to be sealed, and are geotechnically stable and certified by an appropriately qualified person (AQP). |
| **RM2** | Remediation of contaminated land (RA4, RA5, RA6, RA7, RA8, RA9 and RA10) | RM2.1 Detailed site investigation report, as required under the *Environmental Protection Act 1994* (EPA 1994), completed;<br>RM2.2 All contamination is remediated or removed from site;<br>RM2.3 Any contamination removed from site has been removed in accordance with relevant regulations; and<br>RM2.4 A contaminated land investigation document has been prepared by an approved auditor, containing a site suitability statement that states that land is not contaminated and is suitable to achieve the PMLU. |

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| **RM3** | Landform development and reshaping/reprofiling (RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9 and RA10) | RM3.1 All earthworks except topsoil handling and placement are complete;<br>RM3.2 Subsoil of a suitable quality, as signed-off by an AQP, has been applied, spread and compacted over RA2 (in-pit dumps) to the specified depth (minimum of 0.3 m) and design specifications;<br>RM3.3 All erosion and sediment control systems have been installed as per the construction design and are functioning properly as verified by an AQP;<br>RM3.4 The final landform surveyed is to be constructed as per the approved design plan;<br>RM3.5 Batters do not exceed a maximum slope of 15% and are stable as demonstrated by erosion modelling;<br>RM3.6 All areas of substantial surface cracking (vertosol soil types) or subsidence are remediated and no associated effects of erosion or changed surface water flow paths are evident;<br>RM3.7 Areas of surface ponding are remediated by re-profiling and ripping to be free draining;<br>RM3.8 All rehabilitation and associated works are to have ‘as-constructed’ plans prepared;<br>RM3.9 All pits are backfilled and are certified as geotechnically stable by an AQP;<br>RM3.10 Post-closure drainage channels are reinstated with similar geometry and vegetation characteristics to pre-mining drainage channels. This includes:<br>a) Pre-mining channel longitudinal slope and geometry to be reinstated; and<br>b) Channel and floodplain to function as a natural drainage line including similar geomorphic and vegetation characteristics to pre-mining conditions;<br>RM3.11 Permanent drainage channels to be designed in accordance with the Guideline: Works that interfere with water in a watercourse for a resource activity— watercourse diversions authorised under the *Water Act 2000*; and<br>RM3.12 All drainage channels and associated works are to have ‘as-constructed’ plans prepared. |

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| **RM4** | Surface preparation (RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9 and RA10) | RM4.1 Any erosion classified as 'moderate' or 'severe' as defined in **Attachment 1 - Erosion classification framework,** that occurs after the achievement of **RM3**, has been remediated prior to topsoil application;<br>RM4.2 All substantial surface cracks or subsidence evident after the achievement of RM3, have been remediated prior to topsoil application;<br>RM4.3 Areas of ponding that persist after the achievement of **RM3** have been remediated and are free draining prior to topsoil application;<br>RM4.4 Soil health and suitability is assessed and documented by an AQP to confirm topsoil is suitable for the PMLU and target vegetation establishment;<br>RM4.5 Prior to topsoil application, an assessment of the need for soil amelioration has been undertaken and soil ameliorants such as fertiliser, gypsum and/or organic matter have been applied at rates determined by an AQP;<br>RM4.6 A minimum of 0.25 m of topsoil suitable for the PMLU has been placed over all areas (except for RA10).<br>RM4.7 Topsoil (equivalent to a depth of 0.15 m) has been mixed with crushed rock to achieve a final depth of 0.25m and applied to RA10 as per final design specifications;<br>RM4.8 Organic mulch is applied at a rate of at least 5t/ha of hay or organic material on all slopes;<br>RM4.9 Topsoil to meet the following suitability targets:<br>a) pH in the range of 5.5 - 8.5 (average);<br>b) Electrical Conductivity (EC) ≤1.5 dS/m (1,500 µS/cm); and<br>c) Exchangeable sodium percentage (ESP) <6%. |
| **RM5** | Revegetation (RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9, RA10) | RM5.1 Seeding is completed at an average rate of:<br>a) Grazing PMLU - 0.25 kg/ha for trees and shrubs, 13-15 kg/ha for grasses and 13-15 kg/ha for sterile cover crops;<br>b) Native ecosystem PMLU - 2-3 kg/ha for trees and shrubs, 9-11 kg/ha for grasses and 8-10 kg/ha for sterile cover crops; and<br>c) Native ecosystem – riparian PMLU – 2-3 kg/ha for trees and shrubs, 13-15 kg/ha for grasses and 13-15 kg/ha for sterile cover crops;<br>RM5.2 With the exception of a non-permanent cover crop species, the seed mix to satisfy **RM5.1** contains only those species listed in **Attachment 2 – Seed Mix Species List** for the relevant PMLU and reflect the |

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| | | regional ecosystem distribution spatially shown in **Figure 4 - Spatial extent of regional ecosystems to be established post-mining**;<br>RM5.3 Vegetation groundcover >40%;<br>RM5.4 Any species not establishing after seeding (as identified 12 months after seeding) have been planted as tubestock in RA2, RA3 and RA4 at a density suitable to establish the tree cover and shrub cover of the relevant PMLU; and<br>RM5.5 Supplementary seeding and tubestock planting completed within one year of sites failing to achieve vegetation establishment on initial attempt. |
| **RM6** | Land is suitable for the commencement of grazing (RA7 and RA9) | RM6.1 Perennial pasture cover >50%;<br>RM6.2 Rehabilitated areas are to have less than 0.2% cover of *Parthenium hysterophorus* AND rehabilitated areas are to have less than 0.1% cover of *Harrisia martinii* AND any invasive plants listed under the *Biosecurity Act 2014* are not to exceed densities of 1 individual per hectare, as confirmed by an AQP from annual monitoring;<br>RM6.3 All corrective actions recommended by an AQP in response to erosion or deficiencies in vegetation cover criteria have been implemented;<br>RM6.4 Rehabilitated areas are to have a land suitability class for cattle grazing of 3 or lower;<br>RM6.5 No active rill or gully erosion deeper than 30 cm present as stated in **Attachment 1 - Erosion classification framework**;<br>RM6.6 Trees of the target species, as identified in **Attachment 2 – Seed Mix Species List** are, on average, at least 4 m tall;<br>RM6.7 Stock water sources have been installed and meet the approved water criteria for stock use (EC <7800 µS/cm);<br>RM6.8 Stock fencing installation is complete; and<br>RM6.9 Rehabilitation is non-polluting of surface water and achieves surface water runoff water quality criteria of:<br>a) pH: 6.5-8.5;<br>b) TSS <110 mg/L; and<br>c) EC: <310 µS/cm. |

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| **RM7** | Establishment of target vegetation in non-riparian areas. (RA1, RA4, RA6, RA8 and RA10) | RM7.1 Rehabilitated areas are to have less than 0.2% cover of *Parthenium hysterophorus* AND rehabilitated areas are to have less than 0.1% cover of *Harrisia martinii* AND any invasive plants listed under the *Biosecurity Act 2014* are not to exceed densities of 1 individual per hectare, as confirmed by an AQP from annual monitoring;<br>RM7.2 Vegetation groundcover >50%;<br>RM7.3 A BioCondition assessment is undertaken by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual';<br>RM7.4 A rehabilitation performance assessment completed under **RM7.3** achieves a score of at least 40/80 of the reference site based on the benchmark criteria in **Attachment 3 – BioCondition Benchmark Criteria** for the relevant native ecosystem PMLU;<br>RM7.5 Rehabilitation is non-polluting of surface water and achieves water quality criteria of:<br>a) pH: 6.5-8.5;<br>b) TSS 110 mg/L; and<br>c) EC: <310 µS/cm;<br>RM7.6 Soil testing indicates the following parameters are met:<br>a) Rootzone EC <1.5 dS/m (1,500 µS/cm);<br>b) Soil pH <8.5 and >5.5 (average) as measured at any part of the root zone;<br>c) Exchangeable Sodium Percentage (ESP%) <6% (at 0-10cm depth). |
| **RM8** | Establishment of target vegetation in riparian areas (RA3) | RM8.1 Rehabilitated areas are to have less than 0.2% cover of *Parthenium hysterophorus* AND rehabilitated areas are to have less than 0.1% cover of *Harrisia martinii* AND any invasive plants listed under the *Biosecurity Act 2014* are to be <1 individual per hectare, as confirmed by an AQP from annual monitoring;<br>RM8.2 Vegetation groundcover > 50%;<br>RM8.3 *Eucalyptus camaldulensis* is to constitute 33% of the total basal area of woody vegetation;<br>RM8.4 A BioCondition assessment is undertaken by an AQP using the methodology outlined in the latest version of the Queensland's Herbarium 'BioCondition Assessment Manual'; |

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| | | RM8.5 A rehabilitation performance assessment completed under **RM8.4** must achieve a score of 40/80 of the reference site based on the benchmark criteria in **Attachment 3 – BioCondition Benchmark Criteria** for the native ecosystem - riparian PMLU (RE11.3.25);<br>RM8.6 Rehabilitation is non-polluting of surface water and achieves water quality criteria of:<br>a) pH: 6.5-8.5;<br>b) TSS 110 mg/L; and<br>c) EC: <310 µS/cm;<br>RM8.7 Soil testing indicates the following parameters are met:<br>a) Rootzone EC <1.5 dS/m (1,500 µS/cm);<br>b) Soil pH <8.5 and >5.5 (average) as measured at any part of the root zone;<br>c) Exchangeable Sodium Percentage (ESP%) <6% (at 0-10cm depth). |
| **RM9** | Achievement of native vegetation land use with a stable condition (RA1, RA3, RA4, RA6, RA8 and RA10) | RM9.1 All corrective actions recommended by an AQP in response to erosion or deficient vegetation cover have been implemented;<br>RM9.2 No evidence of erosion classified as 'moderate' or 'severe' as defined by **Attachment 1 - Erosion classification framework**;<br>RM9.3 An AQP has certified that the final landform is geotechnically stable;<br>RM9.4 Native ecosystems are to be substantially established spatially as per **Figure 4 - Spatial extent of regional ecosystems to be established post-mining** for the relevant PMLU;<br>RM9.5 A BioCondition assessment has been undertaken by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual';<br>RM9.6 A rehabilitation performance assessment completed under **RM9.5** achieves a score of 60/80 based on the benchmark criteria in **Attachment 3 – BioCondition Benchmark Criteria** for the relevant PMLU;<br>RM9.7 Groundcover is to remain above 80% on all slopes with a gradient higher than 10%, and 50% on slopes with a gradient lower than 10%;<br>RM9.8 Erosion monitoring has been completed and the average erosion rate is <5 t/ha/year;<br>RM9.9 No active rill or gully erosion deeper than 30cm present; |

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| | | RM9.10 Rehabilitated areas have less than 0.2% cover of *Parthenium hysterophorus* AND rehabilitated areas less than 0.1% cover of *Harrisia martinii* AND any invasive plants listed under the *Biosecurity Act 2014* are not to exceed 1 individual per hectare, as confirmed by an AQP from annual monitoring;<br>RM9.11 At least 60% of established target species show natural recruitment;<br>RM9.12 Free draining landform and no cracks greater than 0.15 m deep;<br>RM9.13 The extent and frequency of surface cracking and ponding of the mined land is within 10% of that measured in adjacent unmined land;<br>RM9.14 Surface water quality results monitored monthly during flow at, but not limited to, downstream locations specified in **Attachment 4 - Surface Water Monitoring Locations**, must not exceed the parameters and limits defined in **Attachment 5 - Surface Water Quality Limits** for a minimum of 5 consecutive years;<br>RM9.15 Soil testing indicates the following parameters are met:<br>a) Rootzone EC <1.5 dS/m (1,500 µS/cm);<br>b) Soil pH <8.5 and >5.5 (average) as measured at any part of the root zone;<br>c) Exchangeable Sodium Percentage (ESP%) <6% (at 0-10cm depth). |
| **RM10** | Achievement of cattle grazing land use with a stable condition (RA2, RA5, RA7 and RA9) | RM10.1 All corrective actions recommended by an AQP in response to erosion or deficient vegetation cover have been implemented;<br>RM10.2 No evidence of erosion classified as 'moderate' or 'severe' as defined by **Attachment 1 - Erosion classification framework**;<br>RM10.3 An AQP has certified that the final landform is geotechnically stable;<br>RM10.4 The land suitability class of rehabilitated land is to be 3 or lower for cattle grazing;<br>RM10.5 >6 species of perennial pasture species present and perennial grass cover >30%;<br>RM10.6 Groundcover is to remain above 80% on all slopes with a gradient higher than 10%, and 70% on slopes with a gradient lower than 10%;<br>RM10.7 Erosion monitoring has been completed and the average erosion rate is <5 t/ha/year;<br>RM10.8 No active rill or gully erosion deeper than 30 cm present; |

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| | | RM10.9 Rehabilitated areas have less than 0.2% cover of *Parthenium hysterophorus* AND rehabilitated areas are to have less than 0.1% cover of *Harrisia martinii* AND any invasive plants listed under the *Biosecurity Act 2014* do not exceed 1 individual per hectare, as confirmed by an AQP from annual monitoring;<br>RM10.10 Surface water quality results monitored monthly during flow at, but not limited to, downstream locations specified in **Attachment 4 - Surface Water Monitoring Locations**, must not exceed the parameters and limits defined in **Attachment 5 - Surface Water Quality Limits** for a minimum of 5 consecutive years;<br>RM10.11 Soil testing indicates the following parameters are met:<br>a) Rootzone EC <1.5 dS/m (1,500 µS/cm);<br>b) Soil pH <8.5 and >5.5 (average) as measured at any part of the root zone;<br>c) Exchangeable Sodium Percentage (ESP%) <6% (at 0-10cm depth). |

## Attachments

## Attachment 1 - Erosion classification framework

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

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

## Attachment 2 – Seed Mix Species List

This attachment articulates the list of species which are permitted to be included in the seed mix for Rehabilitation Areas (RAs). For RAs, the list of species is further specific to the PMLU to be achieved.

For RAs, the seed mix should be selected and apportioned with appreciation for the BioCondition benchmarks at later milestones. Hence, the proportion of each species (kg/ha) within the seed mix should reflect the relative cover and frequency of the relevant Regional Ecosystems (REs) Technical Description (https://publications.qld.gov.au/dataset/re-technical-descriptions).

Despite introduced species occurring in the RE Technical Descriptions (due to data being collected at disturbed sites or poor condition sites), introduced species must not be included in the seed mix. Finally, the seed mix must not include Indian Couch *Bothriochloa pertusa* or *Seca Stylosanthes* spp, both of which have significant impacts on surrounding native remnant vegetation.

**Table 1. Seed Mix Species List**

| **11.4.8 - Eucalyptus cambageana woodland to open forest with Acacia harpophylla or A. argyrodendron on Cainozoic clay plains** |
|---|
| **Trees**<br><br>*Dominant: Acacia harpophylla, Eucalyptus cambageana*<br><br>*Frequent: Eucalyptus cambageana, Acacia harpophylla, Eucalyptus populnea, Eucalyptus thozetiana, Terminalia oblongata subsp. Oblongata, Eremophila mitchellii, Lysiphyllum carronii*<br><br>**Shrubs**<br><br>*Dominant: Geijera parviflora, Acacia harpophylla, Eremophila mitchellii, Alectryon diversifolius, Carissa ovata*<br><br>*Frequent*: *Eremophila mitchellii, Acacia harpophylla, Alectryon diversifolius, Carissa ovata, Atalaya hemiglauca, Flindersia dissosperma, Geijera parviflora, Apophyllum anomalum, Alphitonia excelsa, Capparis lasiantha, Clematicissus opaca, Enchylaena tomentosa, Eucalyptus cambageana, Terminalia oblongata*<br><br>**Ground**<br><br>*Dominant: Chloris ventricose, Enteropogon ramosus, Sporobolus scabridus, Paspalidium caespitosum, Trianthema triquetra*<br><br>*Frequent Grasses: Sporobolus caroli, Enteropogon acicularis, Enteropogon ramosus, Cyperus gracilis, Eragrostis lacunaria, Sporobolus scabridus, Aristida personata, Chloris ventricose, Dactyloctenium radulans, Enneapogon lindleyanus, Paspalidium caespitosum, Ancistrachne uncinulata, Aristida indet., Aristida jerichoensis, Astrebla squarrosa, Cymbopogon refractus, Cyperus indet., Eriochloa pseudoacrotricha, Fimbristylis dichotoma, Heteropogon contortus, Panicum effusum, Paspalidium constrictum, Paspalidium distans* |
| **11.5.3 - Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces** |
| **Trees**<br><br>*Dominant: Eucalyptus populnea, Eucalyptus melanophloia*<br><br>*Frequent: Eucalyptus populnea Eucalyptus melanophloia Eucalyptus brownii, Corymbia clarksoniana, Eucalyptus crebra, Ventilago viminalis, Eremophila mitchellii*<br><br>**Shrubs**<br><br>*Dominant: Eremophila mitchellii Erythroxylum australe, Grewia latifolia*<br><br>*Frequent: Eremophila mitchellii, Erythroxylum australe, Grewia latifolia, Acacia excelsa, Atalaya hemiglauca, Carissa ovata, Eucalyptus populnea, Acacia sericophylla, Archidendropsis basaltica, Capparis lasiantha,* |

*Cassia brewsteri, Denhamia cunninghamii, Eucalyptus brownii, Eucalyptus melanophloia, Flindersia dissosperma, Lysiphyllum carronii, Psydrax oleifolia, Carissa lanceolata*

**Ground**

*Dominant: Themeda triandra, Aristida calycina, Chrysopogon fallax, Fimbristylis dichotoma*

*Frequent Grasses: Chrysopogon fallax, Fimbristylis dichotoma, Heteropogon contortus, Aristida calycina, Digitaria brownii, Panicum effusum, Themeda triandra, Cyperus fulvus, Dichanthium sericeum, Eragrostis lacunaria, Eragrostis sororia, Aristida jerichoensis, Bothriochloa decipiens, Bothriochloa decipiens var. decipiens, Cymbopogon bombycinus, Cyperus gracilis, Digitaria ammophila, Enneapogon lindleyanus, Enneapogon virens, Eragrostis brownii, Eragrostis leptostachya, Eulalia aurea, Sporobolus caroli, Tragus australianus, Triodia pungens*

**11.10.1 - Corymbia citriodora woodland on coarse-grained sedimentary rocks**

**Trees**

*Dominant: Corymbia citriodora subsp. Citriodora, Corymbia citriodora subsp. Variegate, Eucalyptus crebra*

*Frequent: Corymbia citriodora subsp. Variegate, Eucalyptus crebra, Corymbia citriodora subsp. Citriodora, Corymbia citriodora, Angophora leiocarpa, Eucalyptus fibrosa subsp. Nubilis, Eucalyptus longirostrata, Eucalyptus melanophloia*

**Shrubs**

*Dominant: Acacia leiocalyx subsp. Leiocalyx, Alphitonia excelsa*

*Frequent: Acacia leiocalyx subsp. leiocalyx, Alphitonia excelsa, Corymbia citriodora subsp. Variegate, Eucalyptus crebra, Petalostigma pubescens, Acacia longispicata*

**Ground**

*Dominant: Cleistochloa subjuncea, Aristida indet., Eremochloa bimaculata, Arundinella nepalensis, Themeda triandra*

*Frequent Grasses: Panicum effusum, Cymbopogon refractus, Arundinella nepalensis, Eremochloa bimaculata, Themeda triandra, Entolasia stricta, Fimbristylis dichotoma, Aristida caput-medusae, Scleria sphacelate, Aristida indet., Eragrostis elongata, Aristida ramosa, Cleistochloa subjuncea, Aristida queenslandica, Cyperus gracilis, Heteropogon contortus, Digitaria diffusa, Digitaria indet., Scleria mackaviensis, Chrysopogon fallax, Paspalidium criniforme, Digitaria breviglumis, Eulalia aurea, Setaria surgens, Sporobolus elongatus, Aristida calycina var. calycina, Aristida queenslandica var. queenslandica, Bothriochloa decipiens var. decipiens*

**11.10.3 - Acacia catenulata or A. shirleyi open forest on coarse-grained sedimentary rocks. Crests and scarps**

**Trees**

*Dominant: Eucalyptus crebra, Acacia shirleyi, Alphitonia excelsa*

*Frequent: Eucalyptus crebra, Corymbia citriodora, Acacia shirleyi*

**Shrubs**

*Dominant: Acacia shirleyi, Alphitonia excelsa*

*Frequent: Alphitonia excelsa, Acacia shirleyi, Alstonia constricta, Erythroxylum sp. (Splityard Creek L.Pedley 5360), Erythroxylum australe*

**Ground**

*Dominant: Cleistochloa subjuncea Scleria sphacelate, Entolasia stricta, Eragrostis lacunaria, Thyridolepis xerophila*

*Frequent: Aristida caput-medusae, Panicum effusum, Aristida queenslandica var. dissimilis, Entolasia stricta, Eragrostis lacunaria, Cleistochloa subjuncea Scleria sphacelate, Thyridolepis xerophila, Digitaria parviflora Eragrostis sororia, Setaria dielsii, Aristida gracilipes, Aristida jerichoensis var. subspinulifera, Cymbopogon refractus Digitaria ramularis, Paspalidium distans, Paspalidium gracile, Aristida jerichoensis var. jerichoensis, Calyptochloa gracillima subsp. gracillima, Cyperus gracilis, Digitaria breviglumis, Schoenus kennyi*

**11.5.9 - Eucalyptus crebra and other Eucalyptus spp. and Corymbia spp. woodland on Cainozoic sand plains and/or remnant surfaces**

**Trees**

*Dominant: Eucalyptus crebra, Corymbia clarksoniana, Acacia leptostachya, Bursaria incana, Petalostigma banksii*

*Frequent: Eucalyptus crebra, Corymbia clarksoniana, Casuarina cristata*[1]*, Petalostigma pubescens, Acacia cowleana, Acacia leptostachya, Alphitonia pomaderroides Antidesma parvifolium, Bursaria incana, Gardenia indet., Geijera salicifolia Grevillea glauca, Larsenaikia ochreata, Petalostigma banksii Siphonodon indet.*

**Shrubs**

*Dominant: Acacia conferta, Acacia disparrima subsp. Calidestris, Acacia cowleana, Gardenia indet., Petalostigma pubescens, Grewia retusifolia Petalostigma banksia, Eucalyptus crebra, Persoonia falcata*

*Frequent: Erythroxylum austral, Acacia conferta, Acacia cowleana, Acacia disparrima subsp. calidestris, Acacia holosericea, Alphitonia pomaderroides, Breynia oblongifolia, Coelospermum reticulatum, Gardenia indet., Grevillea parallela, Petalostigma pubescens, Eucalyptus crebra, Grewia retusifolia, Acacia leptostachya, Corymbia clarksoniana, Indigofera australis, Persoonia falcata, Petalostigma banksia*

**Ground**

*Dominant: Eremochloa bimaculate, Brunoniella acaulis, Desmodium brachypodum, Aristida holathera var. holathera*

*Frequent Grasses: Alloteropsis semialata Aristida calycina var. calycina, Chrysopogon fallax, Eragrostis spartinoides, Eremochloa bimaculata Panicum effusum, Ancistrachne uncinulata, Aristida holathera var. holathera, Calyptochloa cylindrosperma, Ectrosia indet., Heteropogon contortus, Mnesithea Formosa, Paspalidium indet., Scleria brownii, Themeda triandra*

**11.9.2 - Eucalyptus melanophloia +/- E. orgadophila woodland on fine-grained sedimentary rocks**

**Trees**

*Dominant: Eucalyptus orgadophila, Eucalyptus melanophloia*

*Frequent: Eucalyptus melanophloia Eucalyptus orgadophila, Acacia excelsa, Angophora subvelutina, Brachychiton populneus, Brachychiton populneus subsp. Populneus, Corymbia citriodora, Corymbia erythrophloia, Corymbia trachyphloia, Eremophila mitchellii, Eucalyptus populnea, Lysiphyllum carronii*

**Shrubs**

*Dominant: Carissa ovata Archidendropsis basaltica, Alectryon diversifolius, Ehretia membranifolia*

*Frequent: Alectryon diversifolius, Archidendropsis basaltica, Carissa ovata, Ehretia membranifolia, Atalaya hemiglauca, Breynia oblongifolia, Denhamia cunninghamii, Dodonaea filifolia, Eremophila mitchellii,*

[1] *Casuarina cristata* is not listed in the technical description for 11.5.9; however, it has been included as it occurs locally and is an important species for the Glossy Black-cockatoo.

*Erythroxylum austral, Eucalyptus melanophloia, Geijera parviflora, Hovea longipes, Petalostigma pubescens, Senna indet., Xanthorrhoea glauca subsp. glauca*

**Ground**

*Dominant: Aristida calycina var. calycina, Enneapogon lindleyanus, Bothriochloa bladhii, Aristida indet.*

*Frequent Grasses: Enneapogon lindleyanus, Heteropogon contortus, Cymbopogon refractus, Themeda triandra, Ancistrachne uncinulata, Aristida calycina var. calycina, Aristida indet., Bothriochloa bladhii, Bothriochloa decipiens var. decipiens, Chloris ventricose, Cyperus indet., Enneapogon virens, Eragrostis lacunaria, Eulalia aurea, Panicum effusum, Paspalidium indet., Abildgaardia ovata, Aristida acuta, Aristida caput-medusae, Aristida holathera var. holathera, Aristida latifolia, Aristida leptopoda, Aristida personata, Bothriochloa bladhii subsp. bladhii, Bothriochloa ewartiana, Bulbostylis barbata, Chloris divaricate, Cyperus bifax, Cyperus gilesii, Cyperus gracilis, Dactyloctenium radulans Dichanthium sericeum subsp. sericeum, Digitaria indet., Enneapogon indet., Enneapogon polyphyllus, Enteropogon acicularis, Eragrostis indet., Eragrostis sororia, Eriochloa crebra, Eriochloa pseudoacrotricha, Heteropogon indet., Imperata cylindrica, Microlaena stipoides, Panicum decompositum, Paspalidium criniforme, Paspalidium distans, Paspalidium globoideum, Paspalidium gracile, Sarga leiocladum, Scleria brownii, Sporobolus caroli, Sporobolus creber, Themeda avenacea, Tragus australianus, Urochloa foliosa, Urochloa indet.*

**11.3.25 - Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines**

**Trees**

*Dominant: Eucalyptus camaldulensis, Eucalyptus tereticornis, Corymbia tessellaris*

*Frequent: Eucalyptus tereticornis, Eucalyptus camaldulensis, Corymbia tessellaris, Angophora floribunda, Eucalyptus coolabah, Eucalyptus populnea, Acacia salicina, Acacia stenophylla*

**Shrubs**

*Frequent: Acacia salicina, Ficus opposite, Alphitonia excelsa, Melaleuca trichostachya*

**Ground**

*Dominant: Arundinella nepalensis, Heteropogon contortus, Themeda triandra, Lomandra longifolia*

*Frequent grasses: Cyperus gracilis, Heteropogon contortus, Dichanthium sericeum subsp. sericeum, Paspalidium distans, Arundinella nepalensis, Bothriochloa bladhii subsp. bladhii, Cyperus indet., Paspalidium jubiflorum, Themeda triandra, Aristida personata, Eriochloa crebra, Chrysopogon filipes, Dichanthium sericeum, Eriochloa procera, Sporobolus mitchellii, Capillipedium spicigerum, Eulalia aurea, Imperata cylindrica, Leptochloa digitata, Panicum effusum, Anthosachne scabra, Bothriochloa bladhii, Cymbopogon refractus, Eragrostis leptostachya, Panicum laevinode, Sporobolus creber, Urochloa foliosa*

**Low-intensity grazing**

**Grasses**

*Ancistrachne uncinate*

*Bothriochloa ewartiana*

*Chloris divaricate*

*Chloris ventricose*

*Cymbopogon refractus*

*Dichanthium sericeum*

*Themeda triandra*

Japanese Millet - sterile hybrid

Silk Sorghum

## Attachment 3 – BioCondition Benchmark Criteria

This attachment articulates the benchmark criteria to be achieved for each assessable attribute. The benchmark criteria for each RA is determined by the corresponding PMLU. Benchmark criteria and assessable attributes are derived from the Queensland Government's BioCondition benchmark database[2].

**Table 1. Pre-mining Regional ecosystems references – Native ecosystem**

| Relevant PMLU | Native Vegetation | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BioCondition Assessable Attributes | 11.4.8 | | | 11.5.3 | | | 11.9.2 | | | 11.10.1 | | | 11.10.3 | | | 11.5.9 | | |
| | 40/80 | 60/80 | 80/80 | 40/80 | 60/80 | 80/80 | 40/80 | 60/80 | 80/80 | 40/80 | 60/80 | 80/80 | 40/80 | 60/80 | 80/80 | 40/80 | 60/80 | 80/80 |
| Recruitment (tree species) | 1 | 2 | 3 | 3 | 4 | 6 | 1 | 1 | 2 | 2 | 3 | 4 | 1 | 2 | 3 | 1 | 2 | 3 |
| Non-native plant cover (%) | max. 10 | max. 5 | 0 | max. 10 | max. 5 | 0 | max. 10 | max. 5 | 0 | max. 10 | max. 5 | 0 | max. 10 | max. 5 | 0 | max. 10 | max. 5 | 0 |
| Tree (native) species richness* | 1 | 2 | 3 | 3 | 4 | 6 | 1 | 1 | 2 | 2 | 3 | 4 | 1 | 2 | 3 | 1 | 2 | 3 |
| Shrub (native) species richness* | 5 | 7 | 10 | 3 | 4 | 6 | 5 | 7 | 10 | 2 | 3 | 4 | 2 | 3 | 4 | 3 | 4 | 6 |
| Grass (native) species richness* | 4 | 7 | 9 | 3 | 4 | 6 | 3 | 5 | 7 | 4 | 7 | 9 | 3 | 5 | 7 | 4 | 7 | 9 |
| Forb/other (native) species richness | 3 | 5 | 7 | 5 | 7 | 10 | 6 | 9 | 12 | 8 | 13 | 17 | 4 | 7 | 9 | 5 | 8 | 11 |
| Tree canopy cover (%) | 8 | 13 | 17 | 8 | 12 | 16 | 7 | 11 | 15 | 12 | 18 | 24 | 7 | 11 | 15 | 12 | 19 | 25 |
| Native perennial grass cover (%) | 10 | 15 | 20 | 9 | 14 | 19 | 9 | 13 | 18 | 8 | 12 | 16 | 11 | 17 | 23 | 13 | 19 | 26 |
| Litter and other vegetation cover (%) | 18 | 28 | 37 | 10 | 15 | 20 | 15 | 22 | 30 | 25 | 37 | 50 | 16 | 24 | 32 | 15 | 22 | 30 |

*Species richness must be based on species that occur in the RE technical description (refer Attachment 2).

[2] Source: *https://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks*

**Table 2. Pre-mining Regional ecosystems references – Native ecosystem riparian**

| Relevant PMLU | Native Vegetation – Riparian | | |
|---|---|---|---|
| **BioCondition Assessable Attributes** | **11.3.25** | | |
| | **40/80** | **60/80** | **80/80** |
| Recruitment (tree species) | 2 | 3 | 4 |
| Non-native plant cover (%) | max. 10 | max. 5 | 0 |
| Tree (native) species richness* | 2 | 3 | 4 |
| Shrub (native) species richness* | 2 | 3 | 4 |
| Grass (native) species richness* | 4 | 6 | 8 |
| Forb/other (native) species richness | 6 | 10 | 13 |
| Tree canopy cover (%) | 17 | 25 | 34 |
| Native perennial grass cover (%) | 17 | 26 | 35 |
| Litter and other vegetation cover (%) | 10 | 16 | 21 |

*Species richness must be based on species that occur in the RE technical description (refer Attachment 2).

## Attachment 4 - Surface Water Monitoring Locations

| Station ID | Previous Station ID | Catchment Area | Latitude (GDA2020) | Longitude (GDA2020) | Description |
|---|---|---|---|---|---|
| ***Upstream sites*** | | | | | |
| DL2_US | N/A | Boomerang Creek | 22.290841264° S | 148.154357187° E | Drainage line 2 upstream of the highwall mining area |
| DL3_ US | N/A | Boomerang Creek | 22.305612596° S | 148.192716185° E | Drainage line 3 upstream of the haul road |
| DL4_US | N/A | Boomerang Creek | 22.323035473° S | 148.200252458° E | Drainage line 4 at the upstream mining lease boundary |
| DL6_US | N/A | East Creek | 22.339508200° S | 148.207957289° E | Drainage line 6 at the upstream mining lease boundary |
| DL7_US | N/A | East Creek | 22.347211456° S | 148.209392813° E | Drainage line 7 at the upstream mining lease boundary |
| HCN_US | N/A | Hughes Creek | 22.370485469° S | 148.226638033° E | Hughes Creek north tributary approximately 5.5 km upstream of Saraji Road |
| HC_US | VSW5 | Hughes Creek | 22.395927439° S | 148.224656137° E | Hughes Creek approximately 2.8 km upstream of Saraji Road |
| DL8_US | N/A | Hughes Creek | 22.395784122° S | 148.251629364° E | Drainage line 8 approximately 2.2 km upstream of Saraji Road |
| BC1_US | VSW6 | Hughes Creek | 22.411388907° S | 148.269449617° E | Barrett Creek upstream of Saraji |
| ***Downstream sites*** | | | | | |
| DD1_US | VSW1 | Boomerang Creek | 22.276596290° S | 148.174514955° E | Diversion bund approximately |
| DD1_DS | VSW2 | Boomerang Creek | 22.301050508° S | 148.195240117° E | Drainage line 2, downstream of the confluence of existing diversion drain |
| DL2_DS | VSW11 | Boomerang Creek | 22.298264498° S | 148.189625245° E | Drainage line 2 upstream of confluence of existing diversion drain |

| | | | | | |
|---|---|---|---|---|---|
| DL3_DS | VSW3 | Hughes Creek | 22.306311857° S | 148.194663612° E | Minor drainage line, upstream of confluence of Drainage Line 2 |
| DL4_DS | VESW4 | Hughes Creek | 22.321553686° S | 148.200307744° E | Drainage line 4 upstream of the confluence of Boomerang Creek |
| DL6_DS | VSW9 | East Creek | 22.334779125° S | 148.221868903° E | Drainage line 6, at the downstream mining lease boundary |
| DL7_DS1 | VSW7 | East Creek | 22.343101091° S | 148.231039608° E | Drainage line 7, at the downstream mining lease boundary |
| HC_DS1 | VSW4 | Hughes Creek | 22.384885209° S | 148.266275740° E | Hughes Creek at the downstream mining lease boundary |
| DL8_DS | VSW10 | Hughes Creek | 22.388240114° S | 148.268093290° E | Drainage line 8 at the downstream mining lease boundary |

## Attachment 5 - Surface Water Quality Limits

| Quality characteristic (units) | Limit | Comment on limit |
|---|---|---|
| pH | 6.5-8.5 | EPP WQO |
| Electrical Conductivity (µS/cm) | Baseflow: <720<br>Medium flow: <500<br>High flow: <250 | EPP WQO |
| Turbidity (NTU) | 50 | EPP WQO |
| Suspended Solids (mg/L) | 55 | EPP WQO |
| Sulphate as SO4 (mg/L) | 25 | EPP WQO |
| Aluminium - dissolved (µg/L) | 160 | Locally derived |
| Arsenic - dissolved (µg/L) | 13 | ANZG 2018 |
| Boron - dissolved (µg/L) | 940 | ANZG 2018 |
| Cadmium - dissolved (µg/L) | 0.2 | ANZG 2018 |
| Cobalt - dissolved (µg/L) | 1.4 | ANZG 2018 |
| Chromium - dissolved (µg/L) | 1 | ANZG 2018 |
| Copper - dissolved (µg/L) | 1.4 | ANZG 2018 |
| Lead - dissolved (µg/L) | 3.4 | ANZG 2018 |
| Mercury – dissolved (µg/L) | 0.6 | EPP WQO |
| Molybdenum - dissolved (µg/L) | 34 | ANZG 2018 |
| Nickel - dissolved (µg/L) | 11 | ANZG 2018 |
| Selenium - dissolved (µg/L) | 5 | ANZG 2018 |
| Uranium - dissolved (µg/L) | 0.5 | ANZG 2018 |
| Vanadium - dissolved (µg/L) | 6 | ANZG 2018 |
| Zinc - dissolved (µg/L) | 8 | ANZG 2018 |
| Ammonia (µg/L) | 900 | ANZG 2018 |
| Nitrate (µg/L) | 1100 | For aquatic ecosystem protection, based on ambient Qld WQ Guidelines (2006) for Total Nitrate |
| Total recoverable hydrocarbons (C6-C9) (µg/L) | 20 | For aquatic ecosystem protection, based on LOR for GCMS |
| Total recoverable hydrocarbons (C10-C36) (µg/L) | 100 | For aquatic ecosystem protection, based on LOR for GCMS |
| 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.
- Locally derived receiving waters trigger values have been proposed for the Project using the 80th percentile of recorded reference site data.

## Attachment 6 - Groundwater Monitoring Locations

| Monitoring location | Hydrogeological unit | Latitude | Longitude |
|---|---|---|---|
| MB01^ | DLL coal seam | 22.333428732° S | 148.220070636° E |
| MB01R* | DLL coal seam | 22.333428732° S | 148.220070636° E |
| MB06 | Weathered Permian | 22.360790237° S | 148.247150363° E |
| MB07 | Weathered Permian | 22.364540522° S | 148.250437058° E |
| MB08 | Weathered Permian | 22.357739524° S | 148.244501266° E |
| MB09 | DLL coal seam | 22.373728533° S | 148.258356674° E |
| MB10 | DLL coal seam | 22.360862044° S | 148.247209269° E |
| MB11 | DLL coal seam | 22.350287991° S | 148.237375642° E |
| MB12^ | Back Creek Group | 22.364028727° S | 148.215646464° E |
| MB12R* | Back Creek Group | 22.364028727° S | 148.215646464° E |
| MB14* | TBD | 22.384866461° S | 148.266362984° E |
| MB15* | TBD | 22.282575366° S | 148.151921075° E |
| MB16* | TBD | 22.288394573° S | 148.174332028° E |
| MB17* | TBD | 22.340395410° S | 148.213732530° E |
| MB18* | TBD | 22.402178167° S | 148.262216512° E |

GDA2020 MGAz55
* indicates bores to be installed
^indicates bore that require replacement

## Attachment 7 - Groundwater Quality Limits

| Parameter | Unit | Bores | Limit | Comment |
|---|---|---|---|---|
| **pH (field)** | **pH unit** | All bores | 5.5 - 8.0 | ANZG (2018) |
| ***Electrical Conductivity (field)** | **µS/cm** | MB01R^ | 16,000* | EPP WQO |
| | | MB07 | 5,791 | Site-specific 95th percentile |
| | | MB09 | 12,007 | Site-specific 95th percentile |
| | | MB10 | 4,102 | Site-specific 95th percentile |
| | | MB12 | 22,872 | Site-specific 95th percentile |
| | | MB12R^ | 16,000* | EPP WQO |
| | | MB14 | 16,000* | EPP WQO |
| | | MB15 | 16,000* | EPP WQO |
| | | MB16 | 16,000* | EPP WQO |
| | | MB17 | 16,000* | EPP WQO |
| | | MB18 | 16,000* | EPP WQO |
| ***Sulphate** | **mg/L** | MB01R^ | 398* | EPP WQO |
| | | MB07 | 707 | Site-specific 95th percentile |
| | | MB09 | 769 | Site-specific 95th percentile |
| | | MB10 | 418 | Site-specific 95th percentile |
| | | MB12 | 874 | Site-specific 95th percentile |
| | | MB12R^ | 398* | EPP WQO |
| | | MB14 | 398* | EPP WQO |
| | | MB15 | 398* | EPP WQO |
| | | MB16 | 398* | EPP WQO |
| | | MB17 | 398* | EPP WQO |
| | | MB18 | 398* | EPP WQO |
| **Dissolved Metals and metalloids** | | | | |
| **Aluminium** | **mg/L** | All bores | 0.055 | ANZG (2018) |
| **Arsenic** | **mg/L** | All bores | 0.013 | ANZG (2018) |
| **Barium** | **mg/L** | All bores | 0.10 | Site-specific 95th percentile (grouped) |
| **Boron** | **mg/L** | All bores | 0.66 | Site-specific 95th percentile (grouped) |
| **Cobalt** | **mg/L** | All bores | 0.004 | Site-specific 95th percentile (grouped) |
| **Copper** | **mg/L** | All bores | 0.0014 | ANZG (2018) |
| **Iron** | **mg/L** | MB01R^ | 0.246* | EPP WQO |
| | **mg/L** | MB07 | 0.46 | Site-specific 95th percentile |
| | **mg/L** | MB09 | 0.38 | Site-specific 95th percentile |
| | **mg/L** | MB10 | 0.2 | Site-specific 95th percentile |
| | **mg/L** | MB12 | 4.94# | Site-specific 95th percentile |
| | **mg/L** | MB12R^ | 0.246* | EPP WQO |
| | **mg/L** | MB14 | 0.246* | EPP WQO |
| | **mg/L** | MB15 | 0.246* | EPP WQO |

| | | | | |
|---|---|---|---|---|
| | **mg/L** | MB16 | 0.246* | EPP WQO |
| | **mg/L** | MB17 | 0.246* | EPP WQO |
| | **mg/L** | MB18 | 0.246* | EPP WQO |
| **Lead** | **mg/L** | All bores | 0.0034 | ANZG (2018) |
| **Mercury** | **mg/L** | All bores | 0.0006 | ANZG (2018) |
| **Molybdenum** | **mg/L** | All bores | 0.034 | ANZG (2018) |
| **Selenium** | **mg/L** | All bores | 0.005 | ANZG (2018) |
| **Strontium** | **mg/L** | MB01R^ | TBD | Site-specific 95th percentile |
| | | MB07 | 2.2 | Site-specific 95th percentile |
| | | MB09 | 5.7 | Site-specific 95th percentile |
| | | MB10 | 1.2 | Site-specific 95th percentile |
| | | MB12 | 8.4 | Site-specific 95th percentile |
| | | MB12R^ | TBD* | Site-specific 95th percentile |
| | | MB14 | TBD* | Site-specific 95th percentile |
| | | MB15 | TBD* | Site-specific 95th percentile |
| | | MB16 | TBD* | Site-specific 95th percentile |
| | | MB17 | TBD* | Site-specific 95th percentile |
| | | MB18 | TBD* | Site-specific 95th percentile |
| **Uranium** | **mg/L** | MB01R^ | 0.0005* | ANZG 2018 |
| | | MB07 | 0.003 | Site-specific 95th percentile |
| | | MB09 | 0.005 | Site-specific 95th percentile |
| | | MB10 | 0.0005* | ANZG 2018 |
| | | MB12 | 0.0005* | ANZG 2018 |
| | | MB12R^ | 0.0005* | ANZG 2018 |
| | | MB14 | 0.0005* | ANZG 2018 |
| | | MB15 | 0.0005* | ANZG 2018 |
| | | MB16 | 0.0005* | ANZG 2018 |
| | | MB17 | 0.0005* | ANZG 2018 |
| | | MB18 | 0.0005* | ANZG 2018 |
| **TRH (C6-C10)** | **µg/L** | All bores | <20 | LOR |
| **TRH (C10-40)** | **µg/L** | All bores | <50 | LOR |
| **Major Ions** | | | | |
| **Major ions (mg/L) (calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate)** | **mg/L** | All bores | For interpretation purposes only | |
| **Hardness** | **mg/L** | 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 are based on ‘dissolved’ measurements.

* Site-specific limits to be provided in accordance with condition PRCP8.

^ indicates replacement bores to be installed to replace dry bores and bores that require relocation due to mining activities.

[#] Requires additional investigated to ensure it is indicative of background conditions.

EPP WQO: Groundwater quality parameters derived from EPP (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),* Zone 34-deep (80th percentile).

**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.

**END OF PRCP SCHEDULE**