APPENDIX AC - DRAFT PROGRESSIVE REHABILITATION AND CLOSURE PLAN SCHEDULE

DRAFT PRCP schedule

Environmental Protection Act 1994

DRAFT PRCP schedule PRCP_EA#_V#

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_EA#_V#

PRCP schedule holder(s)

Name(s)	Registered address
Stanmore ID Extension Pty Ltd	Level 32, 12 Creek Street, Brisbane City, QLD 4000, Australia

Location details

Location(s)
ML 700081, ML 700082, ML 700083, ML 700084

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

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

Enquiries:
Business Centre Coal
Department of the Environment, Tourism, Science and Innovation
PO Box 3028, Emerald QLD 4720
Phone: (07) 4987 9320
Email: CRMining@des.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

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

Pursuant to section 285 of the EP Act:

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

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

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

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

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

  (b) A declaration by the authorised representative of the EA holder, for the audit report stating the EA holder –

  - Has not knowingly given false or misleading information to the rehabilitation auditor; and
  - has given all relevant information to the rehabilitation auditor.

An audit report for a PRCP schedule must be in the approved form, and include the following:

a) A statement about whether the holder has complied with the schedule during the audit period, including –
   - Details of actions the holder has taken, or failed to take, in relation to the rehabilitation milestones under the schedule; and
   - whether the holder has complied, or failed to comply, with conditions imposed on the schedule; and
   - whether information given to the administering authority under this Act about rehabilitation carried out under the schedule is accurate;

b) an assessment of whether the post-mining land use for land the subject of the schedule is likely to be achieved, having regard to the rehabilitation that has been and is to be carried out under the schedule;

c) recommendations about actions the holder should take to ensure rehabilitation milestones are achieved or conditions of the schedule are complied with;

d) the other information the administering authority considers necessary to decide whether to take action to amend the schedule under part 6 of the *Environmental Protection Act* 1994 (Qld) (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

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 -
    - Each rehabilitation milestone
    - When each rehabilitation milestone is to be achieved.

General Conditions

Condition Number	Condition
PRCP1	The holder must for each rehabilitation area, achieve the corresponding rehabilitation milestone criterion (milestone reference): (a) for the cumulative area available specified in this schedule; and (b) by the milestone completion date specified in this schedule.
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'; (b) describe in the notification why or why not it considers that it would be reasonable and appropriate to amend this schedule; and (c) unless otherwise agreed to by the administering authority in writing, amend this schedule in a way that maximises the progressive rehabilitation to a stable condition within the timeframe specified by the administering authority. <u>Notes</u>: Reference to "earlier than the nominated date in the schedule" means a date that is greater than 1 year prior to the date nominated in the schedule. The written notification must include precise details of the relevant land area and the date when that land became 'available' for rehabilitation' Assessment of land becoming available is undertaken on a nominally annual basis.
PRCP3	Where an area achieves a rehabilitation milestone, the holder must continue to achieve the milestone for that rehabilitation milestone until: (a) A progressive certification area has satisfied the provisions of section 318ZB (4) of the EP Act; and (b) A surrender is approved.

Condition Number	Condition
PRCP4	The holder must maintain a risk register that identifies the risks to not achieving: (a) a stable condition for post-mining land uses (PMLUs); and (b) how the risks are being managed or minimised
PRCP5	The risk register required by **PRCP4** must be reviewed every three years and include consideration of the outcomes of PRCP monitoring data.
PRCP6	The holder must carry out monitoring in accordance with: (a) any requirement under this schedule; and (b) as necessary to demonstrate achievement of each rehabilitation milestone criteria.
PRCP7	The holder must make and keep up to date any evidence and/or records on which the holder relies on to demonstrate the achievement of each rehabilitation milestone criteria in this schedule. Records must be sufficient to demonstrate that these rehabilitation achievements are maintained for the duration of the environmental authority.
PRCP8	Evidence and/or Records made under **PRCP7** must be provided to the administering authority in the specified format within 20 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 which includes achieving the relevant post-mining land use for the disturbance location as detailed in ***Figure 1:*** .
PRCP10	An up-to-date closure groundwater and water balance model (calibrated once data becomes available) must be maintained with predictions rerun at least every five years (or a date agreed with the administering authority), from the date of approval of the PRCP and within a year of any surrender application.
PRCP11	The holder must, prior to the completion of mining, submit to the administering authority updated long term post-mining prediction numerical modelling for drawdown and groundwater level elevations. The predictive groundwater modelling as per the Australian Groundwater Modelling Guidelines (current version), confirms: (a) The residual voids will not cause environmental harm through the release of contaminants from the void lakes post-closure; and (b) Groundwater drawdown will not negatively impact groundwater dependent ecosystems (GDEs) on or surrounding the site, in accordance with the methodology described in the groundwater dependent ecosystem monitoring and management plan.
PRCP12	The monitoring bores listed in **Appendix 3 – Groundwater Compliance Bores** must be installed within five years following approval of the PRCP.

Water Quality Conditions

Condition Number	Condition
PRCP13	Groundwater quality must be monitored quarterly at, but not limited to, the compliance bores specified in **Appendix 3 – Groundwater Compliance Bores**, and for all the quality characteristics listed in **Appendix 4 – Groundwater Quality Limits**.
PRCP14	Surface water quality must be monitored monthly during flow, but not limited to, the locations specified in **Appendix 1 – Receiving Environment Surface Water Monitoring Locations**.

Condition Number	Condition
PRCP15	The holder must ensure that any construction activities required to establish the approved post-mining land uses (PMLUs), including supporting infrastructure, earthworks, water management features, revegetation preparation, or operational requirements specific to a nominated PMLU, must not commence until: (a) The relevant Rehabilitation Area (RA) is available for rehabilitation, as defined in this schedule. (b) An AQP has confirmed in writing that the proposed construction activities are consistent with the approved PMLU design parameters. (c) An AQP has confirmed in writing that the proposed construction activities will support the achievement of a stable condition. (d) An AQP has confirmed in writing that the proposed construction activities will not compromise the ability to meet the associated rehabilitation milestones; and (e) Any prerequisite model updates, assessments or monitoring installations required by this schedule (e.g., hydrology, groundwater, landform stability, vegetation requirements) have been completed; and (f) The holder has notified the administering authority in writing at least 10 business days prior to commencing PMLU construction activities, providing a description of the works to commence. (g) The holder has notified the administering authority in writing at least 10 business days prior to commencing PMLU construction activities providing confirmation of AQP endorsement. (h) The holder has notified the administering authority in writing at least 10 business days prior to commencing PMLU construction activities, providing confirmation that commencement is consistent with this PRCP schedule.

END OF SECTION A

END OF PRCP SCHEDULE CONDITIONS

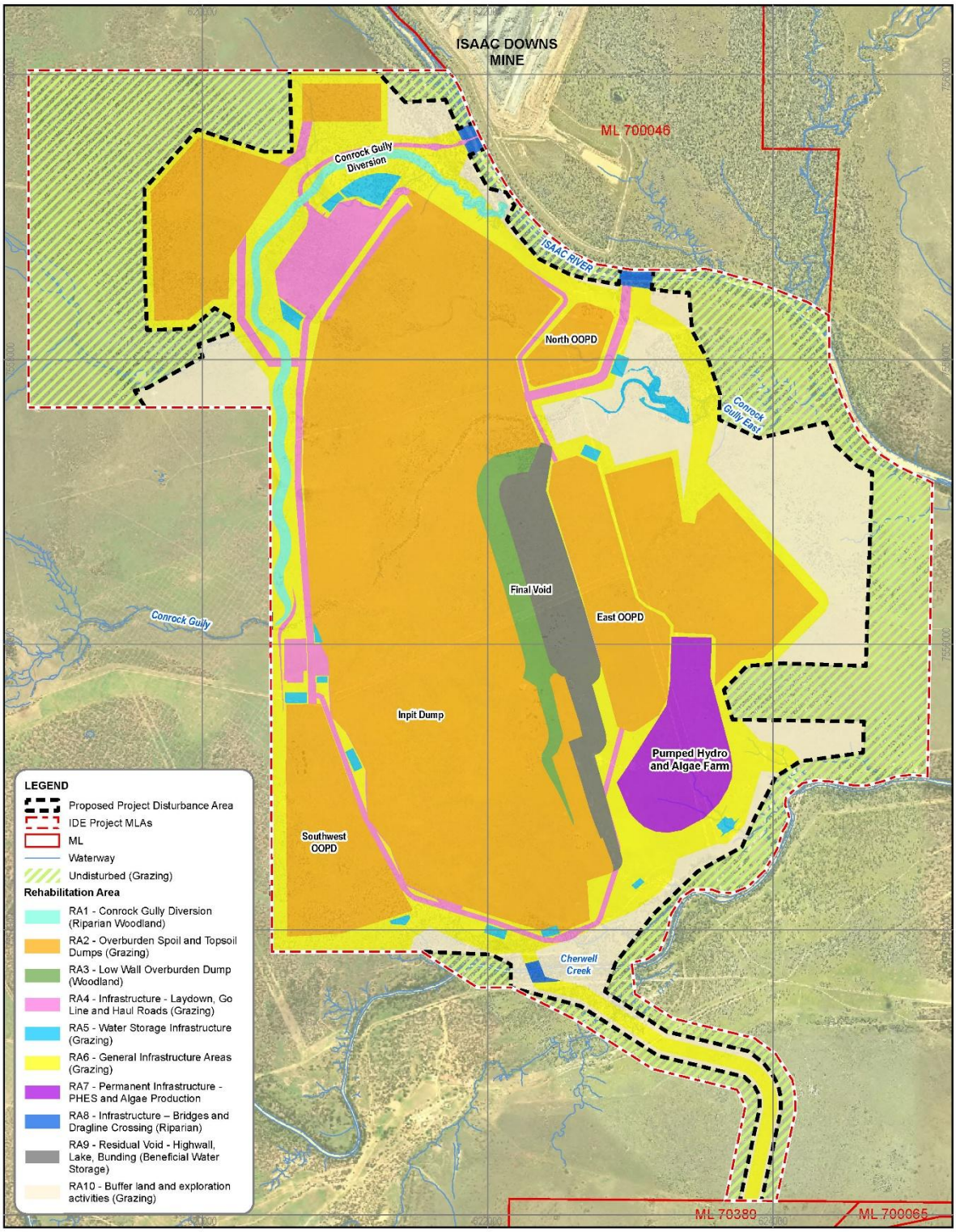
Section B – Definitions

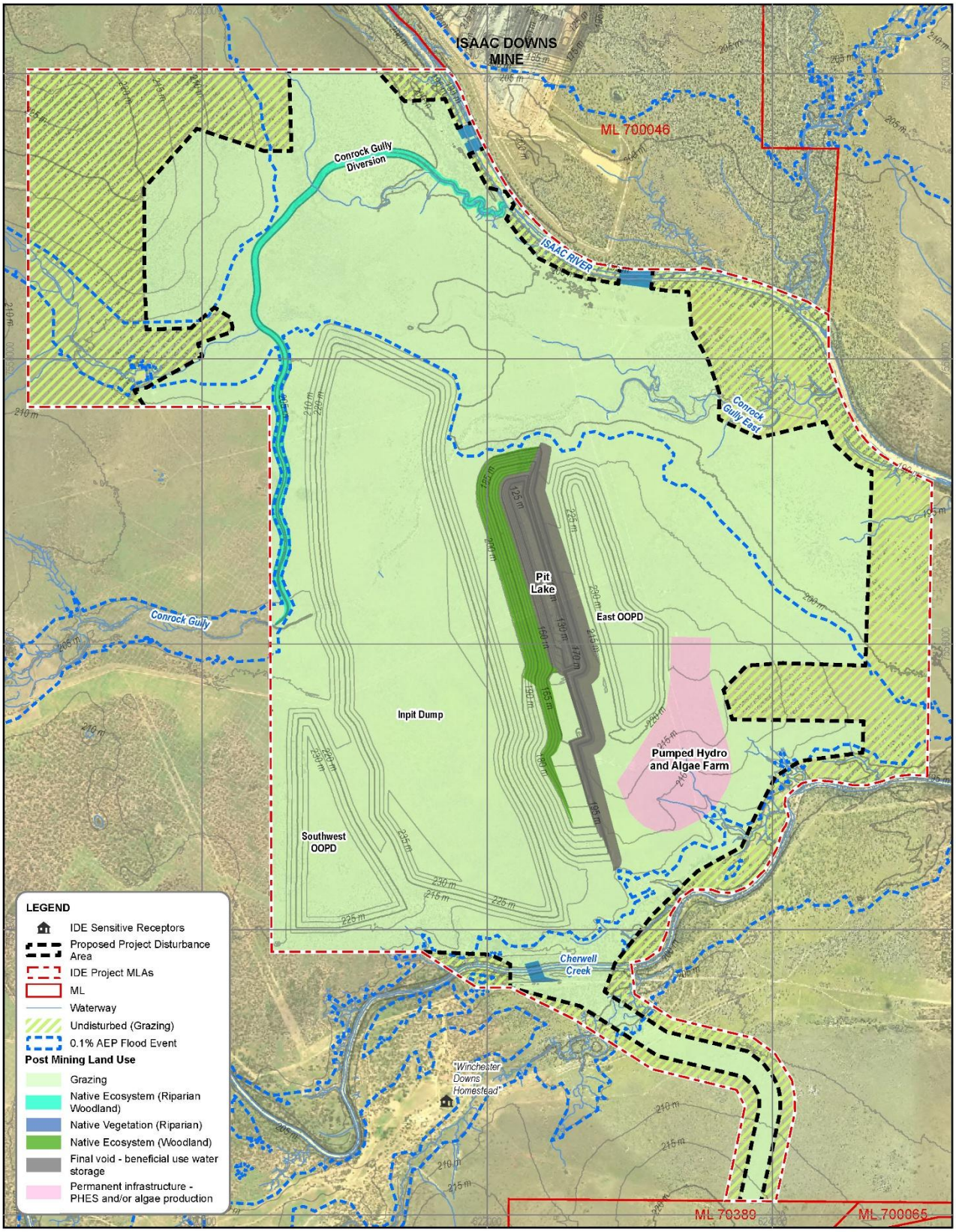
Acronym / Term	Definition
AQP	An appropriately qualified person is a person who has professional qualifications, training, skills and experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods or literature. An AQP must be a third party, being independent of the PRCP schedule holder, and has not previously provided advice on the matter the subject of the review.
Contaminants	A gas, liquid or solid; or an odour; or an organism (whether alive or dead), including a virus; or energy, including noise, heat, radioactivity and electromagnetic radiation; or a combination of contaminants.
EP Act	*Environmental Protection Act 1994*
Flood stress	Pressure on structures from rapid water rise, erosion, and saturation during extreme floods, risking instability.
GDEs	Groundwater dependent ecosystems
Growth media	All soil and soil-like material that will support the final vegetation cover. This includes the topsoil and subsoil where these materials are applied independently. Where the topsoil is incorporated into the underlying subsoil/spoil, topsoil refers to the depth of incorporation and the remaining depth is regarded as subsoil. The total depth of growth media is nominally considered to be the effective plant root zone
Gully	A gully is a channel excavated by water, more than 0.3 m deep.
Independently peer reviewed	A peer reviewer is a third-party to the PRCP schedule holder and the AQP whose report is being reviewed and substantiated. The peer reviewer shall also be an AQP and documentation provided must contain sufficient detail to allow for independent technical review and substantiation and provide and justify site-specific landform performance (SMART) criteria.
Major earthworks	Large scale movement of materials like soil, rock with use of machines to reshape, regrade the landscape, stabilise slopes to create safe, stable landform to sustain a designated post-mine land use or a non-use management area.
PMLU(s)	Post-mining land use(s)
Rehabilitation activity	Any activity that the holder is required to carry out in relation to this PRCP schedule.
RA(s)	Rehabilitation area(s)

Acronym / Term	Definition
Relevant material	Scientific information that supports this PRCP schedule, being not limited to, but may include: i. Modelling and technical assessments. ii. "As Constructed" reports. iii. All monitoring data. iv. Assessment of monitoring data. v. All maintenance records.
Rill	A rill is a channel excavated by water, less than 0.3 m deep.
Stable	In relation to land, means landform dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of environmental context, geotechnical stability, settlement and consolidation allowances, bearing capacity (trafficability), erosion resistance and geochemical stability with respect to seepage, leachate and related contaminant generation.
Stabilised	Refers to a landform where the soil is protected against the forces of wind and water, preventing further sediment movement or land degradation. A site is considered stabilised once permanent, self-sustaining vegetation or hard structures are successfully established.
Stable condition	see section 111A of the EP Act.
Vegetative groundcover	Plants, plant litter, tree leaf litter, twigs, mulch and woody debris capable of protecting the soil surface from erosion.

END OF SECTION B

Section C – RA Reference Map and Final Site Design





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Drawn:	Minserve
Source:	Minserve
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DISCLAIMER: Third party data sources are used in this map compilation. Minserve makes no warranty regarding this data's accuracy or currency.

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ISAAC DOWNS EXTENSION

Final Site Design Showing Post Mining Land Uses

Figure | **2**

Section D – Post-Mining Land Uses

Rehabilitation Area 1 (RA1)

Post-mining land use (PMLU)									
Rehabilitation area				RA1					
Relevant activities				Conrock Gully Diversion					
Total rehabilitation area size (ha)				34.4					
Commencement of first milestone: RM3				10/12/2028					
PMLU				Native Vegetation – Riparian Woodland					
Date area is available	10/12/2028	10/12/2029	10/12/2034	10/12/2039					
Cumulative area available (ha)	34.4	34.4	34.4	34.4					
Milestone completed by	10/12/2029	10/12/2034	10/12/2039	10/12/2044					
Milestone Reference	**Cumulative area achieved (ha)**								
RM3	34.4								
RM4	34.4								
RM5	34.4								
RM6	##	34.4	34.4						
RM7				34.4					
RM8				34.4					

Rehabilitation Area 2 (RA2)

Post-mining land use (PMLU)									
Rehabilitation area				RA2					
Relevant activities				Overburden (in-pit and out-of-pit) and Topsoil Dumps					
Total rehabilitation area size (ha)				1074.9					
Commencement of first milestone: RM1				10/12/2031					
PMLU				Grazing					
Date area is available	10/12/2031	10/12/2033	10/12/2038	10/12/2043	10/12/2048	10/12/2053	10/12/2058		
Cumulative area available (ha)	144.0	340.5	626.4	1074.9	1074.9	1074.9	1074.9		
Milestone completed by	10/12/2033	10/12/2038	10/12/2043	10/12/2048	10/12/2053	10/12/2058	12/12/2063		
Milestone Reference	**Cumulative area achieved (ha)**								
RM1	144.0	340.5	626.4	1074.9					
RM3	96.2	320.3	610.2	1074.9					
RM4	44.5	157.4	404.5	610.2	1074.9				
RM5	24.8	125.8	255.4	404.5	1074.9				
RM6		24.8	125.8	255.4	404.5	1074.9			
RM7			24.8	125.8	255.4	404.5	1074.9		
RM8							1074.9		

Rehabilitation Area 3 (RA3)

Post-mining land use (PMLU)									
Rehabilitation area	RA3								
Relevant activities	Low Wall Overburden Dump (in-pit)								
Total rehabilitation area size (ha)	36.9								
Commencement of first milestone: RM1	10/12/2043								
PMLU	Native Vegetation - Woodland								
Date area is available	10/12/2043	10/12/2048	10/12/2053	10/12/2058					
Cumulative area available (ha)	36.9	36.9	36.9	36.9					
Milestone completed by	10/12/2048	10/12/2053	10/12/2058	10/12/2063					
Milestone Reference	**Cumulative area achieved (ha)**								
RM1 ##	36.9								
RM3	36.9								
RM4	36.9								
RM5	36.9								
RM6		36.9	36.9						
RM7				36.9					
RM8				36.9					

Rehabilitation Area 4 (RA4)

Post-mining land use (PMLU)									
Rehabilitation area				RA4					
Relevant activities				Infrastructure					
Total rehabilitation area size (ha)				106.9					
Commencement of first milestone: RM1				10/12/2043					
PMLU				Grazing					
Date area is available	10/12/2043	10/12/2048	10/12/2053						
Cumulative area available (ha)	106.9	106.9	106.9						
Milestone completed by	10/12/2048	10/12/2053	10/12/2058						
Milestone Reference	**Cumulative area achieved (ha)**								
RM1	106.9								
RM2	106.9								
RM3	106.9								
RM4	106.9								
RM5	106.9								
RM6		106.9							
RM7			106.9						
RM8			106.9						

Rehabilitation Area 5 (RA5)

Post-mining land use (PMLU)									
Rehabilitation area				RA5					
Relevant activities				Water Storages					
Total rehabilitation area size (ha)				23.9					
Commencement of first milestone: RM1				10/12/2043					
PMLU				Grazing					
Date area is available	10/12/2043	10/12/2048	10/12/2053						
Cumulative area available (ha)	23.9	23.9	23.9						
Milestone completed by	10/12/2048	10/12/2053	10/12/2058						
Milestone Reference	**Cumulative area achieved (ha)**								
RM1	23.9								
RM2	23.9								
RM3	23.9								
RM4	23.9								
RM5	23.9								
RM6		23.9							
RM7			23.9						
RM8			23.9						

Rehabilitation Area 6 (RA6)

Post-mining land use (PMLU)									
Rehabilitation area				RA6					
Relevant activities				General Infrastructure Areas - Not Contaminated					
Total rehabilitation area size (ha)				368.8					
Commencement of first milestone: RM1				10/12/2038					
PMLU				Grazing					
Date area is available	10/12/2038	10/12/2043	10/12/2048	10/12/2053	10/12/2058				
Cumulative area available (ha)	75.0	155.0	368.8	368.8	368.8				
Milestone completed by	10/12/2043	10/12/2048	10/12/2053	10/12/2058	10/12/2063				
Milestone Reference	**Cumulative area achieved (ha)**								
RM1	75.0	155.0	368.8						
RM3	75.0	155.0	368.8						
RM4	75.0	155.0	368.8						
RM5	75.0	155.0	368.8						
RM6		75.0	155.0	368.8					
RM7			75.0	155.0	368.8				
RM8					368.8				

Rehabilitation Area 7 (RA7)

Post-mining land uses (PMLUs)									
Rehabilitation area	RA7								
Relevant activities	Permanent Infrastructure - Pumped Hydroelectricity Energy Storage (PHES) and/or Algae Production								
Total rehabilitation area size (ha)	65.9								
Commencement of first milestone: RM9	10/12/2043								
PMLUs	PHES and/or Algae Production								
Date area is available	10/12/2043								
Cumulative area available (ha)	65.9								
Milestone completed by	10/12/2048								
Milestone Reference	**Cumulative area achieved (ha)**								
RM10	65.9								
##									
##									
##									
##									
##									
##									

Rehabilitation Area 8 (RA8)

Post-mining land use (PMLU)									
Rehabilitation area				RA8					
Relevant activities				Infrastructure – Bridges and Dragline Crossing					
Total rehabilitation area size (ha)				6.7					
Commencement of first milestone: RM1				10/12/2048					
PMLU				Native Vegetation - Riparian					
Date area is available	10/12/2048	10/12/2053	10/12/2058	10/12/2063					
Cumulative area available (ha)	6.7	6.7	6.7	6.7					
Milestone completed by	10/12/2053	10/12/2058	10/12/2063	10/12/2068					
Milestone Reference	**Cumulative area achieved (ha)**								
RM1	6.7								
RM3	6.7								
RM4	6.7								
RM5	6.7								
RM6		6.7	6.7						
RM7				6.7					
RM8				6.7					

Rehabilitation Area 9 (RA9)

Post-mining land use (PMLU)									
Rehabilitation area	RA9								
Relevant activities	Pit Void, Safety Setbacks, Bunding/Fencing and Pit Lake								
Total rehabilitation area size (ha)	71.0								
Commencement of first milestone: RM10	10/12/2043								
PMLU	Beneficial Use of Void Lake Water								
Date area is available	10/12/2043								
Cumulative area available (ha)	71.0								
Milestone completed by	10/12/2053								
Milestone Reference	**Cumulative area achieved (ha)**								
RM9	71.0								
##									
##									
##									
##									

Rehabilitation Area 10 (RA10)

Post-mining land use (PMLU)									
Rehabilitation area				RA10					
Relevant activities				Buffer Land and Exploration Activities					
Total rehabilitation area size (ha)				290.6					
Commencement of first milestone: RM5				10/12/2043					
PMLU				Grazing					
Date area is available	10/12/2043	10/12/2048	10/12/2053	10/12/2058					
Cumulative area available (ha)	100.0	290.6	290.6	290.6					
Milestone completed by	10/12/2048	10/12/2053	10/12/2058	10/12/2063					
Milestone Reference	**Cumulative area achieved (ha)**								
RM5	100.0	290.6							
RM6		100.0	290.6						
RM7			100.0	290.6					
##									
##									
##									
##									

END OF SECTION D

Section E – Rehabilitation Milestones and Criteria

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
RM1	**Infrastructure decommissioning and removal**	**<u>All PMLUs requiring infrastructure removal (RA1, RA2, RA3, RA4, RA5, RA6, RA8)</u>** **RM1.1** With the exception of any infrastructure to remain as part of the post-mining land use (PMLU), where infrastructure is agreed to be retained by the landholder as evidenced by a signed landholder agreement, or required for rehabilitation activities, the following actions must be complete: • All services disconnected and removed. • All buildings and associated infrastructure not associated with a PMLU dismantled and removed offsite. • All hardstand, concrete areas and roads removed (e.g. bitumen, blue metal, aggregate etc). • All fencing and associated foundations removed. • All pipelines drained and removed. • All waste non-authorised to be disposed of on-site under Environmental Authority (tbc) removed and appropriately disposed offsite. • All surface water drainage infrastructure that is not compatible with the sustainment of the PMLU is removed. • All drillholes, sediment ponds and sumps decommissioned. • All machinery and equipment, not required for rehabilitation works removed from site. • All required dams dewatered and desilted as per an appropriately qualified person (AQP)'s recommendation. • Watercourse crossings and culverts removed. **RM1.2** For all surface to seam boreholes, including but not limited to exploration bores, water monitoring bores and resource delineation bores, not required for ongoing monitoring in accordance with RM8, must be: • grouted and/or plugged.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		• capped 0.5m below surface. • decommissioned in accordance with 'Eligibility criteria and standard conditions for exploration and mineral development projects (DEHP, 2016)'.
RM2	**Identification, remediation and/or removal of contaminated land**	**All PMLUs requiring contaminated land assessment (RA4, RA5)** **RM2.1** Contaminated land investigations involving investigation, remediation and validation will be conducted in accordance with the *Environmental Protection Act 1994* (EP Act), including a site investigation report, and where required, a validation report and/or a draft Site Management Plan if the site is to remain on the Environmental Management Register or Contamination Site Register. **RM2.2** Contaminated water and sediment are removed from dams and disposed of in an appropriate manner. **RM2.3** Contaminated material is either remediated in-situ or removed and transported to a facility lawfully able to accept the material. **RM2.4** A Contaminated Land Auditor certifies that that no contamination unsuitable for the PMLU remains, is likely to occur or is occurring.
RM3	**Landform development (re-profiling / reshaping)**	**All PMLUs requiring landform development (RA1, RA2, RA3, RA4, RA5, RA6, RA8)** **RM3.1** All major earthworks, including reshaping and pushing/trimming, are completed in accordance with the design specification provided by an AQP that achieves an outcome that is safe, erosionally and structurally stable, and appropriate to support the achievement of the PMLU. **RM3.2** All major earthworks, including reshaping and pushing/trimming, are completed in accordance with a design specification provided by an AQP for the final landform design and have completed the following tasks:

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		• a landform evolution modelling demonstrates that the landform is erosionally stable. • a geotechnical assessment demonstrates the ability of the landform to achieve a Factor of Safety (FoS) of ≥1.5. • the batters of the dumps areas possess slopes of overall ≤15% (RA1, RA2, RA4, RA5, RA6, RA8), other than the final low wall batter draining to the void lake which is overall ≤25% (RA3). • the landform is water shedding. • the landform is suitable to sustain the PMLU. **RM3.3** The constructed landform achieves geotechnical stability with a FoS of ≥1.5, which includes consideration of flood stress. **RM3.4** All drainage is constructed in accordance with the engineering designs developed by an AQP. **RM3.5** Erosion and sediment control structures are installed as per the requirements of an ESCP certified by an AQP. **Native vegetation (riparian) – River/creek crossings (RA8)** **RM3.6** Disturbed natural watercourse bed and banks are returned to a natural condition with a profile similar to the pre-disturbance condition. **Native vegetation (riparian woodland) – Conrock Gully (RA1)** **RM3.7** The Conrock Gully diversion is constructed in accordance with its Functional Design Report (Appendix D of **Appendix J**).

RM4	**Surface preparation (topdressing, contour ripping, soil amelioration, rock armouring)**	**<u>All PMLUs requiring surface preparation (RA1, RA2, RA3, RA4, RA5, RA6, RA8)</u>** **RM4.1** Prior to placement on landform, plant growth media is ameliorated (if required) and representatively tested as required by an AQP to confirm the following parameters are achieved: • pH in the range of 6 – 8.5. • Electrical Conductivity (saturated extent) is ≤2 dS/m or 2,000 µS/cm. • Exchangeable sodium percentage (ESP %) <6. • Emerson aggregate class is ≥4. **RM4.2** Plant growth media placement of a minimum 0.3 m in areas where topsoil has previously been removed. **RM4.3** Deep ripping of compacted surfaces to a depth of no less than 0.3 m into the soil profile along the contour of the slope. **RM4.4** The surface and groundwater monitoring network are appropriately installed under supervision of an AQP, and monitoring is underway and at least one year of sampling completed. **<u>Native vegetation (woodland) – Final low wall batter (≤25%) (RA3)</u>** **RM4.5** Rock armouring will be placed on the final low batter (≤25%) and will comprise: • Fresh non-carbonaceous sandstone and carbonaceous sandstone in preference to fresh non-carbonaceous and carbonaceous siltstones/mudstones. • The rock fraction will include particles greater than approximately 50 mm in diameter. • The rock source will contain less than 40% fines (<2 mm diameter).

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
RM5	**Revegetation**	**<u>All PMLUs requiring revegetation (RA1, RA2, RA3, RA4, RA5, RA6, RA8, RA10)</u>** **RM5.1** Appropriate erosion controls installed and functioning as designed by an AQP to ensure plant establishment is not significantly impacted from erosive events. **<u>Native vegetation (riparian woodland) – Conrock Gully (RA1) and Native vegetation (riparian) – River/creek crossings (RA8)</u>** **RM5.2** Seeding completed using a specific seed mix (upper storey tree species, mid and lower storey tree and shrub species, and groundcover species) for RE11.3.25 as described in **Appendix 5 – Proposed Species per nominated RE11.3.25 and RE11.5.3**. **RM5.3** Seeding completed as per recommended sowing rates for individual species where possible, and with total recommended seeding rates for dominant tree species (5 kg/ha), mid-storey species (5 kg/ha), and groundcover species (5 kg/ha). **RM5.4** Non-native seed must not be included in the seed mix for the establishment of native revegetation PMLUs, except when sterile cover crops are used. **<u>Grazing land (RA2, RA4, RA5, RA6, RA10)</u>** **RM5.5** Completed seeding with a selection of species and seeding rates listed in **Appendix 6 – Grazing Rehabilitation Species and Seeding Rates** for the grazing PMLU.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		<u>Native vegetation (woodland) – Final low wall batter (≤25%) (RA3)</u> **RM5.6** Seeding completed using a specific seed mix (upper storey tree species, mid and lower storey tree and shrub species, and groundcover species) for RE11.5.3 as described in **Appendix 5 – Proposed Species per nominated RE11.3.25 and RE11.5.3**. **RM5.7** Seeding completed as per recommended sowing rates for individual species where possible, and with total recommended seeding rates for dominant tree species (5kg/ha), mid-storey species (5kg/ha), and groundcover species (5kg/ha). **RM5.8** Non-native seed must not be included in the seed mix for the establishment of native revegetation PMLUs, except when sterile cover crops are used.
RM6	**Achievement of surface requirements**	**<u>All PMLUs requiring revegetation (RA1, RA2, RA3, RA4, RA5, RA6, RA8, RA10)</u>** **RM6.1** Weed presence is less than 10% of total vegetative groundcover confirmed by an AQP, as a component of annual monitoring. **RM6.2** Groundcover for slopes of ≤15% possesses a total vegetative ground cover of ≥65% which is confirmed by an AQP, as a component of annual monitoring. **RM6.3** As a component of annual monitoring, erosion is assessed by an AQP using the Erosion Classification Framework provided in **Appendix 7 – Erosion Classification Framework** and achieves a 'minor' classification.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		RM6.4 Any erosion present will not compromise the achievement of a PMLU to a stable condition. **RM6.5** Erosion requiring intervention has been appropriately remediated and does not impact achieving the PMLU. **RM6.6** Surface water runoff and/or seepage is collected and compared with **Appendix 2 – Surface Water Quality Limits** to determine any trends over time, as collected from representative areas of rehabilitation when surface water flows occur, if physically possible and it is safe to carry out the sample collection. **RM6.7** Surface water quality is monitored during flow events within the Isaac River at the upstream and downstream monitoring stations (ID-IR2 and PTM-MP5, respectively; **Appendix 1 – Receiving Environment Surface Water Monitoring Locations**) for all the water quality parameters listed in **Appendix 2 – Surface Water Quality Limits**. **RM6.8** All contour banks and other temporary erosion and sediment control structures have been removed. **Native vegetation (riparian woodland) – Conrock Gully (RA1) and Native vegetation (riparian) – River/creek crossings (RA8)** **RM6.9** The revised BioCondition benchmarks nominated for RE11.3.25, as specified in **Appendix 8 – Revised RE11.3.25 Benchmark Criteria**, are confirmed by an AQP, as a component of annual monitoring. **Grazing land (RA2, RA4, RA5, RA6, RA10)** **RM6.10** The groundcover comprises a self-sustaining vegetative groundcover of species listed in **Appendix 6 – Grazing Rehabilitation Species and Seeding Rates** is confirmed by an AQP, as a component of annual monitoring.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		RM6.11 Annual monitoring by an AQP confirms a minimum vegetation composition (per hectare (averaged)) of: • Four pasture species. • Two legumes species. • Two shade tree species. **RM6.12** Monitoring data and technical assessments completed by an AQP indicate that the overburden dump rehabilitation is on a trajectory to achieve a stable condition. **RM6.13** A land suitability class of ≤4 is confirmed by an AQP, as a component of annual monitoring. **RM6.14** An AQP confirms the establishment of a pasture condition rating ≤3, based on the Pasture Condition Assessment Table as per "Stocktake: Balancing Supply and Demand" (Developed by FutureBeef – futurebeef.com.au), as a component of annual monitoring. **Native vegetation (woodland) – Final low wall batter (≤25%) (RA3)** **RM6.15** An AQP confirms that the groundcover for slopes of ≤25% has achieved a total vegetative groundcover of ≥30% and when combined with rock armouring, as a component of annual monitoring. **RM6.16** The revised BioCondition benchmarks nominated for RE11.5.3, as specified in **Appendix 9 – Revised RE11.5.3 Benchmark Criteria**, are confirmed by an AQP, as a component of annual monitoring.
RM7	**Achievement of post-mining land use to a stable condition**	**All PMLUs requiring revegetation (RA1, RA2, RA3, RA4, RA5, RA6, RA8, RA10)** **RM7.1** Safety hazards in the rehabilitation area are not significantly different to surrounding unmined landscapes subject to the same land use.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		RM7.2 An AQP certifies that the final landform is geotechnically stable and has achieved a factor of safety ≥1.5. **RM7.3** An AQP certifies based on annual monitoring that the erosion targets have been successfully achieved and any erosion present will not compromise the achievement of a PMLU to a stable condition. **RM7.3** An AQP certifies based on annual monitoring that the groundcover for slopes of ≤15% possesses a total vegetative ground cover of ≥65%. **RM7.4** An AQP certifies that the presence of weeds are less than 5% of total vegetative groundcover. **RM7.5** Representative soil testing of growth media across the PMLU by an AQP confirms: • pH in the range of 6 - 8.5. • Electrical Conductivity (saturated extract) (dS/m) ≤2 (2,000 µS/cm). • Exchangeable sodium percentage (ESP) (%) < 6. • Emerson aggregate class: ≥4. **RM7.6** All remaining infrastructure no longer required is rehabilitated or removed in accordance with **RM1.1**. **Native vegetation (riparian woodland) – Conrock Gully (RA1) and Native vegetation (riparian) – River/creek crossings (RA8)** **RM7.7** A BioCondition assessment of the revised BioCondition benchmarks nominated for RE11.3.25 (**Appendix 8 – Revised RE11.3.25 Benchmark Criteria**) is completed by an AQP in accordance with latest version of Queensland Herbarium's BioCondition Assessment Manual and certifies that the PMLU has reached the required revised BioCondition status.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		Native vegetation (riparian woodland) – Conrock Gully (RA1) **RM7.8** An AQP certifies that the Conrock Gully diversion has achieved a long-term geomorphic stability consistent with the requirements of its Functional Design Report (Appendix D of **Appendix J**). **Grazing land (RA2, RA4, RA5, RA6, RA10)** **RM7.9** A self-sustaining groundcover of comprising the vegetative groundcover species listed in **Appendix 6 – Grazing Rehabilitation Species and Seeding Rates** is certified by an AQP based on monitoring data and consists of a minimum (per hectare (averaged)) of: • Four pasture species. • Two legumes species. • Two shade tree species. **RM7.10** An AQP certifies that a land suitability class of ≤4 has been achieved. **RM7.11** An AQP certifies the establishment of a pasture condition rating ≤3, based on the Pasture Condition Assessment Table as per "Stocktake: Balancing Supply and Demand" (Developed by FutureBeef – futurebeef.com.au). **RM7.12** An AQP certifies that the rehabilitated land can be sustainably grazed and is fire resilient. **Native vegetation (woodland) – Final low wall batter (≤25%) (RA3)** **RM7.13** An AQP certifies based on annual monitoring that the groundcover for slopes of ≤25% has achieved a total vegetative groundcover of ≥30% and when combined with rock armouring.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		RM7.14 A BioCondition assessment of the revised BioCondition benchmarks nominated for RE11.5.3 (**Appendix 9 – Revised RE11.5.3 Benchmark Criteria**) is completed by an AQP in accordance with latest version of Queensland Herbarium's BioCondition Assessment Manual and certifies that the PMLU has reached the required revised BioCondition status. **Contaminated Land (RA4, RA5)** **RM7.15** An AQP certifies that **RM2.1** to **RM2.4** have been achieved.
RM8	**Achievement of post-mining land use water quality**	**RM8.1** Surface water quality is monitored during flow events within the Isaac River at the upstream and downstream Isaac River monitoring stations (ID-IR2 and PTM-MP5, respectively) for at least five consecutive years for all the quality characteristics listed in **Appendix 2 – Surface Water Quality Limits**. If the surface water quality exceeds the specified limits during a specific monitoring event, the upstream (ID-IR2) and downstream (PTM-MP5) monitoring results must be compared and where the downstream result is less than the upstream result no further action is required. **RM8.2** If the surface water quality results monitored per **RM8.1** exceed the specified limits during a specific monitoring event, the upstream (ID-IR2) and downstream (PTM-MP5) monitoring results must be compared and where the downstream result is greater than the upstream result, an AQP must complete an assessment of the cause of the exceedance and risk of rehabilitation not achieving a stable condition within the schedule timeframe. • Where the assessment concludes that there is a low risk to achieving a stable condition, then no further action is to be taken.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		• Where the assessment concludes that there is a risk greater than low to achieving a stable condition, then an assessment of potential environmental harm and any changes or rectification actions to rehabilitation activities must be determined and implemented. **RM8.3** **RM8.2** can only be triggered three times over five consecutive years prior to surrender. **RM8.4** Groundwater quality is monitored quarterly for at least five consecutive years at, but not limited to, the compliance bores specified in **Appendix 3 – Groundwater Compliance Bores**, and for all the quality characteristics listed in **Appendix 4 – Groundwater Quality Limits**. **RM8.5** The limits specified for the compliance bores in **Appendix 3 – Groundwater Compliance Bores** must not be exceeded, for three consecutive sampling events within the five-year period immediately prior to surrender. If monitoring demonstrates that a compliance bore exceeds a specified groundwater quality limit during three consecutive sampling events within the five-year period immediately prior to surrender, an AQP must complete an assessment of the cause of the exceedance to determine if there is a reasonable risk of rehabilitation not achieving a stable condition in relation to groundwater quality. **RM8.6** Groundwater level must be monitored quarterly at the compliance bores listed in **Appendix 3 – Groundwater Compliance Bores**, and all results must not exceed the Level Thresholds outlined in **Appendix 10 – Groundwater Level Trigger Thresholds**, for a minimum of 10 consecutive years. If monitoring demonstrates that a compliance bore triggers its specified Level Threshold, an AQP must complete an assessment of the cause of the threshold exceedance to determine if there is a reasonable risk of rehabilitation not achieving a stable condition in relation to groundwater levels.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		RM8.7 An AQP must certify achievement of **RM8.2** to **RM8.6** inclusive.
RM9	**Achievement of a stable water supply source for RM10 and cattle**	**Beneficial Water Storage (RA9)** **RM9.1** An AQP recertifies that all slopes of the final void are geotechnically stable and have achieved a factor of safety of ≥1.5. **RM9.2** An AQP recertifies that the final void is not subject to inundation from floodwaters up to and including the 0.1% AEP flood event and will not over top, based on the re-running of flood modelling at the end of mine life and calibrated against the final landform. **RM9.3** An AQP certifies the following safety requirements: • A competent safety bund or equivalent landform is in place to prevent access to the final void, at the geotechnical set-back distance of a minimum of 15 m (distance necessary to achieve FoS≥ 1.5). • The safety bund is constructed from non-weathered, non-dispersive dumped rockfill and is a minimum of 2 m in height, a minimum of 4 m in base width and possesses 1 in 3 batters. • Fencing is erected, where required to prevent access to the final void, around the perimeter of the safety bund. • Safety signage (design in accordance with Australian standard) is erected at 100m intervals along the fence. • The final void is safe to humans and livestock. **RM9.4** As demonstrated by void water quality monitoring and modelling, an AQP certifies that void water quality meets, and is predicted to meet, the ANZG guidelines for stock drinking water for the purpose of a water source for beef cattle.

Milestone Reference	Rehabilitation Milestone	Milestone Criteria
		RM9.5 An AQP demonstrates, based on void water balance and groundwater modelling data, that the final void will act as a groundwater sink post-closure. **RM9.6** The final void will not present an unacceptable risk of environmental harm. **RM9.7** An AQP certifies that the erosion of the landform will not negatively impact on the stability of any adjacent rehabilitation areas, or their ability to sustain their PMLU
RM10	**Achievement of the PHES and/or Algae Production PMLUs**	**PHES and/or Algae Production PMLUs (RA7)** **RM10.1** The proposed PHES and/or algae Production PMLUs are subject to bankable feasibility studies prior to the end of Project operations, with **RM10.2** to **RM10.5** applicable to the demonstration of feasible PMLUs. **RM10.2** A signed agreement is obtained from the Landowner accepting the long term installation and operation of the PHES and/or algae Production PMLUs. **RM10.3** 'Development Approvals' are obtained under the *Planning Act 2016* or other relevant legislation in force at the time for operation of the PHES and/or algae production PMLUs. **RM10.4** The PHES and/or Algae Production PMLUs are constructed ready for operational feasibility testing. **RM10.5** The PHES and/or Algae Production PMLUs are commercially operational based on their design parameters.

END OF SECTION E

Appendix 1 – Receiving Environment Surface Water Monitoring Locations

Site name	Waterway	Location	
		Longitude (GDA2020)	Latitude (GDA2020)
Upstream monitoring points			
ID-IR2*	Isaac River – upstream of IDM and IDE	148.168197	-22.040876
IDE-CG1	Conrock Gully – upstream of IDE	148.169025	-22.095638
IDE-CC1	Cherwell Creek – upstream of IDE	148.163531	-22.121846
Downstream monitoring points			
ID-IR5	Isaac River – downstream of Conrock Gully diversion	148.205483	-22.077632
IDE-CG2	Conrock Gully – downstream of IDE	148.204658	-22.080908
IDE-CG3	Conrock Gully diversion – downstream before confluence with Isaac River	148.177970	-22.066234
IDE-CC2	Cherwell Creek – upstream of JB Gully	148.191014	-22.117059
IDE-CC3	Cherwell Creek – downstream of IDE	148.232452	-22.096283
IDE-WL1	Unnamed wetland	148.228449	-22.092989
PTM-MP5*	Isaac River – downstream of IDE	148.240546	-22.094180

Note:

The data from background monitoring points must not be used where they are affected by releases from other mines.

* = Primary upstream and downstream locations within the Isaac River.

Appendix 2 – Surface Water Quality Limits

Quality characteristic	Units	Trigger level	Source of the Limit
Electrical conductivity (EC)	µS/cm	1,000 (maximum)[1]	Final Model Water Conditions for Coal Mines in the Fitzroy Basin (DERM, 2009
pH	pH units	6.5 - 8.5 (range)[2]	Isaac River Sub-basin WQO
Total suspended solids (TSS)	mg/L	1,050 (maximum)[3]	80th percentile of local water quality
Sulphate (SO_4^{2-})	mg/L	250 (maximum)[1]	Final Model Water Conditions for Coal Mines in the Fitzroy Basin (DERM, 2009
Aluminium	µg/L	212	Site-specific trigger value (SSTV)
Antimony	µg/L	9	Aquatic ecosystem EV
Arsenic	µg/L	13	Aquatic ecosystem EV
Cadmium	µg/L	0.2	Aquatic ecosystem EV
Chromium	µg/L	1.0	Aquatic ecosystem EV
Copper	µg/L	3.0	SSTV
Iron	µg/L	280	Aquatic ecosystem EV
Lead	µg/L	3.4	Aquatic ecosystem EV
Mercury	µg/L	0.2	Aquatic ecosystem EV
Nickel	µg/L	11	Aquatic ecosystem EV
Zinc	µg/L	8.0	Aquatic ecosystem EV
Boron	µg/L	940	Aquatic ecosystem EV
Cobalt	µg/L	1.4	Aquatic ecosystem EV
Manganese	µg/L	1,900	Aquatic Ecosystem EV
Molybdenum	µg/L	34	Aquatic ecosystem EV
Selenium	µg/L	10	Limit of Reporting
Silver	µg/L	1.0	Aquatic ecosystem EV
Uranium	µg/L	1.0	Aquatic ecosystem EV
Vanadium	µg/L	10	Aquatic ecosystem EV
Ammonia	µg/L	720	Aquatic ecosystem EV
Nitrate	µg/L	1,100	Aquatic ecosystem EV
Petroleum hydrocarbons (C6-C9)	µg/L	20	Model mining conditions
Petroleum hydrocarbons (C10-C36)	µg/L	100	Model mining conditions
Fluoride	µg/L	320	80^{th} %ile for Isaac River at Goonyella gauge
Sodium	µg/L	188,000	80^{th} %ile for Isaac River at Goonyella gauge

Notes:

1. All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Trigger levels for metal/metalloids apply if dissolved results exceed trigger.

2. The Environmental Protection Policy (Water and Wetland Biodiversity) 2019 was used to determine the water quality objectives (WQOs) to protect or enhance the environmental values of the Isaac and lower Connors River main channel region of the Isaac River Sub-Basin. A comparison of the WQOs against local streamflow water quality monitoring in the Isaac River were then used to develop the local site-specific trigger values.

3. The aquatic ecosystem EV is derived from the Isaac River Sub-basin Environmental Values and Water Quality Objectives scheduling document (DEHP, 2011). The EV was selected to protect from the effects of habitat alteration, contaminated runoff and releases and changed flow to ensure healthy aquatic ecosystems and waterways that are safe for community use.

4. The Model Mining Conditions (MMC) were developed for coal mines in the Fitzroy basin (DERM, 2012). The MCC are designed to manage water discharges to meet the water quality objectives set out in the EPP (Water) and to provide consistency between mining operations in the Fitzroy basin.

5. The environmental authority holder will continue to monitor for all quality characteristics listed in Table C3 until such time that sufficient data has been acquired to either enable additional site specific trigger levels to be determined or to justify the removal of a characteristic from Table C3.

6. LOR – typical reporting for method stated. ICPMS/CV FIMS – analytical method required to achieve LOR.

Appendix 3 – Groundwater Compliance Bores

Bore	Install Date	Longitude (GDA2020)	Latitude (GDA2020)	Surface Elevation (mAHD)	Total Depth (mBGL)	Screen Top Elevation (mAHD)	Screen Base Elevation (mAHD)	Aquifer	Proposed GMMP Bore
MBID23	28/06/2020	148.180425	-22.064238	198.86	14	191.35	185.35	Alluvium	Compliance
MBID28	29/06/2020	148.191319	-22.073707	198.37	16	186.36	183.36	Alluvium	Compliance
MBIS04	05/05/2025	148.217114	-22.089108	195.89	19	183.89	177.89	Alluvium	Compliance
MBIS07	15/06/2025	148.202453	-22.107815	199.9	19	190.9	187.9	Alluvium	Compliance
MBIS20	06/07/2025	148.195903	-22.082878	198.88	22	181.88	178.88	Regolith	Compliance
RN182851	31/05/2021	148.172615	-22.121871	208	35	202	174	Regolith	Compliance
MBIS10	26/11/2022	148.211874	-22.104295	183.93	24.15	166.42	160.42	Regolith	Compliance
MBIS02	29/05/2025	148.205221	-22.081048	196.98	138	63.97	60.97	Leichhardt coal seam	Compliance
MBIS05	09/05/2025	148.217154	-22.089189	195.96	155	47.95	41.95	Leichhardt coal seam	Compliance
MBIS08	19/11/2022	148.199423	-22.111731	202.53	50	160.53	154.53	Leichhardt coal seam	Compliance
MBIS11	13/05/2025	148.211847	-22.104449	199.15	94	109.14	106.14	Leichhardt coal seam	Compliance
MBIS13	22/05/2025	148.221560	-22.098912	196.71	153	47.70	44.70	Leichhardt coal seam	Compliance

Bore	Install Date	Longitude (GDA2020)	Latitude (GDA2020)	Surface Elevation (mAHD)	Total Depth (mBGL)	Screen Top Elevation (mAHD)	Screen Base Elevation (mAHD)	Aquifer	Proposed GMMP Bore
MBIS15	12/06/2025	148.225982	-22.092402	194.46	52	152.45	143.45	Leichhardt coal seam	Compliance
MBIS03	16/05/2025	148.205086	-22.081085	196.66	181	25.66	16.66	Vermont coal seam	Compliance
MBIS09	18/11/2022	148.199278	-22.111759	202.57	96.41	122.57	110.57	Vermont coal seam	Compliance

Appendix 4 – Groundwater Quality Limits

Analyte																			
Unit:	**pH (Field)**	**EC (Lab)**	**SO_4**	**NO_3**	**Ag**	**Al**	**As**	**B**	**Cd**	**Co**	**Cu**	**Cr**	**Fe**	**Hg**	**Mo**	**Mn**	**Ni**	**Pb**	**U**	**Zn**
Compliance Bore	-	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MBID23	6.5 - 8.5[a]	8910[d]	318[d]	3.26[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	0.784[e]	0.0006[a]	0.1[b]	1.788[e]	0.014[a]	0.0034[a]	0.0158[e]	0.06[d]
MBID28	6.38 - 6.85[e]	8910[d]	318[d]	3.26[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0062[a]	0.001[a]	0.784[e]	0.0006[a]	0.1[b]	1.83[e]	0.011[a]	0.0034[a]	0.004[b]	0.3214[e]
MBIS04	6.5 - 8.5[a]	8910[d]	318[d]	3.26[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	TBA	0.0006[a]	0.1[b]	TBA	0.011[a]	0.0034[a]	0.002[b]	TBA
MBIS07	6.5 - 8.5[a]	8910[d]	318[d]	3.26[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	0.14[d]	0.0006[a]	0.1[b]	TBA	0.011[a]	0.0034[a]	0.002[b]	0.008[c]
MBIS20	6.5 - 8.5[a]	8910[d]	TBA	3.26[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	TBA	TBA	TBA	TBA	0.14[d]	0.0006[a]	0.1[b]	TBA	0.011[a]	0.0034[a]	0.002[b]	TBA
RN182851	6.5 - 8.5[a]	16000[d]	TBA	1.12[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	TBA	0.0006[a]	0.1[b]	TBA	0.011[a]	0.0034[a]	0.002[b]	TBA
MBIS10	6.5 - 8.5[a]	16000[d]	398[d]	1.12[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	0.246[d]	0.0006[a]	0.1[b]	0.291[d]	0.011[a]	0.0034[a]	0.002[b]	TBA
MBIS02	6.5 - 8.5[a]	16000[d]	398[d]	1.12[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	0.246[d]	0.0006[a]	0.1[b]	TBA	0.011[a]	0.0034[a]	0.002[b]	TBA
MBIS05	6.5 - 8.5[a]	16000[d]	398[d]	1.12[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	0.246[d]	0.0006[a]	0.1[b]	0.291[d]	0.011[a]	0.0034[a]	TBA	TBA
MBIS08	6.5 - 8.5[a]	16000[d]	398[d]	1.12[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	TBA	0.0006[a]	0.1[b]	0.291[d]	0.011[a]	0.0034[a]	0.002[b]	0.008[c]
MBIS11	6.5 - 8.5[a]	16000[d]	398[d]	1.12[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	0.246[d]	0.0006[a]	0.1[b]	0.291[d]	TBA	0.0034[a]	0.002[b]	TBA
MBIS13	6.5 - 8.5[a]	16000[d]	398[d]	1.12[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	0.246[d]	0.0006[a]	0.1[b]	0.291[d]	0.011[a]	0.0034[a]	0.002[b]	TBA
MBIS15	6.5 - 8.5[a]	TBA	TBA	1.12[d]	0.05[a]	0.055[a]	0.024[a]	TBA	0.0002[a]	0.1[b]	TBA	TBA	TBA	0.0006[a]	0.1[b]	0.291[d]	0.011[a]	0.0034[a]	TBA	TBA
MBIS03	6.5 - 8.5[a]	16000[d]	398[d]	1.12[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	0.246[d]	0.0006[a]	0.1[b]	0.291[d]	0.011[a]	0.0034[a]	0.002[b]	0.008[c]
MBIS09	6.5 - 8.5[a]	16000[d]	398[d]	1.12[d]	0.05[a]	0.055[a]	0.024[a]	0.5[b]	0.0002[a]	0.1[b]	0.0014[a]	0.001[a]	TBA	0.0006[a]	0.1[b]	0.291[d]	0.011[a]	0.0034[a]	0.002[b]	TBA

Note: Dissolved metals

a = Aquatic Ecosystem (95% Protection) (ANZG, 2018)

b = Irrigation (Fitzroy Basin WQO)

c = Stock (Fitzroy basin WQO)

d = Lower Isaac River (zone 34) (DEHP, 2011)

e = Site specific 80th percentile values

TBA = It is proposed that these trigger values will be reassessed once additional data become available to ensure they are representative of meaningful hydrochemical conditions.

Appendix 5 – Proposed Species per nominated RE11.3.25 and RE11.5.3

Nominated Regional Ecosystems	Upper Storey Tree Species	Mid and Lower Storey Tree and Shrub Species	Groundcover Species
RE11.3.25	*Angophora floribunda* *Casuarina cunninghamiana* *Corymbia clarksoniana* *Corymbia tessellaris* *Eucalyptus camaldulensis* *Eucalyptus coolabah* *Eucalyptus crebra* *Eucalyptus populnea* *Eucalyptus tereticornis* *Melaleuca leucadendra* *Eucalyptus melanophloia*	*Acacia disparrima* *Acacia leiocalyx* *Acacia salicina* *Alphitonia excelsa* *Brachychiton australis* *Callitris glaucophylla* *Cassia brewsteri* *Ficus opposita* *Geijera parviflora* *Livistona decora* *Lysiphyllum hookeri* *Macaranga tanarius* *Melaleuca bracteata* *Melaleuca fluviatilis* *Melaleuca viminalis* *Terminalia oblongata*	*Chrysopogon fallax* *Cymbopogon refractus* *Cyperus gracilis* *Dianella caerulea* *Dichanthium sericeum* *Heteropogon contortus* *Lomandra longifolia* *Panicum effusum* *Sida hackettiana* *Themeda triandra* *Wahlenbergia gracilis*
RE11.5.3	*Corymbia clarksoniana* *Corymbia dallachiana* *Corymbia erythrophloia* *Eucalyptus crebra* *Eucalyptus melanophloia* *Eucalyptus populnea*	*Acacia excelsa* *Acacia salicina* *Alectryon oleifolius* *Alphitonia excelsa* *Atalaya hemiglauca* *Brachychiton australis* *Bursaria incana* *Capparis lasiantha* *Cassia brewsteri* *Ehretia membranifolia* *Eremophila mitchellii* *Flindersia dissosperma* *Geijera parviflora* *Grevillea striata* *Lysiphyllum carronii* *Lysiphyllum hookeri* *Terminalia oblongata*	*Alloteropsis semialata* *Aristida calycina* *Chloris divaricata* *Chrysopogon fallax* *Heteropogon contortus* *Panicum effusum* *Panicum queenslandicum* *Phyllanthus virgatus* *Sida hackettiana* *Themeda triandra*

Seed availability will guide species selection.

Appendix 6 – Grazing Rehabilitation Species and Seeding Rates

Common Name	Scientific Name	Seeding Rate (kilograms per hectare (kg/ha))
Queensland Blue Grass	*Dicanthium sericeum*	3
Desert Bluegrass	*Bothriochloa ewartiana*	3
Rhodes Grass	*Chloris gayana cvv. Callide1*	3
Rhodes Grass	*Chloris gayana cvv. Katambora1*	4
Windmill Grass	*Chloris truncata*	3
Black Spear Grass	*Heteropogon contortus*	3
Blown Grass	*Lachnagrostis filiformis*	3
Bisset Creeping Bluegrass	*Bothriochloa insculpta*	3
Sabi Grass	*Urochloa mosambicensis*	3
Bermuda Couch	*Cynodon dactylon*	2
Butterfly Pea	*Clitoria ternatea*	1
Round-leafed Cassia	*Chamaecrista rotundifolia*	1
Burgundy bean	*Macroptilium bracteatum*	2
Snoutbean	*Rhynchosia spp.*	1
Red Natal Grass	*Melenis repens*	2
Sugar-drip Sorghum	*Sorghum sp.*	3
Japanese Millet*	*Echnochloa esculenta*	0.5

(* = Sterile cover crop.)

Seed availability will guide species selection. The species listed are commonly used in rehabilitation in the Bowen Basin.

Appendix 7 – Erosion Classification Framework

Erosion classification	Minor	Moderate	Severe
Sheet erosion	Shallow soil deposits downslope	Partial exposure of roots; moderate soil deposits downslope, etc.	Loss of surface horizon; root exposure; moderate substantial soil deposits downslope
Rill erosion	<0.3m deep Occasional rills	<0.3m deep Common rills	<0.3m deep. Numerous rills forming corrugated ground surface
Gully erosion	>0.3m deep Gullies are isolated, linear, discontinuous, and restricted to primary or minor drainage lines	>0.3m deep Gullies are linear, continuous, and restricted to primary or minor drainage lines	>0.3m deep Gullies are continuous or discontinuous, and either tend to branch away from primary drainage lines and on to foot slopes, or have multiple branches within drainage lines
Tunnel erosion	Absent	Absent	Present
Mass movement	Absent	Absent	Present

(Australian Soil and Land Survey Field Handbook 2009)

Appendix 8 – Revised RE11.3.25 Benchmark Criteria: Native Vegetation (Riparian Woodland) – Conrock Gully and Native Vegetation (Riparian) – River/creek Crossings PMLUs

Regional Ecosystem		RE11.3.25 Benchmark	PRCP Benchmark - RE11.3.25 revised
Short Description		*Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines	
BioCondition Standard Attributes			
Recruitment of woody perennial species in Ecological Dominant Layer (EDL)		100	≥40%[1]
Native plant species richness	Trees	4	≥3
	Shrubs	4	≥1
	Grasses	8	≥1
	Forbs	13	≥3
Emergent canopy (E) height (m)		N/A	N/A
Tree canopy (T1) height (m)		23	≥12
Tree subcanopy (T2) height (m)		11	≥5
Average Canopy height		17	8.5
Emergent canopy (E) cover (%)		NA	NA
Tree canopy (T1) cover (%)		34	≥27
Tree subcanopy (T2) cover (%)		12	≥7
Average canopy cover		23	17
Shrub canopy cover (%)		7	4
Native grass cover (%)		35	≥23
Organic litter (%)		21	≥10
Coarse woody debris (CWD) (m/ha)		473	≥142
Non-native plant cover		0	≤10
QBEIS Supplementary Attributes			
Basal Area Trends (m^2/ha)		14.7[2]	≥7
Woody Species Composition		Nil	NA[3]
Stem density measures of abundance (stems/ha)		Nil	>500

1 = To demonstrate stability and avoid reliance on episodic recruitment events, the recruitment benchmark must be achieved in two consecutive monitoring events, unless departure from this pattern can be reasonably attributed to a documented climatic disturbance (e.g. drought, flood, fire) affecting flowering, seed set, establishment or survival of juveniles.

2 = QBEIS attributes (e.g., Basal area trend, woody species composition, stem density) benchmarks taken from the Technical Description for the REs.

3 = Woody species composition will be recorded as a contextual monitoring indicator only to help interpret rehabilitation trajectory toward the nominated REs and support adaptive management, but it will not be assessed against a benchmark.

Appendix 9 – Revised RE11.5.3 Benchmark Criteria: Native Vegetation (Woodland) – Final Low Wall Batter (≤25%) PMLU

Regional Ecosystem		RE11.5.3 Benchmark	PRCP Benchmark - RE11.5.3 revised
Short Description		*Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana* woodland on Cainozoic sand plains and/or remnant surfaces	
BioCondition Standard Attributes			
Recruitment of woody perennial species in Ecological Dominant Layer (EDL)		100	≥40%[1]
Native plant species richness	Trees	3	≥2
	Shrubs	6	≥1
	Grasses	9	≥1
	Forbs	11	≥2
Emergent canopy (E) height (m)		N/A	N/A
Tree canopy (T1) height (m)		17	≥8
Tree subcanopy (T2) height (m)		8	≥4
AVERAGE Canopy height		12.5	6
Emergent canopy (E) cover (%)		NA	NA
Tree canopy (T1) cover (%)		25	≥20
Tree subcanopy (T2) cover (%)		5	≥3
AVERAGE canopy cover		15	11.5
Shrub canopy cover (%)		10	5
Native grass cover (%)		26	≥17
Organic litter (%)		30	≥15
Coarse woody debris (CWD) (m/ha)		342	≥103
Non-native plant cover		0	≤10
QBEIS Supplementary Attributes			
Basal Area Trends (m^2/ha)		10.5	≥5
Woody Species Composition		Nil	N/A[2]
Stem density measures of abundance (stems/ha)		Nil	>500

1 = To demonstrate stability and avoid reliance on episodic recruitment events, the recruitment benchmark must be achieved in two consecutive monitoring events, unless departure from this pattern can be reasonably attributed to a documented climatic disturbance (e.g. drought, flood, fire) affecting flowering, seed set, establishment or survival of juveniles.

2 = Woody species composition will be recorded as a contextual monitoring indicator only to help interpret rehabilitation trajectory toward the nominated REs and support adaptive management, but it will not be assessed against a benchmark.

Appendix 10 – Groundwater Level Trigger Thresholds

Proposed Compliance Bore	Formation Monitored	Designation	Level Trigger Threshold (m)	Level Trigger Threshold Elevation (mAHD)
MBID23	Alluvium	Compliance	1.50[1]	184.5
MBID28	Alluvium	Compliance	3.47[1]	183.8
MBIS04	Alluvium	Compliance	4.28[1]	180.6
MBIS07	Alluvium	Compliance	na	
MBIS20	Regolith	Compliance	7.60[1]	179.0
RN182851	Regolith	Compliance	13.38	181.4
MBIS10	Regolith	Compliance	9.64	160.8
MBIS02	Leichhardt coal seam	Compliance	25.86	160.8
MBIS05	Leichhardt coal seam	Compliance	15.50	169.2
MBIS08	Leichhardt coal seam	Compliance	10.31	180.0
MBIS11	Leichhardt coal seam	Compliance	13.08	172.5
MBIS13	Leichhardt coal seam	Compliance	12.82	170.1
MBIS15	Leichhardt coal seam	Compliance	3.05	180.0
MBIS03	Vermont coal seam	Compliance	28.03	159.2
MBIS09	Vermont coal seam	Compliance	13.74	175.0

Note:

1 = Maximum drawdown limited to base of model layer.

MBIS07 has not been given a water level trigger as the water level trigger elevation falls below the screen of the bore.

END OF APPENDICIES

END OF PRCP SCHEDULE