PRCP schedule

Environmental Protection Act 1994

P-PRCP-1008445331 Daunia Coal Mine

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

PRCP schedule: P-PRCP-100844533_V1

PRCP schedule holder(s)

Name(s)	Registered address
Whitehaven Daunia Pty Ltd	Level 28, 259 George Street SYDNEY NSW 2000

Location details

Location(s)
Mining Lease (ML) 1781, ML70115,ML70116 and MLA700085.

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.

	xx March 2026
Signature	Date

Ben Byrd

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

Enquiries:

Business Centre Coal
PO Box 3028, Emerald QLD 4720
Phone: (07) 49879320
Email: CRMining@detsi.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

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

Pursuant to section 285 of the EP Act:

- the holder of a PRCP schedule must commission an audit of the schedule by a rehabilitation auditor for the following periods (each an audit period) —
    (a) the 3-year period starting on the day the schedule takes effect
    (b) each 3-year period starting on the day after the previous audit period ended.
- the holder must, within 4 months after the end of each audit period, give the administering authority -
    (a) the rehabilitation auditor's report (an audit report) about the audit that complies with section 286 of the EP Act, and
    (b) a declaration for the audit report that complies with section 285 of the EP Act.

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

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

PRCP schedule

The PRCP schedule incorporates the following sections:

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

Section A - Conditions of PRCP schedule

Pursuant to section 206A of the EP Act:

- it is a condition of this PRCP schedule that, in carrying out a relevant activity under the schedule, the holder must comply with a requirement stated in the environmental authority relevant to carrying out the activity.
- it is a condition of this PRCP schedule that the holder must comply with the following matters stated in the schedule -
    (a) each rehabilitation milestone and management milestone
    (b) when each rehabilitation milestone and management milestone is to be achieved

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

General conditions

PRCP1 All mining disturbance authorised under EA EPML00561913 must have an associated rehabilitation outcome provided in this PRCP Schedule.

PRCP2 For each rehabilitation and improvement area the holder must achieve the rehabilitation or management milestone criteria (milestone reference):

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

(b) by the milestone completion date specified in this schedule.

PRCP3 Where a land area ≥50 hectares becomes 'available for rehabilitation', earlier than **12 months** prior to the milestone date nominated in this schedule, the holder must amend the schedule under s.215(1)(b) of the EP Act within **60 business days** of the land being made available.

PRCP4 Where an area achieves a rehabilitation or management milestone, the holder must continue to achieve the milestone criteria until a surrender is approved.

PRCP5 The holder must maintain a risk register that identifies the risks to not achieving:

(a) a stable condition for post-mining land uses (PMLUs);
(b) sufficient improvement for non-use management areas (NUMAs); and

how the risks are being managed or minimised.

PRCP6 The risk register required under PRCP5 must be reviewed annually and include consideration of the outcomes of PRCP monitoring data.

PRCP7 The holder must carry out monitoring in accordance with:

(a) the monitoring and maintenance program described in the rehabilitation planning part for the activity;
(b) any requirement under this schedule; and
(c) as necessary to demonstrate achievement of each rehabilitation milestone or management milestone criteria.

Note: Where there is any inconsistency between this schedule and the rehabilitation planning part, the schedule criteria prevail to the extent of the inconsistency.

PRCP8 The holder must make and keep up to date records on:

(a) Achievement and ongoing maintenance of each rehabilitation or management milestone criteria relating to this schedule;

(b) Rehabilitation activities and the results of those activities (including but not limited to, actions taken, date, location, methods, data collected, Quality Assurance/Quality Control, photos, waste tracking and disposal records, appropriately qualified person details and assumptions);

(c) Maintenance of rehabilitation and the results of maintenance activities;

(d) Monitoring of rehabilitation and the results of monitoring;

(e) Details and results of rehabilitation trials;

(f) Relevant designs, drawings, specifications and any similar documents developed in accordance with good professional practice in relation to rehabilitation milestones or milestone criteria;

(g) All documents in relation to the requirements of this schedule, including reports (e.g. site investigation report), statements (e.g. site suitability statement), certifications, assessments, investigations, inspections, audits or any similar documents developed in relation to rehabilitation milestones or milestone criteria;

(h) Landholder agreements;

(i) Details of community consultation (to be documented in the community consultation register) relating to rehabilitation and closure activities.

Note: It is acknowledged that for works that pre-date this PRCP schedule (i.e. RA5 and RA6 – Existing Rehabilitation), there may be records that will not have been taken or kept, but all relevant records that do exist will be included.

PRCP9 Records made under **PRCP8** must be kept until the relevant environmental authority has been surrendered or cancelled.

PRCP10 Records made under **PRCP8** must be provided to the administering authority in the specified format within **10 business days** of a written request.

PRCP11 All Appropriately Qualified Persons (AQP) / Suitably Qualified Persons (SQP) designs, specifications, certifications, assessments and any similar documents, must:

(a) include documented consideration of any relevant guideline or publication material, including material published by the administering authority;

(b) detail the boundary conditions (of any model);

(c) detail any assumptions made, limitations and areas of uncertainty; and

(d) must contain sufficient detail to allow for independent peer review and substantiation.

PRCP12 Disturbance due to exploration and minor ancillary activities in areas not planned to be mined and not within a Rehabilitation Area in this Schedule must be rehabilitated in accordance with the provisions detailed in the 'Eligibility criteria and standard conditions for exploration and mineral development projects' or its successor, with the exception that land must be rehabilitated to a stable condition which includes achieving the relevant post mining land use for the disturbance location as detailed in **Figure 1 – Final Site Design**.

Closure landform design report

PRCP13 By **1 July 2027**, the EA holder must provide to the administering authority an AQP prepared and peer reviewed closure landform design report, that incorporates all relevant structures, includes detailed landform designs, and is certified by an AQP as being safe, erosionally and structurally stable, and appropriate for the PMLU, having regard to the material properties and local conditions as they apply to geotechnical and erosional stability risk. The closure landform design report must demonstrate that the landform will support the achievement of a stable condition.

PRCP14 The currency of the closure landform design report must be maintained, and the report updated as often as necessary, to ensure that the relevant structures will achieve a stable condition that can be sustained. Where the report has been updated, the certifications provided under **PRCP13** must also be provided in relation to the updates.

Flood susceptibility and impact assessment

PRCP15 By **1 July 2029**, the EA holder must submit to the administering authority a flood susceptibility and impact assessment prepared by a third party AQP. The assessment must:

(a) describe potential risks and impacts under extreme flood events (up to and including 0.1% AEP), including quantifying potential impacts to the embankment structure, the final rehabilitated landform and the receiving environment as per relevant guidelines[1]; and

(b) confirm that any impacts to the flood protection landform and relevant areas of the final rehabilitated landform during or following extreme events (up to and including 0.1% AEP) will:

(i) not prevent stable condition being achieved; and

(ii) not result in serious environmental harm to the receiving environment that is:

(1) irreversible, of a high impact or widespread[2]; and

(2) significantly different to impacts to the surrounding environment exposed to the flood; and

(3) if required, recommend design, design modifications or additional protection measures (e.g. rock armouring, regrading, drainage re-alignment, toe protection or freeboard augmentation) to ensure long term hydraulic and geotechnical stability.

PRCP16 If the flood susceptibility and impact assessment required by **PRCP15** identifies requirements for new flood protection measures or modifications to the Pandora spoil landform, the EA holder must by **1 December 2029:**

(a) Submit a revised closure landform design report for any new or modified structure (e.g. Pandora spoil landform crest, toe protection, armouring or drainage works) to the administering authority.

(b) Ensure the design plan is prepared and certified by a third party AQP in the appropriate discipline(s).

(c) Demonstrate that the design ensures flood immunity to 0.1% AEP, with minimum stability criteria, crest elevation and freeboard requirements clearly defined.

Groundwater modelling

PRCP17 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, from the date of approval of the PRCP and within a year of any surrender application.

PRCP18 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 beyond the tenure boundaries post-closure; and
(b) Groundwater drawdown will not negatively impact groundwater dependent ecosystems (GDEs) on or surrounding the site.

Progressive Rehabilitation Certification

PRCP19 The requirements for achievement of progressive rehabilitation certification do not include the requirements of RM8.

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[1] *Manual for assessing consequence categories and hydraulic performance of structures* (ESR/2016/1933), *Structures which are dams or levees constructed as part of environmentally relevant activities* (ESR/2016/1934) and other relevant guidelines.

[2] Section 17(1) of the *Environmental Protection Act 1994*

END OF CONDITIONS

Section B – Definitions

Appropriately qualified person (AQP)	means a person who has professional qualifications, training, skills and experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods or literature.
Activity (EP Regulation)	includes that part, if any, of an activity relating to the following— (a) preparing a place for the activity before carrying out the activity; (b) rehabilitating a place after it has been used for carrying out the activity.
BioCondition	refers to the *BioCondition Assessment Manual* (Eyre, T.J., Kelly, A.L, Neldner, V.J., Wilson, B.A., Ferguson, D.J., Laidlaw, M.J. and Franks, A.J. (2015)) and *BioCondition: A Condition Assessment Framework for Terrestrial Biodiversity in Queensland. Assessment Manual. Version 2.2* (Queensland Herbarium, Department of Science, Information Technology, Innovation and Arts, Brisbane) or later versions thereof.
Contaminants	can be a gas, liquid or solid; or an odour; or an organism (whether alive or dead), including a virus; or energy, including noise, heat, radioactivity and electromagnetic radiation; or a combination of contaminants.
Contaminated Land Auditor	A contaminated land auditor is responsible for auditing the work of the suitably qualified person (SQP) by evaluating and certifying site investigation and validation reports and drafting the site management plans that are submitted for a decision on a land contamination matter.
Environmentally problematic material	means material that will negatively impact water quality and stability or vegetation growth.
Flood stress	is the pressure on structures from rapid water rise, erosion, and saturation during extreme floods, risking instability.
Groundcover	means anything in contact with the soil surface including live cover, standing dry cover, organic litter (including leaves, hay, woody debris) or rocks.
Growth media	is defined as all soil and soil-like material that will support the final vegetation cover. This includes the topsoil and subsoil where these materials are applied independently. Where the topsoil is incorporated into the underlying subsoil/spoil, topsoil refers to the depth of incorporation and the remaining depth is regarded as subsoil. The total depth of growth media is nominally considered to be the effective plant root zone
Gully	A gully is a channel excavated by water, more than 0.3 m deep.
Independent AQP	is an AQP who is a third party, being independent of the PRCP schedule holder, and has not previously provided advice on the matter the subject of the review.
Independently peer reviewed	means a peer reviewer who is a third-party to the PRCP schedule holder and the AQP whose report is being reviewed and substantiated. The peer reviewer shall also be an AQP and documentation provided must contain sufficient detail to allow for independent technical review and substantiation and provide and justify site-specific landform performance (SMART) criteria.

Potentially acid forming (PAF)	means material with either a Net Acid Producing Potential of greater than 5 kg of H_2SO_4/tonne or a Net Acid Generation oxidation pH of less than 4.5 (pH unit).
Rehabilitation activity	means any activity that the holder is required to carry out in relation to this PRCP schedule.
Relevant material	includes: (i) Final landform design report, (ii) Durability assessment/ report, (iii) "As Constructed" report; (iv) All monitoring data (v) Assessment of monitoring data, (vi) All maintenance records; and (vii) Modelling and technical assessments.
Relevant structure	Overburden/spoil emplacements, waste rock dumps, tailings storage facilities, residual voids/depressed landforms, permanent diversions and flood protection landforms/levees.
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	means one or both of the following conditions apply: no evidence of sediment movement; sides and/or floors of erosion form are revegetated (Australian Soil and Land Survey Field Handbook Fourth Edition).
Stable condition	see section 111A of the *Environmental Protection Act 1994*.
Suitably qualified and experienced person (SQP)	for performing a regulatory function under chapter 7, part 8 (Contaminated Land) of the EP Act or another function prescribed under a regulation, means a person who— (a) has qualifications and experience relevant to performing the function; and (b) if a regulation prescribes an organisation for this paragraph—is a member of the organisation.
Vegetative groundcover	means plants, plant litter, tree leaf litter, twigs and woody debris capable of protecting the soil surface from erosion.
Weed	(a) Category 3 restricted invasive plant species, defined by the *Biosecurity Act 2014*; and (b) Weeds of Natural Significance, defined by Invasive Plants and Animals Committee 2016, Australian Weeds Strategy 2017 to 2027, Australian Government Department of Agriculture and Water Resources, Canberra.

Section C - Final site design and reference maps

Figure 1 – Final Site Design
Figure 2 – Reference Map

Figure 1 – Final Site Design

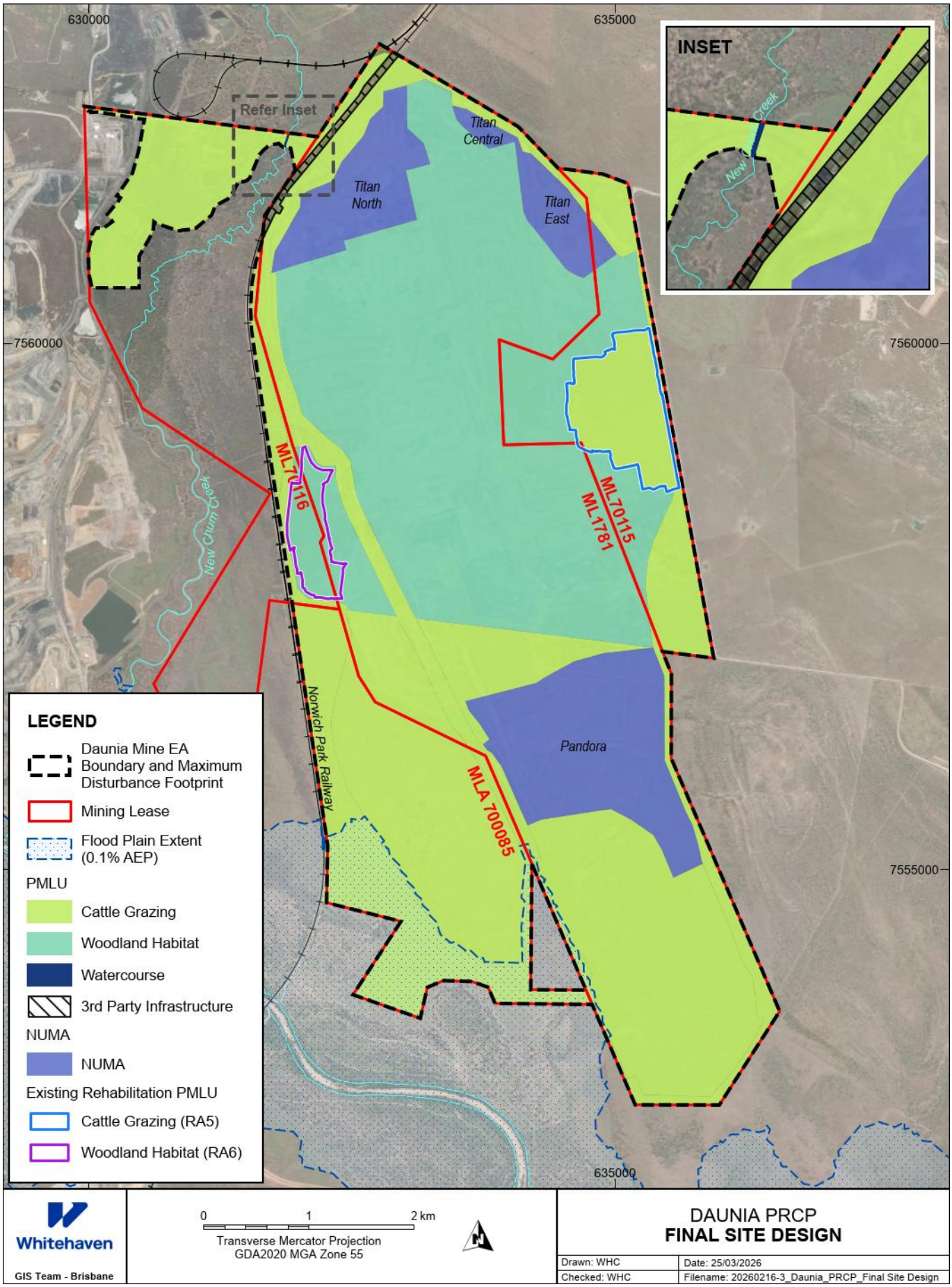
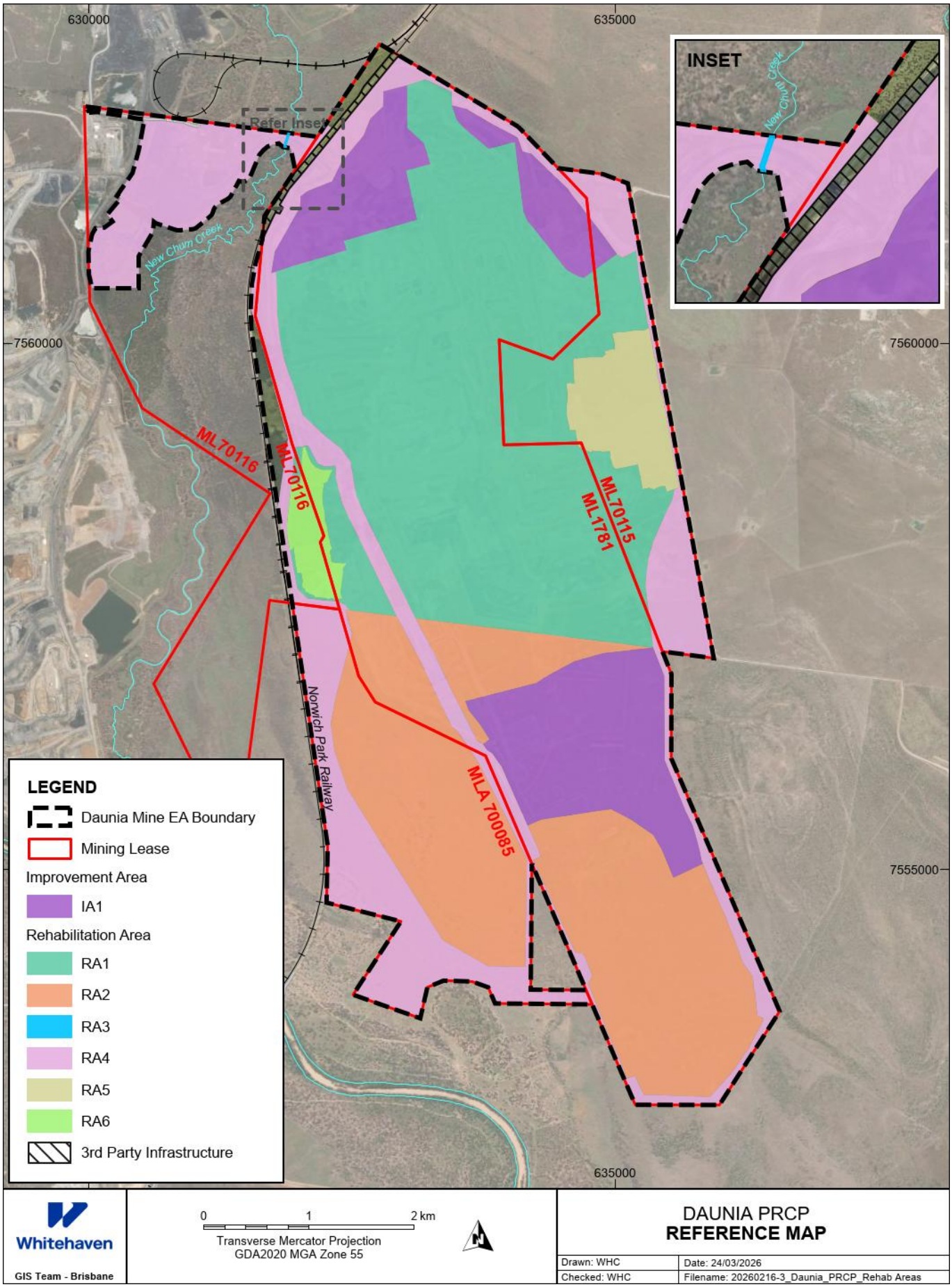


Figure 2 – Reference Map



Section D – Post mining land uses

(RA1) Rehabilitation area 1

Post-mining land uses (PMLU)																				
Rehabilitation area	RA1																			
Relevant activities	Spoil Dumps																			
Total rehabilitation area size (ha)	1185																			
Commencement of first milestone: RM1	1/07/2026																			
PMLU	Woodland Habitat																			
Date area is available	1/07/2026	1/07/2028	1/07/2031	1/07/2033	1/07/2036	1/07/2038	1/07/2041	1/07/2043	1/07/2046											
Cumulative area available (ha)	51	123	233	403	568	693	819	1053	1185											
Milestone completed by	10/12/2028	10/12/2031	10/12/2033	10/12/2036	10/12/2038	10/12/2041	10/12/2043	10/12/2046	10/12/2048	10/12/2051	10/12/2053	10/12/2056	10/12/2058	10/12/2061	10/12/2063	10/12/2066	10/12/2068	10/12/2071	10/12/2073	10/12/2076	10/12/2078
Milestone Reference	Cumulative area achieved (ha)																			
RM1	51	123	233	403	568	693	819	1053	1185												
RM2	51	123	233	403	568	693	819	1053	1185												
RM3	51	123	233	403	568	693	819	1053	1185												
RM4	0	82	123	276	403	610	693	897	1053	1185											
RM5	0	17	82	174	276	527	610	768	897	1131	1185										
RM6	0	0	0	17	82	174	276	527	610	768	897	1131	1185								
RM7	0	0	0	0	0	0	0	0	0	0	0	17	82	174	276	527	610	768	897	1131	1185
RM8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1185

(RA2) Rehabilitation area 2

Post-mining land uses (PMLU)																	
Rehabilitation area	RA2																
Relevant activities	Spoil Dumps																
Total rehabilitation area size (ha)	790																
Commencement of first milestone: RM1	1/07/2026																
PMLU	Cattle Grazing																
Date area is available	1/07/2026	1/07/2028	1/07/2031	1/07/2033	1/07/2036	1/07/2038	1/07/2041	1/07/2043									
Cumulative area available (ha)	13	34	38	38	122	374	560	790									
Milestone completed by	10/12/2028	10/12/2031	10/12/2033	10/12/2036	10/12/2038	10/12/2041	10/12/2043	10/12/2046	10/12/2048	10/12/2051	10/12/2053	10/12/2056	10/12/2058	10/12/2061	10/12/2078		
Milestone Reference	**Cumulative area achieved (ha)**																
RM1	13	34	38	38	122	374	560	790									
RM2	13	34	38	38	122	374	560	790									
RM3	13	34	38	38	122	374	560	790									
RM4	0	13	34	38	38	206	374	638	790								
RM5	0	13	13	38	38	38	206	453	638	790							
RM6	0	0	0	13	13	38	38	38	206	453	638	790					
RM7	0	0	0	0	0	13	13	38	38	38	206	453	638	790			
RM8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	790		

(RA3) Rehabilitation area 3

Post-mining land uses (PMLU)					
Rehabilitation area	RA3				
Relevant activities	Watercourse Crossing / Culverts				
Total rehabilitation area size (ha)	0.3				
Commencement of first milestone: RM1	1/07/2043				
PMLU	Watercourse				
Date area is available	1/07/2043				
Cumulative area available (ha)	0.3				
Milestone completed by	10/12/2046	10/12/2048	10/12/2053	10/12/2073	10/12/2078
Milestone Reference	**Cumulative area achieved (ha)**				
RM1	0.3				
RM2	0.3				
RM3	0.3				
RM4	0.3				
RM5	0.0	0.3			
RM6	0.0	0.0	0.3		
RM7	0.0	0.0	0.0	0.3	
RM8	0.0	0.0	0.0	0.0	0.3

(RA4) Rehabilitation area 4

Post-mining land uses (PMLU)											
Rehabilitation area	RA4										
Relevant activities	Infrastructure (CHPP, MIA, workshops, dams, coal stockpiles, roads and general infrastructure)										
Total rehabilitation area size (ha)	721										
Commencement of first milestone: RM1	1/07/2043										
PMLU	Cattle Grazing										
Date area is available	1/07/2043	1/07/2046	1/07/2048								
Cumulative area available (ha)	173	473	721								
Milestone completed by	10/12/2046	10/12/2048	10/12/2051	10/12/2053	10/12/2056	11/12/2058	11/12/2061	12/12/2063	12/12/2066	17/12/2078	
Milestone Reference	**Cumulative area achieved (ha)**										
RM1	173	473	721								
RM2	173	473	721								
RM3	173	473	721								
RM4	0	173	623	721							
RM5	0	0	323	623	721						
RM6	0	0	0	0	323	623	721				
RM7	0	0	0	0	0	0	323	623	721		
RM8	0	0	0	0	0	0	0	0	0	721	

(RA5) Rehabilitation area 5

Post-mining land uses (PMLU)				
Rehabilitation area	RA5			
Relevant activities	Existing Rehabilitation			
Total rehabilitation area size (ha)	104			
Commencement of first milestone: RM5	1/07/2026			
PMLU	Cattle Grazing			
Date area is available	1/07/2026	1/07/2031	1/07/2036	1/07/2071
Cumulative area available (ha)	104	104	104	104
Milestone completed by	10/12/2028	10/12/2033	10/12/2038	10/12/2078
Milestone Reference	**Cumulative area achieved (ha)**			
RM5	104			
RM6	0	104		
RM7	0	0	104	
RM8	0	0	0	104

(RA6) Rehabilitation area 6

Post-mining land uses (PMLU)				
Rehabilitation area	RA6			
Relevant activities	Existing Rehabilitation			
Total rehabilitation area size (ha)	44			
Commencement of first milestone: RM5	1/07/2026			
PMLU	Woodland Habitat			
Date area is available	1/07/2026	1/07/2031	1/07/2051	1/07/2071
Cumulative area available (ha)	44	44	44	44
Milestone completed by	10/12/2028	10/12/2033	10/12/2053	10/12/2078
Milestone Reference	**Cumulative area achieved (ha)**			
RM5	44			
RM6	0	44		
RM7	0	0	44	
RM8	0	0	0	44

Rehabilitation area milestones

Milestone reference	Rehabilitation milestone	Milestone criteria
RM1	Infrastructure decommissioning and removal	**1.1** 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 to be completed: (a) **Services and utilities:** Disconnect and remove all above and below ground services (water, electricity, gas etc) and ensure no service infrastructure remains within 0.5 m of the final landform surface. All pipelines are to be drained. (b) **Buildings and structures:** Dismantle and remove all buildings, fencing, associated foundations and related materials to within 0.5 m of the final landform surface. Dispose of such materials on-site only if they are a type of waste authorised under Environmental Authority EPML00561913. All other materials must be transported offsite for lawful disposal off-site. (c) **Hardstands and roads:** Remove all hardstand, concrete, roads and road construction materials (bitumen, blue metal, aggregate etc) to within 0.5 m of the final landform surface. Dispose of such materials on-site only if they are a type of waste authorised under Environmental Authority EPML00561913. All other materials must be transported for lawful disposal off-site. (d) **Drainage and water infrastructure:** All dams dewatered and desilted, and dam liners removed. Remove all surface water drainage infrastructure (including watercourse crossings and culverts) that do not form part of a watercourse or riparian ecosystem PMLU, or form part of a non-use management area (NUMA). (e) **Earthworks and other features:** Decommission all drillholes, bores (not used for the purposes of monitoring as defined in this schedule), sediment ponds and sumps. (f) **Machinery and equipment:** Remove all plant and equipment not required for rehabilitation works from site. (g) **Waste materials:** Remove all waste not authorised for on-site disposal under Environmental Authority EPML00561913. **1.2** Independent AQP certifies achievement of RM1.1.
RM2	Identification, remediation and removal of contaminated land	**2.1** Contaminated land investigations (investigation, remediation and validation) in accordance with the EP Act, including a site investigation report, and where required, a validation report and/or a draft Site Management Plan. **2.2** Contaminated and hazardous material either remediated in-situ or disposed of on-site to the extent authorised under Environmental Authority EPML00561913, or removed and disposed of to an approved landfill, with waste tracking information recorded and submitted. **2.3** Contaminated Land Auditor certifies that no contamination unsuitable for the PMLU remains or is occurring.

Milestone reference	Rehabilitation milestone	Milestone criteria
RM3	Landform development (re-profiling / reshaping)	**Criteria applicable to all RAs:** **3.1** Relevant structures are developed and/or reshaped such that they are consistent with the closure landform design report (**PRCP13**) and the remainder of disturbed land is reshaped to approximate original contours. **3.2** An "As-Constructed Report" prepared which details and justifies all variations to the design, including a certification that such variations will not affect the design performance. **3.3** All major earthworks (including reshaping, pushing, trimming etc) are undertaken in accordance with the detailed design specifications provided by an AQP. **3.4** Erosion and sediment control systems are installed as per detailed design specifications and installation is verified by an AQP. **3.5** Constructed landforms achieve geotechnical stability with a Factor of Safety (FOS) ≥ 1.5 at the safety bund which includes consideration of flood stress, unless an alternative is justified by an AQP. **3.6** AQP certifies that all areas with slopes ≥15% have been covered with at least 1m of a rock-soil mix or another depth as prescribed by an AQP, and that either the following criteria are met or an AQP has determined that alternative methods are suitable: (a) Material is mixed at a ratio of 4 parts rock to 1 part soil; (b) The rock component of the mix is fresh Permian material with a minimum slake durability of 70%; (c) Rock component has a median particle size as approved by an AQP based on shear stress results from erodibility testing; (d) Material is not dispersive; and (e) Material chemical and physical characteristics are sufficient to support vegetation targets as a secondary or primary growth medium. **Additional PMLU specific landform criteria:** **3.7** For the Cattle Grazing PMLU, landforms are reshaped with: (a) at least 70% of slopes ≤20% gradient; (b) at least 50% of slopes ≤15% gradient; and (c) no slopes ≥25% gradient **3.8** For the Woodland Habitat PMLU, landforms reshaped to ≤25% gradient.

Milestone reference	Rehabilitation milestone	Milestone criteria
		3.9 For the Watercourse PMLU, disturbed natural watercourse bed and banks are returned to a profile similar to the pre-disturbance condition. **Additional criteria for spoil dumps:** **3.10** For spoil dumps which include rejects, at least 1 m of capping material is required (in addition to any rock-soil mix prescriptions required by an AQP per PRCP13 and RM3.6), unless an alternative is recommended by an AQP. **3.11** Cover surfaces are water shedding and free from surface ponding. **3.12** Appropriate mitigative measures are in place for outer landform slopes that interact with flood waters up to 0.1% AEP, as modelled on the closure landform, and designed by an AQP to minimise potential instability of the landforms from interaction with floodwaters. **3.13** The flood protection landforms and flood protection measures required by **PRCP15 and PRCP16** must include parameters to mitigate the impacts of high-energy flow (≥2.5m/s) against the constructed landforms, to reduce flow energy and ensure the stability of the landform, as determined by the AQP. These include, but are not limited to, energy dissipation measures (e.g. rock lining) and consideration of surface roughness to ensure effective stabilisation of the landform. **3.14** Independent AQP certifies achievement of RM3.1 to RM3.13 inclusive.
RM4	Surface preparation	**4.1 Growth media assessment:** Growth media health and suitability is assessed and documented by an AQP as suitable for the PMLU and target vegetation establishment no more than six (6) months prior to placement on the landform for the parameters in ***Attachment 1 – Growth Media Quality Criteria***. **4.2 Amelioration:** Where growth media tested under the criteria of RM4.1 does not meet the criteria of ***Attachment 1 – Growth Media Quality Criteria***, the growth media is ameliorated to achieve the criteria. **4.3 Growth media placement:** For areas where topsoil has previously been removed, topsoil and or growth media is placed to a depth of: (a) ≥150 mm for the cattle grazing and watercourse PMLUs; and (b) ≥100 mm for the woodland habitat PMLU. **4.4 Soil ripping:** Rip on contour at a minimum depth of ≥300 mm. **4.5** Independent AQP certifies achievement of RM4.1 to RM4.4 inclusive.

Milestone reference	Rehabilitation milestone	Milestone criteria
RM5	Revegetation	**Cattle Grazing PMLU:** **5.1** Seeding is completed in accordance with the recommended pasture mix and seeding rates provided in ***Attachment 2 - Seed Mix Species List and Seeding Rates (Table 1)***. **5.2** At least four (4) species of 3P (preferred, palatable and perennial) grasses, including at least two (2) native species of grasses, and two (2) legume species are to be included in the seed mix, as listed in ***Attachment 2 - Seed Mix Species List and Seeding Rates (Table 1),*** or as recommended by an AQP. **5.3** At least two (2) native shade tree species consisting of *Eucalyptus* sp. and/or *Corymbia* sp framework tree species are to be included in the seed mix, as listed in ***Attachment 2 - Seed Mix Species List and Seeding Rates (Table 2)***, or as recommended by an AQP. **5.4** Minimum seeding rates of at least 12kg/ha of pure live seed,3 kg/ha of uncoated legume seed and 0.5 kg/ha framework *Eucalyptus* sp. and/or *Corymbia* sp shade trees are to be applied, unless adjusted by an AQP. **5.5** All seed mixes will also include 5 kg/ha of Japanese millet (*Echinochloa esculenta*) or similar as a sterile cover crop to protect soils from erosion. **Woodland Habitat PMLU:** **5.6** Target Regional Ecosystems species mix for woodland habitat rehabilitation determined and documented by an AQP with consideration of the landform spoil and growth media characteristics, and the commercial availability of seed species. **5.7** Seeding is completed in accordance with the recommended woodland mix and seeding rates provided in ***Attachment 2 - Seed Mix Species List and Seeding Rates (Table 2).*** **5.8** At least six (6) species from the revegetation lists for framework trees, woody understorey (shrub) species, and grass species are to be included in the seed mix, or as recommended by an AQP as per RM5.5. **5.9** Minimum seeding rates of at least 4.5 kg/ha of pure live seed of tree species, 3 kg/ha of pure live seed of woody understorey species and 10 kg/ha of grass species are to be applied, unless adjusted by an AQP as per RM5.5. **5.10** All seed mixes will also include 5 kg/ha of Japanese millet (*Echinochloa esculenta*) or similar as a sterile cover crop to protect soils from erosion. **Watercourse PMLU:** **5.11** Seeding is completed in accordance with the recommended watercourse species mix and seeding rates provided in ***Attachment 2 - Seed Mix Species List and Seeding Rates (Table 3)*.**

Milestone reference	Rehabilitation milestone	Milestone criteria
		5.12 Minimum seeding rates for upper and mid banks of at least 6 kg/ha pure live seed for tree species, 4 kg/ha of pure live seed for woody understorey species and 10 kg/ha of pure live seed for grass species and other ground species are to be included in the seed mix, unless adjusted by an AQP. **5.13** Minimum seeding rates for lower banks of at least 5 kg/ha pure live seed for tree species, 10 kg/ha of pure live seed for grass species and other ground species are to be included in the seed mix, unless adjusted by an AQP. **5.14** All seed mixes will also include 5 kg/ha of Japanese millet (*Echinochloa esculenta*) or similar as a sterile cover crop to protect soils from erosion. **5.15** Independent AQP certifies achievement of RM5.1 to RM5.14 inclusive.
RM6	Achievement of surface requirements	**For all PMLUs**: **6.1** Weeds comprise <5% of total vegetative groundcover, except *Parthenium hysterophorus,* which must not exceed 10% and must be assessed by an AQP as appropriately managed. **6.2** With respect to erosion: (a) There is no evidence of 'moderate' or 'severe' erosion as defined by ***Attachment 3: Erosion classification framework***; (b) Any erosion present will not compromise the achievement of a PMLU to a stable condition; and (c) Erosion requiring intervention has been remediated and does not impact achieving the PMLU. **6.3** The surface water monitoring network features within the rehabilitated area (as per ***Attachment 6 – Surface Water Monitoring Locations***) are installed and monitoring is underway (at least one year of sampling undertaken). **6.4** Ground cover: (a) For slopes ≤15%, ≥80% total vegetative groundcover. (b) For slopes ≥15%, ≥50% total vegetative groundcover. **Additional criteria for Cattle Grazing PMLU:** **6.5** Vegetative groundcover is established and self-sustaining, of which at least 50% of vegetative dry matter is comprised of 3P pasture species as listed in ***Attachment 2 - Seed Mix Species List and Seeding Rates (Table 1)***.

Milestone reference	Rehabilitation milestone	Milestone criteria
		Additional criteria for Woodland Habitat PMLU (RA1) and Watercourse PMLU (RA3): **6.6** A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'. **6.7** Modified BioCondition assessed under RM6.6 demonstrates achievement of an overall score of: (a) for Woodland habitat PMLU, ≥15 out of a possible 60 for the hybrid regional ecosystem as defined in ***Attachment 5 - Modified BioCondition Benchmarks for Woodland and Watercourse Regional Ecosystems***; and (b) for Watercourse PMLU, ≥15 out of a possible 60 for the relevant representative regional ecosystem as defined in ***Attachment 5 - Modified BioCondition Benchmarks for Woodland and Watercourse Regional Ecosystems***. **6.8** Independent AQP certifies achievement of RM6.1 to RM6.7 inclusive.
RM7	Achievement of PMLU to a safe, stable, non-polluting and self-sustaining condition	**For all PMLUs**: **7.1** An AQP certified risk assessment is completed and confirms that the safety hazards in rehabilitation are not significantly different to surrounding unmined landscapes subject to the same land use. **7.2** Rehabilitation is assessed as geotechnically stable by an AQP with a minimum FOS ≥1.5 achieved at the safety bund, unless an alternative is justified by an AQP. **7.3** The land is structurally and erosionally stable. **7.4** Any remaining infrastructure rehabilitated or removed in accordance with RM1.1. **7.5** An AQP certifies that: (a) There is no moderate or severe erosion present (as defined in ***Attachment 3: Erosion classification framework***); and (b) All other erosion requiring intervention has been remediated and does not impact achieving the PMLU. **7.6** Surface water runoff collected from representative areas of rehabilitation when surface flow occur, when it is safe to do so, complies with ***Attachment 7 – Surface Water Quality Limits*.** **7.7** The groundwater monitoring network features within the rehabilitated area (as per ***Attachment 8 – Groundwater Monitoring Locations***) are installed and monitoring is underway (at least one year of sampling undertaken). **Additional criteria for Existing Rehabilitation - Cattle Grazing PMLU (RA5):** **7.8** At least 60% of vegetative dry matter yield is comprised of 3P pasture species (Stocktake, 2021).

Milestone reference	Rehabilitation milestone	Milestone criteria
		7.9 Grazing land condition is assessed as Good (A) if ungrazed, or Fair (B) if under a grazing regime as per ***Attachment 4 – ABCD Land Condition Framework*** (DES 2022a). **7.10** Leucaena >2m high: stem density is <250 stems per hectare (1 per 40m^2) mean total area. **Additional criteria for Future Rehabilitation - Cattle Grazing PMLU (RA2, RA4):** **7.11** At least 60% of vegetative dry matter yield is comprised of 3P pasture (Stocktake, 2021). **7.12** Land suitability class is assessed in accordance with *'Rehabilitated mined land suitability for cattle grazing in the Bowen Basin (Short 2023).'* Land suitability assessed by an AQP as ≤3; or if ≥4, is not different from pre-mining and/or limited by the same factors present in representative reference sites. **7.13** Leucaena >2m high: stem density is <250 stems per hectare (1 per 40m^2) mean total area. **Additional criteria for Existing Rehabilitation - Woodland Habitat PMLU (RA6):** **7.14** Species richness: ≥2 native tree species; ≥3 native shrub species; ≥4* native grass species. **7.15** Tree canopy cover: ≥16%. **Existing rehabilitation may contain a mixture of native and exotic grass species* **Additional criteria for Future Rehabilitation - Woodland Habitat PMLU (RA1) and Watercourse PMLU (RA3):** **7.16** A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'. **7.17** Modified BioCondition assessed under RM7.16 demonstrates achievement of an overall score of: (a) for woodland habitat, ≥33 out of a possible 60 for the hybrid regional ecosystem as defined in ***Attachment 5 - Modified BioCondition Benchmarks for Woodland and Watercourse Regional Ecosystems***. (b) for watercourses, ≥30 out of a possible 60 for the relevant representative regional ecosystem as defined in ***Attachment 5 - Modified BioCondition Benchmarks for Woodland and Watercourse Regional Ecosystems***. **7.18** Independent AQP certifies achievement of RM1.1 to RM7.17 inclusive.

Milestone reference	Rehabilitation milestone	Milestone criteria
RM8	Water management in the final landform	**8.1** Surface water quality is monitored monthly during flow for at least five (5) consecutive years at, but not limited to, the downstream monitoring locations specified in ***Attachment 6 - Surface Water Monitoring Locations***, for all quality characteristics listed in ***Attachment 7 – Surface Water Quality Limits***. **8.2** With respect to surface water and subject to RM8.1 the following must be demonstrated prior to surrender: (a) Surface water quality must not exceed the limits specified in ***Attachment 7 – Surface Water Quality Limits*** within the five-year period immediately prior to surrender; (b) If the surface water quality exceeds the criteria in RM8.2(a), the applicable upstream site must be compared to the downstream site result; and quality result measured at a downstream site must be equal to or less than the quality result measured at the applicable upstream site[1]. **8.3** If the surface water quality results monitored per RM8.2 exceed the criteria listed, an AQP must complete and provide to the administering authority within three (3) months of receiving the relevant sampling results 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: (a) that there is a low risk to achieving a stable condition, then no further action is to be taken; (b) 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. **8.4** RM8.3 can only be triggered three (3) times over five (5) consecutive years prior to surrender. **8.5** Groundwater quality is monitored quarterly for at least five (5) consecutive years at, but not limited to, the monitoring locations specified in ***Attachment 8 - Groundwater Monitoring Locations***, for all quality characteristics listed in ***Attachment 9 - Groundwater Quality Limits***. **8.6** The limits in ***Attachment 9 - Groundwater Quality Limits*** must not be exceeded, for three (3) consecutive sampling events within the five-year period immediately prior to surrender. **8.7** Independent AQP certifies achievement of RM8.1 to RM8.6 inclusive.

[1] For pH, the quality result measured at the downstream location must be within the prescribed range. However, where pH at the downstream location is greater-than (>) the highest limit in the range, the pH at the applicable upstream location must be greater-than or equal-to (≥) the downstream location. Conversely, where pH at the downstream location is less than (<) the lowest limit in the range, the upstream pH at the applicable upstream location must be less-than or equal-to (≤) the downstream location.

Section E – Non-use management areas

(IA1) Improvement area 1

Non-use management area (NUMA)								
Improvement area	IA1							
Relevant activities	Voids (Titan North/Central, Titan East, Pandora)							
Total size (ha)	432							
Commencement of first milestone: MM1	1/07/2033							
NUMA	Non-use Management Area							
Date area is available	1/07/2033	1/07/2036	1/07/2038	1/07/2041	1/07/2043	1/07/2046	1/07/2048	1/07/2051
Cumulative area available (ha)	112	176	176	176	176	432	432	432
Milestone completed by	10/12/2036	10/12/2038	10/12/2041	10/12/2043	10/12/2046	10/12/2048	10/12/2051	10/12/2053
Milestone Reference	**Cumulative area achieved (ha)**							
MM1	112	176	176	176	176	432		
MM2	112	176	176	176	176	432		
MM3	0	0	112	176	176	176	176	432

Improvement area milestones

Milestone reference	Management milestone	Milestone criteria
MM1	Achievement of final landform design	**1.1** The maximum area of each NUMA must not exceed the following: (a) Titan North / Central – 112ha (b) Titan East – 64ha (c) Pandora – 256ha **1.2** The closure landform design for the landforms must be updated by an AQP based on the latest flood modelling and materials data prior to construction. **1.3** Final residual voids are not subject to inundation from floodwaters up to and including the 0.1% AEP event. **1.4** The pit walls achieve a FOS ≥1.5 within the NUMA extents, as certified by an AQP. **1.5** The location of the voids and associated safety bunds does not cause instability or degradation to the land outside the NUMA. **1.6** Residual voids must not overtop to the receiving environment.
MM2	Achievement of safety requirements	**2.1** Access to residual voids is restricted by a competent safety bund or equivalent landform to prevent access, and are constructed to the following specifications: (a) Constructed from competent non-weathered, non-dispersive material; (b) Minimum height of 2m; (c) Minimum base width of 4m; (d) 1 in 3 batters; and (e) Positioned at the geotechnical offset or a 15m offset, whichever is greater. **2.2** Access to highwalls is restricted by fencing and safety signage designed and installed in accordance with Australian standards. **2.3** Safety signage designed and installed in accordance with Australian Standard is erected at 100 m intervals along the fence.

Milestone reference	Management milestone	Milestone criteria
MM3	Achievement of sufficient improvement	**3.1** The final landform has been constructed in accordance with the closure landform design. **3.2** The NUMAs will not present an unacceptable risk of environmental harm. **3.3** Erosion of the landform within the NUMA area will not negatively impact on the stability of any adjacent structures or rehabilitation areas, or their ability to sustain their PMLU. **3.4** The NUMA is safe to humans and livestock. **3.5** The water level and quality in the final voids does not, and will, not cause environmental harm to the receiving environment, as demonstrated by groundwater level, surface water and groundwater quality monitoring and modelling. **3.6** An AQP demonstrates with water quality, water level and modelling data, that the residual voids act as groundwater sinks post-closure **3.7** Monitoring and maintenance of exclusion fences and bunds installed at MM2 confirms that they remain effective. **3.8** Flood modelling re-run on the as-constructed landform and calibrated against the closure landform design confirms flood immunity of the residual voids provided at construction has been retained for 0.1% AEP events. **3.9** Independent AQP certifies achievement of MM1.1 to MM3.8 inclusive.

Section F – Attachments

Attachment 1 – Growth Media Quality Criteria

Parameter	Criteria		
	Cattle Grazing PMLU (RA2, RA4)	Woodland Habitat PMLU (RA1)	Watercourse PMLU (RA3)
Available Phosphorus (Colwell P)	≥14mg/kg	≥8mg/kg	≥8mg/kg
Electrical Conductivity Saturation Extract (ECse)	≤4dS/m	≤4dS/m	≤4dS/m
Exchangeable Sodium Percentage (ESP)	≤6%	≤10%	≤6%
pH	6 – 8.5	5.1 – 8.8 or as determined by an AQP	5.1 – 8.8 or as determined by an AQP

Attachment 2 – Seed Mix Species List and Seeding Rates

Table 1 - Recommended species list and seeding rates for Cattle Grazing PMLU

Scientific name	Common name	Cracking clays and heavy loams/clays	Light loams/sands	Pure live seed[1] (PLS) rate (kg/ha)
Astrebla lappulacea, A, squarrosa, A. elymoides	Mitchell Grasses (curly, bull and hoop)	X	-	1-3 (per species)
Bothriochloa bladhii	Forest Blue Grass	-	X	1-3
*Bothriochloa insculpta cvv. Bisset**	Bisset Creeping Blue Grass	X	X	1-2
*Chloris gayana cvv. Callide**	Callide Rhodes Grass	X	X	1-2
*Chloris gayana cvv. Katambora**	Katambora Rhodes Grass	X	X	1-2
Dichanthium sericeum subsp. sericeum	Queensland Blue Grass	X	-	1-3
Digitaria brownii	Cotton Panic	X	X	1-3
Heteropogon contortus	Black Spear Grass	X	X	1-3
*Megathyrsus maximus var. pubiglumis**	Green Panic	-	X	1-2
*Panicum coloratum var. makarikariense**	Bambatsi Panic	X	-	1-2
Panicum decompositum	Native Millet	X	X	1-3
*Urochloa mosambicensis**	Sabi Grass	-	X	1-2
Grass species - Total seed weight coated (kg/ha)				**12**
*Stylosanthes seabrana**	Caatinga Stylo	X	-	1
*Macroptilium bracteatum **	Burgundy Bean	X	X	1-2
*Stylosanthes hamata**	Caribbean Stylo	-	X	1
Rhynchosia minima	Rhynchosia	X	X	1-2
Legume species - Total seed weight uncoated (kg/ha)				**3**
Echinochloa esculenta	Japanese Millet	X	X	5

[1] Where pure live seed (PLS) information is not yet available minimum seeding rates should be 16kg/ha uncoated pasture grasses, 4kg/ha uncoated legume species and 5kg/ha cover crop

** Denotes exotic species*

Table 2 - Recommended species list and seeding rates for Woodland Habitat PMLU

Species name	Common name	Commercial availability rating[1]	Life form and functional group code[2]	Pure live seed[3] rate (kg/ha-uncoated weight)	RE 11.5.3	RE 11.9.2
Acacia rhodoxylon	Rosewood	L	LLA	0.2-0.5	X	
Alphitonia excelsa	Red Ash	H	NE/NA	0.2-0.5	X	X
Angophora leiocarpa	Smooth Barked Apple	L	E/C	0.2-0.5	X	
Atalaya hemiglauca	Whitewood	H	NE/NA	0.3-0.5	X	X
Corymbia citriodora subsp. citriodora, ***	Lemon Scented Gum	H	E/C	0.5-1.5		X*,**
Corymbia clarksoniana	Clarkson's Bloodwood	M	E/C	0.5-1	X	
Corymbia dallachiana	Dallachy's Gum	M	E/C	0.2-0.5	X	X
Corymbia erythrophloia	Red Bloodwood	H	E/C	0.2-0.5	X	X
Corymbia trachyphloia	Brown Bloodwood	M	E/C	0.2-0.5		X
Eucalyptus brownii	Reid river box	M	E/C	0.2-0.5	X	
*Eucalyptus crebra**	Narrow Leafed Ironbark	H	E/C	0.5 -1.5	X*	
*Eucalyptus melanophloia**	Silver Leafed Ironbark	H	E/C	0.5 -1.5	X*	X*
Eucalyptus orgadophila	Mountain Coolabah	M	E/C	0.3-0.5		X
*Eucalyptus populnea**	Poplar Box	M	E/C	0.5 -1.5	X*	X
Lysiphyllum carronii	Red Bauhinia	M	NE/NA	0.3-0.5	X	X
Lysiphyllum hookeri	White Bauhinia	M	NE/NA	0.2-0.5	X	
Ventilago viminalis	Vine tree	L	E/C	0.2-0.5	X	
Framework tree species - Total seed weight uncoated (kg/ha)				**4.5**		
Acacia conferta	Crowded-leaf wattle	H	SU	0.1-0.5	X	
Acacia decora	Western Silver Wattle	H	SU	0.1-0.5		X
Acacia excelsa	Ironwood wattle	L	ILA	0.1-0.5	X	X
Acacia sericophylla	Desert oak	M	ILA	0.1-0.5	X	

Species name	Common name	Commercial availability rating[1]	Life form and functional group code[2]	Pure live seed[3] rate (kg/ha-uncoated weight)	RE 11.5.3	RE 11.9.2
Alstonia constricta	Bitterbark	L	SU	0.1-0.5	X	X
Alectryon diversifolius	Holly bush	L	SU	0.1-0.5	X	X
Breynia oblongifolia	Coffee bush	L	SU	0.1-0.5		X
Capparis lasiantha, C. canescens, C. loranthifolia.	Wait-a-while	M	V/C	0.1-0.5	X	X
Cassia brewsteri, ***	Leichhardt bean	H	SU	0.3-0.5	X	X
Dodonaea viscosa, ***	Sticky hop bush	H	SU	0.2-0.5	X	X
Dodonaea filifolia	Thread leaved hop bush	L	SU	0.1-0.5		X
Denhamia cunninghamii		L	SU	0.1-0.5	X	
Eremophila mitchellii	False sandlewood	L	SU	0.1-0.5	X	X
Erythroxylon australe	Cocaine tree	L	SU	0.1-0.5	X	
Geijera parvifolia	Wilga	H	SU	0.2-0.5	X	X
Grewia retusifolia, Grewia latifolia	Emu berry	L	SU	0.2-0.5	X	X
Owenia acidula	Emu apple	L	SU	0.2-0.5		X
Petalostigma pubescens	Quinine	M	SU	0.2-0.5	X	X
Senna artemisioides	Silver cassia	H	SU	0.1– 0.5	X	
Woody understory species - Total seed weight uncoated (kg/ha)				**3**		
Astrebla lappacea	Curly Mitchell grass	H	NG	1-2	X	
Aristida spp (i.e. A. calycina, A. latifolia, A. ramosa, A. caput-medusae, A. jerichoensis, A. personata, A. calycina, A. leptopoda)	Three awned spear grass	M	NG	1-2	X	X
Bothriochloa bladhii subsp. bladhii	Forest blue grass	H	NG	1-2		X
Bothriochloa decipiens var. decipiens	Pitted blue grass	L	NG	1-2	X	X
Bothriochloa ewartiana	Desert bluegrass	L	NG	1-2	X	X
Chrysopogon fallax	Golden beard grass	M	NG	1-2	X	X
Chloris divaricata		M	NG	1-2	X	X
Chloris truncata	Windmill grass	H	NG	1-2	X	X

Species name	Common name	Commercial availability rating[1]	Life form and functional group code[2]	Pure live seed[3] rate (kg/ha-uncoated weight)	RE 11.5.3	RE 11.9.2
Cymbopogon refractus	Barbwire grass	H	NG	1-2	X	
*Cynodon dactylon var. dactylon**	Couch	H	IG	1-2	X	X
Dichanthium sericeum subsp. sericeum	Queensland bluegrass	H	NG	1-2	X	X
Digitaria brownii		M	NG	1-2	X	
Eulalia aurea	Silky brown top	M	NG	1-2		X
Enteropogon acicularis	Windmill grass	M	NG	1-2	X	X
Heteropogon contortus	Black spear grass	H	NG	1-2	X	X
Iseilema vaginiflorum		L	NG	1-2		X
Panicum effusum	Hairy panic	M	NG	1-2	X	
Panicum decompositum	Native millet	H	NG	1-2		X
Panicum queenslandicum	Yabila grass	L	NG	1-2	X	X
Paspalidium distans	Shot grass	L	NG	1-2		X
Sarga leiocladum		L	NG	1-2		X
Sporobolus creber		L	NG	1-2		X
Themeda triandra	Kangaroo grass	H	NG	1-2	X	X
Grass species- Total pure live seed weight uncoated (kg/ha)				**10**		
Echinochloa esculenta	Japanese Millet		Cover crop	5		

[1] Commercial availability rating: high (H), medium (M), low (L)

[2] Life form and functional group code: Eucalypt/Bloodwood (Corymbia) species (E/C), Non-eucalypt, non-acacia species (NE/NA), Long lived acacias (LLA), Shrubby understorey (SU), Groundcover shrubs (GCS), Vines/creepers (V/C), Intermediate lifespan acacias (ILA), Short lifespan wattles (SLA), Introduced woody perennials (IWP), Competitive pasture grasses (CPG), Introduced grasses (IG), Native grasses (NG)

[3] Where pure live seed (PLS) information is not yet available minimum seeding rates must be at least 6kg/ha uncoated framework tree species, 4kg/ha uncoated woody understory species, 10 kg/ha uncoated grass species and 5kg/ha cover crop

** mandatory in relevant RE mix*

*** medium salinity tolerance (DERM 2011)*

Table 3 - Recommended species and seeding rates for Watercourse PMLU

Species name	Common name	Life form and functional group code[1]	Pure Live Seed[2] rate (kg/ha uncoated weight)
Upper and mid banks			
Angophora floribunda	Rough Barked Apple	E/C	0.5 - 1
*Casuarina cunninghamiana**	River She Oak	NE/NA	0.5 - 1
*Corymbia tessellaris**	Moreton Bay Ash	NE/NA	0.5 - 1
Eucalyptus camaldulensis subsp. *obtusa**	River Red Gum	E/C	1 - 2
Eucalyptus coolabah subsp. *coolabah*	Coolabah	E/C	1 - 2
Eucalyptus tereticornis subsp. *tereticornis**	Queensland Blue Gum	E/C	0.5 - 1
Lysiphyllum hookeri	White Bauhinia	NE/NA	0.5 - 1
*Melaleuca bracteata**	Black Tea Tree	NE/NA	0.5 - 1
Terminalia oblongata	Yellowwood	NE/NA	0.5 - 1
Framework tree species - total seed weight uncoated (kg/ha)			**6**
Carissa ovata	Current Bush	GCS	0.5 - 1
Eremophila mitchellii	False Sandalwood	SU	0.5 - 1
Erythroxylum australe	Cocaine Tree	SU	0.5 - 1
Ficus coronata	Creek Sandpaper Fig	SU	0.5 - 1
Ficus fraseri	White Sandpaper Fig	SU	0.5 - 1
Ficus opposita	Sandpaper Fig	SU	0.5 - 1
Petalostigma pubescens	Quinine	SU	0.5 - 1
Woody Understorey Species - Total Seed Weight Uncoated (Kg/Ha)			**4**
Bothriochloa bladhii	Forest Blue Grass	NG	0.5 - 1
*Cynodon dactylon**	Couch	IG	2
Chloris truncata	Windmill grass	NG	0.5 - 1

Species name	Common name	Life form and functional group code[1]	Pure Live Seed[2] rate (kg/ha uncoated weight)
Cymbopogon refractus	Barbwire grass	NG	0.5 - 1
Dichanthium sericeum subsp. sericeum	Queensland bluegrass	NG	0.5 - 1
Digitaria brownii	Cotton panic	NG	0.5 - 1
Eulalia aurea	Silky brown top	NG	0.5 - 1
Enteropogon acicularis	Windmill grass	NG	0.5 - 1
Heteropogon contortus	Black spear grass	NG	0.5 - 1
Lomandra longifolia	Mat Rush	NG	0.2 - 0.5
Panicum decompositum	Native millet	NG	0.2 - 0.5
Panicum effusum	Hairy Panic	NG	0.2 - 0.5
Paspalidium distans	Shot Grass	NG	0.2 - 0.5
Rhynchosia minima	Rhynchosia	V/C	0.2 - 0.5
Themeda triandra	Kangaroo Grass	NG	0.5 - 1
Grass and other ground species- Total pure live seed weight uncoated (kg/ha))			**10**
Lower banks and bank toe			
*Casuarina cunninghamiana**	River She Oak	NE/NA	0.5 -1.5
*Melaleuca bracteata**	Black Tea Tree	NE/NA	0.5 -1.5
*Melaleuca leucadendra**	Broad-Leaved Tea Tree	NE/NA	0.5 -1.5
*Melaleuca viminalis**	Red Bottlebrush	NE/NA	0.5 -1.5
Framework tree species - total seed weight uncoated (kg/ha)			**5**
Bothriochloa bladhii	Forest Blue Grass	NG	1 - 2
*Cynodon dactylon**	Couch	NG	1 - 2
Chloris truncata	Windmill grass	NG	1 - 2
Cymbopogon refractus	Barbwire grass	NG	1 - 2
Dichanthium sericeum subsp. sericeum	Queensland bluegrass	NG	1 - 2

Species name	Common name	Life form and functional group code[1]	Pure Live Seed[2] rate (kg/ha uncoated weight)
Themeda triandra	Kangaroo Grass	NG	0.5 -1
Bothriochloa bladhii subsp. bladhii	Forest Blue Grass	NG	1 - 2
Lomandra longifolia	Spiny-Headed Mat Rush	NG	2 - 3
Eustrephus latifolius	Wombat Vine	V/C	0.5 - 1
*Cyperus spp. (C. gracilis, C. polystachyos)***	Sedge	NG	2 - 3
*Cynodon dactylon**	Couch	IG	2 - 3
Ground species - total seed weight uncoated (kg/ha)			**10**
Echinochloa esculenta	Japanese Millet	Cover crop	5

Notes:

[1] Life form and functional group code: Eucalypt/Bloodwood (Corymbia) species (E/C), Non-eucalypt, non-acacia species (NE/NA), Long lived acacias (LLA), Shrubby understorey (SU), Groundcover shrubs (GCS), Vines/creepers (V/C), Intermediate lifespan acacias (ILA), Short lifespan wattles (SLA), Introduced woody perennials (IWP), Competitive pasture grasses (CPG), Introduced grasses (IG), Native grasses (NG)

[2] Where pure live seed (PLS) information is not yet available minimum seeding rates must be at least 6kg/ha uncoated framework tree species, 4kg/ha uncoated woody understory species, 10 kg/ha uncoated grass species and 5kg/ha cover crop

** mandatory in relevant RE mix*

*** medium salinity tolerance (DERM 2011)*

Attachment 3 – Erosion classification framework:

Erosion classification	Minor[1]	Moderate[1]	Severe[1]
Sheet erosion	Shallow soil deposits downslope.	Active[3] sheet erosion including indicators such as exposure of roots, moderate soil deposits in downslope sediment traps.	Active[3] sheet erosion including loss of surface horizons, exposure of subsoil horizons, pedestalling, root exposure, substantial soil deposits in downslope sediment traps.
Rill[6]	<7 active[3] rills / 50 m transect[5]	7-15 active[3] rills / 50 m transect[5]	>15 active[3] rills / 50 m transect[5]
Gully erosion	Stabilised[4] gullies 30 cm–100 cm depth; isolated, linear, discontinuous and restricted to primary or minor drainage lines.	Active[3] gullies 30 cm–100 cm depth; isolated, linear, discontinuous and restricted to primary or minor drainage lines.	Active[3] gullies >100 cm depth
Tunnel erosion	No tunnel erosion[2]	No tunnel erosion[2]	Tunnel erosion present
Mass movement	No mass movement[2]	No mass movement[2]	Mass movement present

Notes:
[1] State of Erosion form definitions: *NCST (2024) Australian Soil and Land Survey Field Handbook, 4th edition. The National Committee on Soil and Terrain. CSIRO Publishing, Collingwood, Australia.*
[2] No erosion: no evidence of any erosion types.
[3] Active: One or both of the following conditions apply: evidence of sediment movement; sides and/or floors of erosion form are relatively bare of vegetation.
[4] Stabilised: One or both of the following conditions apply: no evidence of sediment movement; sides and/or floors of erosion form are revegetated.
[5] The erosion monitoring transect is established by running a 50m tape at an angle perpendicular to the slope (i.e. along the contour).
[6] Rill frequency assessed over the entire rehabilitation area (not only features that intersect an existing monitoring transect).

Attachment 4 – ABCD Land Condition Framework

ABCD Land Condition Framework	
The ABCD land condition framework (*Grazing Guide version 2, Department of Environment, Innovation and Science, 2022*)	
Good condition (A)	**Fair condition (B)**
Often above 70% groundcover	Minimum 50% groundcover, but often less than 70% groundcover
Good density of perennial grasses (less than 30% bare ground), dominated by 3P grasses	Decreased density of perennial grasses (bare ground > 30% but < 50%), not dominated by 3P grasses
Few weeds, no significant infestations	Increased weeds, no significant infestations
Good soil condition, no erosion	Decline in soil condition, signs of erosion and susceptibility to erosion

Attachment 5 – Modified BioCondition Benchmarks for Woodland and Watercourse Regional Ecosystems

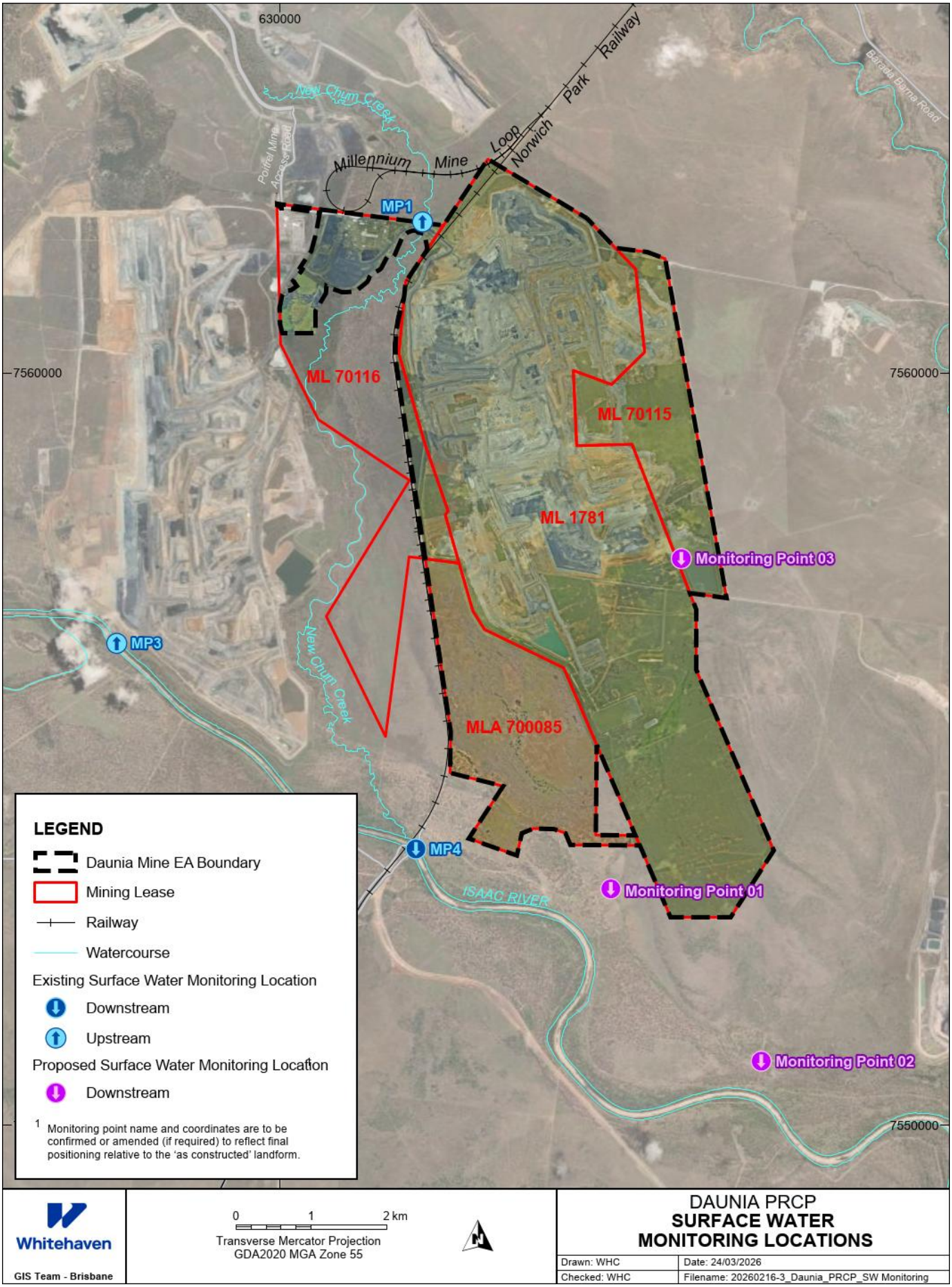
BioCondition Accessible Attribute	Maximum score for Attributes	Hybrid RE11.5.3/RE11.9.2	RE11.3.25
Recruitment of woody perennial species in ecologically dominant layer (%)	5	100	100
Native plant species richness - trees	5	4	4
Native plant species richness - shrubs	5	8	4
Native plant species richness - grasses	5	7	8
Native plant species richness - forbs	5	11	13
Tree canopy height (m)	5	16	23
Tree canopy cover (%)	5	23	34
Shrub canopy cover (%)	5	14	7
Native grass cover (%)	5	19	35
Organic litter (%)	5	25	21
Non-native plant cover (%)	10	0	0
Maximum score	**60**		

Attachment 6 – Surface Water Monitoring Locations

Monitoring points	Receiving waters location description	Latitude (decimal degrees, GDA2020)	Longitude (decimal degrees, GDA2020)
Upstream background monitoring points			
MP1	Upstream New Chum Creek, on the lease boundary with Millennium Mine.	-22.04166	148.27809
MP3	Isaac River – upstream of the confluence of New Chum Creek and Isaac River.	-22.09258	148.23915
Downstream monitoring points			
MP4	Isaac River – downstream of the confluence of New Chum Creek and the Isaac River.	-22.11697	148.27792
Monitoring Point 01[1]	Unnamed watercourse west of lease boundary, downstream of Pandora spoil dumps.	-22.121563	148.3030758
Monitoring Point 02[1]	Unnamed watercourse south of lease boundary, downstream of Pandora spoil dumps.	-22.1421	148.32265
Monitoring Point 03[1]	Downstream in unnamed drainage line on eastern lease boundary.	-22.08184	148.311792

[1] *Monitoring point name and coordinates are to be confirmed or amended (if required) to reflect final positioning relative to the 'as constructed' landform.*

Figure 3 – Surface water monitoring locations



Attachment 7 – Surface Water Quality Limits

Quality characteristics (units)[1]	Unit	Limit	Source
pH	pH Units	6.5 – 9.0	WQO
Electrical Conductivity	µS/cm	720	WQO
Turbidity	NTU	50	WQO
Sulfate (Isaac River)	mg/L	9	Site-specific 80th percentile
Sulfate (New Chum Creek)	mg/L	153	Site-specific 80th percentile
Aluminium	µg/L	480	Site-specific 80th percentile
Antimony	µg/L	9	[2]ANZG 2018
Arsenic	µg/L	13	ANZG 2018
Boron	µg/L	110	Site-specific data at 80th percentile
Cadmium	µg/L	0.2	ANZG 2018
Chromium	µg/L	1	ANZG 2018
Cobalt	µg/L	1.4	ANZG 2018
Copper	µg/L	4	Site-specific 95th percentile
Iron	µg/L	280	ANZG 2018
Lead	µg/L	3.4	ANZG 2018
Manganese	µg/L	300	Site-specific 95th percentile
Mercury	µg/L	0.06	ANZG 2018

Quality characteristics (units)[1]	Unit	Limit	Source
Molybdenum	µg/L	8	Site-specific 95th percentile
Nickel	µg/L	11	ANZG 2018
Selenium	µg/L	5	ANZG 2018
Silver	µg/L	0.05	ANZG 2018
Uranium	µg/L	0.5	ANZG 2018
Vanadium	µg/L	6	ANZG 2018
Zinc	µg/L	8	ANZG 2018
Ammonia	mg/L	0.9	ANZG 2018
Nitrate	mg/L	1.1	ANZG 2018
Fluoride	mg/L	0.3	Site-specific 80th percentile
Total recoverable hydrocarbons (C6-C9) (µg/L)	µg/L	20	
Total recoverable hydrocarbons (C10-C36) (µg/L)	µg/L	100	
Major ions (mg/L) Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate			For interpretation purposes
Hardness (mg/L)			For interpretation purposes

Notes:

[1] 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.

[2] Interim limit due to insufficient data. Limit remains enforceable until amended by application.

ANZG (2018) Aquatic ecosystem protection for moderately disturbed system (95% protection).

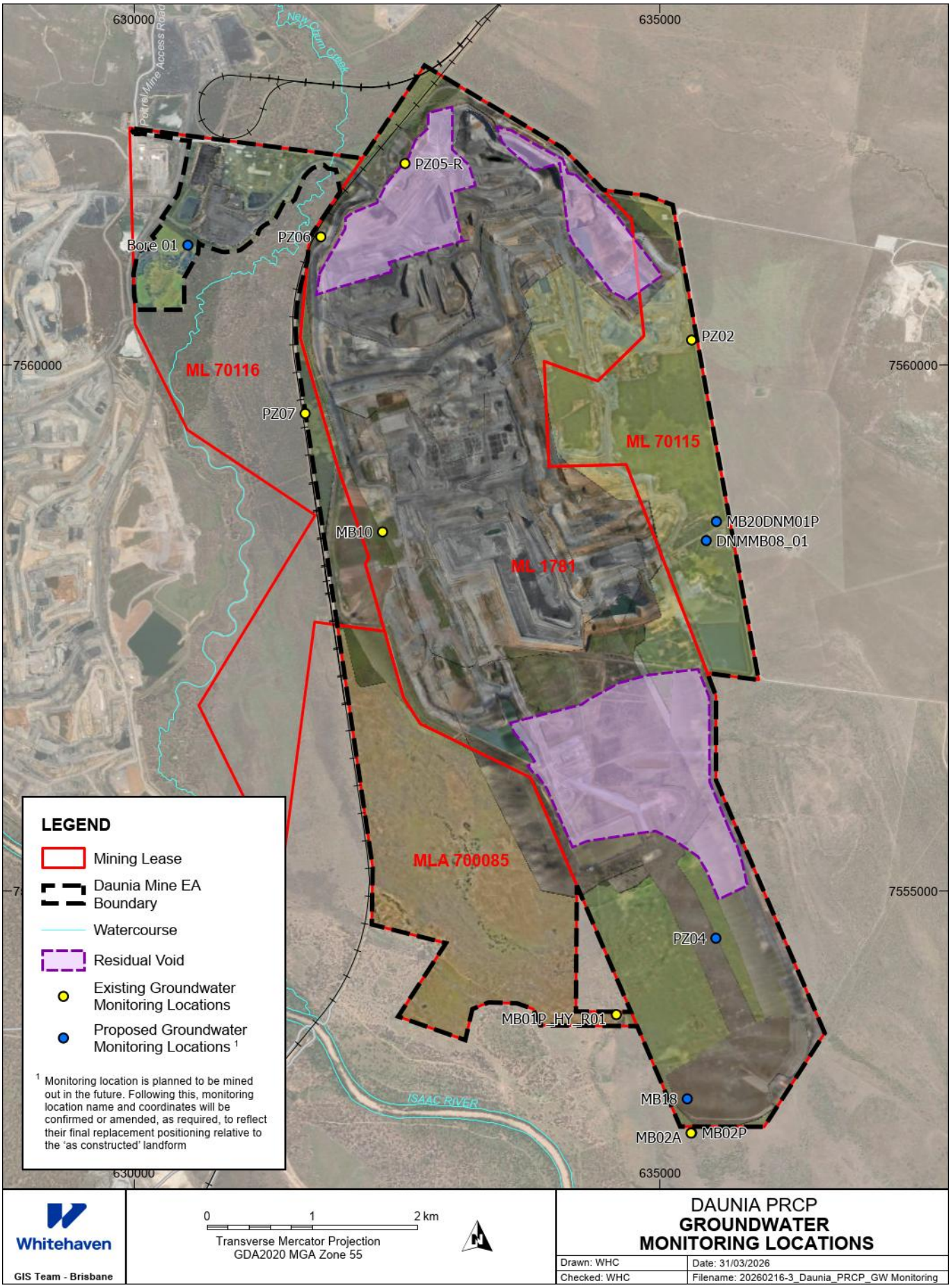
WQO – Upper Isaac River catchment waters.

Attachment 8 – Groundwater Monitoring Locations

Hydrogeological unit	Monitoring location	Latitude (decimal degrees, GDA2020)	Longitude (decimal degrees, GDA2020)	mAHD
RCM Interburden	PZ02	-22.057411	148.3112275	229.82
RCM Leichhardt Overburden	PZ04[1]	-22.108722	148.3139405	193.20
RCM Vermont Underburden	PZ05-R	-22.042473	148.2846968	232.15
RCM Vermont Coal Seams	PZ06	-22.048829	148.2770026	220.73
FCCM combined coal seams	PZ07	-22.063996	148.2756949	219.38
Vermont Coal Seams	MB10	-22.0741	148.28291	210.80
Leichhardt and Vermont Coal	MB18[1]	-22.122526	148.311432	198.40
FCCM	MB20DNM01P[1]	-22.07297	148.313658	208.60
RCM Vermont Underburden	MB02P	-22.125431	148.3118656	195.09
Tertiary Sediments	DNMMB08_01[1]	-22.07461	148.31274	208.80
Tertiary Sediments	MB02A	-22.12546	148.31181	196.10
Quaternary – tertiary sediments	Bore 01[1]	-22.04964	148.26476	
FCCM Overburden	MB01P_HY_R01	-22.11536	148.30482	188.90

[1] Monitoring location is planned to be mined out in the future. Following this, monitoring location name and coordinates will be confirmed or amended, as required, to reflect their final replacement positioning relative to the 'as constructed' landform.

Figure 4 – Groundwater monitoring locations



Attachment 9 – Groundwater Quality Limits

Quality Characteristics	Units		Limit
pH	pH units	All Bores	6.5-9.0
Electrical Conductivity	µS/cm	All Bores, except bores in table below	16,000
Sulfate	mg/L	All Bores, except bores in table below	398
Aluminium	µg/L	All Bores	55[2]
Antimony	µg/L	All Bores	9[2]
Arsenic	µg/L	All Bores, except bores in table below PZ05-R5	13[2]
Arsenic	µg/L	All bores	77
Iron	µg/L	All Bores, except bores in table below	280[2]
Mercury	µg/L	All Bores	0.06[2]
Molybdenum	µg/L	All Bores	10[1]
Selenium	µg/L	All Bores	5[2]
Silver	µg/L	All Bores	0.05[2]
Major ions - calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	mg/L	All Bores	Interpretation
Hardness	mg/L	All Bores	Interpretation
Water level	mAHD	All Bores	Interpretation

Quality Characteristics	Units	PZ02	PZ04	PZ05-R5	PZ06	PZ07	MB20DNM01P	MB02P
Electrical Conductivity	µS/cm	11,300[1]	20,700	7,055[1]	19,430[1]	7,202[1]	8,143[1]	15,060[1]
Sulfate	mg/L	422[1]	423	486[1]	7[1]	280[1]	1[3]	422[3]
Iron	µg/L	1,306	3,140	1,315	3,550	440	280[2]	5,960

Notes:

All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Limits for metal/metalloids apply to dissolved results.
[1]Site specific 95th percentile based on data ranging from May 2008-November 2024.

[2]ANZG values for 95% aquatic ecosystem protection.

[3]Data for PZ05-R is from the replaced PZ05 bore which was consumed by the advancing mining operation.

END OF PRCP SCHEDULE