PRCP schedule

Environmental Protection Act 1994

PRCP schedule P-PRCP-100981610

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

PRCP schedule: P-PRCP-100981610-V1

PRCP schedule holder(s)

Name(s)	Registered address
Centurion Coal Mining Pty Ltd	Level 14, 31 Duncan Street Fortitude Valley QLD 4006

Location details

Location(s)
ML6949 and PL504

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.

	21 November 2025
Signature	Date

Juliana McCosker

Department of the Environment, Tourism, Science and Innovation

Delegate of the administering authority

Environmental Protection Act 1994

Enquiries:

Business Centre Coal

Phone: 07 4987 9320

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Obligations under the *Environmental Protection Act 1994*

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

Pursuant to section 285 of the EP Act:

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

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

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

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

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

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

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

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

PRCP schedule

The PRCP schedule incorporates the following sections:

- Section A - Conditions of PRCP schedule
- Section B – Definitions
- Section C – Final site design and reference maps
- Section D – Post mining land uses
- Section E – Rehabilitation area milestones

Section A – Conditions of PRCP schedule

Pursuant to section 206A of the EP Act:

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

    (a) each rehabilitation milestone and management milestone

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

General conditions

PRCP1 All mining disturbance authorised under environmental authority EPML00815613 must have an associated rehabilitation outcome provided in this PRCP Schedule.

PRCP2 The holder must, for each rehabilitation area, achieve the corresponding rehabilitation milestone criteria:

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

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

PRCP3 Where land becomes ‘available for rehabilitation’ earlier than the date nominated in this schedule, the holder must:

(a) Notify the administering authority in writing within 30 days of the land being assessed as becoming ‘available for rehabilitation’. The written notification must include:

(i) precise details of the relevant land area and the date when that land became ‘available for rehabilitation’; and

(ii) Whether or not it considers that it would be reasonable and appropriate to apply to the administering authority to amend this schedule in a way that maximises the progressive rehabilitation of the land to a stable condition; and

(b) within 30 days of any notification to the administering authority that it considers an amendment application would be reasonable and appropriate, apply to the administering authority to amend this schedule in a way that maximises the progressive rehabilitation of the land to a stable condition.

Note:

1) *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.*
2) *Assessment of land becoming available is undertaken on a nominally annual basis.*
3) *Rehabilitation of land size must be practicable and economical.*
4) *The dates by which milestones are to be completed is brought forward, to the extent it is reasonably practicable to do so, by the same amount of time as the commencement was brought forward.*

PRCP4 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.

PRCP5 The holder must maintain a risk register that identifies the risks to not achieving a stable condition for post-mining land uses (PMLU), and how the risks are being managed or minimised. The risk register

must be reviewed every three (3) years and include consideration of the outcomes of PRCP monitoring data.

PRCP6 The holder must carry out monitoring in accordance with:

(a) any requirements under this schedule; and

(b) as necessary to demonstrate achievement of each rehabilitation milestone.

Note: where there is any inconsistency between this schedule and the rehabilitation planning part, the schedule criteria prevails to the extent of the inconsistency

PRCP7 The holder must make and keep up to date records on:

(a) achievement and maintenance of each rehabilitation milestone criteria of 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) 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; and

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

PRCP8 Records made under **PRCP7** must be:

(a) kept until the relevant environmental authority has been surrendered or progressive rehabilitation certification is achieved; and

(b) provided to the administering authority in the specified format within **10 business days** of a written request or an alternative timeframe as agreed with the administering authority.

PRCP9 All AQP designs, specifications, certifications, assessments and any similar documents must:

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

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

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

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

PRCP10 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 A1 – Final Landform**.

PRCP11 By **10 December 2027**, the holder must submit an application to the administering authority to amend the PRCP Schedule to update the monitoring network prescribed in **Attachment 7: Receiving Environment Monitoring Points.** The application must be accompanied by supporting information which includes a hydrological investigation and modelling program conducted by an AQP to:

(a) assess the suitability of the existing network; and

(b) determine additional monitoring points as required to ensure the monitoring network is fit for purpose and able to determine any localised impacts to surface waters.

PRCP12 By **10 December 2027**, the holder must submit an application to the administering authority to amend the PRCP schedule to update the groundwater monitoring network and provide locations and hydrogeological units to replace all 'TBD' values in **Attachment 9: Groundwater Monitoring Locations**. The application must be accompanied by supporting information which includes a hydrogeological investigation, gap analysis and modelling program conducted by an AQP to:

(a) assess the suitability of the existing network; and

(b) determine additional monitoring bore locations as required to ensure the monitoring network is fit for purpose and able to determine any localised impacts to groundwater.

PRCP13 The monitoring bores listed in **Attachment 9: Groundwater Monitoring Locations** must be installed before **10 December 2028**.

PRCP14 By **10 December 2030**, the holder must submit an application to the administering authority to amend the PRCP schedule to replace the interim limits specified in **Attachment 8: Receiving Environment Water Quality Limits** with updated limits based on site-specific data. The application must be supported by monitoring results for baseline surface water quality based on a minimum of 18 months of sampling and present any identified trends in the surface water monitoring data.

PRCP15 By **10 December 2030**, the holder must submit an application to the administering authority to amend the PRCP schedule to replace the interim limits specified in **Attachment 10: Groundwater Monitoring Parameters** with updated limits based on site-specific data. The application must be supported by monitoring results of the baseline groundwater quality in accordance with the guideline *Using monitoring data to assess groundwater quality and potential environmental impacts* (DES 2021) or more recent version, and present any identified trends in the groundwater monitoring data.

PRCP16 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.

PRCP17 Where the groundwater or water balance model, as per **PRCP16**, indicate a risk to achieving stable condition, an amendment application to this PRCP Schedule must be submitted to the administering authority to address the risk within 3 months of the risk being identified.

PRCP18 **Subsidence record**

The holder must keep a record of all longwall panels detailing:

(a) the surface area (ha) and depth of subsidence within each subsided panel, including dry subsidence areas as well as areas with temporary and permanent/residual ponds;

(b) the locations of pre-existing drainage lines and drainage lines to be established to prevent/manage ponding;

(c) the locations of proposed and existing infrastructure;

(d) the pre-subsidence (baseline) condition of the vegetation and land condition, including:

(i) site hydrology and fluvial networks;

(ii) soil types, properties and productivity;

(iii) flora species composition and structure;

(iv) land stability (pre-existing degradation/erosion and predisposition to ongoing stability issues); and

(v) regional ecosystem details for areas of remnant vegetation; and

(e) spatial data for each panel as well as the extent of each temporary and permanent/residual pond modelled/predicted, and/or authorised ponded areas.

The record must be prepared and subsequently updated for each longwall panel within **18 months** of the completion of mining for that panel.

The record must be provided to the administering authority upon request

PRCP19 By **10 December 2030** the holder must submit the final landform design document that ensures the final landforms will achieve the rehabilitation criteria set out within this schedule. The final landform design document must include confirmation that the final landform design will not be subject to erosional or geotechnical failure that would result in:

(a) high or irreversible impacts to the structures, the final rehabilitated landform or the receiving environment (including under extreme events)

(b) impacts on the final rehabilitated landform that are significantly different to impacts to the surrounding environment, including the costs of any repairs

Any limitations or essential requirements informing the outcomes presented in the final landform design document must be clearly defined.

PRCP20 Surface water quality results must be monitored monthly during flow at, but not limited to, the locations specified in **Attachment 7: Receiving Environment Monitoring Points** for all quality characteristics listed in **Attachment 8: Receiving Environment Water Quality Limits** for a minimum of 5 consecutive years within the five-year period immediately prior to surrender.

PRCP21 Surface water quality at downstream sites must not exceed the limits specified in **Attachment 8: Receiving Environment Water Quality Limits** within the five-year period immediately prior to surrender.

PRCP22 If the surface water quality at downstream sites exceeds the imits specified in **Attachment 8: Receiving Environment Water Quality Limits**, the applicable upstream site must be compared to the downstream site result; and the quality result measured at a downstream site must be equal to or less than the quality result measured at the applicable upstream site[1].

PRCP23 Where the surface water quality at the downstream site exceeds the upstream site results as per **PRCP22**, an AQP must complete an assessment of the cause of the exceedance and risk of rehabilitation not achieving a stable condition within the schedule timeframe and:

(a) where there is a low risk to achieving a stable condition from the mining tenure (ML6949), no further action is to be taken; or

(b) where there is a risk greater than low to achieving a stable condition, an assessment of potential environmental harm must be completed by an AQP and their recommended rectification actions to rehabilitation activities must be determined and implemented.

[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.

PRCP24 The assessment(s) under **PRCP23(b)** must be completed and provided to the administering authority within 3 months of receiving the relevant sampling results.

PRCP25 The five-year timeframe under **PRCP21** is reset by 4 occurrences of **PRCP23(a)** or by a single occurrence of **PRCP23(b)**.

PRCP26 For a minimum of five consecutive years immediately prior to surrender, groundwater quality must be monitored quarterly at, but not limited to, compliance bores specified in **Attachment 9: Groundwater Monitoring Locations**, for all quality characteristics listed in **Attachment 10: Groundwater Monitoring Parameters**.

PRCP27 Groundwater quality results must not exceed the limits in **Attachment 10: Groundwater Monitoring Parameters** for 3 consecutive results within the five-year period immediately prior to surrender.

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.

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.

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.

Independent AQP means an AQP who is independent of the PRCP schedule holder and has not previously provided advice on the subject matter under review.

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

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.

Stable condition see section 111A of the *Environmental Protection Act 1994.*

Subsidence pond means a subsided area >0.2m deep with a continuous presence of ponded water for 90 or more consecutive days per year for 50% or more modelled years.

Suitably qualified person (SQP), for performing a regulatory function under chapter 7, part 8 (Contaminated Land) of the *Environmental Protection Act 1994* or another function prescribed under a regulation, means a person who:

(a) has qualifications and experience relevant to performing the function; and

(b) if a regulation prescribes an organisation for this paragraph – is a member of the organisation.

Vegetation groundcover means the living and attached plant material that comprise the groundcover components (shrubs, grasses, forbs). It does not include trees, organic litter or coarse woody debris.

Weed means non-native plants that can displace native plants, disrupt ecosystems, and alter landscapes, including:

- Category 3 restricted invasive plant species, defined by the *Biosecurity Act 2014*; and

- Weeds of National Significance, defined by the Invasive Plants and Animals Committee 2016, Australian Weeds Strategy 2017 to 2027, and the Australian Government Department of Agriculture and Water Resources, Canberra.

Section C – Final site design and reference maps

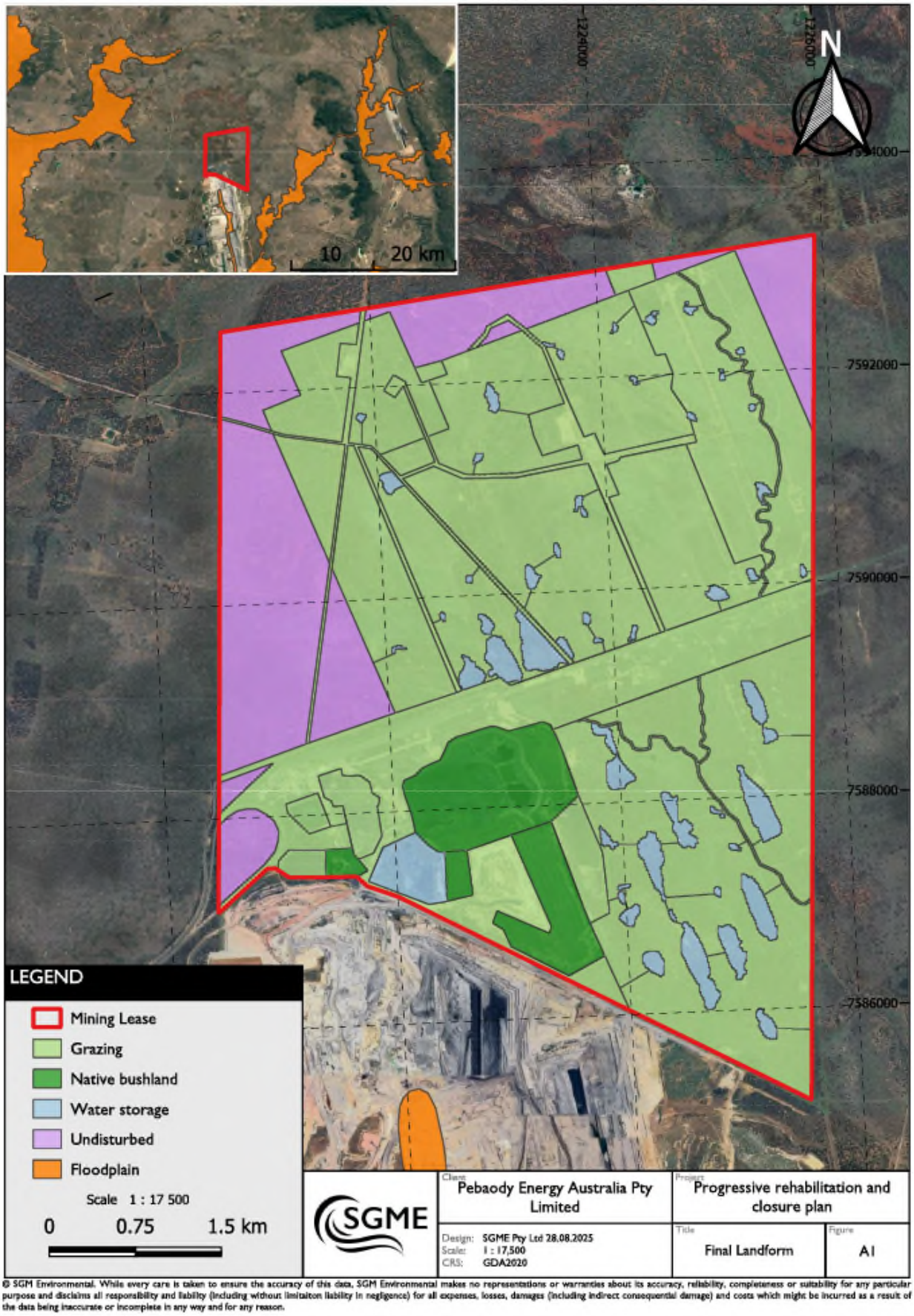

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Figure A1 – Final Landform

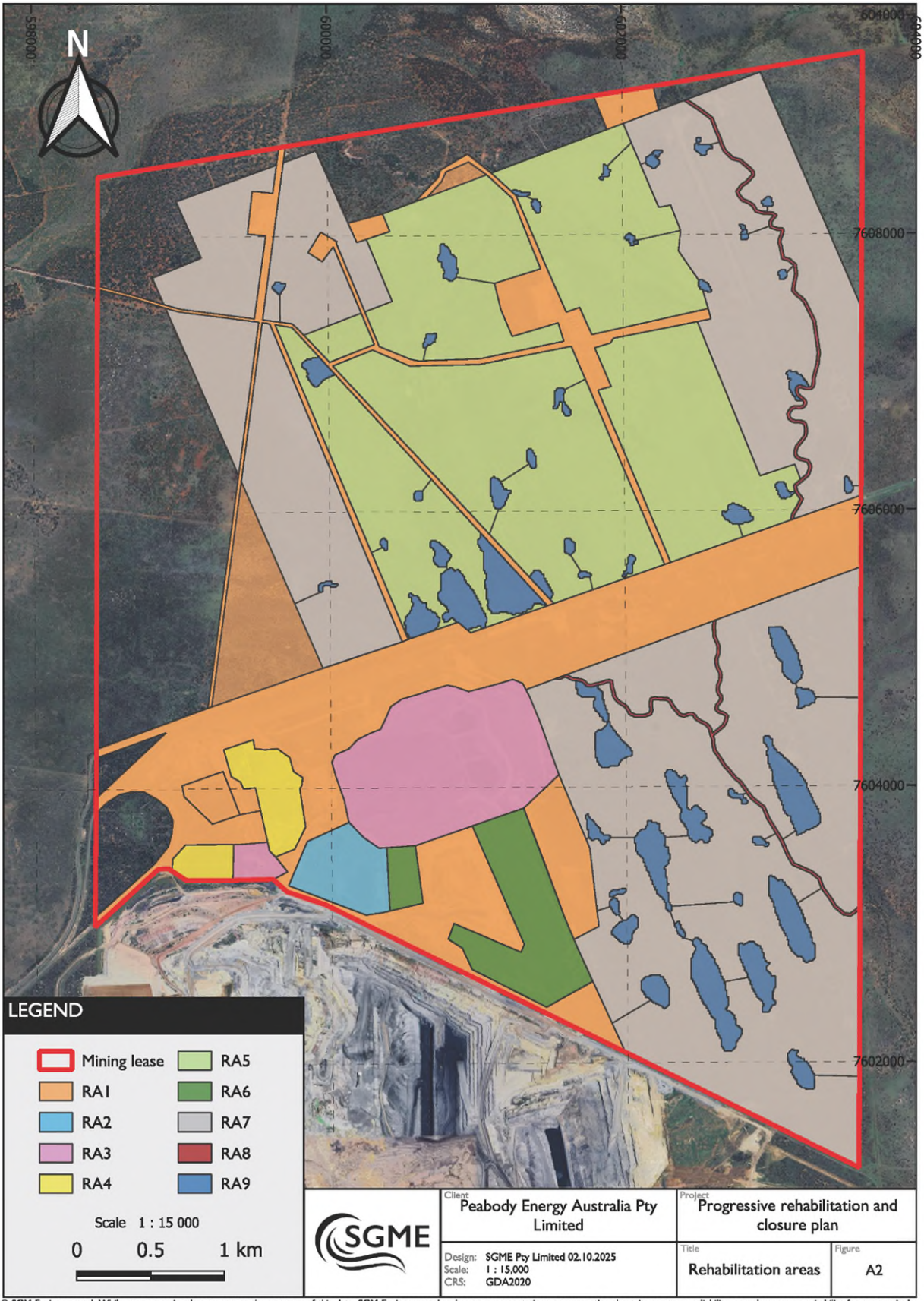

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Figure A2 – Rehabilitation Areas

Section D – Post mining land uses

(RA1) Rehabilitation Area 1

Post-mining land uses (PMLU)										
Rehabilitation area	RA1									
Relevant activities	Infrastructure									
Total rehabilitation area size (ha)	512									
Commencement of first milestone: RM1	10-Dec-48									
PMLU	Cattle grazing									
Date area is available	10/12/48	10/12/49	10/12/50	10/12/55	10/12/56					
Cumulative area available (ha)	512	512	512	512	512					
Milestone completed by	10/12/49	10/12/50	10/12/55	10/12/56	10/12/58					
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	512									
RM2		512								
RM3			512							
RM5			512							
RM6			512							
RM8				512						
RM10					512					

(RA2) Rehabilitation Area 2

Post-mining land uses (PMLU)										
Rehabilitation area	RA2									
Relevant activities	Retained dam									
Total rehabilitation area size (ha)	31									
Commencement of first milestone: RM1	10-Dec-48									
PMLU	Water storage									
Date area is available	10/12/48	10/12/49	10/12/50	10/12/55	10/12/56					
Cumulative area available (ha)	31	31	31	31	31					
Milestone completed by	10/12/49	10/12/50	10/12/55	10/12/56	10/12/58					
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	31									
RM2		31	31	31						
RM12					31					

(RA3) Rehabilitation Area 3

Post-mining land uses (PMLU)										
Rehabilitation area	RA3									
Relevant activities	CHPP, CDA and EOOPD									
Total rehabilitation area size (ha)	136									
Commencement of first milestone: RM1	10-Dec-48									
PMLU	Native bushland									
Date area is available	10/12/48	10/12/49	10/12/50	10/12/55	10/12/60					
Cumulative area available (ha)	136	136	136	136	136					
Milestone completed by	10/12/49	10/12/50	10/12/55	10/12/60	10/12/70					
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	136									
RM2		136								
RM3			136							
RM4			136							
RM5			136							
RM7			136							
RM9				136						
RM11					136					

(RA4) Rehabilitation Area 4

Post-mining land uses (PMLU)										
Rehabilitation area	RA4									
Relevant activities	ROM and product stockpiles									
Total rehabilitation area size (ha)	35									
Commencement of first milestone: RM1	10-Dec-48									
PMLU	Native bushland									
Date area is available	10/12/48	10/12/49	10/12/50	10/12/55	10/12/60					
Cumulative area available (ha)	35	35	35	35	35					
Milestone completed by	10/12/49	10/12/50	10/12/55	10/12/60	10/12/70					
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	35									
RM2		35								
RM3			35							
RM5			35							
RM7			35							
RM9				35						
RM11					35					

(RA5) Rehabilitation Area 5

Post-mining land uses (PMLU)											
Rehabilitation area	RA5										
Relevant activities	Subsidence not beneath a watercourse or drainage line										
Total rehabilitation area size (ha)	680										
Commencement of first milestone: RM1	10-Dec-38										
PMLU	Cattle grazing										
Date area is available	10/12/38	10/12/39	10/12/40	10/12/43	10/12/44	10/12/45	10/12/46	10/12/48	10/12/50	10/12/51	
Cumulative area available (ha)	340	340	340	680	680	680	680	680	680	680	
Milestone completed by	10/12/39	10/12/40	10/12/43	10/12/44	10/12/45	10/12/46	10/12/48	10/12/50	10/12/51	10/12/53	
Milestone Reference	**Cumulative area achieved (ha)**										
RM1	340			680							
RM2		340			680						
RM3			340			680					
RM5			340			680					
RM6			340	340	340	680	680	680			
RM8						340			680		
RM10							340			680	

(RA6) Rehabilitation Area 6

Post-mining land uses (PMLU)										
Rehabilitation area	RA6									
Relevant activities	Existing rehabilitation (native bushland)									
Total rehabilitation area size (ha)	72									
Commencement of first milestone: RM7	10-Dec-26									
PMLU	Native bushland									
Date area is available	10/12/26	10/12/27	10/12/32							
Cumulative area available (ha)	72	72	72							
Milestone completed by	10/12/27	10/12/32	10/12/42							
Milestone Reference	**Cumulative area achieved (ha)**									
RM7	72									
RM9		72								
RM11			72							

(RA7) Rehabilitation Area 7

Post-mining land uses (PMLU)													
Rehabilitation area	RA7												
Relevant activities	Subsidence not beneath a watercourse or drainage line												
Total rehabilitation area size (ha)	1113												
Commencement of first milestone: RM1	10-Dec-33												
PMLU	Cattle grazing												
Date area is available	10/12/33	10/12/38	10/12/39	10/12/41	10/12/43	10/12/44	10/12/46	10/12/48	10/12/49	10/12/51	10/12/53	10/12/54	
Cumulative area available (ha)	223	557	557	557	835	835	835	1113	1113	1113	1113	1113	
Milestone completed by	10/12/38	10/12/39	10/12/41	10/12/43	10/12/44	10/12/46	10/12/48	10/12/49	10/12/51	10/12/53	10/12/54	10/12/56	
Milestone Reference	**Cumulative area achieved (ha)**												
RM1	223	557			835			1113					
RM3	223	557			835			1113					
RM5	223	557			835			1113					
RM6	223	557	557	557	835	835	835	1113	1113	1113			
RM8		223			557			835			1113		
RM10			223			557			835			1113	

(RA8) Rehabilitation Area 8

Post-mining land uses (PMLU)										
Rehabilitation area	RA8									
Relevant activities	Subsidence beneath a watercourse or drainage line									
Total rehabilitation area size (ha)	16									
Commencement of first milestone: RM3	10-Dec-48									
PMLU	Cattle grazing									
Date area is available	10/12/48	10/12/53	10/12/54							
Cumulative area available (ha)	16	16	16							
Milestone completed by	10/12/53	10/12/54	10/12/56							
Milestone Reference	**Cumulative area achieved (ha)**									
RM3	16									
RM5	16									
RM8		16								
RM10			16							

(RA9) Rehabilitation Area 9

Post-mining land uses (PMLU)										
Rehabilitation area	RA9									
Relevant activities	Intermittent ponding									
Total rehabilitation area size (ha)	132									
Commencement of first milestone: RM3	10-Dec-38									
PMLU	Cattle grazing / water storage									
Date area is available	10/12/38	10/12/43	10/12/44	10/12/46	10/12/48	10/12/49	10/12/51	10/12/53	10/12/54	
Cumulative area available (ha)	73	119	119	119	132	132	132	132	132	
Milestone completed by	10/12/43	10/12/44	10/12/46	10/12/48	10/12/49	10/12/51	10/12/53	10/12/54	10/12/56	
Milestone Reference	**Cumulative area achieved (ha)**									
RM3	73	119			132					
RM5	73	119			132					
RM6	73	119	119	119	132	132	132			
RM8		73			119			132		
RM10			73			119			132	

Section E – Rehabilitation area milestones

Milestone reference	Rehabilitation milestone	Milestone criteria
RM1	Infrastructure decommissioning and removal	**ALL RAs** 1.1 All services disconnected, terminated and removed off-site. 1.2 All buildings and associated infrastructure are demolished and removed off-site. 1.3 All hardstand, concrete and road materials (bitumen and gravel) removed. 1.4 All fencing and associated foundations removed. 1.5 All pipelines drained and removed. 1.6 All dams (with the exception of the **Main retention dam**) dewatered, desilted and backfilled. 1.7 All waste is removed. 1.8 All remaining infrastructure is demolished and removed. 1.9 All machinery and equipment not required for rehabilitation works removed from site. 1.10 Certification by an Appropriately Qualified Person (AQP) that: a) all exploration drill holes and monitoring bores that have not been converted to water bores have been rehabilitated in accordance with the latest edition of the *Eligibility criteria and standard conditions for exploration and mineral development projects* (EHP, 2016); and b) all exploration drill holes and monitoring bores that have been converted to a water bore have been converted in accordance with the latest edition of Minimum Construction Requirements for Water Bores in Australia (National Uniform Drillers Licensing Committee 2020). 1.11 All gas drainage bores and associated infrastructure is decommissioned in accordance with the *Code of Practice for the construction and abandonment of petroleum wells and associated bores in Queensland* (DNRME, 2019). **Additional criteria for the Main Retention Dam (RA2)**

		1.12 The Main Retention Dam complies with the following: a) where present, liners are removed; and b) all contaminated sediment has been removed.
RM2	Remediation of contaminated land	2.1 Preliminary site investigation and, if required by preliminary site investigation, a detailed site investigation, are done by a suitably qualified person (SQP). 2.2 Contaminated Land Investigation Document completed in accordance with the *Environmental Protection Act 1994*, including a site investigation report, and, where required, a Validation Report and/or draft Site Management Plan. 2.3 Contaminated and hazardous material either remediated in-situ or removed/transported to an approved landfill for disposal and waste tracking information recorded and submitted. 2.4 Validation testing confirms that contaminated and hazardous materials have been removed or remediated successfully. 2.5 Contaminated land assessment is completed by a suitability qualified person (SQP) indicates that no contamination unsuitable for post-mining land use remains or is occurring. 2.6 A site suitability statement from a SQP confirms the uses or activities for which the land is suitable, align to the approved PMLUs for the site.
RM3	Landform development and reshaping or reprofiling	**All RAs** 3.1 All major earthworks (including reshaping, pushing / trimming) are completed in accordance with the design specification provided by an AQP. 3.2 Erosion and sediment controls have been installed and are functioning as per design specifications. 3.3 High geochemical risk material is appropriately placed and located within the final landform, consistent with the relevant designs as certified by an AQP. **Native bushland (RA3, RA4)** 3.4 Landforms profiled to a maximum slope of 17%.

		Additional criteria for mineral extraction, processing and disposal (RA3) 3.5 General reshaping and pushing / trimming are done to achieve final landform. 3.6 The final consolidated landform is water-shedding. 3.7 Certification from an appropriately qualified person that the landform achieves a factor of safety ≥1.5. **Cattle grazing (RA1, RA5, RA7, RA8, RA9)** 3.8 Landforms meet the following design specifications: a) slopes ≤ 15% (RA1, RA5); and b) landforms maintain pre-mining contour ± 5m (RA7, RA8, RA9). **Additional criteria for underground openings (RA1)** 3.9 Construction of seal from surface into the underground workings complies with regulation 325 of the *Queensland Coal Mining Safety and Health Regulation 2017* (CMSHR, 2020) and Registered Professional Engineer of Queensland (RPEQ) design. 3.10 AQP has prepared an As-Constructed Report that details the works undertaken, and certified that construction and backfilling of underground openings met the design intent. **Additional criteria for subsidence and ponding areas (RA7, RA8, RA9)** 3.11 Any erosion or effects of subsidence remediated to ensure maintenance of baseline condition as recorded under condition **PRCP18(d),** and confirmed by an AQP to not compromise the achievement of a grazing PMLU to a stable condition. 3.12 Subsidence cracks are repaired if the cracks will not self-heal and they adversely impact achieving the PMLU as assessed by an AQP.

		3.13 Instances of surface soil buckling (≥150mm vertical displacement) have been treated via re-grading. 3.14 Slopes are suitable for grazing given the soil type. 3.15 An AQP has confirmed the extent of ponding areas through a surface hydrological assessment. 3.16 Areas of subsidence, on which authorised ponding is negatively impacting the surrounding environment or the achievement of the grazing PMLU, are backfilled as recommended by an AQP to minimise impacts to environmental values. 3.17 Instances of ponding assessed for retention (RA9) or where mitigation is required, drainage and landform work completed to design (RA7, RA8). 3.18 Subsidence within the rehabilitation area does not present a safety hazard. **Additional criteria for subsidence beneath a watercourse or drainage feature (RA8)** 3.19 Stream condition survey undertaken by appropriately qualified person, and a recommendation made for a rehabilitation strategy to support stabilisation of beds and banks adversely affected by subsidence. 3.20 All temporary watercourse stabilisation structures are removed.
RM4	Cover system installation	**CDA only (RA3)** 4.1 An AQP to determine appropriate detailed cover design for installation based on geochemical and geotechnical characterisation of the CDA, which at minimum achieves the following: a) tailings and rejects to be capped with at least 1m of competent benign spoil or suitable capping material; b) reduces risk of upward movement of contaminants into the topsoil layer above the cover and reduces risk of environmental harm from contaminated seepage; c) cover materials have no potential for acid mine drainage (AMD) and / or neutral mine drainage (NMD); d) capping layer surface is water shedding and does not display surface ponding; e) cover installed to minimise erosion and reduce rainfall infiltration; f) landforms are reshaped with slopes ≤17% (1V:6H); and

		g) >15% slopes to be covered with minimum 0.5m rock, unless an alternative is justified by an AQP. 4.2 An independent AQP to endorse installation of the cover system as per RM4.1 and certify that: a) the cover system has been installed as per design. b) the cover system displays erosional stability, is geotechnically stable and supports the PMLU. c) the installed cover is effective in mitigating the potential for migration of contaminants from co-disposal areas to the receiving environment.
RM5	Surface preparation	5.1 Prior to each rehabilitation event: a) a soil health and suitability assessment of the growth media characteristics is undertaken by an AQP and endorsed as suitable to ensure achievement of the PMLU; and b) where the soil health and suitability assessment identifies that the growth media is not suitable, an amelioration and physical treatment plan is completed by an AQP to ensure achievement of the PMLU. 5.2 Records demonstrate that ameliorants and physical treatments such as fertiliser, lime, gypsum and/or organic matter have been applied as identified in Criteria 5.1. 5.3 Placement of a minimum of 0.2 m of topsoil / growth media on disturbed areas. 5.4 Deep ripping of compacted areas, at least 300 mm into soil / subsoil profile along contour of slopes. 5.5 Following amelioration as per Criteria 5.1 and 5.2, an AQP certifies that the relevant depths within the effective root zone (0-300 mm) meets the soil quality parameters in **Attachment 1: Soil Quality Criteria**. 5.6 Where soil assessment results identify that the characteristics specified in RM5.5 have not been met, soil has been treated with ameliorants and / or fertilisers as per recommendations made by an AQP. 5.7 Surface and groundwater monitoring is underway (at least one year of sampling undertaken).
RM6	Revegetation (grazing pasture)	6.1 Completed seeding with a selection of species and rates listed in **Attachment 3: Cattle Grazing PMLU Seed Mix**. Minimum seeding rates of 4.25 kg/ha of coated pasture seed and 6 kg/ha of uncoated legume seed will be used, unless adjusted by an AQP based on results of rehabilitation monitoring. 6.2 Completed seeding of areas defined as remnant vegetation under the Regulated Vegetation Management Map (*Vegetation Management Act 1999*) with a selection of native tree and shrub species listed in **Attachment 4: Native Bushland PMLU Seed Mix** at a minimum seeding rate of 1-2 kg/ha of uncoated seed.

RM7	Revegetation (native bushland)	7.1 Completed seeding with a selection of species and rates listed in **Attachment 4: Native Bushland PMLU Seed Mix**. 7.2 No deep-rooted tree species are seeded at the CDA (RA3).
RM8	Achievement of surface requirements (grazing)	8.1 Minimum vegetation composition (per hectare averaged) of: a) four species of 3P native pasture species; b) two legumes; and c) two shade tree species present. 8.2 ≥50% vegetation groundcover 8.3 An AQP confirms that: a) there is no evidence of erosion classified as 'moderate' or 'severe' in accordance with **Attachment 2: Erosion Classification Framework**; b) mass movement and tunnel erosion are absent; and c) any erosion present has been remediated and does not impact achieving the PMLU. 8.4 Weed presence, including Category 3 restricted invasive plants (as defined in the *Biosecurity Act 2014*), comprise less than 5 % of total vegetation cover as confirmed by an AQP in annual monitoring. 8.5 Regarding growth media: a) testing meets the soil quality parameters in **Attachment 1: Soil Quality Criteria**; or b) the physical, chemical and biological properties do not limit vegetation cover performance or restrict the potential effective depth of rooting of the target vegetation specified in **Attachment 3: Cattle Grazing PMLU Seed Mix** and select tree and shrub species specified in **Attachment 4: Native Bushland PMLU Seed Mix** where applicable. 8.6 Drainage follows appropriate drainage paths. 8.7 Surface water runoff to the receiving environment complies with **Attachment 8: Receiving Environment Water Quality Limits** as collected from representative areas of rehabilitation when surface flows occur.

		Additional criteria for subsidence and ponding areas (RA7, RA8, RA9) 8.8 No areas of active subsidence. 8.9 There are no surface cracks greater than 20mm in width. 8.10 No evidence of surface soil buckling (≥150mm vertical displacement). 8.11 Excavated drainage structures do not expose highly erodible material. 8.12 An AQP has confirmed that bed or bank erosion within drainage lines or watercourses as a result of subsidence or subsidence management are rehabilitated and stable using a digital elevation model (DEM) of difference compared to reference sites for 5 years after subsidence.
RM9	Achievement of surface requirements (native bushland)	9.1 Species used in revegetation remain present and show evidence of natural recruitment. Evidence of flora recruitment from rehabilitation monitoring data. 9.2 An AQP has certified that: a) there is no evidence of erosion classified as 'moderate' or 'severe' as defined by **Attachment 2: Erosion Classification Framework**; b) mass movement and tunnel erosion are absent; and c) any erosion present has been remediated and does not impact achieving the PMLU. 9.3 >50% vegetation groundcover. 9.4 Weed presence, including Category 3 restricted invasive plants (as defined in the *Biosecurity Act 2014*), comprise less than 5% of total vegetation cover as confirmed by an AQP in annual monitoring. 9.5 Regarding growth media: a) testing meets the soil quality parameters in **Attachment 1: Soil Quality Criteria**; or b) the physical, chemical and biological properties do not limit vegetation cover performance or restrict the potential effective depth of rooting of the target vegetation specified in **Attachment 4: Native Bushland PMLU Seed Mix**, where applicable. 9.6 Drainage follows appropriate drainage paths.

		9.7 Surface water runoff to the receiving environment complies with **Attachment 8: Receiving Environment Water Quality Limits** as collected from representative areas of rehabilitation when surface flows occur. 9.8 A BioCondition assessment completed in accordance with the latest version of the Queensland Herbarium's BioCondition Assessment Manual determines that the rehabilitation area has achieved a BioCondition score >30/60, based on the benchmark criteria in **Attachment 5: Progressive and Final BioCondition Milestone Criteria for Native Bushland PMLU (RE 11.5.3)**. 9.9 All corrective actions recommended by an AQP in response to erosion or insufficient vegetation cover have been implemented. **Cover system (RA3)** 9.10 No evidence of seepage. 9.11 No evidence of water ponding. 9.12 No surface expression, such as salt crust or pans. 9.13 No deep-rooted species present.
RM10	Achievement of PMLU to a stable condition (grazing pasture)	10.1 Safety hazards in the rehabilitation area are not significantly different to surrounding unmined landscapes subject to the same land use. 10.2 The land is structurally and erosionally stable. 10.3 Minimum vegetation composition (per hectare averaged) of: a) four species of 3P native pasture species; b) two legumes; and c) two shade tree species present. 10.4 The rehabilitated land meets land suitability Class 3 or better for grazing according to the *Rehabilitated mined land suitability for beef cattle grazing in the Bowen Basin: Technical paper 1* guidelines as assessed by an AQP. Where a land assessment demonstrates that limiting factors prevent the achievement of a post-mine land suitability class of 3 or better, land must be rehabilitated to achieve at least a class 3 for all soil properties with the exception of those identified as limiting factors preventing achievement of class 3.

		10.5 Vegetation cover ≥70%. 10.6 Pasture productivity within 1 standard deviation (SD) of productivity at the relevant reference sites as detailed in **Attachment 11: Rehabilitation Reference Sites**. 10.7 An AQP certifies via an erosion assessment that: a) there is no evidence of erosion classified as 'moderate' or 'severe' as defined by **Attachment 2: Erosion Classification Framework**; b) mass movement and tunnel erosion are absent; c) any erosion present has been remediated and does not impact achieving the PMLU to a stable condition; and d) there is no evidence of scouring, overtopping, sedimentation or destabilisation in or associated with erosion and sediment control and engineered drainage structures. 10.8 Certification from an AQP that the landform is geotechnically stable and achieved a factor of safety ≥1.5. 10.9 Risk to stock, and people undertaking management activities associated with stock, is as low as reasonably practicable (ALARP) in accordance with the latest version of AS/NZS ISO 31000:2009 Risk Management. 10.10 Weed presence, including Category 3 restricted invasive plants (as defined in the *Biosecurity Act 2014*), comprise less than 5% of total vegetative cover as confirmed by an AQP in annual monitoring. 10.11 Vegetation demonstrates recovery after prescribed fire events comparable to conditions at reference sites as detailed in **Attachment 11: Rehabilitation Reference Sites**. 10.12 Final landform survey confirms no built structures remain other than those that form part of a landholder agreement. **Additional criteria for subsidence and ponding areas (RA7, RA8, RA9)** 10.13 Subsidence within the rehabilitation area does not present a safety hazard in the context of the PMLU. 10.14 The rehabilitation area is safe for human access and use. 10.15 There is no cracking present in the rehabilitation area that is greater than 20mm wide and 1m long.

		10.16 Certification by an AQP that no active tunnel erosion or fissures are present in areas subject to subsidence through a landform risk assessment and a survey of high-risk areas; as informed by the *Subsidence Management Strategy*. 10.17 Land affected by subsidence / ponding does not impact flows of watercourse or drainage lines greater than what is observed in the *Subsidence Management Strategy*. 10.18 Watercourses and drainage lines in subsidence areas are in a stable condition. 10.19 No evidence of surface soil buckling (≥150mm vertical displacement). 10.20 An AQP has confirmed that bed or bank erosion within drainage lines or watercourses as a result of subsidence or subsidence management are rehabilitated and stable using a DEM of difference compared to reference sites (as detailed in **Attachment 11: Rehabilitation Reference Sites)** for 5 years after subsidence. 10.21 Subsidence cracks are repaired if the cracks will not self-heal and they adversely impact achieving the PMLU as assessed by an AQP. 10.22 Subsidence areas and drainage structures that may be prone to avulsion (identified through the *Subsidence Management Strategy*) are designed to withstand flood stresses compromising structural or erosional stability. 10.23 Drainage structures do not require ongoing maintenance. 10.24 Subsidence ponds to be sampled following rainfall events during the wet season. 10.25 If ponds are not connected to the receiving environment, water must be of a suitable quality for native wildlife and/or livestock ingestion and must not exceed the stock water guidelines (ANZECC 2000) (**Attachment 6: Stock Water Guidelines**), for a minimum of 5 consecutive years. **Additional criteria for subsidence areas beneath a watercourse (RA8)** 10.26 Areas of subsidence under watercourses: a) incorporate pre-existing natural features of watercourses (including geomorphic), as far as practicable; b) pools in watercourses retain water quality suitable for local WQOs and provide suitable habitat for macroinvertebrates following the *Australian River Assessment System* (AusRivAS);

		c) attain pre-existing hydrologic characteristics of surface water and groundwater systems for the area in which the watercourses are located, as far as practicable; d) attain the hydraulic characteristics of the watercourses that are equivalent to other local watercourses and are suitable for the subsided areas of Goonyella Creek and the unnamed tributary, without using artificial structures that require on-going maintenance; e) five years of upstream and downstream water quality data show no increase in sediment transport as a result of subsidence; f) no significant increase in NTU downstream of the subsidence area compared to upstream values; and g) attain equilibrium and functionality in all substrate conditions at the location of the watercourses.
RM11	Achievement of PMLU to a stable condition (native bushland)	11.1 Safety hazards in the rehabilitation area are not significantly different to surrounding unmined landscapes subject to the same land use. 11.2 Certification from an AQP that the landform is geotechnically stable and has achieved a FOS ≥ 1.5. 11.3 An AQP certifies that: a) there is no evidence of erosion classified as 'moderate' or 'severe' as defined by **Attachment 2: Erosion Classification Framework**; b) mass movement and tunnel erosion are absent; c) any erosion present has been remediated and does not impact achieving the PMLU to a stable condition; and d) there is no evidence of scouring, overtopping, sedimentation or destabilisation in or associated with erosion and sediment control and engineered drainage structures. 11.4 A BioCondition assessment completed in accordance with the latest version of the Queensland Herbarium's BioCondition Assessment Manual determines that the rehabilitation area has achieved a BioCondition score of ≥40/50, based on the benchmark criteria in **Attachment 5: Progressive and Final BioCondition Milestone Criteria for Native Bushland PMLU (RE 11.5.3)**. 11.5 Weed presence, including Category 3 restricted invasive plants (as defined in the *Biosecurity Act 2014*), comprise less than 5% of total vegetative cover as confirmed by an AQP in annual monitoring.

		11.6 Vegetation cover ≥70%. 11.7 Final landform survey confirms no built structures remain other than those that form part of a landholder agreement. **Cover system (RA3)** 11.8 No evidence of seepage. 11.9 No evidence of water ponding. 11.10 No surface expression, such as salt crust or pans. 11.11 No deep-rooted species present.
RM12	Achievement of PMLU to stable condition (water storage)	12.1 Certification from an AQP that water in retained water storages is suitable for stock water and does not exceed the stock water guidelines (ANZECC 2000) (**Attachment 6: Stock Water Guidelines**). 12.2 Certification from an AQP that contaminants in stored water will not impact surrounding groundwater systems. 12.3 Certification from an AQP that dam walls and spillways (where installed) are stable and fit for purpose. 12.4 Access ramp remains traversable by animals / livestock and the retained dam is safe for native animals and stock access with vegetated banks.

END OF PRCP SCHEDULE

Attachments

Attachment 1: Soil Quality Criteria

Parameter	Criteria		Comments
	Grazing	Bushland	
pH (1:5) 0 cm – 15 cm	5.6-8.4	5.6-8.4[1]	For grazing, derived from *Rehabilitated mine land suitability for cattle grazing in the Bowen Basin* (QMRC guidelines) (Short 2023).
pH (1:5) 15 cm – 30 cm	5.6-9.3	5.6-9.3[1]	Median pH upper limit from overburden samples.
Saturate paste extract EC (ECe) (deciSiemens per metre (dS/m)) 0 cm – 15 cm	Less than or equal to (≤) 2	≤ 2[1]	For grazing, derived from the QMRC guidelines.
Saturate paste extract EC (ECe) (deciSiemens per metre (dS/m)) 15 cm – 30 cm	Less than or equal to (≤) 10	≤ 10	For grazing, derived from the QMRC guidelines.
Available P (milligrams per kilogram (mg/kg))[2] 0 cm – 15 cm	Greater than or equal to (≥) 8	-	For grazing, derived from the QMRC guidelines. Criteria have not been proposed for bushland or riparian PMLUs, which contain native vegetation that can tolerate low fertility.
ESP (%) 0 cm – 15 cm	≤ 6	< 6	For grazing, derived from the QMRC guidelines. QMRC guidelines separate the critical sodicity range for topsoil and subsoil. Therefore, it is considered appropriate to do the same here. These criteria have been kept for bushland and riparian PMLUs.
ESP (%) 15cm – 30cm	> 6-10	> 6-10	
Soil organic matter (SOM) (%) 0 cm – 15 cm	3-Oct	-	For grazing, agricultural industry benchmark sufficiency criteria[2] were used. Criteria have not been proposed for bushland or riparian PMLUs, which contain native vegetation that can tolerate low fertility.
Emerson aggregate class 0 cm – 15 cm	> 3	> 3	Emerson aggregate class measures the stability of the soil aggregate. An Emerson class value of ≤ 2 is indicative of unstable soil. DETSI has recommended an acceptable Emerson class of ≥ 3 in the draft PRCP schedule. This recommendation has been adopted for both bushland and riparian PMLUs.

[1]pH and Ece criteria from the grazing PMLU have been applied to the bushland and riparian PMLUs.

[2]Relevant to surface soils (0 – 0.2m depth), consistent with QMRC guidelines.

Attachment 2: 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 etc
Rill / gully erosion	Occasional rills and <0.3 m deep	Common rills and < 0.3 m deep	Numerous rills formed corrugated ground surface and / or < 0.3 m deep
Tunnel erosion	Absent	Absent	Present
Mass movement	Absent	Absent	Present

Attachment 3: Cattle Grazing PMLU Seed Mix

Common name	Scientific name	Recommended application rate (kg/ha)
Pasture grasses (preferred)		
Queensland Bluegrass	*Dicanthium sericum*	0.25
Desert Bluegrass	*Bothriochloa ewartiana*	0.25
Curly Bluegrass	*Dichanthium fecundum*	0.25
Black Speargrass	*Heteropogon contortus*	0.25
Kangaroo Grass	*Themeda triandra*	0.25
Cotton Panic	*Digitaria brownii*	0.25
Hoop Mitchell Grass	*Astrebla elymoides*	0.25
Curly Mitchell Grass	*Astrebla lappacea*	0.25
King Bluegrass	*Dichanthium queenslandicum*	0.25
Native Millet	*Panicum decompositum*	0.25
Intermediate grasses		
Yabila Grass	*Panicum queenslandicum*	0.25
Silky Browntop	*Eulalia aurea*	0.25
Bull Mitchell Grass	*Astrebla squarrosa*	0.25
Golden Beard Grass	*Chrysopogon fallax*	0.25
Curly Windmill Grass	*Enteropogon acicularis*	0.25
Tall Chloris	*Chloris ventricosa*	0.25
Hairy Panic	*Panicum effusum*	0.25
Grass species – total minimum seed weight coated		**4.25**
Legumes		
Butterfly Pea	*Clitoria ternatea*	2
Caatinga Stylo	*Stylosanthes seabrana*	4
Glycine Pea	*Glycine tabacina*	2
Rhynchosia	*Rhynchosia minima var. minima*	2
Slender tick trefoil	*Desmodium varians*	2
Native sensitive plant	*Neptunia gracilis*	2
Legume species – total minimum seed weight uncoated		**6**

Attachment 4: Native Bushland PMLU Seed Mix

Common Name	Scientific name	Recommended application rate (kg/ha)
Native trees and shrubs		
Eastern Dead Finish	*Archidendropsis basaltica*	5
Weeping Koda	*Ehretia membranifolia*	5
Scrub Boonaree	*Alectryon diversifolius*	5
Coffee Bush	*Breynia oblongifolia*	5
Carbeen	*Corymbia tessellaris*	5
Denhamia	*Denhamia oleaster*	5
Bloodwoods	*Corymbia clarksoniana*	5
Cocaine Tree	*Erythroxylum australe*	5
Rosewood	*Acacia excelsa*	5
Currant Bush	*Carissa ovata*	5
Brewster's Cassia	*Cassia brewsteri*	5
Queensland Bottle Tree	*Brachychiton rupestris*	5
Silver-leaved Ironbark	*Euclayptus melanophloia*	5
Poplar Box	*Eucalyptus populnea*	5
Narrow-leaved Ironbark	*Eucalyptus creba*	5
Dawson Gum	*Eucalyptus cambageana*	5
Brown's Box	*Eucalyptus brownii*	5
Tree and shrub species – total minimum seed weight uncoated		**5**
Native grasses/herbs/sedges		
Wiregrasses	*Aristida spp*	10
Vernonia	*Cyanthillium cinereum*	10
Button Grass	*Dactyloctenium radulans*	10
Caustic Weed	*Euphorbia drummondii*	10
Dwarf Morning-glory	*Evolvulus alsinoides var. decumbens*	10
Monkey Rope	*Parsonisa straminea*	10
Rhynchosia	*Rhynchosia minima*	10
Queensland Hemp	*Sida hackettiana*	10
Sida	*Sida spp*	10
Kangaroo Grass	*Themeda triandra*	10
Small Burr Grass	*Tragus australianus*	10
Queensland Bluegrass	*Dichanthium sericeum*	10
Bottlewashers	*Enneapogon sp*	10
Mountain Wanderrie Grass	*Eriachne mucronate*	10
Glycine Pea	*Glycine tabacina*	10
Mulga Mitchell Grass	*Thyridolepis mitchelliana*	10
Pepper Vine	*Cissus opaca*	10
Crabgrasses	*Digitaria spp*	10
Narrow-leaved Indigo	*Indigofera linifolia*	10
Tephrosia	*Tephrosia spp (excluding introduced species)*	10
Blue Trumpet	*Brunoniella australis*	10
Desert Jasmine	*Jasminum didymium subsp. Lineare*	10
Grass/herb/sedge species – total minimum seed weight uncoated		**10**

Attachment 5: Progressive and Final BioCondition Milestone Criteria for Native Bushland PMLU (RE 11.5.3)

Relevant PMLU BioCondition assessable attributes	**Weighting**	**Native Vegetation**			
		11.5.3			
		Benchmark[1]	c. 5yrs	c. 10yrs	c. 15-20yrs
Tree canopy height	5	16	0	3 ≥25% to 70% of benchmark height	3 ≥25% to 70% of benchmark height
Recruitment of canopy species	5	100	0 <20% of dominant canopy* species present as regeneration	3 ≥20 – 75% of dominant canopy* present as regeneration	3 ≥20 – 75% of dominant canopy* present as regeneration
Tree canopy cover (%)	5	20	0 <10% of benchmark	2 ≥10% and <50%	5 ≥50% or ≤200%
Shrub cover (%)	5	3	3 >/= 10 to 200% of benchmark shrub cover	3 >/= 10 to 200% of benchmark shrub cover	5 ≥50% or ≤200% of benchmark shrub cover
Native plant species richness (4 life-forms)[2]	20 Tree — 5; Shrub — 5; Grass — 5; and Forbs and other — 5	 Tree — 6; Shrub — 6; Grass — 6; and Forbs and other — 10.	10 ≥25% of benchmark number of species within each life-form (<25% of trees)	10 ≥25% of benchmark number of species within each life-form	15 ≥25% of benchmark number of species within each life-form (trees ≥90%)
Non-native plant cover (%)	10	0	5 ≥5 - 25% of vegetation cover are non-native plants	5 ≥5 - 25% of vegetation cover are non-native plants	5 ≥5 - 25% of vegetation cover are non-native plants
Native perennial (or preferred and intermediate) grass cover (%)	5	19	3 ≥50 – 90% of benchmark native perennial (or preferred and intermediate) grass cover	3 ≥50 – 90% of benchmark native perennial (or preferred and intermediate) grass cover	3 ≥50 – 90% of benchmark native perennial (or preferred and intermediate) grass cover
Organic litter cover	5	20	0 <10% of benchmark organic litter	3 ≥10 to <50% or >200% of benchmark organic litter	5 ≥50% or ≤200% of benchmark organic litter
Modified BioCondition Score	**Total = 60**		> 20	>30	>40

[1]Benchmark BioCondition weighting is based from RE 11.5.3 benchmark data (available from The State Queensland 2025e).

[2]Species richness is based on species that occur in the relevant RE consistent with the RE technical description.

Attachment 6: Stock Water Guidelines

Quality characteristic	Trigger value (low risk)[1,2]
Major ions	
pH	6.5-8.5
EC (µS/cm)	5,970
TDS (mg/L)	0-4,000
Ca (mg/L)	1,000
Mg (mg/L)	Insufficient information
Nitrate (mg/L)	400
Nitrite (mg/L)	30
Sulfate (mg/L)	1,000
Heavy metals and metalloids	
Al (mg/L)	5
As (mg/L)	0.5 (up to 5[3])
Be (mg/L)	ND
B (mg/L)	5
Cd (mg/L)	0.01
Cr (mg/L)	1
Co (mg/L)	1
Cu (mg/L)	1
F (mg/L)	2
Fe (mg/L)	Not sufficiently toxic
Pb (mg/L)	0.1
Mn (mg/L)	Not sufficiently toxic
Hg (mg/L)	0.002
Mo (mg/L)	0.15
Ni (mg/L)	1
Se (mg/L)	0.02
U (mg/L)	0.2
V (mg/L)	ND
Zn (mg/L)	20

[1]ANZECC & ARMCANZ *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (2000).

[2]Higher concentrations may be tolerated in some situations (further details provided in ANZECC & ARMCANZ *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (2000), Volume 3, Section 9.3.5).

[3]ND = not determined, insufficient background data to calculate.

Attachment 7: Receiving Environment Monitoring Points

Monitoring points		Receiving waters description	Latitude (GDA2020)	Longitude (GDA2020)
Upstream (background)	UMP1 Issac River	Isaac River 3,000 m upstream of the confluence of Isaac River and Goonyella Creek.	-21.7307327	148.0164014
	UMP2 Goonyella Creek	Goonyella Creek 4,000 m upstream of RP1.	-21.6469985	147.9969034
Downstream	DMP1 Isaac River	Isaac River 1,600 m downstream of the confluence of Isaac River and Goonyella Creek.	-21.7679664	148.0155222
	DMP2 Gauging Station 2	Goonyella Creek 4,200 m downstream of RP1.	-21.6840390	148.0115984

Attachment 8: Receiving Environment Water Quality Limits

Quality characteristics (units)	Limit	Source
pH	6.5 – 8.5	Upper Isaac River WQO[1]
Electrical conductivity (µS/cm)	720	Upper Isaac River WQO
Turbidity (NTU)	50	Upper Isaac River WQO
Sulfate (mg/L)	25	Upper Isaac River WQO
Antimony – dissolved (µg/L)	9	ANZG[2]
Arsenic – dissolved (µg/L)	13	ANZG
Boron – dissolved (µg/L)	940	ANZG
Cadmium – dissolved (µg/L)	0.2	ANZG
Chromium – dissolved (µg/L)	1	ANZG
Copper – dissolved (µg/L)	1.4	ANZG
Fluoride – dissolved (µg/L)	2.5	ANZG technical brief[3]
Manganese – dissolved (µg/L)	1,900	ANZG
Mercury – dissolved (µg/L)	0.06	ANZG, 99% species protection
Molybdenum – dissolved (µg/L)	34	ANZG
Nickel – dissolved (µg/L)	11	ANZG
Selenium – dissolved (µg/L)	5	ANZG, 99% species protection
Silver – dissolved (µg/L)	0.05	ANZG
Vanadium – dissolved (µg/L)	6	ANZG
Zinc – dissolved (µg/L)	8	ANZG
Total Recoverable Hydrocarbons (C6-C10) (µg/L)	20	Limit of reporting
Total Recoverable Hydrocarbons (>C10-C40) (µg/L)	100	Limit of reporting
Major ions (mg/L) Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	For interpretation purposes only	
Metals and metalloids (mg/L) Bismuth, lithium, tellurium, tungsten	For interpretation purposes only	

[1]Department of Environment and Heritage Protection (2011) *Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Isaac River Sub-basin (including Connors River)* – water quality objectives to protect environmental values for moderately disturbed aquatic ecosystem.
[2]Australia and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG) – Aquatic ecosystem protection for moderately disturbed system (95% protection).
[3]ANZG (2024) *Toxicant default guideline values for aquatic ecosystem protection – Fluoride in freshwater*

Attachment 9: Groundwater Monitoring Locations

Monitoring Point	Hydrogeological Unit	Latitude (GDA2020)	Longitude (GDA2020)
GN2479	Cenzoic Suttor Formation	-21. 6526728	147.9683681
GN2480	Cenzoic Suttor Formation	-21.6326294	147.9972701
GN2481	Cenzoic Suttor Formation	-21.6302791	147.9994075
GN2482	Cenzoic Suttor Formation	-21.6249785	147.9965339
CDA1[1]	TBD	TBD	TBD
	TBD		
CDA2[1]	TBD	TBD	TBD
	TBD		
CDA3[1]	TBD	TBD	TBD
	TBD		

[1]Nested bore, monitoring point name TBD

Attachment 10: Groundwater Monitoring Parameters

Quality characteristics	Units	Limit	Source
pH	pH units	6.5 – 8.5	Upper Isaac River WQO[1]
Electrical conductivity	µS/cm	8,910	Upper Isaac River WQO
Sulfate	mg/L	318	Upper Isaac River WQO
Antimony – dissolved	µg/L	9	ANZG[2]
Arsenic – dissolved	µg/L	13	ANZG
Boron – dissolved	µg/L	940	ANZG
Cadmium – dissolved	µg/L	0.2	ANZG
Chromium – dissolved	µg/L	1	ANZG
Copper – dissolved	µg/L	30	Upper Isaac River WQO
Fluoride – dissolved	µg/L	0.5	Upper Isaac River WQO
Manganese – dissolved	µg/L	1,900	ANZG
Mercury – dissolved	µg/L	0.06	ANZG, 99% species protection
Molybdenum – dissolved	µg/L	34	ANZG
Nickel – dissolved	µg/L	11	ANZG
Selenium – dissolved	µg/L	5	ANZG, 99% species protection
Silver – dissolved	µg/L	0.05	ANZG
Vanadium – dissolved	µg/L	6	ANZG
Zinc – dissolved	µg/L	60	Upper Isaac River WQO
Total Recoverable Hydrocarbons (C6-C10)	µg/L	20	Limit of reporting
Total Recoverable Hydrocarbons (>C10-C40)	µg/L	100	Limit of reporting
Major ions Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	mg/L	For interpretation purposes only	
Metals and metalloids Bismuth, lithium, tellurium, tungsten	mg/L	For interpretation purposes only	
Water level	mAHD	For interpretation purposes only	

[1]Department of Environment and Heritage Protection (2011) *Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Isaac River Sub-basin (including Connors River)* – Fitzroy groundwater: water quality objectives (aquatic ecosystem), Zone 34, shallow, 80th percentile

[2]Australia and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG) – Aquatic ecosystem protection for moderately disturbed system (95% protection).

Attachment 11: Rehabilitation Reference Sites

Reference site	Latitude (GDA2020)	Longitude (GDA2020)	Description (RE type)
Pasture Reference 1	-21.6481238	147.9592243	Grazing pasture
Pasture Reference 2	-21.6245100	147.9973964	Grazing pasture
Pasture Reference 3	-21.6345369	147.9607289	Grazing pasture
NBR_1	-21.6553785	147.9684915	Native bushland RE 11.5.3 *Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana*