PRCP schedule

Environmental Protection Act 1994

PRCP schedule PRCP_EPML00313313_V1

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

PRCP schedule: PRCP_EPML00313313_V1

PRCP schedule holder(s)

Name(s)	Registered address
Peabody Coppabella Pty Ltd	Level 14 31 Duncan Street Fortitude Valley QLD 4006
CITIC Australia Coppabella Pty Ltd	Level 7, CITIC House 99 King Street MELBOURNE VIC 3000
NS Coal Pty Ltd	Level 2, Navision House 10 Market Street BRISBANE CITY QLD 4000
KC Resources Pty Ltd	Suite 3B, Level 33 52 Martin Place SYDNEY NSW 2000
Winchester Coal Operations Pty Ltd	Gateway Suite 4101, Level 41 1 Macquarie Street SYDNEY NSW 2000

Location details

Location(s)
Mining Lease (ML)70384, ML70385, ML70386, ML70387.

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.

Alison O'Brien	8/12/2023
Signature	Date

Alison O'Brien
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

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Obligations under the *Environmental Protection Act 1994*

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

Pursuant to section 285 of the EP Act:

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

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

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

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

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

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

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

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

PRCP schedule

The PRCP schedule incorporates the following sections:

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

Section A - Conditions of PRCP schedule

Pursuant to section 206A of the EP Act:

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

  (a) each rehabilitation milestone and management milestone

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

General conditions

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

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

PRCP2 Mining activities must not commence earlier than the nominated calendar year under condition **PRCP1**.

PRCP3 Once a calendar year is nominated under condition **PRCP1**, that nominated year is to be read in place of xxxx in the PRCP schedule milestone completed by and area available timeframes (e.g. if the nominated year is 2025, then a milestone completed by date of 10 Dec xxxx + 3 years in the PRCP schedule is taken to be 10 Dec 2028 for the purposes of determining compliance with the milestone date).

PRCP4 The holder must comply with each milestone criteria stated in the schedule.

PRCP5 Where land becomes available for rehabilitation earlier than the nominated 'Date area is available', progressive rehabilitation for that land must commence as soon as practicable. Progressive rehabilitation commenced early under this condition must be carried out in accordance with the milestones and criteria in this schedule, except that each of the dates by which milestones are to be completed is brought forward by the same amount of time as the commencement was brought forward.

PRCP6 Where an area achieves a rehabilitation milestone, it must be maintained and continue to comply with the rehabilitation milestone criteria for that rehabilitation milestone until the next rehabilitation milestone is achieved.

PRCP7 Where an area has achieved the final rehabilitation milestone, it must be maintained and continue to comply with the rehabilitation milestone criteria for the final milestone and continue to be in a stable condition[1], until the area is progressively certified according to the requirements of the EP Act, or that area is surrendered.

PRCP8 Monitoring and maintenance must be carried out in accordance with:

[1] 'Stable condition' means land is in a stable condition if—the land is safe and structurally stable, and there is no environmental harm being caused by anything on or in the land, and the land can sustain a PMLU.

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

b) Any requirement under this PRCP schedule.

PRCP9 The holder must keep records in relation to relevant matters for a minimum of five years and provide such records to the administering authority on request.

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

a) Rehabilitation activities and the results of these activities;

b) Maintenance activities and the results of maintenance activities;

c) Monitoring activities and the results of monitoring;

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

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

PRCP10 By **1 December 2026**, or prior to significant disturbance as per condition **PRCP1** (whichever is the earlier), the holder must submit a PRCP amendment application to the administering authority which:

a) Proposes monitoring locations and hydrogeological units to replace all 'TBD' values in **Appendix 5: Groundwater Quality Monitoring Locations**; and

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

PRCP11 Disturbance due to exploration activities in areas not authorised to be mined must be rehabilitated in accordance with the provisions detailed in the '*Eligibility criteria and standard conditions for exploration and mineral development projects*' or its successor, with the exception that land must be rehabilitated to a stable condition that achieves the relevant PMLU as indicated by Figure 1 - Final Site Design.

END OF CONDITIONS

Section B - Final site design and reference maps

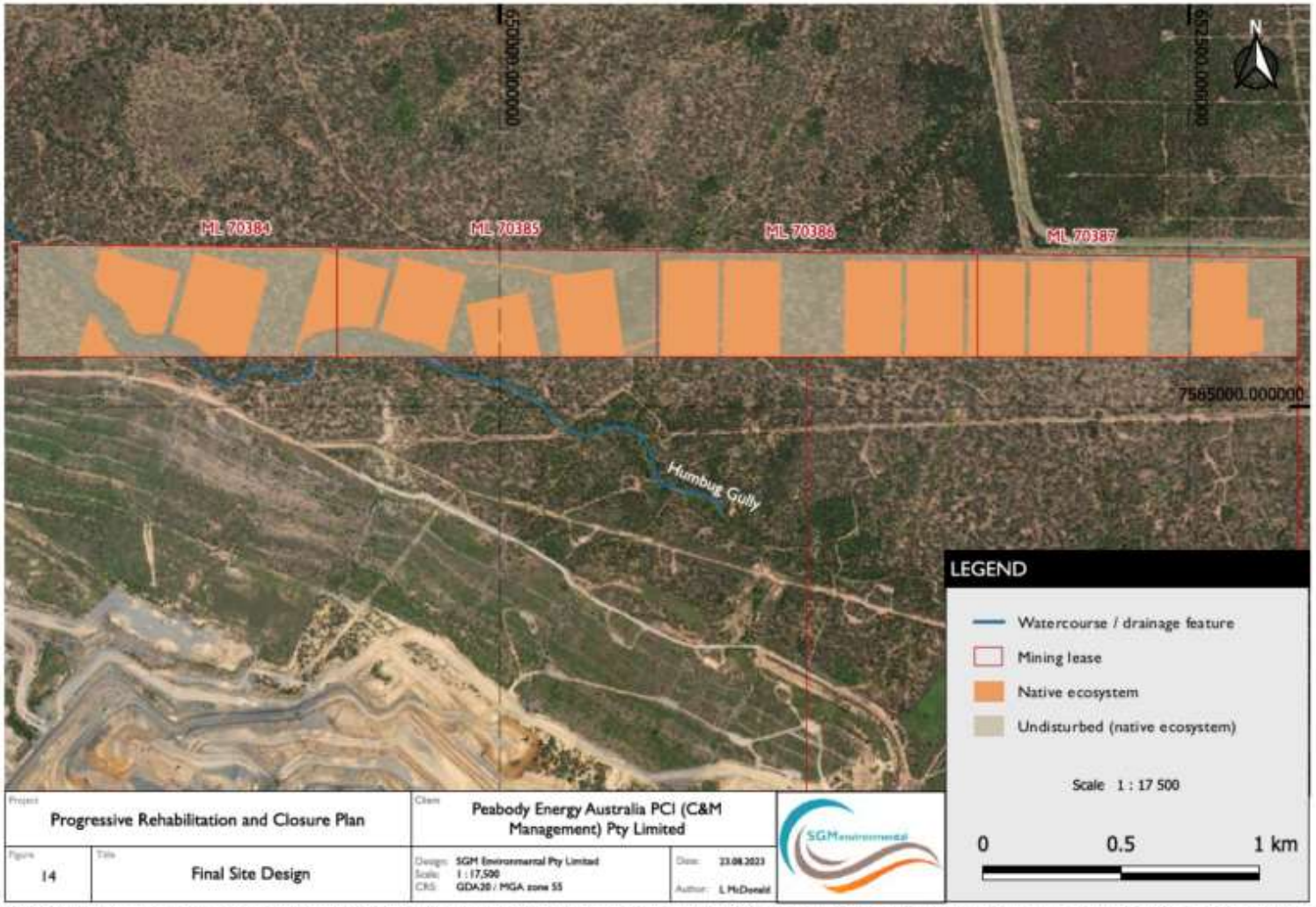


Figure 1 – Final Site Design

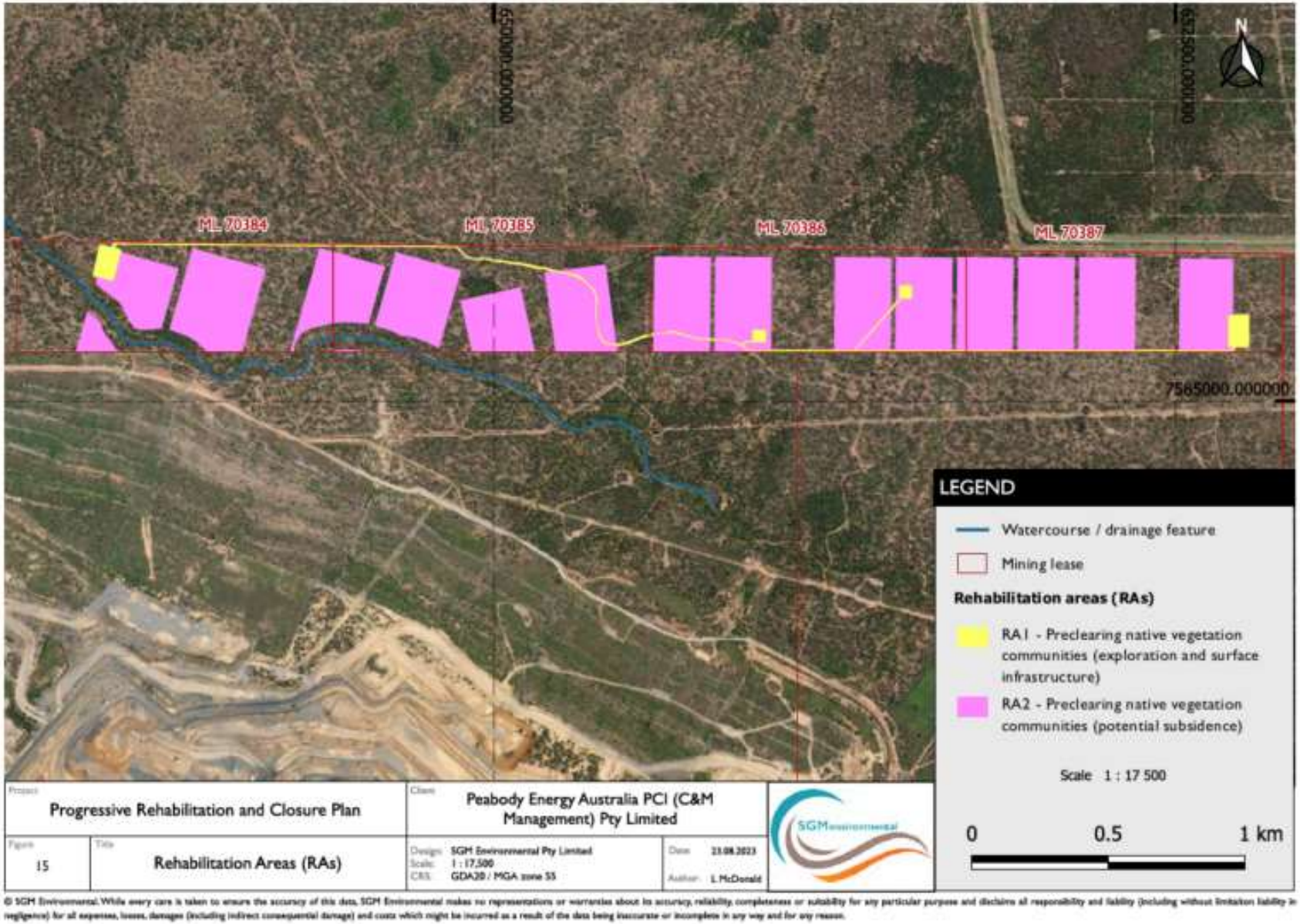


Figure 2 – Rehabilitation Areas

Section C – Post mining land uses

(RA1) Rehabilitation area 1

Post-mining land uses (PMLU)										
Rehabilitation area	RA1									
Relevant activities	Exploration areas and surface infrastructure									
Total rehabilitation area size (ha)	6.0									
Commencement of first milestone: RM1	10/12/2023									
PMLU	Preclearing native vegetation community									
Date area is available	10/12/23	10 Dec xxxx + 5 years	10 Dec xxxx + 6 years	10 Dec xxxx + 11 years						
Cumulative area available (ha)	0.5	6	6	6						
Milestone completed by	10/12/24	10 Dec xxxx + 6 years	10 Dec xxxx + 11 years	10 Dec xxxx + 21 years						
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	0.5	6								
RM2	0.5	6								
RM3	0.5	6								
RM4			6							
RM5				6						

Note – the holder must nominate to the administering authority a calendar year to be read in place of xxxx prior to any significant disturbance occurring. Refer to condition number **PRCP1**.

(RA2) Rehabilitation area 2

Post-mining land uses (PMLU)												
Rehabilitation area	RA2											
Relevant activities	Potential subsidence areas											
Total rehabilitation area size (ha)	95.4											
Commencement of first milestone: RM2	10 December XXXX											
PMLU	Preclearing native vegetation community											
Date area is available	10 Dec xxxx + 5 years	10 Dec xxxx + 6 years	10 Dec xxxx + 7 years	10 Dec xxxx + 8 years	10 Dec xxxx + 10 years	10 Dec xxxx + 11 years	10 Dec xxxx + 12 years	10 Dec xxxx + 13 years	10 Dec xxxx + 20 years	10 Dec xxxx + 21 years	10 Dec xxxx + 22 years	10 Dec xxxx + 23 years
Cumulative area available (ha)	47.73	73.44	80.07	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4
Milestone completed by	10 Dec xxxx + 6 years	10 Dec xxxx + 7 years	10 Dec xxxx + 8 years	10 Dec xxxx + 9 years	10 Dec xxxx + 11 years	10 Dec xxxx + 12 years	10 Dec xxxx + 13 years	10 Dec xxxx + 14 years	10 Dec xxxx + 21 years	10 Dec xxxx + 22 years	10 Dec xxxx + 23 years	10 Dec xxxx + 24 years
Milestone Reference	**Cumulative area achieved (ha)**											
RM1	47.73	73.44	80.07	95.4								
RM2	47.73	73.44	80.07	95.4								
RM3	47.73	73.44	80.07	95.4								
RM4					47.73	73.44	80.07	95.4				
RM5									47.73	73.44	80.07	95.4

Note – the holder must nominate to the administering authority a calendar year to be read in place of xxxx prior to any significant disturbance occurring. Refer to condition number **PRCP1**.

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 agreed by the landholder as evidenced by a signed landholder agreement, the following are complete: a) All services disconnected, terminated and removed. b) All infrastructure dismantled and removed offsite. c) All hardstand, concrete areas and roads (bitumen, blue metal, aggregate etc) removed. d) All pipelines drained and removed. e) All waste removed. f) All surface water drainage infrastructure removed. g) All drillholes bores and sumps decommissioned. h) All machinery and equipment removed from site. 1.2 Contaminated land assessment is completed by a suitably qualified person (SQP) and indicates that no contamination unsuitable for the post-mining land use remains or is occurring.
RM2	Surface preparation	<u>Exploration and surface infrastructure (RA1)</u> 2.1 Deep ripping of compacted surfaces, at least 300mm into soil/subsoil profile along contour of slopes (for example, SIS and drill pads). 2.2 An assessment of the need for soil amelioration undertaken and soil ameliorants such as gypsum and/or organic matter have been applied at rates determined by an AQP. 2.3 Placement of a minimum 200 mm topsoil (SIS and drill pads only). <u>Potential subsidence (RA2)</u> 2.4 No areas of active subsidence or gully erosion. 2.5 Shallow rip or scarify any surface cracking. 2.6 Rework surface material to fill cracks and hollows. 2.7 Areas are reshaped/graded to be free draining, to prevent ponding in depressions. 2.8 Disturbance to native vegetation during rehabilitation works is minimised.
RM3	Revegetation (preclearing native vegetation community)	3.1 Disturbed areas are fertilised and seeded with seed mix that reflects the preclearing regional ecosystem as per **Appendix 2 – Species list for preclear native vegetation communities** of the schedule. 3.2 Areas are fenced to exclude livestock from disturbed areas where required.

RM4	Achievement of surface requirements (preclearing native vegetation community)	4.1 No areas of gully erosion >300mm deep. 4.2 No areas of subsidence >300mm deep. 4.3 Native vegetation communities must achieve 40% of values from reference benchmark criteria of mapped preclear regional ecosystems as per **Appendix 3 – Benchmarks for native vegetation communities PMLU** of the schedule and measured by the BioCondition Assessment methodology by an AQP.
RM5	Achievement of the PMLU to a stable condition (preclearing native vegetation community)	5.1 Certification from an AQP that the area has achieved a stable condition. 5.2 The extent and frequency of surface cracking and ponding of the mined land is comparable to the unmined land. 5.3 No areas of gully erosion >300mm deep. 5.4 No areas of subsidence >300mm deep. 5.5 Invasive plants (as defined in the *Biosecurity Act 2014*) comprise less than 5% of vegetation groundcover. 5.6 Native vegetation communities must achieve 80% of values from benchmark criteria of mapped preclear regional ecosystems as per **Appendix 3 – Benchmarks for native vegetation communities PMLU** of the schedule and measured by the BioCondition Assessment methodology by an AQP. 5.7 Surface water quality results monitored monthly during flow at, but not limited to, downstream locations specified in **the Appendix 4 – Receiving Water Upstream Background Sites and Downstream Monitoring Points** of this schedule must not exceed the following, for a minimum of 5 consecutive years: a) pH: 6.5-8.0 b) Electrical conductivity: 340 µS/cm c) Turbidity: 50 NTU d) Sulfate: 25mg/L e) Arsenic (Dissolved): 13 µg/L f) Copper (Dissolved): 1.4 µg/L g) Zinc (Dissolved): 8 µg/L h) Nickel (Dissolved): 11 µg/L i) Selenium (Dissolved): 5 µg/L j) Aluminium (Dissolved): 55 µg/L k) Boron (Dissolved): 940 µg/L l) Molybdenum (Dissolved): 34 µg/L m) Major ions (mg/L) - Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate – interpretation purposes

		n) Hardness (mg/L) – interpretation purposes. 5.8 If the surface water quality exceeds criteria above, the applicable upstream/reference site must be compared to the downstream site result; and if the quality measured at a downstream site is equal to or less than the quality measured at the applicable upstream/reference site, no further action is required. 5.9 Groundwater quality should be monitored quarterly at, but not limited to, monitoring bores listed in **Appendix 5 – Groundwater Quality Monitoring Locations** of the schedule, for quality characteristics listed in **Appendix 6 – Groundwater Quality Limits** of the schedule and 3 consecutive results must not exceed limits included in **Appendix 6 – Groundwater Quality Limits** of the schedule for a minimum of 5 consecutive years. 5.10 No mining subsidence present within 50 m either side of Humbug Gully, as defined by the current creek alignment. 5.11 Certification from an AQP that Humbug Gully is safe and stable and flow conditions are consistent with pre-mining conditions. 5.12 Certification from an AQP that all life of mine seals meet the requirements dictated in the Coal Mining Health and Safety Regulation 2017, or a more current version. 5.13 Long-term stability of the underground mine layout with a minimum factor of safety of 1.6.

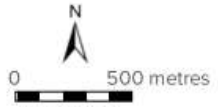
Appropriately qualified person (AQP) means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards,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

Appendix 1 – Mapped Regional Ecosystems

Coppabella Johnson Extended Project PRCP

Regional Ecosystems

A product of Queensland Globe



Scale: 1:25000

Printed at: A4

Print date: 12/9/2023

Not suitable for accurate measurement.

Projection: Web Mercator EPSG 102100 (3857)

For more information, visit https://qldglobe.information.qld.gov.au/help-info/Contact-us.html

Queensland Government
Department of Resources

Appendix 2 – Species list for preclear native vegetation communities

Recommended species for seeding native remnant vegetation. The final proportion of seeds (kg/ha) should reflect the relative cover and frequency of each Regional Ecosystem Technical Descriptions. Additional potential species for the seed mix can be found in the Regional Ecosystem Technical Descriptions (https://publications.qld.gov.au/dataset/re-technical-descriptions). It should be noted, though introduced species do occur in the Regional Ecosystem Technical Description (due to data being collected at disturbed sites or poor condition sites), introduced species should not be used in the seed mix and have not been included in the table below. Only species occurring with more than 10% frequency have been listed in the table.

Stratum	**11.5.3**	**11.3.4**	**11.4.9**
Example of regional ecosystem			
Emergent	-	**Dominant:** *Eucalyptus tereticornis*	-
Tree layer 1	**Dominant**: *Eucalyptus populnea, Eucalyptus melanophloia* **Frequent:** *Eucalyptus populnea, Eucalyptus melanophloia, Eucalyptus brownii, Corymbia clarksoniana, Eucalyptus crebra, Ventilago viminalis.*	**Dominant:** *Eucalyptus tereticornis, Corymbia tessellaris, Angophora subvelutina, Corymbia clarksoniana, Lophostemon suaveolens.* **Frequent:** *Eucalyptus tereticornis, Corymbia tessellaris, Angophora subvelutina, Corymbia clarksoniana, Lophostemon suaveolens, Angophora floribunda, Eucalyptus melanophloia, Eucalyptus populnea.*	**Dominant**: *Acacia harpophylla, Acacia cambagei, Eucalyptus thozetiana.* **Frequent:** *Enteropogon ramosus, Acacia harpophylla, Acacia cambagei, Eucalyptus thozetiana, Amyema quandang var. quandang, Eucalyptus crebra, Lysiphyllum carronii.*

Tree layer 2	**Frequent:** *Eucalyptus populnea, Eucalyptus melanophloia, Eucalyptus brownii, Corymbia clarksoniana, Eucalyptus crebra, Ventilago viminalis*	**Dominant**: *Corymbia tessellaris, Eucalyptus tereticornis, Angophora subvelutina, Lophostemon suaveolens.* **Frequent:** *Eucalyptus tereticornis, Angophora subvelutina, Corymbia tessellaris, Lophostemon suaveolens, Eucalyptus melanophloia.*	**Dominant:** *Acacia harpophylla* **Frequent:** *Acacia harpophylla, Acacia cambagei, Santalum lanceolatum, Amyema quandang var. quandang, Eremophila mitchellii, Eucalyptus thozetiana, Terminalia oblongata subsp. oblongata.*
Tree layer 3	**Frequent:** *Eremophila mitchellii*	**Dominant:** *Eucalyptus tereticornis* **Frequent:** *Eucalyptus tereticornis*	-
Shrub 1	**Dominant:** *Eremophila mitchellii, Erythroxylum australe, Grewia latifolia* **Frequent:** *Eremophila mitchellii, Erythroxylum australe, Grewia latifolia, Acacia excelsa, Atalaya hemiglauca, Carissa ovata, Eucalyptus populnea, Acacia sericophylla, Archidendropsis basaltica, Capparis lasiantha, Cassia brewsteri, Denhamia cunninghamii, Eucalyptus brownii, Eucalyptus melanophloia, Flindersia dissosperma, Lysiphyllum carronii, Psydrax oleifolia*	**Dominant**: *Eucalyptus tereticornis, Acacia glaucocarpa.* **Frequent:** *Acacia glaucocarpa, Eucalyptus tereticornis, Acacia disparrima subsp.disparrima, Alphitonia excelsa.*	**Dominant:** *Acacia harpophylla, Eremophila mitchellii, Carissa ovata, Santalum lanceolatum, Terminalia oblongata subsp. oblongata* **Frequent:** *Acacia harpophylla, Carissa ovata, Eremophila mitchellii, Terminalia oblongata subsp. oblongata, Santalum lanceolatum, Alectryon diversifolius, Acacia cambagei, Amyema quandang var. quandang, Apophyllum anomalum, Cynanchum viminale subsp. brunonianum, Ehretia membranifolia, Enchylaena tomentosa, Flindersia dissosperma, Acacia rhodoxylon, Alphitonia excelsa, Atalaya hemiglauca, Brachychiton rupestris, Breynia oblongifolia, Capparis indet., Casuarina cristata, Citrus glauca, Eremophila deserti, Erythroxylum australe, Eucalyptus crebra, Eucalyptus thozetiana, Flindersia australis, Geijera parviflora, Grevillea*

			parallela, Melaleuca tamariscina, Sesbania cannabina.
Shrub 2	**Frequent:** *Carissa lanceolata, Carissa ovata*	-	-
Ground	**Dominant**: *Themeda triandra, Aristida calycina, Chrysopogon fallax, Fimbristylis dichotoma* **Frequent:** *Chrysopogon fallax, Fimbristylis dichotoma, Heteropogon contortus, Aristida calycina, Digitaria brownii, Panicum effusum, Themeda triandra, Cyperus fulvus, Dichanthium sericeum, Eragrostis lacunaria, Eragrostis sororia, Aristida jerichoensis, Bothriochloa decipiens, Bothriochloa decipiens var. decipiens, Cymbopogon bombycinus, Cyperus gracilis, Digitaria ammophila, Enneapogon lindleyanus, Enneapogon virens, Eragrostis brownii, Eragrostis leptostachya, Eulalia aurea, Sporobolus caroli, Tragus australianus, Triodia pungens.*	**Dominant:** *Arundinella nepalensis Heteropogon contortus, Bothriochloa bladhii subsp. Bladhii, Dinebra decipiens.* **Frequent**: *Heteropogon contortus, Cyperus gracilis, Arundinella nepalensis, Cyperus fulvus, Themeda triandra, Dichanthium sericeum, Bothriochloa bladhii subsp. bladhii, Capillipedium spicigerum, Chloris divaricata, Cymbopogon refractus, Dichanthium sericeum subsp. sericeum, Panicum simile, Sporobolus creber, Dinebra decipiens, Eragrostis leptostachya, Eragrostis sororia, Fimbristylis dichotoma, Imperata cylindrica, Panicum effusum, Scleria brownii, Aristida calycina, Aristida queenslandica var. queenslandica, Aristida ramosa, Bothriochloa decipiens, Bothriochloa ewartiana, Eragrostis elongate, Eragrostis lacunaria, Paspalidium distans, Paspalidium indet., Sorghum nitidum, Sporobolus elongatus.*	**Dominant:** *Paspalidium caespitosum, Enteropogon ramosus, Panicum decompositum.* **Frequent:** *Sporobolus scabridus, Astrebla squarrosa, Enteropogon acicularis, Paspalidium caespitosum, Paspalidium distans, Sporobolus caroli, Cyperus indet., Dactyloctenium radulans, Enneapogon lindleyanus, Aristida indet., Dinebra decipiens var. decipiens, Dinebra ligulata, Enteropogon ramosus, Eragrostis tenellula, Eriochloa pseudoacrotricha, Panicum decompositum, Aristida gracilipes, Aristida personata, Bothriochloa decipiens var. decipiens, Brachyachne convergens, Cleistochloa subjuncea, Cymbopogon refractus, Cyperus alterniflorus, Cyperus fulvus, Cyperus gracilis, Digitaria indet., Digitaria parviflora, Elytrophorus spicatus, Eragrostis brownii,* *Eriochloa indet., Fimbristylis dichotoma, Iseilema fragile, Iseilema membranaceum, Iseilema vaginiflorum, Leptochloa digitata, Panicum queenslandicum, Paspalidium indet., Paspalidium rarum, Sporobolus*

			disjunctus, Sporobolus indet, Sporobolus partimpatens, Tragus australianus.

Appendix 3 – Benchmarks for native vegetation communities PMLU

Preclear Regional Ecosystem 11.5.3

Regional Ecosystem	**11.5.3** **Reference**	**11.5.3** **Benchmark for RM4 (40% of reference)**	**11.5.3** **Benchmark for RM5 (80% of reference)**
Short description	*Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana* woodland on Cainozoic sand plains and/or remnant surfaces	*Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana* woodland on Cainozoic sand plains and/or remnant surfaces	*Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana* woodland on Cainozoic sand plains and/or remnant surfaces
Structure code	Woodland	-	-
recruitment	100	Presence of tree species establishment	Presence of tree species (min. 2) and shrub species (min. 2) recruitment.
non native_plant_cover (%)	Max. 10% of ground cover	Max. 60% of ground cover	Max. 30% of ground cover
native tree_sp_richness	6*	2*	5*
native shrub_sp_richness	6*	2*	5*
native grass_sp_richness	6*	2*	5*
native forb_other_sp_richness	10	4	8
tree_canopy_height	16	6	12
tree_canopy_cover	20	8	16
shrub_canopy_cover	3	1	2
native_perennial_grass (%)	19	8	15
litter_ground_cover (%)	20	8	16

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

Preclear Regional Ecosystem 11.3.4

Regional Ecosystem	**11.3.4** **Reference**	**11.3.4** **Benchmark for RM4 (40% of reference)**	**11.3.4** **Benchmark for RM5 (80% of reference)**
Short description	*Eucalyptus tereticornis* and/or *Eucalyptus spp.* woodland on alluvial plains	*Eucalyptus tereticornis* and/or *Eucalyptus* spp. woodland on alluvial plains	*Eucalyptus tereticornis* and/or *Eucalyptus* spp. woodland on alluvial plains
Structure code	Woodland	-	-
recruitment	100	Presence of tree species establishment	Presence of tree species (min. 2) and shrub species (min. 2) recruitment.
non native_plant_cover (%)	Max. 10% of ground cover	Max. 60% of ground cover	Max. 30% of ground cover
tree_sp_richness	4*	2*	3*
shrub_sp_richness	2*	1*	2*
grass_sp_richness	7*	3*	5*
forb_other_sp_richness	10	4	8
tree_canopy_height	22	9	17
tree_subcanopy_height	12	5	9
tree_canopy_cover	17	7	13
tree_subcanopy_cover	5	2	4
shrub_canopy_cover	1	0.4	0.8
native_perennial_grass (%)	43	17	36
litter_ground_cover (%)	20	8	16

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

Preclear Regional Ecosystem 11.4.9

Regional Ecosystem	**11.4.9** **Reference**	**11.4.9** **Benchmark for RM4 (40% of reference)**	**11.4.9** **Benchmark for RM5 (80% of reference)**
Short description	*Acacia harpophylla* shrubby woodland with *Terminalia oblongata* on Cainozoic clay plains	*Acacia harpophylla* shrubby woodland with *Terminalia oblongata* on Cainozoic clay plains	*Acacia harpophylla* shrubby woodland with *Terminalia oblongata* on Cainozoic clay plains
Structure code	Woodland	-	-
recruitment	100	Presence of tree species establishment	Presence of tree species (min. 2) and shrub species (min. 2) recruitment.
non native_plant_cover (%)	Max. 10% of ground cover	Max. 60% of ground cover	Max. 30% of ground cover
tree_sp_richness	2*	1*	2*
shrub_sp_richness	5*	2*	4*
grass_sp_richness	5*	2*	4*
forb_other_sp_richness	10	4	8
tree_canopy_height	10	4	8
tree_subcanopy_height	6	2	5
tree_canopy_cover	25	10	20
tree_subcanopy_cover	11	4	8
shrub_canopy_cover	5	2	4
native_perennial_grass (%)	16	6	12
litter_ground_cover (%)	45	18	36

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

Appendix 4 – Receiving Water Upstream Background Sites and Downstream Monitoring Points

Monitoring points	Receiving waters location description	Easting (GDA2020, MGA 55)	Northing (GDA2020, MGA 55)
Upstream background monitoring points			
Humbug gully site 1	Approx 4km upstream of JEP	645114	7587468
Humbug gully site 2	Within the proposed JEP underground mining area	648290	7585582
Downstream monitoring points			
Humbug gully site 3	Approx 10km downstream of JEP	656220	7581288

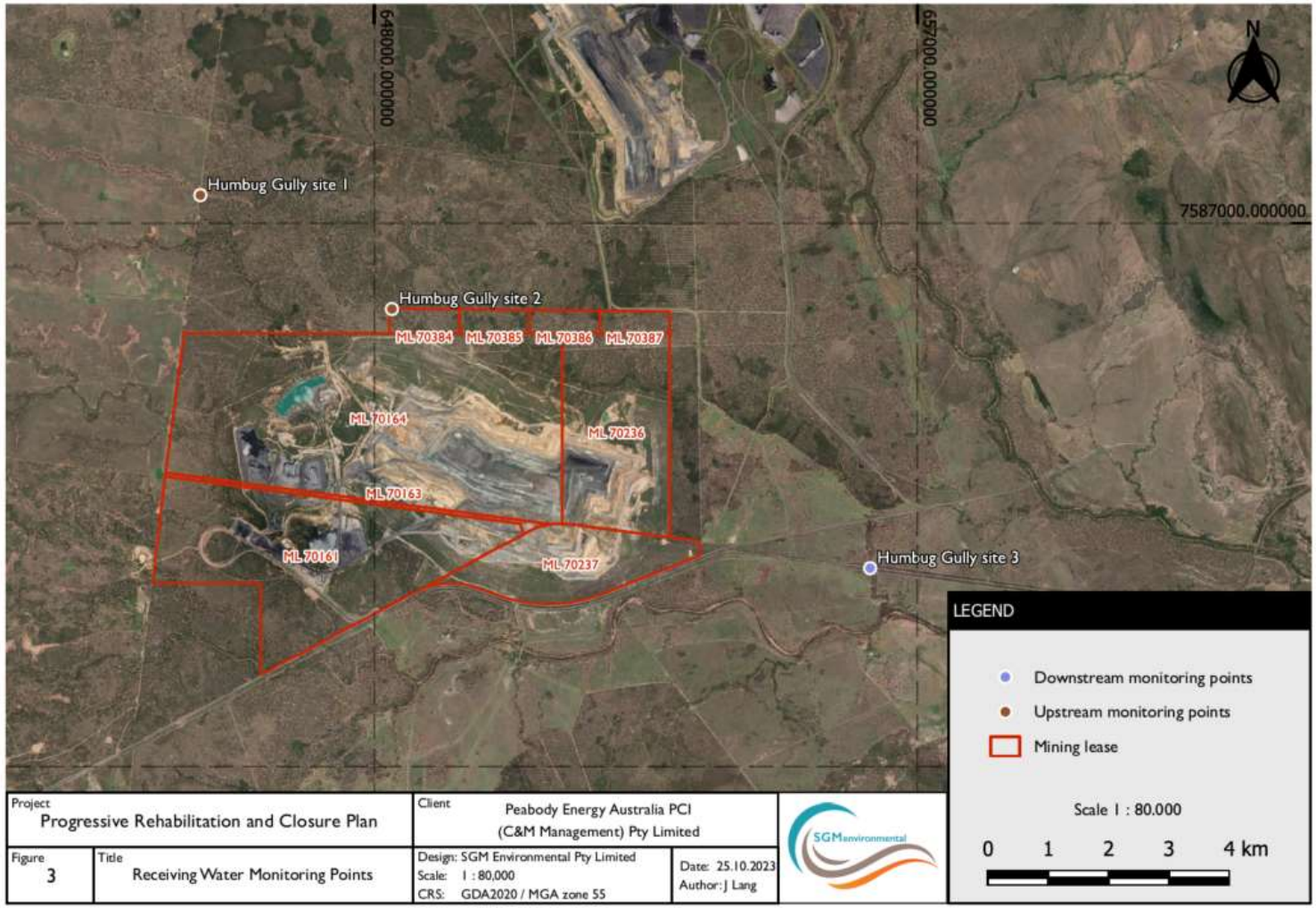


Figure 3 – Location of Receiving Water Monitoring Points

Appendix 5 – Groundwater Quality Monitoring Locations

Monitoring points	Target Aquifer	Easting (GDA2020, MGA 55)	Northing (GDA2020, MGA 55)
MB1	Permian overburden	649433	7584688
MB4	Permian overburden	650847	7584688
MB14	TBD	TBD	TBD
MB13	TBD	TBD	TBD
MB6	Tertiary	648989	7583194
MB9	Coal seam	651604	7582566
MB10	Coal seam	647540	7583160
Proposed bore JEP 1 (as per condition E2 of EA)	TBD	TBD	TBD
Proposed bore JEP 2 (as per condition E2 of EA)	TBD	TBD	TBD

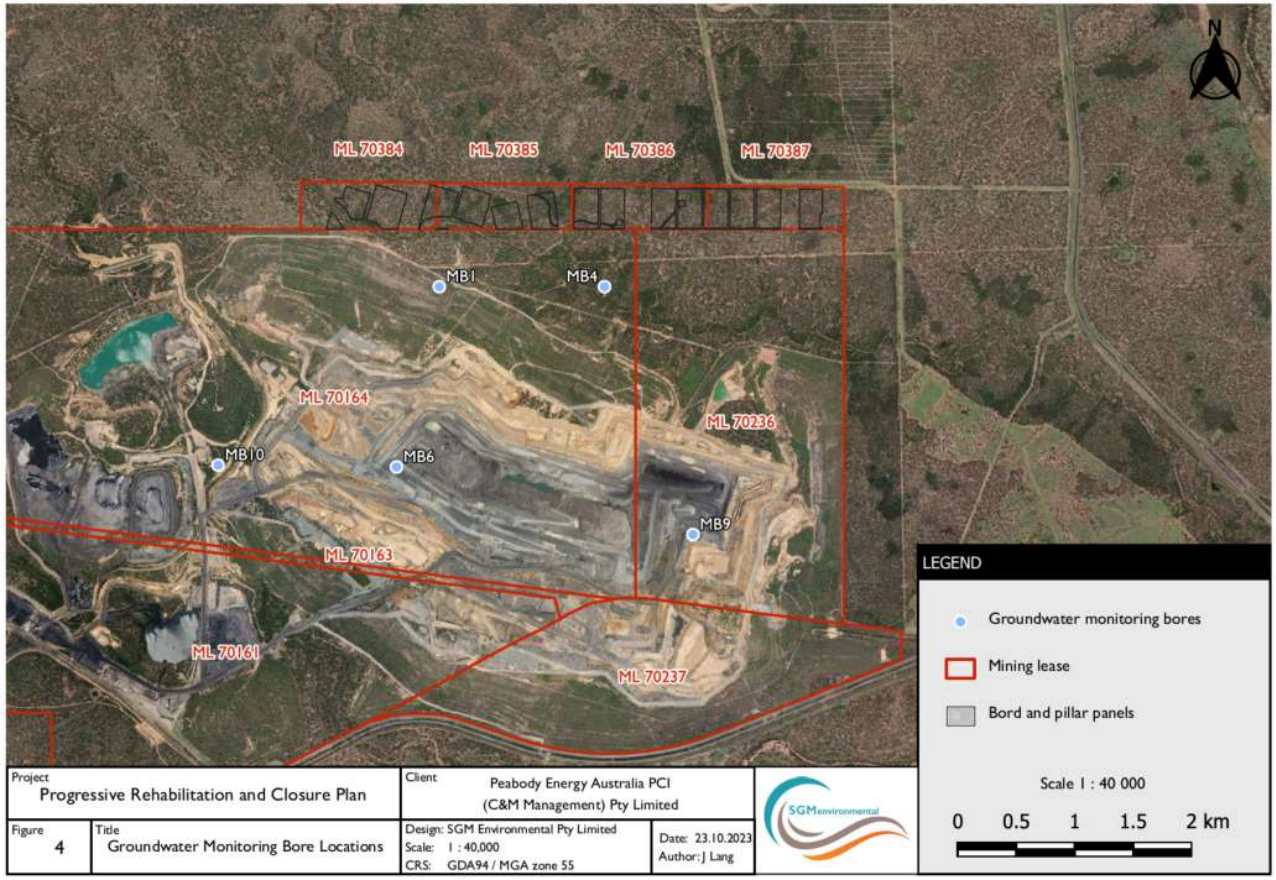


Figure 4 – Groundwater Monitoring Locations

Appendix 6 – Groundwater Quality Limits

Quality characteristic (units)	Monitoring Bore	Limit
pH (pH units)	All bores	6.5 – 8.5[1]
Electrical conductivity (µS/cm)	Bores (shallow)	8910[1]
Electrical conductivity (µS/cm)	Bores (deep)	16000[1]
Sulfate (mg/L)	Bores (deep)	398[1]
Sulfate (mg/L)	Bores (shallow)	318[1]
Aluminium - dissolved (µg/L)	All bores	55[2]
Arsenic - dissolved (µg/L)	All bores	13[2]
Boron - dissolved (µg/L)	All bores	630
Cadmium - dissolved (µg/L)	All bores	0.2[2]
Cobalt - dissolved (µg/L)	All bores	1.4[2]
Copper - dissolved (µg/L)	All bores	5
Molybdenum - dissolved (µg/L)	All bores	34[2]
Nickel - dissolved (µg/L)	All bores	11[2]
Selenium - dissolved (µg/L)	All bores	5[2]
Vanadium - dissolved (µg/L)	All bores	6[2]
Zinc - dissolved (µg/L)	All bores	20

Major ions (mg/L) Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	All bores	For interpretation purposes only
Hardness (mg/L)	All bores	For interpretation purposes only

Notes:

- All metals and metalloids must be measured as ‘dissolved’ (from analysis of a field filtered sample) and total (unfiltered).
- Limits for metals and metalloids apply to dissolved results.

1. DEHP (2011) Isaac River Sub Basin Water Quality Objectives (WQO)
2. ANZG (2018) Aquatic ecosystem protection for moderately disturbed system (95% protection)

END OF **PRCP** SCHEDULE