PRCP schedule

Environmental Protection Act 1994

PRCP schedule P-PRCP-100738792

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-100738792

PRCP schedule holder(s)

Name(s)	Registered address
Jellinbah Group Pty Ltd	Level 20, 66 Eagle Street, BRISBANE QLD 4000
Tremell Pty. Ltd.	
Marubeni Resources Development Pty Ltd	'Riverside Centre', Level 37, Suite 3705, 123 Eagle Street, BRISBANE QLD 4000
Sojitz Development Pty Limited	'Central One Plaza', Level 27, 345 Queen Street, BRISBANE QLD 4000

Location details

Location(s)
Mining Lease (ML) ML2418, ML6992, ML70445, ML70446, ML70448, ML70449, ML80018, ML80053, ML80068, ML80108, ML80129, ML80140, ML80165, ML80184, ML700011, ML700012, ML700013

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.

Queensland Government

EBurgess	**3/03/2025**
Signature	**Date**

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

Enquiries:
Business Centre Coal
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(07) 4987 9320
CRMining@des.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

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

Pursuant to section 285 of the EP Act:

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

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

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

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

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

  (b) a declaration 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 E – Attachments.

Section A - Conditions of PRCP schedule

Pursuant to section 206A of the EP Act:

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

  (a) each rehabilitation milestone and management milestone

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

General conditions

PRCP1 The holder must comply with each milestone criteria stated in the schedule.

PRCP2 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 rehabilitation milestone must be achieved as soon as practicable after the land to which it relates becomes available for rehabilitation.

PRCP3 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.

PRCP4 Where an area has achieved the final rehabilitation milestone, it must be maintained and continue to comply with the rehabilitation milestone criteria for the final milestone and continue to be in a stable condition, until the area is progressively certified according to the requirements of the EP Act, or that area is surrendered.

PRCP5 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[1] that achieves the relevant PMLU as indicated by Figure 1 Final Site Design.

PRCP6 Monitoring and maintenance must be carried out in accordance with:

i. the monitoring and maintenance program described in the rehabilitation planning part relating to this PRCP schedule; and
ii. any requirement under this PRCP schedule.

PRCP7 The holder must keep records in relation to relevant matters for a minimum of five years and provide such records to the administering authority on request. Relevant matters for this condition include, but are not necessarily limited to, the following:

i. rehabilitation activities and the results of these activities
ii. maintenance activities and the results of maintenance activities
iii. monitoring activities and the results of monitoring
iv. designs, drawings, specifications or any similar documents required under the PRCP schedule
v. certifications, assessments, investigations, inspections, audits or any similar processes carried out in relation to rehabilitation milestones or milestone criteria.

END OF CONDITIONS

Section B - Final site design and reference maps

Figure 1 – Final Site Design (northern area)

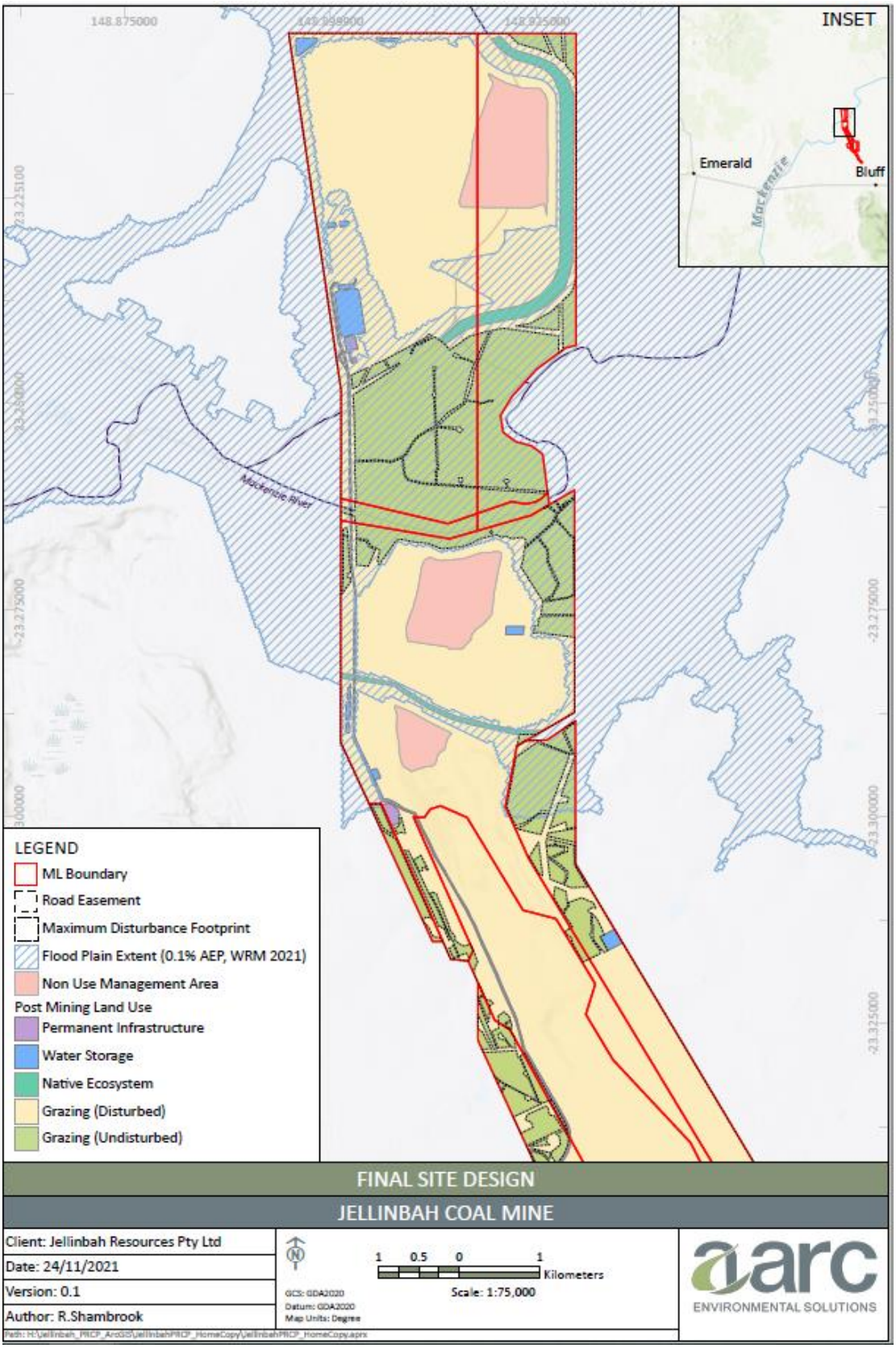


Figure 2 – Final Site Design (southern area)

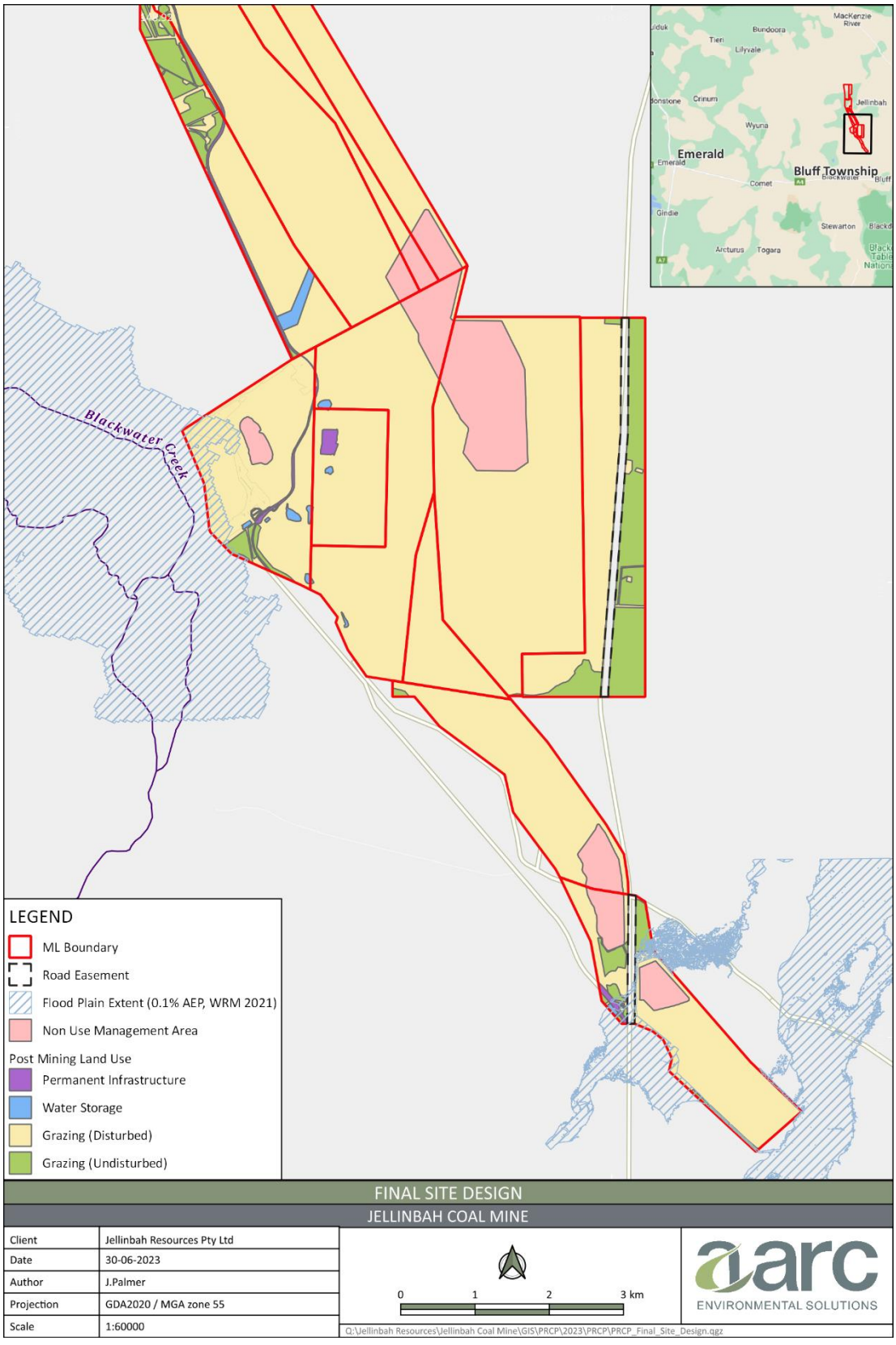


Figure 3 – Reference Map (Mackenzie North)

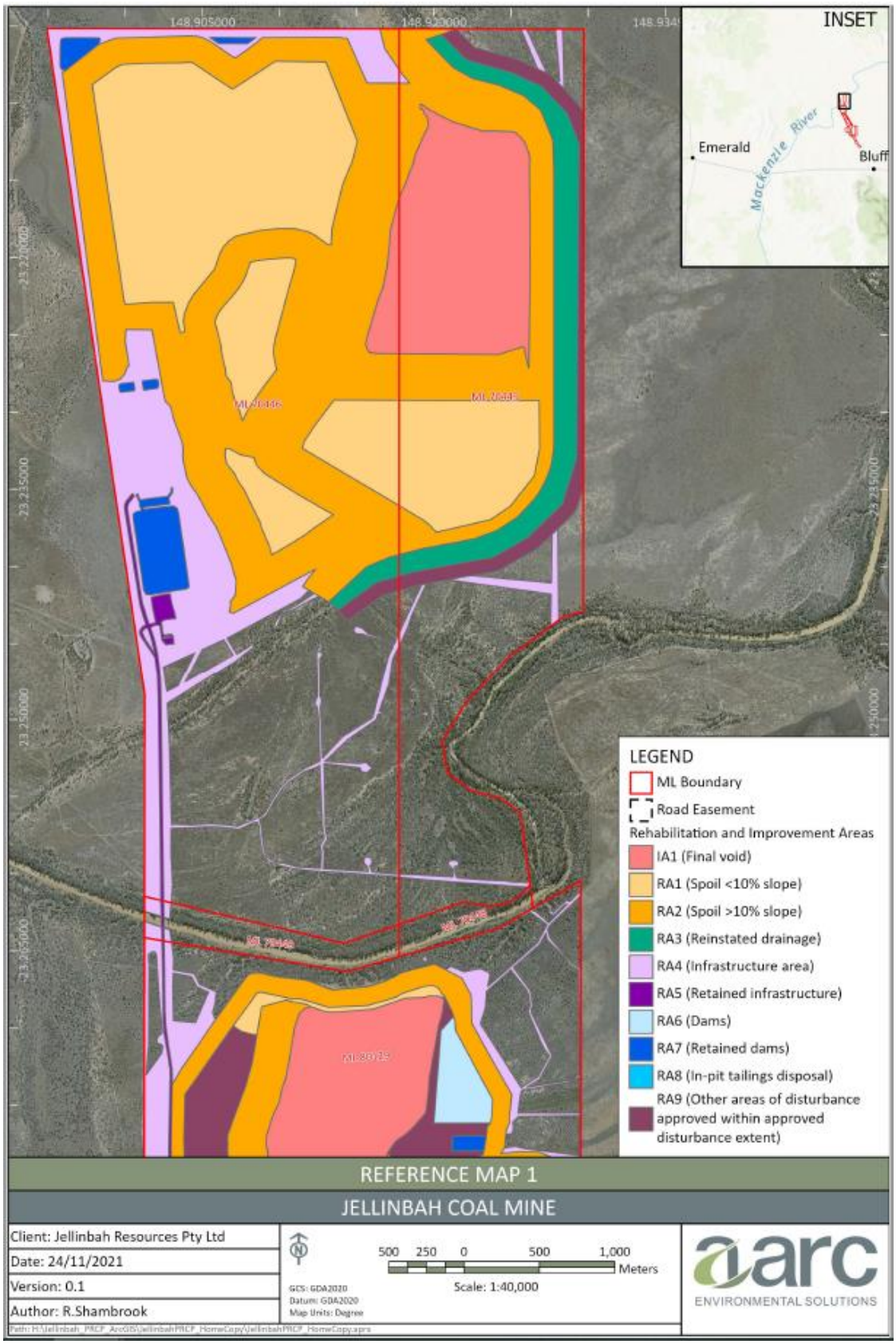


Figure 4 – Reference Map (Jellinbah Plains)

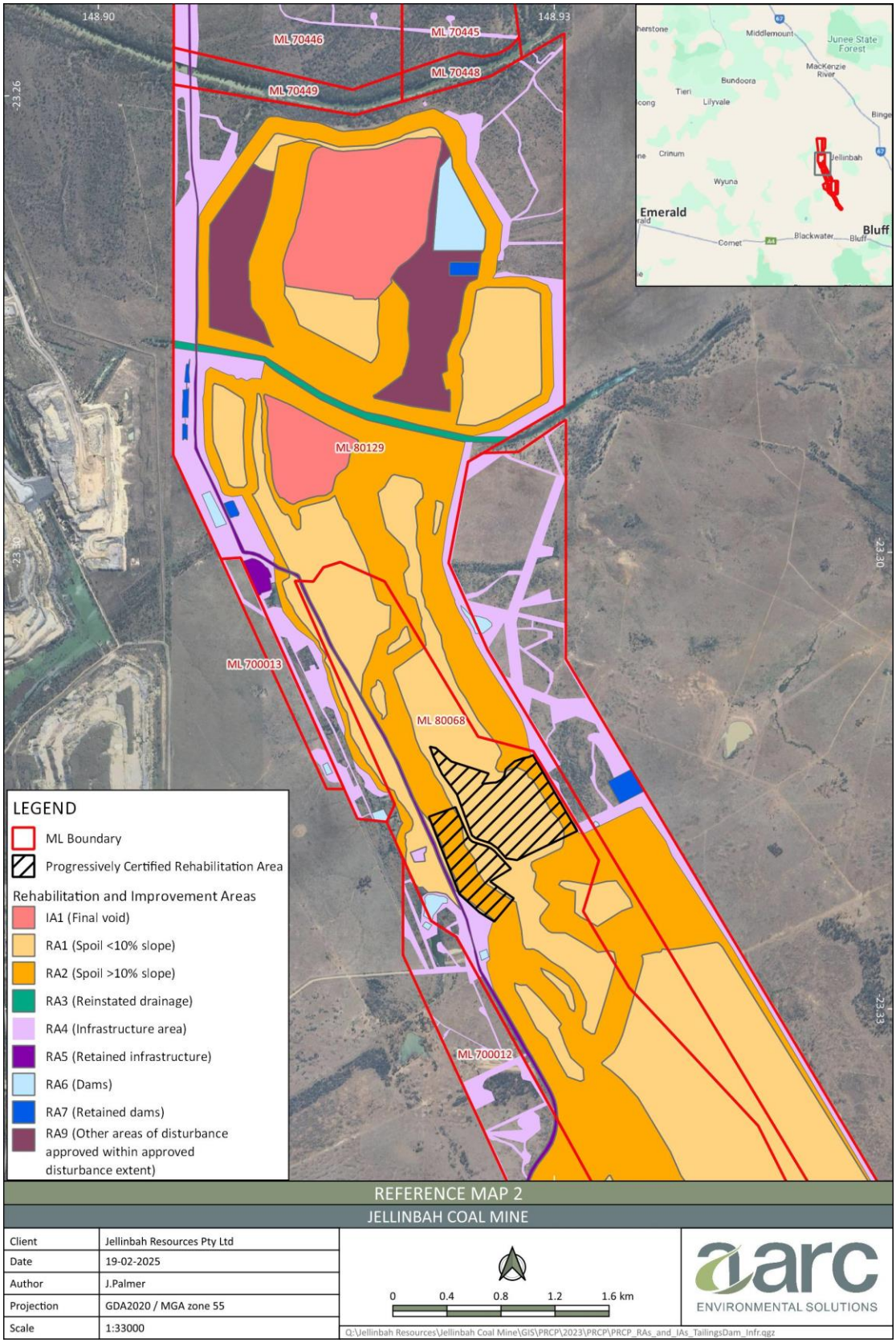


Figure 5 – Reference Map (Jellinbah Central)

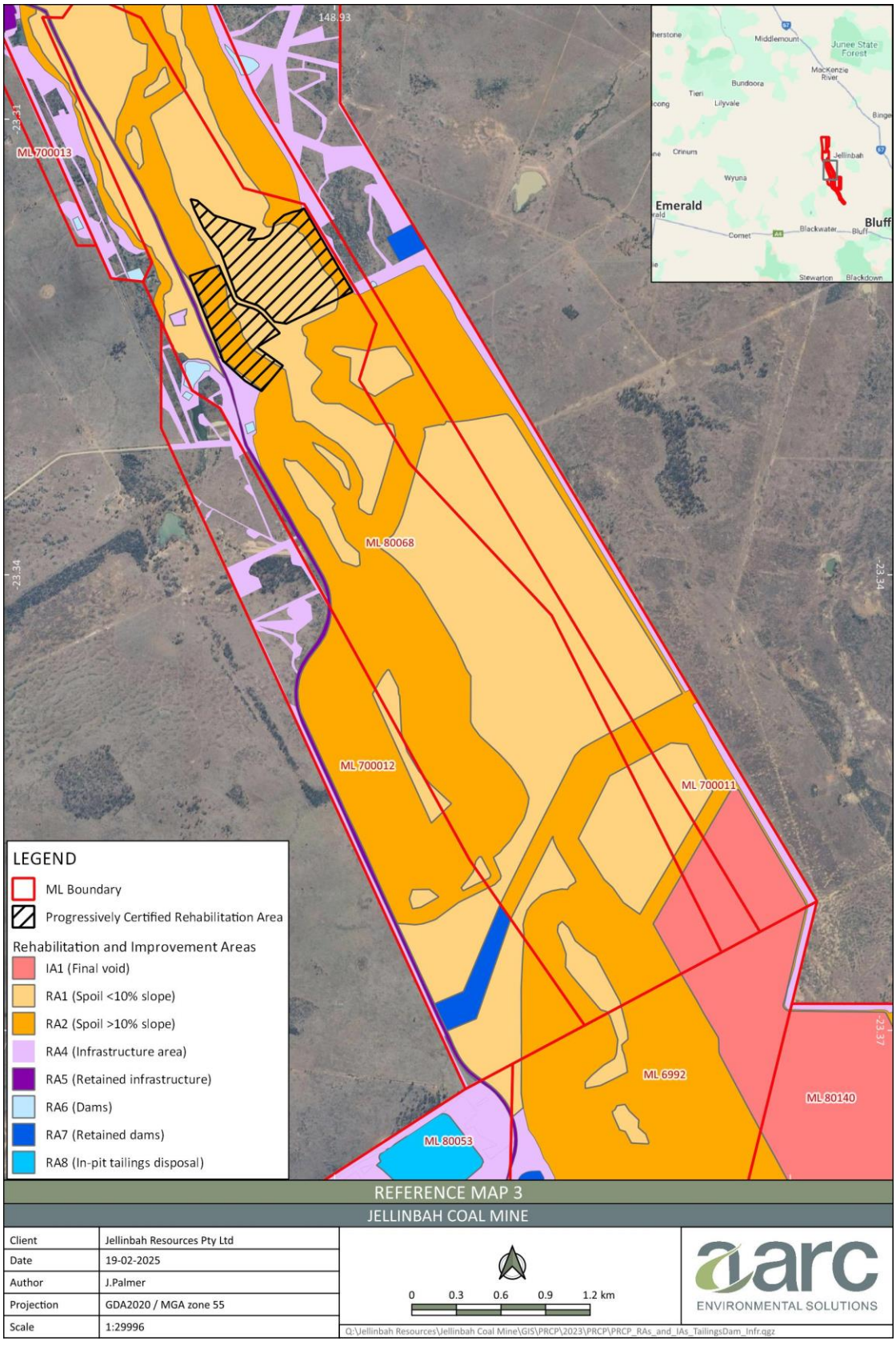


Figure 6 – Reference Map (Jellinbah Central South)

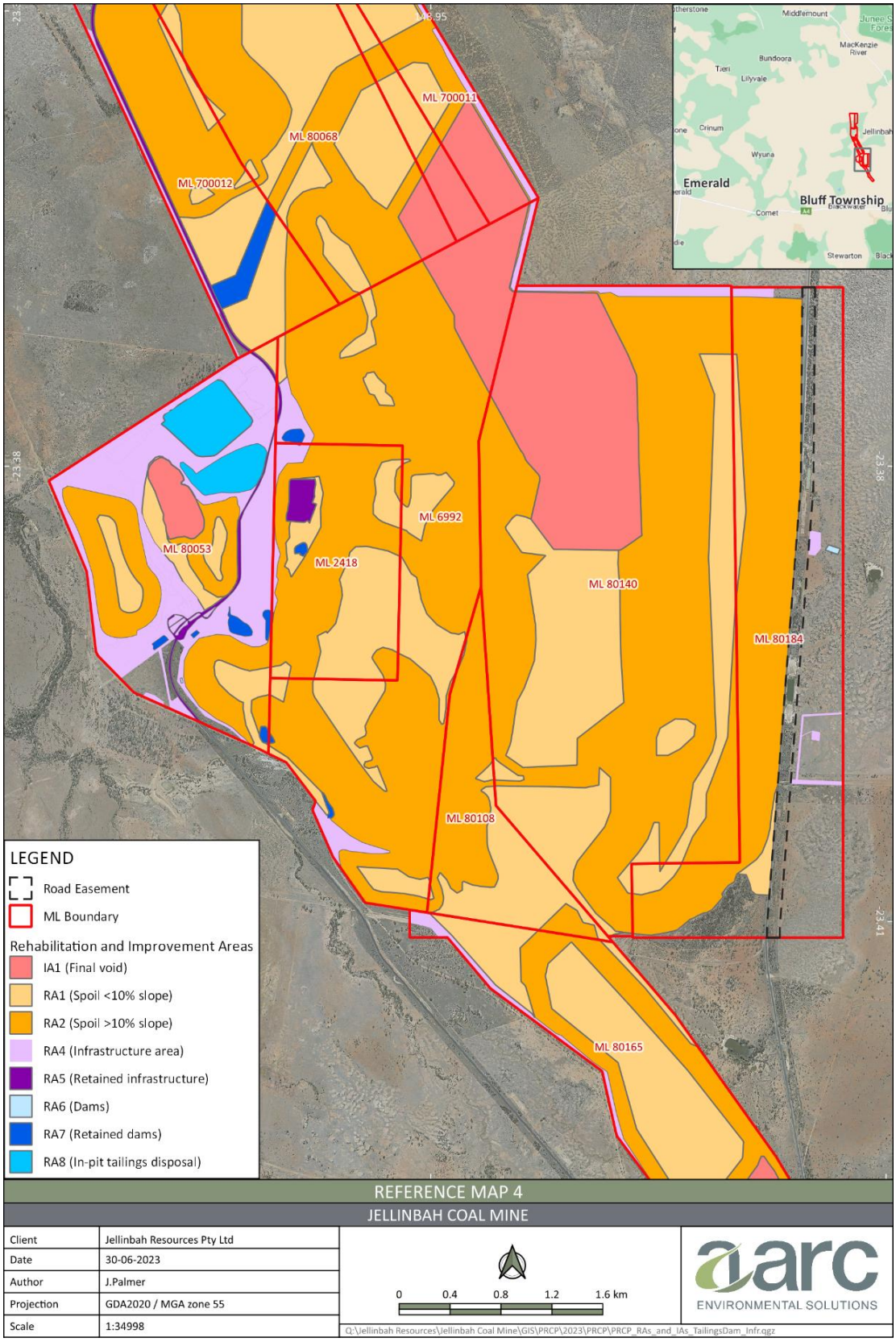
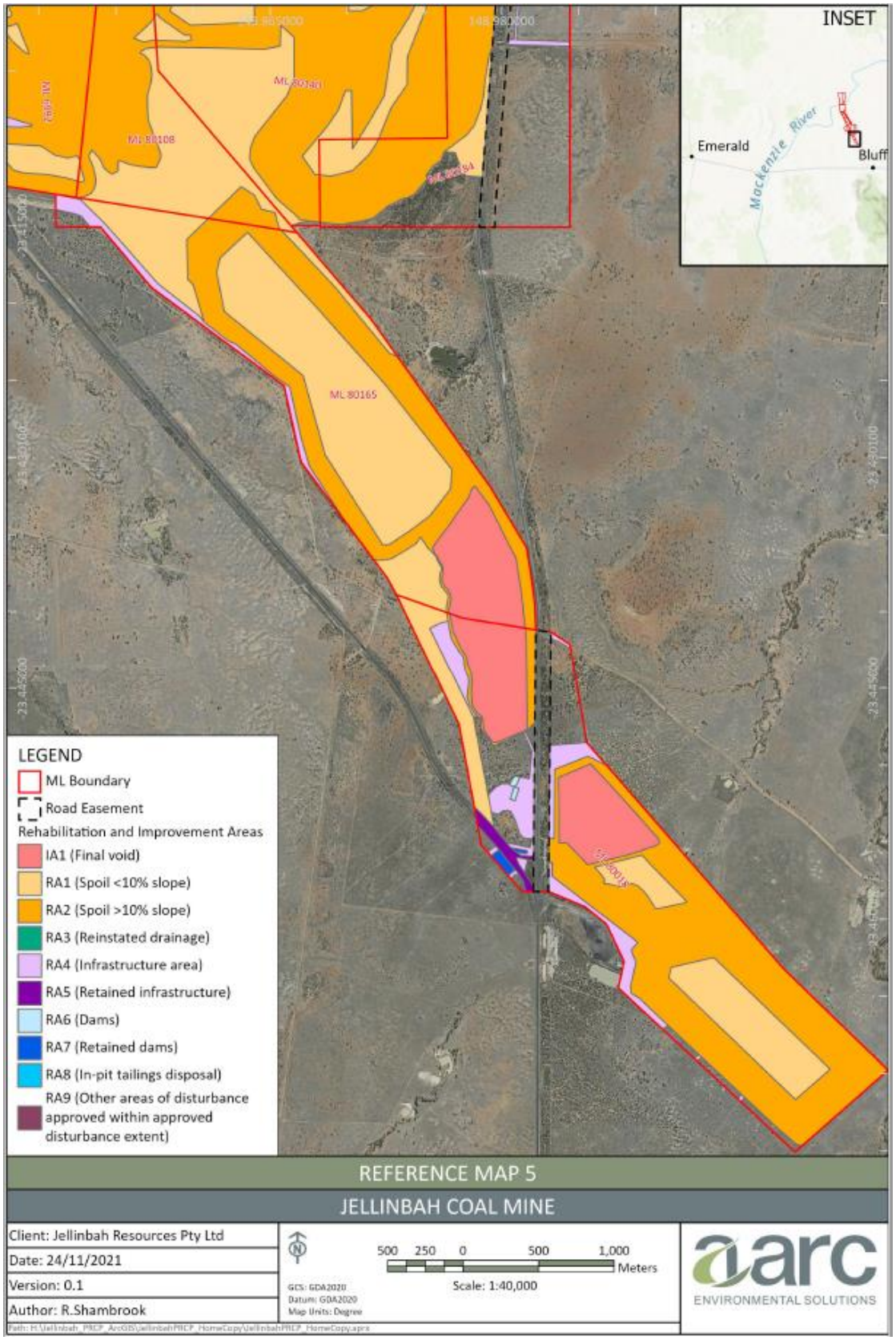


Figure 7 – Reference Map (Jellinbah South)



Section C – Post mining land uses

(RA1) Rehabilitation area 1

Post-mining land uses (PMLU)											
Rehabilitation area	RA1										
Relevant activities	Spoil (<10%)										
Total rehabilitation area size (ha)	2,037										
Commencement of first milestone: RM4	10/12/2018										
PMLU	Low intensity grazing										
Date area is available	10/12/2018	10/12/2027	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area available (ha)	50.1	279.6	462.4	494.4	789.4	1,028	1,618.5	2,037	2,037	2,037	2,037
Milestone completed by	10/12/2024	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2075	10/12/2080
Milestone Reference		**Cumulative area achieved (ha)**									
RM4	50.1	279.6	462.4	494.4	789.4	1,028	1,618.5	2,037			
RM9	50.1	279.6	462.4	494.4	789.4	1,028	1,363.7	2,037			
RM10	50.1	279.6	462.4	494.4	789.4	1,028	1,363.7	2,037			
RM12	50.1	146.9	279.6	462.4	494.4	789.4	1,028	1,363.7	2,037		
RM14	50.1	50.1	146.9	279.6	462.4	494.4	789.4	1,028	1,618.5	2,037	
RM19											2,037

(RA2) Rehabilitation area 2

Post-mining land uses (PMLU)											
Rehabilitation area	RA2										
Relevant activities	Spoil (>10% slope)										
Total rehabilitation area size (ha)	3,164.1										
Commencement of first milestone: RM4	10/12/2018										
PMLU	Marginal grazing										
Date area is available	10/12/2018	10/12/2027	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area available (ha)	24.9	582.4	824.5	962.9	1,353.6	1,606.6	2,488.9	3,164.1	3,164.1	3,164.1	3,164.1
Milestone completed by	10/12/2024	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2075	10/12/2080
Milestone Reference	**Cumulative area achieved (ha)**										
RM4	24.9	582.4	824.5	962.9	1,353.6	1,606.6	2,441.2	3,164.1			
RM9	24.9	582.4	824.5	962.9	1,353.6	1,606.6	1,818.1	3,164.1			
RM10	24.9	582.4	824.5	962.9	1,353.6	1,606.6	1,818.1	3,164.1			
RM12	24.9	196.8	582.4	824.5	962.9	1,353.6	1,606.6	1,818.1	3,164.1		
RM14	24.9	24.9	196.8	582.4	824.5	962.9	1,353.6	1,606.6	2,441.2	3,164.1	
RM19											3,164.1

(RA3) Rehabilitation area 3

Post-mining land uses (PMLU)										
Rehabilitation area	RA3									
Relevant activities	Reinstated drainage (including Mackenzie North Anabranch diversion and 3 to 5 Mile Lagoon reinstated drainage)									
Total rehabilitation area size (ha)	93.5									
Commencement of first milestone: RM5	10/12/2037									
PMLU	Native ecosystem									
Date area is available	10/12/2037	10/12/2042	10/12/2047	10/12/2057						
Cumulative area available (ha)	80	80	80	93.5	93.5	93.5	93.5			
Milestone completed by	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2080			
Milestone Reference	**Cumulative area achieved (ha)**									
RM5	80			93.5						
RM9	80				93.5					
RM11	80				93.5					
RM13		80				93.5				
RM15			80			93.5				
RM19							93.5			

(RA4) Rehabilitation area 4

Post-mining land uses (PMLU)										
Rehabilitation area	RA4									
Relevant activities	Infrastructure area									
Total rehabilitation area size (ha)	732									
Commencement of first milestone: RM1	10/12/2027									
PMLU	Low intensity grazing									
Date area is available	10/12/2027	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area available (ha)	107.2	107.2	107.2	139.1	147.4	546.8	732	732	732	732
Milestone completed by	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2075	10/12/2080
Milestone Reference	**Cumulative area achieved (ha)**									
RM1	107.2			139.1	147.4	546.8	732			
RM18	107.2			139.1	147.4	546.8	732			
RM6	107.2			139.1	147.4	177.2	732			
RM9	107.2			139.1	147.4	177.2	732			
RM10	107.2			139.1	147.4	177.2	732			
RM12	25	107.2			139.1	147.4	177.2	732		
RM14		25	107.2			139.1	147.4	177.2	732	
RM19										732

(RA5) Rehabilitation area 5

Post-mining land uses (PMLU)										
Rehabilitation area	RA5									
Relevant activities	Retained infrastructure									
Total rehabilitation area size (ha)	64.3									
Commencement of first milestone: RM17	10/12/2042									
PMLU	Retained infrastructure									
Date area is available	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062					
Cumulative area available (ha)	4.4	4.4	4.4	57	64.3	64.3				
Milestone completed by	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2080				
Milestone Reference	**Cumulative area achieved (ha)**									
RM18	4.4			57	64.3					
RM17	4.4			57	64.3					
RM19						64.3				

(RA6) Rehabilitation area 6

Post-mining land uses (PMLU)										
Rehabilitation area	RA6									
Relevant activities	Backfilled Dams									
Total rehabilitation area size (ha)	29									
Commencement of first milestone: RM7	10/12/2027									
PMLU	Low intensity grazing									
Date area is available	10/12/2027	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area available (ha)	2.8	2.8	2.8	3.4	3.7	28.9	29	29	29	29
Milestone completed by	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2075	10/12/2080
Milestone Reference	**Cumulative area achieved (ha)**									
RM7	2.8			3.4		28.9	29			
RM9	2.8			3.4			29			
RM10	2.8			3.4			29			
RM12		2.8			3.4		3.4	29		
RM14			2.8			3.4		28.9	29	
RM19										29

(RA7) Rehabilitation area 7

Post-mining land uses (PMLU)										
Rehabilitation area	RA7									
Relevant activities	Retained dams									
Total rehabilitation area size (ha)	60.5									
Commencement of first milestone: RM16	10/12/2027									
PMLU	Water containment for stock watering									
Date area is available	10/12/2027	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area available (ha)	4.9	6	6	7.4	7.4	39	60.5	60.5		
Milestone completed by	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2080		
Milestone Reference	**Cumulative area achieved (ha)**									
RM16	4.9	6		7.4		39	60.5			
RM19								60.5		

(RA8) Rehabilitation area 8

Post-mining land uses (PMLU)										
Rehabilitation area	RA8									
Relevant activities	In-pit tailings disposal									
Total rehabilitation area size (ha)	45.8									
Commencement of first milestone: RM2	10/12/2057									
PMLU	Low intensity grazing									
Date area is available	10/12/2057	10/12/2062								
Cumulative area available (ha)	18.1	45.8	45.8	45.8						
Milestone completed by	10/12/2062	10/12/2067	10/12/2075	10/12/2080						
Milestone Reference	**Cumulative area achieved (ha)**									
RM2	18.1	27.7								
RM3		18.1	27.7							
RM8		18.1	27.7							
RM10		18.1	27.7							
RM12			18.1	45.8						
RM14			18.1	45.8						
RM19				45.8						

(RA9) Rehabilitation area 9

Post-mining land uses (PMLU)										
Rehabilitation area	RA9									
Relevant activities	Other areas of disturbance approved within approved disturbance extent*									
Total rehabilitation area size (ha)	137.9									
Commencement of first milestone: RM9	10/12/2037									
PMLU	Low intensity grazing									
Date area is available	10/12/2037	10/12/2042	10/12/2047	10/12/2052						
Cumulative area available (ha)	40.8	40.8	40.8	137.9	137.9	137.9	137.9			
Milestone completed by	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067	10/12/2080			
Milestone Reference	**Cumulative area achieved (ha)**									
RM9	40.8			137.9						
RM10	40.8				137.9					
RM12		40.8			137.9					
RM14			40.8		40.8	137.9				
RM19							137.9			

**What is referred to as 'other areas of disturbance approved within approved disturbance extent' implies areas that are indirectly disturbed as a consequence of construction or rehabilitation works that are to be undertaken in close proximity. This includes a strip of area east of the Mackenzie River Anabranch that will be disturbed while completing the anabranch works, an area in Jellinbah Plains inside the flood levee that will be disturbed by machinery while doing the levee, spoil areas and reinstated drainage (including the Mackenzie North Anabranch diversion and 3 to 5 Mile Lagoon reinstated drainage) that it is being surrounded by. For PRCP purposes, these areas will have vegetation cleared and potentially have topsoil stripped.*

Rehabilitation area milestones

Milestone reference	Rehabilitation milestone	Milestone criteria
RM1	Infrastructure decommissioning and removal	(a) With the exception of any infrastructure to remain as part of the post-mining land use (PMLU) or where infrastructure is agreed to be retained by the landholder as evidenced by a signed landholder agreement, the following are complete: (i) All services disconnected and removed; (ii) All concrete bitumen and gravel roads removed; (iii) All operational pipelines drained and removed; (iv) All fencing that is not part of PMLU requirements removed; (v) All buildings demolished and/or removed off-site; (vi) All machinery and equipment removed; (vii) All surface water drainage infrastructure removed; and (viii) All rubbish removed.
RM2	In-pit tailings dewatering	(a) Assessed as geotechnically stable for base layer placement by an appropriately qualified person (AQP)[2].
RM3	Base layer placement for in-pit tailings	(a) All bulk earthworks associated with placement criteria of 1.7m of suitable cover material; (b) Cover material meets design specifications: (i) P90 <250mm; (ii) P50 <2mm; (iii) P25 <0.025mm; (iv) Emerson aggregate class: 3-6; (v) pH: 6-9; (vi) EC (µS/m) <3,500; and (vii) ESP (%) <6; and (c) Groundwater monitoring bores have been installed in locations that will detect seepage from in-pit tailings.

RM4	Landform development of spoil (reshaping and reprofiling)	(a) All bulk earthworks completed. (b) All flood protection landforms meet design specifications to provide final void flood immunity for events up to 0.1% AEP at a minimum, including: (i) Embankment crest level height as per 0.1% AEP; (ii) Minimum toe-to-toe width of 85m; and (iii) Selective placement of non-erosive materials and/or rock mulch protection to ensure landform stability. (c) Selective placement of non-erosive materials and/or rock mulch protection to ensure landform stability. (d) Batter slopes meet design specifications; (e) RA1: 100% slopes are <10% grade. (f) RA2: slopes <17% grade, when measured for individual slope sections from the crest of the slope section to the toe of the slope section[3], excluding 94.5ha of existing rehabilitation >17% grade as depicted in Attachment 7 Jellinbah Coal Mine existing rehabilitation with slopes 17-30%. (g) Slopes of 20% have a maximum horizontal slope length[4] of 50m. (h) Slopes of 15% have a maximum horizontal slope length[4] of 133m. (i) Slopes of 10% have a maximum horizontal slope length[4] of 220m. (j) Slopes of 5% have a maximum horizontal slope length[4] of 520m. (k) Slopes of 3% have a maximum horizontal slope length[4] of 900m. (l) Bench features to dissipate surface water flow. (m) AQP[2] certifies that as constructed landform achieves design criteria for geotechnical stability with a Factor of Safety (FOS) ≥1.5. (n) No reactive material is present on the land surface.
RM5	Landform developed of reinstated drainage (diversions)	(a) The Mackenzie River Anabranch diversion constructed in accordance with EA - Schedule H Conditions[5] and associated design plans. (b) All bulk earthworks completed to achieve landform design ([5,6,7]), including embankments with 1V:6H slope and rock-lining protection. (c) Landform is assessed as being geotechnical stable by an AQP[2].

RM6	Landform development of infrastructure areas	(a) All bulk earthworks completed to reshape landform to final design. (b) Certification provided by an AQP[2] confirms that drainage features are constructed to design specifications. (c) AQP[2] certifies that as constructed landform achieves design criteria for geotechnical stability with a FOS ≥ 1.5.
RM7	Landform development of backfilled dams	(a) All bulk earthworks completed to reshape landform to final design. (b) Certification provided by an AQP[2] confirms that drainage features are constructed to design specifications. (c) AQP[2] certifies as constructed landform achieves design criteria for geotechnical stability with a FOS ≥1.5.
RM8	Topsoil placement, sediment control and landform development for in-pit tailings	(a) Soil health and suitability is assessed and documented by an AQP[2]. (b) Where required, ameliorants such as gypsum are added to improve soil quality characteristics at the rates recommended by an AQP[2]; (c) All bulk earthworks associated with placement of 0.6m of topsoil over the cover material completed; (d) Topsoil meets design specifications; (i) P90 <50mm; (ii) P75 <2mm; (iii) P25 <0.025mm; (iv) Emerson aggregate class: 3; (v) pH: 6-8.5; (vi) EC_{SAT} (dS/m) $\underline{\leq 4}$ and (vii) ESP (%) <6; (viii) Organic matter content >0.5% in the top 50cm; and (ix) Rock cover: P90: 250-350mm at 25% to 35% cover (x) Rock armour on external slopes: P90: 250-350mm at >75% cover (e) An AQP[2] certifies that the cover has been constructed according to the design specifications.

		(f) Installation of monitoring equipment to verify design criteria by an AQP[2]. (g) Assessed as geotechnical stable by an AQP[2].
RM9	Surface preparation (topdressing, contour ripping, soil amelioration)	(a) Soil health and suitability is assessed and documented by an AQP[2]. (b) Where required, ameliorants such as gypsum are added to improve soil quality characteristics at the rates recommended by an AQP[2]; (c) Presence of topsoil with a minimum thickness of 200mm across the rehabilitated area following landform development; (d) Ripping that penetrates at least 600mm into soil profile/subsoil profile has been completed along the contour of slopes; and (e) Topsoil to meet the following suitability targets: (i) pH in the range of 6-8.5; (ii) EC_{SAT} (dS/m) ≤4; and (iii) ESP (%) <6.
RM10	Revegetation for low intensity grazing and marginal grazing	(a) Complete seeding of all topsoil surfaces using a selection of the recommended species mix for each soil characteristic type in Attachment 1 – Recommended species selected for revegetation (RM10), at a minimum total sowing rate of 15kg/ha; (b) The seed mix sown should comprise a minimum of 25% (by weight) native species, and include a minimum of 3 x 3P native species from Attachment 1 – Recommended species selected for revegetation with minimum sowing rates, excluding Seca and Indian Couch. (c) Seeding of target key species completed at a sowing rate as specified in Attachment 1 – Recommended species selected for revegetation (RM10); and (d) Application of hay mulch at time of seeding, at a rate of 8t/ha
RM11	Revegetation for native ecosystem	(a) Complete seeding of all topsoil surfaces using a selection of the recommended species mix in Attachment 2 – Seed Mix Species List; (b) Revegetation completed for cover crops at a minimum sowing rate of 5kg/ha; (c) Revegetation completed for ground cover seed mix at a minimum total rate of 15kg/ha, and a minimum of 6 native species;

		(d) Revegetation completed for tree/shrub mix at a minimum total rate of 4kg/ha, and a minimum of 6 native species of trees/shrubs; (e) Application of hay mulch at time of seeding, at a rate of 8t/ha; and (f) Stock exclusion fencing has been established to prevent stock from grazing newly seeded areas.
RM12	Achievement of target revegetation criteria – low intensity grazing and marginal grazing	(a) RA1, RA4, RA6, RA8, RA9: Rehabilitation polygons have a median fractional vegetation cover greater than the first quartile of reference polygons[8] for at least 85% of all sample times, as determined using the satellite-derived fractional vegetation cover method[8, 9, 10]; (b) RA2: Total percentage of vegetative groundcover to be >80%; (c) No evidence of erosion classified as 'moderate' or 'severe' as defined by Attachment 4 - Erosion classification framework; and (d) Weed[11] presence is a maximum of 10% of total vegetative groundcover confirmed by an AQP[2] in annual monitoring. Weed management recommendations to be provided in annual reports.
RM13	Achievement of target revegetation criteria – native ecosystem	(a) A BioCondition assessment is completed by an AQP[2] using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'. (b) The BioCondition assessment completed under RM15(a) complies with the PRCP Benchmark for the PMLU, as per Attachment 3 – PRCP Benchmarks for Rehabilitation Areas. (c) ≥80% established and persistent native groundcover species on embankments (d) No evidence of erosion classified as 'moderate' or 'severe' as defined by Attachment 4 - Erosion classification framework; and (e) Weed[11] presence is a maximum of 10% of total vegetative groundcover confirmed by an AQP[2] in annual monitoring. Weed management recommendations to be provided in annual reports.
RM14	Achievement of PMLU to stable condition – low intensity grazing and marginal grazing	(a) Land suitability assessment by an AQP[2] certifies that land has achieved a post-mine land suitability[12] class of: (i) 3 or better for low intensity grazing; and (ii) 4 or better for marginal grazing;

		(b) Without limiting subparagraph (a) above, RA1, RA4, RA6, RA8, RA9: Total percentage of vegetative groundcover over a 3-year average is: (i) for a gradient slope of 0% to 5%, vegetative groundcover of ≥55%; and (ii) for a gradient slope over 5%, vegetative groundcover of ≥70%; (c) RA2: Total percentage of vegetative groundcover to be >80%; (d) A species presence that is consistent with[13] those used in the rehabilitation seed mix in Attachment 1 – Recommended species selected for revegetation (RM10), including 3P grasses as recommended by Grazing Land Management information provided by NQ Dry Tropics[14] or the Fitzroy Basin Association[15], and are suitable to achieve the approved PMLU; (e) RA8: Geotechnical assessment of in-pit tailings settlement and consolidation by an AQP[2] indicating landform stability; (f) No evidence of erosion classified as 'moderate' or 'severe' as defined by Attachment 4 - Erosion classification framework; (g) RA8: There is no evidence of water ponding, salt scalding or bare patches. (h) Assessed as geotechnically stable by an AQP[2]; (i) Weed[11] presence is a maximum of 10% of total vegetative groundcover confirmed by an AQP[2] in annual monitoring. Weed management recommendations to be provided in annual reports.
RM15	Achievement of PMLU to stable condition - native ecosystem	(a) A BioCondition assessment is completed by an AQP[2] using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'; (b) The BioCondition assessment completed under RM15(a) complies with the PRCP Benchmark for the PMLU, as per Attachment 2 – PRCP Benchmarks for Rehabilitation Areas; (c) ≥80% established and persistent native groundcover species on embankments; (d) Evidence of flora recruitment from rehabilitation monitoring data; (e) Fauna survey observation provides evidence of native fauna utilisation i.e., fauna spotting, scats, and tracks recorded;

		(f) No evidence of erosion classified as 'moderate' or 'severe' as defined by Attachment 4 - Erosion classification framework; (g) Installation of fencing to exclude cattle use and prevent erosion; (h) Monitoring reports prepared by an AQP[2] indicate design requirements have been met for the Mackenzie River Anabranch diversion in accordance with EA EPML00516813 - Schedule H Conditions and associated design plans; (i) An AQP[2] has certified that diversions being retained in the landform continue to achieve the following: (i) Incorporate natural features (including geomorphic and vegetation) present at the location of the diversion; (ii) Maintain the pre-existing hydrologic characteristics of surface water and groundwater systems for the area in which the watercourse diversion is located; (iii) Maintain the hydraulic characteristics of the permanent watercourse diversion that are equivalent to other local watercourses and are suitable for the area in which the diversion is located without using artificial structures that require on-going maintenance; (iv) Maintain sediment transport and water quality regimes that allow the diversion to be self-sustaining, while minimising any impacts to upstream and downstream water quality, geomorphology, or vegetation; and (v) Maintain equilibrium and functionality in all substrate conditions at the location of the diversion; (j) Geotechnical assessment by an AQP[2] confirms that long-term geotechnical stability has been achieved for each relevant landform; (k) Report prepared by an AQP[2] confirms the target native ecosystem PMLU has been achieved and is self-sustaining; and (l) Weed[11] presence is a maximum of 10% of total vegetative groundcover confirmed by an AQP[2] in annual monitoring. Weed management recommendations to be provided in annual reports.
RM16	Achievement of PMLU to stable condition – retained dams	(a) AQP[2] certifies that all contaminated sediment has been removed from all dams that are not backfilled; (b) Dams to remain for landholder use are safe for stock access;

		(c) All retained water storages achieve geotechnical and erosional safety and stability as assessed and approved by an AQP[2]; (d) No evidence of erosion on the retained dam banks classified as 'moderate' or 'severe' as defined by Attachment 4 - Erosion classification framework; and (e) Retained water storage water quality for quality characteristics to be below the trigger values for livestock drinking water defined in Environmental Protection (Water) Policy 2009 Mackenzie River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Mackenzie River Sub-basin, September 2011[16], or the most recent version.
RM17	Achievement of PMLU to stable condition – retained infrastructure	(a) Transfer of ownership agreements in place for all infrastructure to be retained; (b) All retained structures and landforms to be assessed and approved as safe and stable by an AQP[2]; and (c) Final landform survey confirms no built structures remain other than those that form part of a landholder agreement.
RM18	Identification and remediation of contaminated land	(a) Preliminary site investigation completed by a SQP[17]. (b) Detailed site investigation report, as required under *the Environmental Protection Act 1994*, completed. (c) Contaminated materials (e.g. PCBs, dioxins, mercury, hydrocarbon contaminated soils) removed and appropriately disposed or remediated. (d) Validation testing confirms that contaminated soils have been removed or remediated. (e) A site suitability statement from a SQP[17] confirms the uses or activities for which the land is suitable, align to the approved PMLUs for the site.
RM19	Surface water and groundwater demonstrate non-polluting landform	(a) Surface water quality results monitored monthly during flow at, but not limited to, downstream locations specified in Table C8: Receiving Water Upstream Background Sites and Down Stream Monitoring Points of the EA EPML00516813, or alternative representative locations, must comply with the following parameters for a minimum of 5 consecutive years: (i) Field EC (µS/cm) <310 (ii) pH >6.5 and <8.5

		(iii) Total Suspended Solids [TSS] (mg/L) <110 (iv) Sulfate [SO_4^{2-}] (mg/L) <10 (v) Fluoride (mg/L) <2; (b) Surface water quality monitored monthly during flow for quality characteristics listed in Table C3 of the EA EPML00516813 must comply with the Australian and New Zealand Guidelines (ANZG 2018) for aquatic ecosystem protection for slightly to moderately disturbed ecosystems for a minimum of 5 consecutive years; (c) If the surface water quality exceeds criteria (a) and (b), the applicable upstream site must be compared to the downstream site result; and quality measured at a downstream site must be equal to or less than the quality measured at the applicable upstream site; (d) Groundwater level is monitored quarterly and all results comply with Level Trigger Thresholds outlined in Attachment 6 – Groundwater standing water level monitoring locations, frequency and triggers for 10 consecutive years; (e) For a minimum of 5 consecutive years, groundwater quality must be monitored quarterly at, but not limited to, compliance bores specified in Table I1 of the EA EPML00516813, for all quality characteristics listed in Table I2 and I3 of the EA EPML00516813; and (f) Groundwater quality results must not exceed the limits in Attachment 5 – Groundwater Quality Limits, for 3 consecutive results.

Notes –

*[1] **Stable condition** as defined in section 111A of the* Environmental protection Act.

*[2] **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.*

[3] Slope angle (%) is measured by dividing the elevation change from the toe of the slope section to the crest of the of the slope section by the horizontal distance between the two points, and multiplying the result by 100.

[4] The continuous slope length is the section of generally uniform slope from the crest of slope section to the toe of slope section (e.g. between bench, contour banks etc.).

[5] Environmental Authority (EA) EPML00516813 – Jellinbah Coal Mine.

[6] WSP 2021, Jellinbah Resources Mackenzie North – Mackenzie River Anabranch Diversion Functional Design Report (10 April 2021, Revision D).

[7] Section 3.5.7.5 Transitional Progressive Rehabilitation and Closure Plan' for Jellinbah Coal Mine (January 2023, V3).

[8] *Reference polygons for fractional vegetation cover are required to be of Land Class Suitability 3 or 4, or better. A minimum of two additional reference sites will be nominated by 2026, and upon assessment must represent a land suitability class of either 3 or 4, or better.*

[9] *Spectral unmixing algorithm employed in seasonal fractional cover – Landsat, JRSRP algorithm, Australia coverage v1.0 (Beutel et al. 2019).*

[10] *Fractional Cover: Satellite Assessment, AARC 2023, or equivalent, methodology to be used for rehabilitation monitoring.*

[11] *Weeds are defined by the Biosecurity Act 2014.*

[12] *Department of Science, Information Technology and Innovation and Department of Natural Resources and Mines (2015) Guidelines for Agricultural Land Evaluation in Queensland (Second Edition), State of Queensland or later version. (https://www.publications.qld.gov.au/dataset/qld-agricultural-land-evaluation-guidelines/resource/d6591386-08e2-453f-a6fa-dff2a756215f).*

[13] *A species presence consistent with those used in the rehabilitation seed mix (Attachment 1 - Recommended species selected for revegetation (RM10)), does not require all species seeded to be present. However, rehabilitation monitoring results should demonstrate species presence of those which can be expected at the time of monitoring (i.e., wet or dry season) consistent with the rehabilitation seed mix.*

[14] *https://nrm.nqdrytropics.com.au/land/3p-grasses/.*

[15] *https://fba.org.au/services/graziers/.*

[16] *https://environment.des.qld.gov.au/__data/assets/pdf_file/0031/89068/fitzroy_mackenzie_river_wqo_290911.pdf.*

[17] ***Suitability qualified person (SQP)** retains its definition under section 564 of the EP Act.*

Section D – Non-use management areas

(IA1) Improvement area 1

Non-use management area (NUMA)										
Improvement area	IA1									
Relevant activities	Final void									
Total size (ha)	744									
Commencement of first milestone: MM1 & MM2	10/12/2027									
NUMA	Void									
Date area is available	10/12/2027	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057			
Cumulative area available (ha)	37	165	235	265	265	414	744	744		
Milestone completed by	10/12/2032	10/12/2037	10/12/2042	10/12/2047	10/12/2052	10/12/2057	10/12/2062	10/12/2067		
Milestone Reference	**Cumulative area achieved (ha)**									
MM1	37	37	165	235	265	414	744			
MM2	37	37	165	235	265	414	744			
MM3		37	37	235		265	414	744		

Improvement area milestones

Milestone reference	Management milestone	Milestone criteria
MM1	Achievement of final landform design	(a) Final void highwall with the following angles: (i) ≤70° for competent rock; and (ii) ≤45° for incompetent rock. (b) Final void low-wall dumps: (i) ≤21° average slope angle (ii) Floor preparation of voids by ripping and blasting to raise margins of safety as required (c) Voids are assessed to be geotechnically stable by an AQP[2]; (d) Predictive modelling undertaken by an AQP[2], confirming that the voids will remain as a groundwater sink and that there is no risk of contamination post mining. (e) For the Max Pit/Void: (i) Final reprocessing of existing tailings material to occur by **2037**, prior to applying the final landform design requirements for all final voids.
MM2	Achievement of surface and safety requirements	(a) Adequate bunding in place, confirmed to be geotechnically stable by an AQP[2]; (b) Fencing and safety bunds or fencing and flood protection landform constructed ≥1.5m in height, battered at 1:3 grade, and located 25m beyond the projected stable crest that achieves a FOS >1.5 of final highwall crests. (c) Bunding is confirmed to be capable of maintaining stability under a PMF scenario.; and (d) Perimeter fencing and signage erected to prevent access to fauna and humans.
MM3	Achievement of sufficient improvement	(a) Voids assessed to be geotechnically stable by a AQP[2], achieving: (i) A modelled FOS of ≥ 1.5 for the in-situ pit walls before maximum in-pit water level is reached; (ii) A modelled FOS ≥ 1.5 for the in-situ pit walls after maximum in-pit water level is reached; (iii) A FOS ≥1.5 spoil pit walls above the maximum in-pit water level; and (iv) An 11.5° angle for the spoil pit walls below the maximum predicted water level. (b) Certification from an AQP[2] that water level in each residual void will not cause environmental harm to the surrounding environment, and the voids act as groundwater sinks to the receiving groundwater environment:

		(i)	Mackenzie North and Plains Pit – water balance modelling confirms that long-term pit water levels will remain below the alluvium and paleochannels for the prevention of potential groundwater contamination.

Section E – Attachments

Attachment 1 – Recommended species selected for revegetation (RM10)

Common Name	Scientific Name	Minimum sowing rate (kg/ha)
Cover crop seed mix		
Japanese millet	Echinochloa esculenta	5
Rye grass	Lolium sp.	5
Clay to heavy clay soils		
Queensland blue grass	*Dichanthium sericeum*	3
Native millet	*Panicum decompositum*	3
Mitchell grasses	*Astrebla spp.*	3
Rhodes grass	*Chloris gayana cvv. Callide*	2
Rhodes grass	*Chloris gayana cvv. Katambora*	2
Bisset creeping blue grass	*Bothriochloa insculpta cvv. Bisset*	2
Bambatsi panic	*Panicum coloratum cvv. makarikariense*	2
Purple pigeon	*Setaria incrassata*	1
Burgundy bean	*Macroptilium bracteatum*	1
Shirohie millet	*Echinochloa esculenta*	2
Lighter textured soils		
Kangaroo grass	*Themeda triandra*	3
Native millet	*Panicum decompositum*	3
Rhodes grass	*Chloris gayana cvv. Callide*	2
Rhodes grass	*Chloris gayana cvv. Katambora*	2
Bisset creeping blue grass	*Bothriochloa insculpta cvv. Bisset*	2

Buffel grass	*Cenchrus ciliaris cvv. Gayndah*	3
Caribbean stylo	*Stylosanthes hamata cvv. Verano or Amiga*	1
Roundleaf cassia	*Chamaecrista rotundifolia*	1
Caatinga stylo	*Stylosanthes Seabrana cvv. caatinga*	1
Shirohie millet	*Echinochloa esculenta*	2

Attachment 2 – Seed Mix Species List

The following table includes a list of species which are permitted to be included in the seed mix to be applied to RA3.

Common Name	Scientific Name	Minimum sowing rate (kg/ha)
Cover crop seed mix		
Japanese millet	*Echinochloa esculenta*	5
Rye grass	*Lolium sp.*	5
Groundcover seed mix		
Queensland blue grass	*Dichanthium sericeum*	3
Mitchell grasses	*Astrebla spp.*	3
Forest Bluegrass	*Bothriochloa bladhii*	3
Kangaroo grass	*Themeda triandra*	3
Mat-rush	*Lomandra longifolia*	0.5
Common Rush	*Juncus usitatis*	0.25
Lagoon Saltbush	*Atriplex muelleri*	0.5
Ruby Saltbush	*Enchylaena tomentosa*	0.5
Tress/shrub seed mix		
Mountain coolabah	*Eucalyptus orgadophila*	0.5
Queensland Blue Gum	*Eucalyputs tereticornis*	0.5
Black Tea Tree	*Melaleuca bracteata*	0.5
River Red Gum	*Eucalyptus camaldulensis*	0.5
Lemon scented gum	*Corymbia citriodora*	0.5
Soap Tree	*Alphitonia excelsa*	1
Black Wattle	*Acacia leiocalyx*	1

River Oak	*Casuarina cunninghamiana*	0.5
Bancroft's Wattle	*Acacia bancroftiorum*	1
Weeping Bottlebrush	*Callistemon viminalis*	0.5
Coolabah	*Eucalyptus coolabah*	0.5

Attachment 3 – PRCP Benchmarks for Rehabilitation Areas

Relevant PMLU	Native ecosystem
BioCondition Assessable Attributes	**PRCP Benchmark**
Recruitment	Evidence of woody tree species recruitment (individuals with <5cm DBH), for the dominant species present at the time of monitoring.
Non-native plant cover (%)	<10%
Tree (native) species richness	1.5
Shrub (native) species richness	2.5
Grass (native) species richness	6
Forb/other (native) species richness	8
Tree canopy height (m)	≥5m
Tree canopy cover (%)	≥3%
Shrub canopy cover (%)	≥2%
Native perennial grass cover (%)	23%
Litter and other vegetation cover (%)	15%

Attachment 4 – 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	<15 rills and <0.3m deep	15-30 rills and <0.3m deep	>30 rills and/or any >0.3m deep.
Tunnel erosion	Absent	Absent	Present
Mass movement	Absent	Absent	Present

Attachment 5 – Groundwater Quality Limits:

Site Specific

Monitoring Bore	pH (pH units)	Electrical Conductivity (µS/cm)	Sulfate (mg/L)
JMR4WA	6.4 – 8.6	6,900	103
JMR4WP2	6.4 – 8.6	9,590	60
JMR24WP2	6.4 – 8.6	10,490	20
JMR25WA	6.4 – 8.6	2,200	16

All monitoring bores

Quality Characteristic	Limits	
	Alluvium Hydro-stratigraphic Unit	Permian Hydro-stratigraphic Unit
EC (µS/cm)	2500[B]	2000[B]
pH	7.5 – 8.5[B]	7.5 – 8.5[B]
Sulfate (SO_4^{2-}) (mg/L)	125[B]	67[B]
Fluoride (mg/L)	0.6[B]	0.4[B]
Nitrate (NO_3^-) (mg/L)	16.4[B]	4.93[1B]
Aluminium[A] (mg/L)	0.055[C]	0.055[C]
Arsenic[A] (mg/L)	0.013[C]	0.013[C]
Chromium[A] (mg/L)	0.001[C]	0.001[D]
Cobalt[A] (mg/L)	0.0014[C]	0.0014[C]
Copper[A] (mg/L)	0.030[B]	0.035
Manganese[A] (mg/L)	1.9[C]	1.9[C]
Molybdenum[A] (mg/L)	0.034[C]	0.034[C]
Nickel[A] (mg/L)	0.02[D]	0.02[D]
Selenium[A] (mg/L)	0.010[C]	0.010[C]
Zinc[A] (mg/L)	0.050[B]	0.135[B]

Notes:

[A] *Limit applies to dissolved fraction.*

[B] *Environmental Protection (Water) Policy 2009 Mackenzie River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Mackenzie River Sub-basin September 2011. 80th percentile for zone 13 (north of Blackwater, as per WQO1310) groundwater, shallow (Alluvium) and deep (Permian).*

[C] *ANZG 2018 Aquatic ecosystem protection for slightly to moderately disturbed ecosystems.*

[D] *Site specific value*

Attachment 6 – Groundwater standing water level monitoring locations, frequency and triggers:

Monitoring Bore	Hydrogeological Unit	Location (decimal degrees, GDA2020)		Surface RL (mAHD)	Screened Interval (mbgl)		Monitoring Frequency[a]	Baseline water level (mAHD)[b]	Level Trigger Threshold – End of mining drawdown[c] (m)
		Latitude	Longitude		From	To			
Interpretation Bores									
JP0911T	Alluvium	-23.264898	148.901783	124.86	22	28	Q	99.48	N/A
JP0912T	Alluvium	-23.262135	148.928424	122.56	36	42	Q	100.89	N/A
JMR26WA	Alluvium	-23.265381	148.921434	123.40	18.2	21.2	Q	Dry	N/A
Compliance Bores									
JMR4WP2	Permian-Pollux seam	-23.253030	148.915413	124.00	83.5	88	Q	103.20	18
JMR24WP2	Permian-Overburden	-23.208712	148.927998	120.50	72.8	78.8	Q	77.81	55
JMR4WA	Alluvium	-23.253039	148.915384	123.80	36	42	Q	103.25	10 to 20
JMR25WA	Alluvium	-23.249658	148.919381	122.50	17.9	20.9	Q	102.43	5 to 10
JMR22WP	Permian	-23.228966	148.926433	122.2	157	163	Q	101.24	90
JMR22WA	Alluvium	-23.229120	148.926396	122.2	14.5	17.5	Q	Dry	N/A
JN1119E	Permian	-23.225812	148.925928	121.38	140	146	Q	100.79	100
JMR24WA	Alluvium	-23.208712	148.927979	120.40	14.8	17.8	Q	Dry	N/A
JMR23WA	Alluvium	-23.242885	148.927600	122.30	17.2	20.2	Q	Dry	N/A

[a] Q-quarterly monitoring (every 3 months).
[b] Baseline water levels are underpinned by data gathered prior to July 2020 (as mining of coal in the Mackenzie North Pit commenced in August 2020).
[c] Trigger level thresholds sourced from *'Australasian Groundwater & Environmental Consultants Pty Ltd, report on Mackenzie North groundwater assessment, June 2013' (AGE 2013)*.

Attachment 7 Jellinbah Coal Mine existing rehabilitation with slopes 17-30%

Figure 1 Mackenzie North Slope Analysis

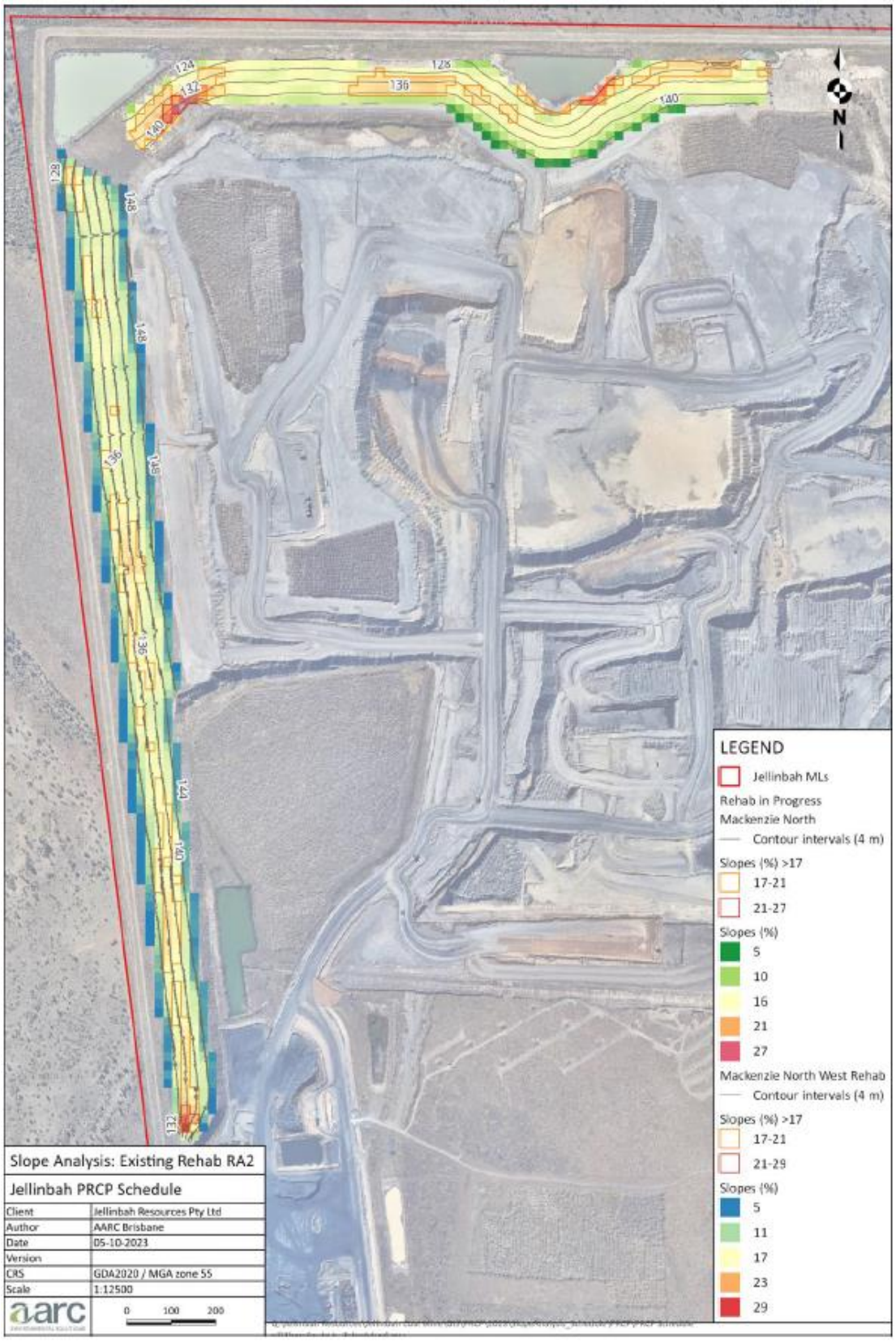


Figure 2 Mackenzie South / Plains North Slope Analysis

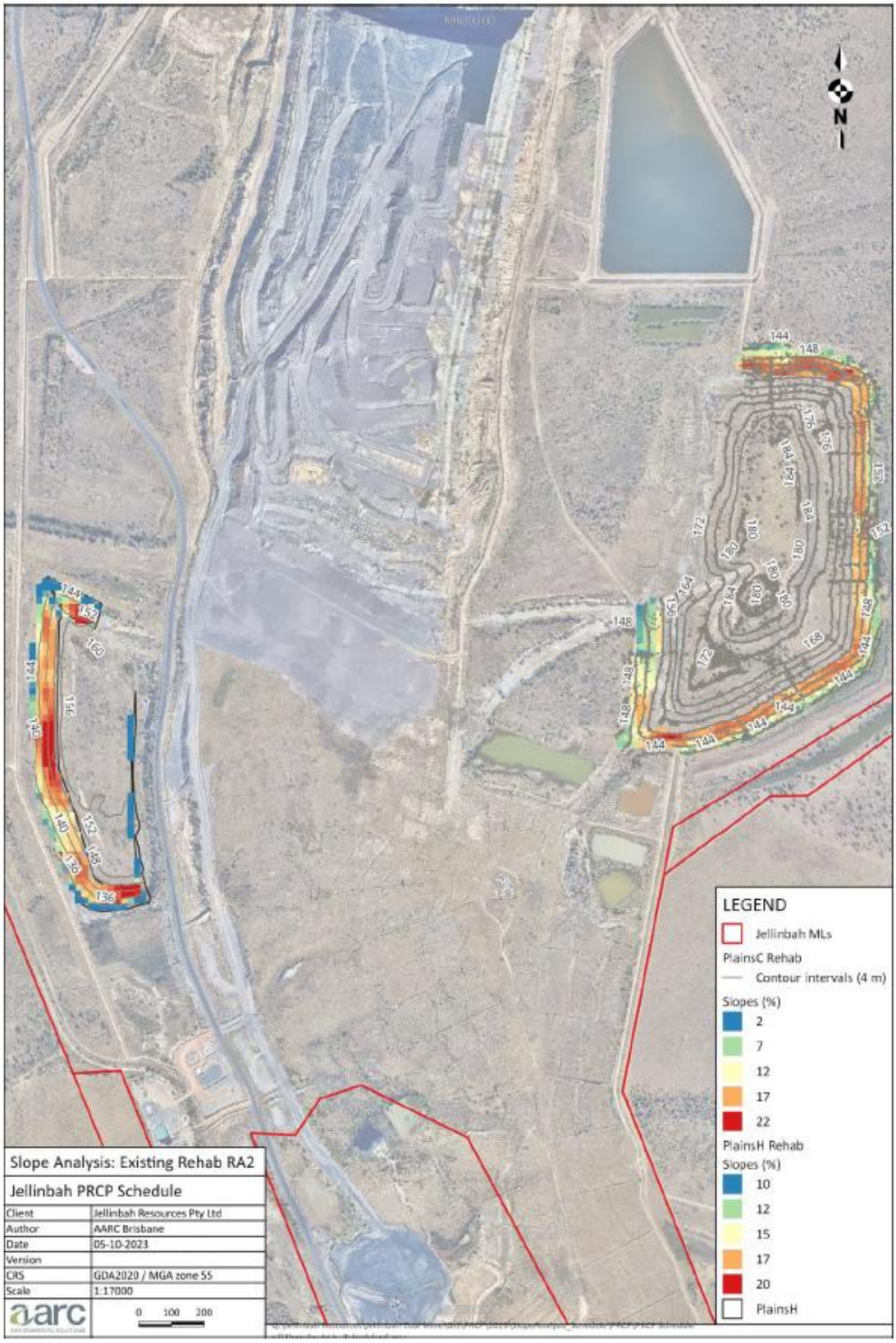


Figure 3 Plains G Slope Analysis

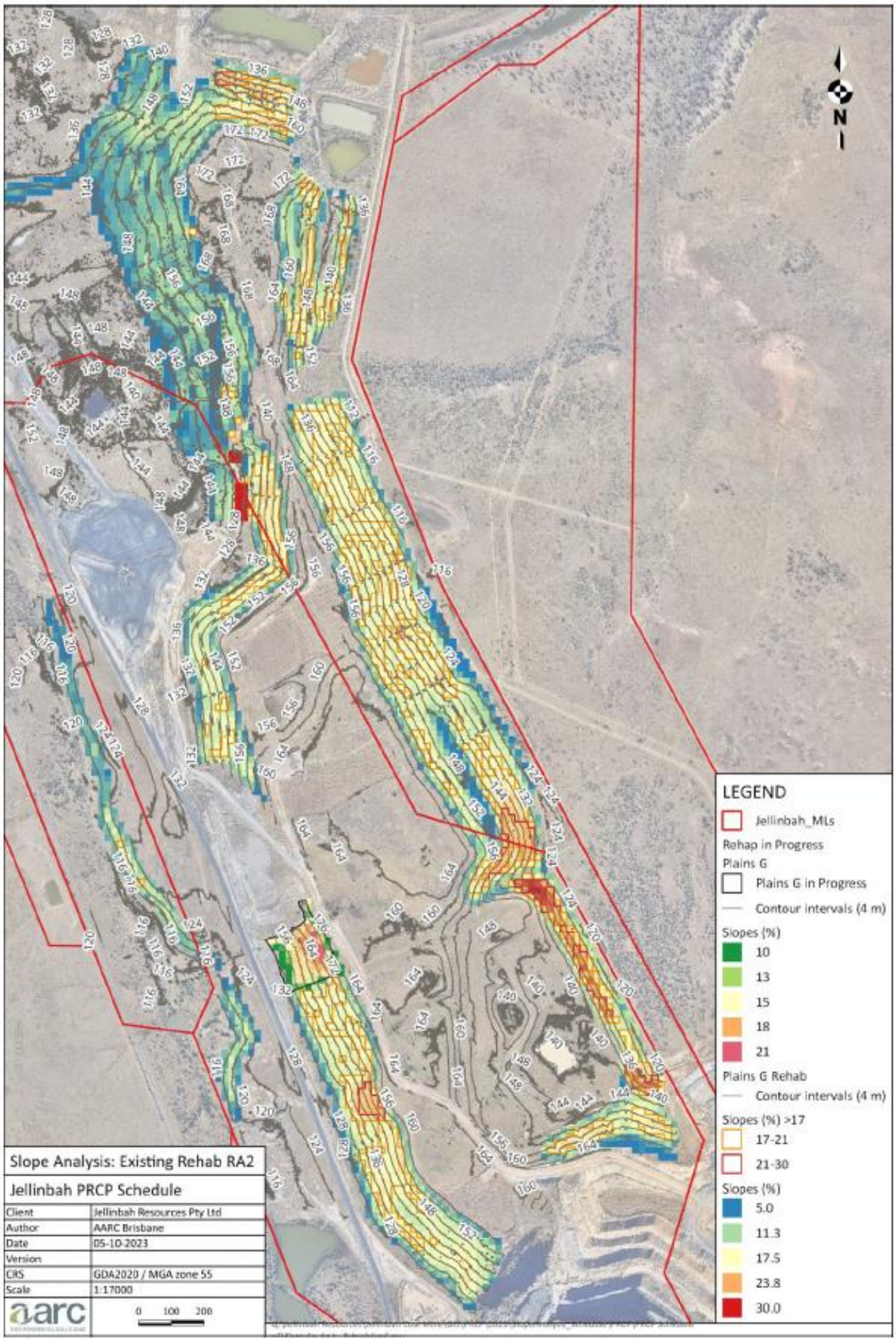


Figure 4 Central D Slope Analysis

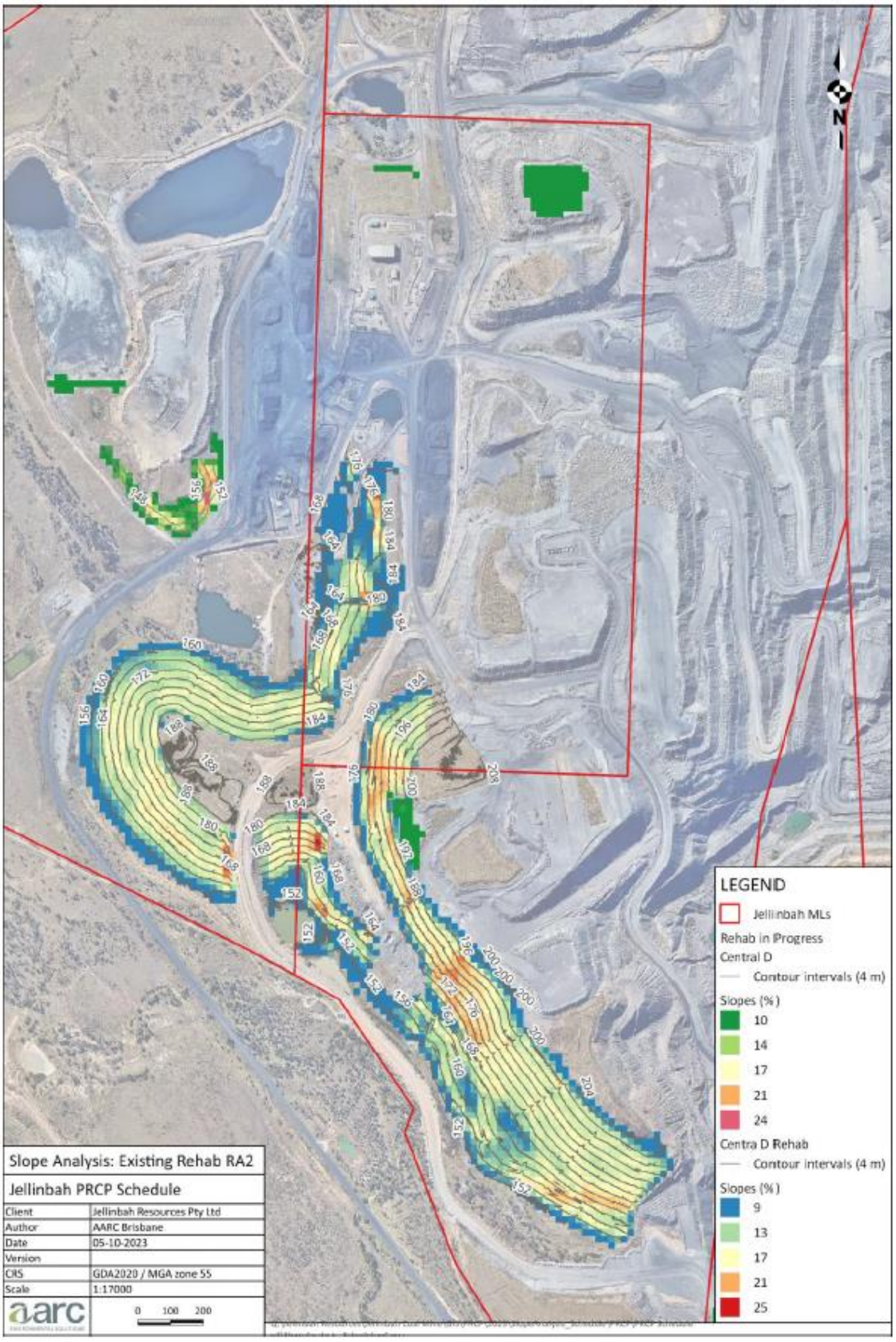
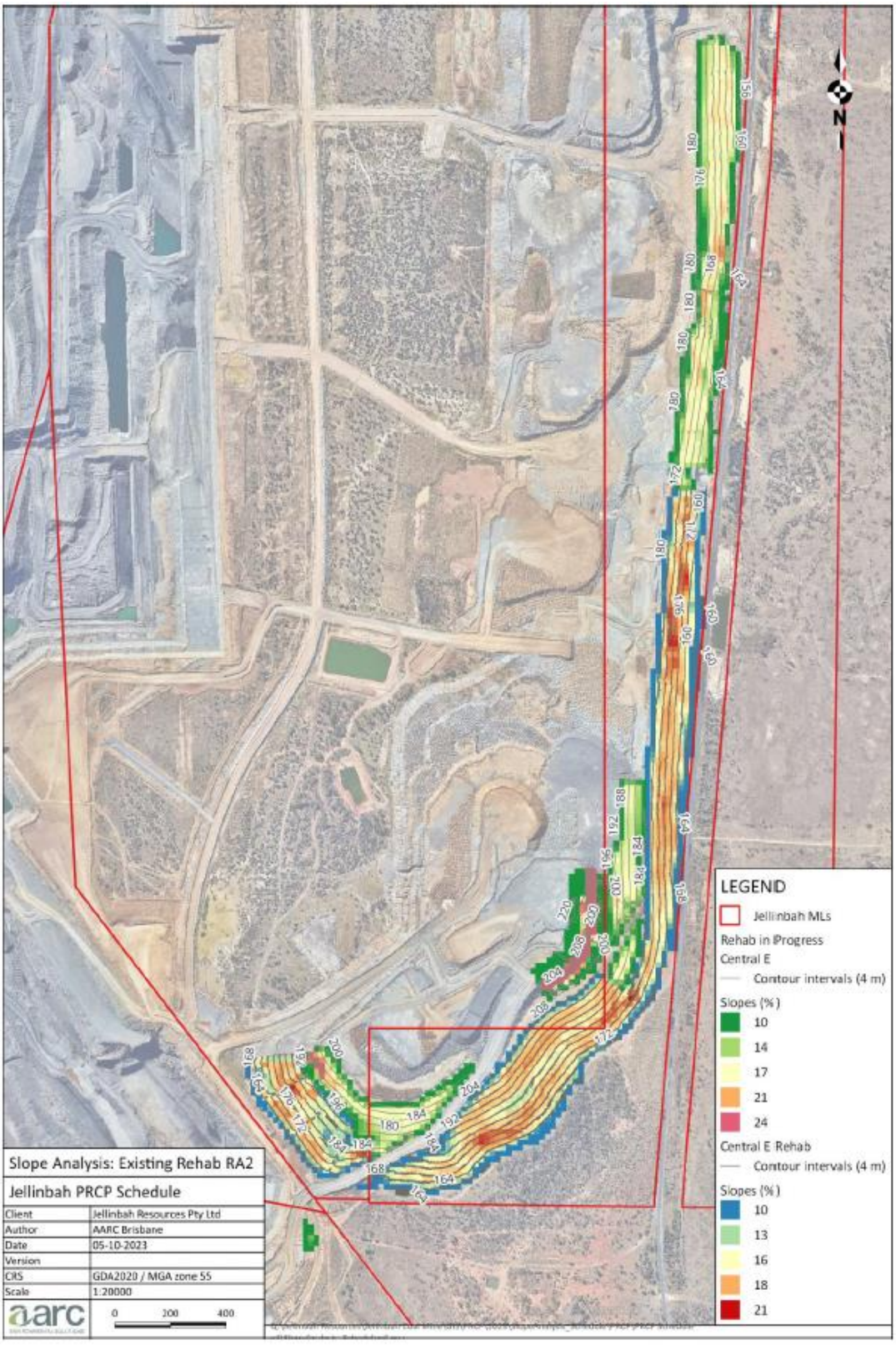


Figure 5 Central E Slope Analysis



END OF **PRCP** SCHEDULE