

FWP0001293

MAULES CREEK MINE COMPLEX FORWARD PROGRAM

Monday 1 January 2024 to Thursday 31 December 2026

Contents

Summary-1

Important-1

Three-year forecast – surface disturbance activities.....-1

 Project description.....-1

 Description of surface disturbance activities.....-1

Three-year rehabilitation forecast-1

 Rehabilitation planning schedule-1

 Rehabilitation research and trials8

 Rehabilitation maintenance and corrective actions-1

 Rehabilitation schedule-1

 Subsidence remediation for underground operations-1

Progressive mining and rehabilitation statistics.....-1

 Three-yearly forecast cumulative disturbance and rehabilitation progression.....-1

 Rehabilitation key performance indicators (KPIs)-1

Attachment 1 – Reporting Definitions.....-1

Attachment 2 – Definitions-1

Attachment 3 – Plans-1

Summary

DETAIL	
Mine	Maules Creek Mine Complex
Reference	FWP0001293
Forward program commencement date	Monday 1 January 2024
Forward program end date	Thursday 31 December 2026
Forward program revision (if applicable)	
Contact	Emma Bulkeley
Mining leases	ML 1701 (1992), ML 1719 (1992), CL 375 (1973)
Project location	ASTON COAL 2 PTY LTD
Date of submission	Tuesday 6 February 2024

Important

The department may make the information in your program and any supporting information available for inspection by members of the public, including by publication on its website or by displaying the information at any of its offices. If you consider any part of your program to be confidential, please communicate this to the department via the message function on this submission within the NSW Resources Regulator Portal.

Three-year forecast – surface disturbance activities

Project description

MCCM is an open cut coal mine located in the north-west of NSW, approximately 18km north-east of Boggabri and 55km north of Gunnedah. MCCM is owned and operated by Maules Creek Coal Pty Ltd, a joint venture between Aston Coal 2 Pty Ltd (wholly owned subsidiary of Whitehaven), ITOCHU Coal Resources Australia Maules Creek Pty Ltd (wholly owned subsidiary of Itochu Corporation) and J-Power Australia Pty Ltd (wholly owned subsidiary of Electric Power Development Company). On 23 October 2012, NSW Planning Assessment Commission, a delegate of the NSW Minister for Planning and Infrastructure, issued approval for MCCM under PA 10_0138. The commonwealth minister for Sustainability, Environment, Water, Population and Communities granted the MCCM Commonwealth approval EPBC 2010/5566 on 11 February 2013. The Forward Program covers calendar year 2024 (Year 1), 2025 (Year 2) and 2026 (Year 3).

Description of surface disturbance activities

Exploration activities

Exploration drilling will be undertaken to assess the coal reserves at MCCM. The focus on ongoing exploration drilling will most likely include:

- Exploration within ML 1701 and CL 375; and
- Delineation of outlying coal prospective areas.

Additional disturbance is required for ongoing mining activities with clearance to be managed as per the Biodiversity Management Plan and other plans. Planned exploration is outlined below:

Year 1 – 2024 (Exploration drilling will be completed within the approved project disturbance area)

Year 2 – 2025 (Exploration drilling will be completed within the approved project disturbance area)

Year 3 – 2026 (Exploration drilling will be completed within the approved project disturbance area)

Construction activities

Planned construction activities over the next three years will include possible infrastructure upgrades which will involve improvements to the CHPP, mine, administration and maintenance infrastructure areas. Planned construction is outlined below:

Year 1 - 2024

- In pit production hub
- Relocation of in pit refueling areas
- New warehouse facility in the MIA
- LV wash pad facility
- Communications workshop/hub

Year 2 - 2025

- Finalisation of warehouse facility
- Increase capacity to current water storage areas
- Telecommunication tower

Year 3 – 2026 None planned yet. Construction

is likely to occur in already disturbed areas. Areas of future disturbance are shown in the Forward Program figures.

Mining schedule

Mining development method and sequencing and general mine features.

Planned vegetation clearing activities within the mining area will continue to be conducted during an annual ten-week campaign generally from 15th February to 30th April. Proposed additional clearing areas are shown in Plan 2A to 2C. Soil stripping and stockpiling in the open cut area that will be cleared will be in accordance with the Soil Management Protocol. Blasting will continue to occur at an average rate of four times a week between the hours of 9:00 am to 5:00 pm Monday to Saturday. Blasting on Sundays and Public Holidays will only occur if prior approval from the relevant government agencies is obtained. The site operates under a series of environmental management plans during the active mining phase.

Areas identified for emplacements, the sequencing of emplacements, construction, and management.

Overburden removal within the open cut area will continue using excavators/loaders and a supporting truck fleet. The identification of Potentially Acid Forming (PAF) materials will continue to be undertaken through drill hole sampling. Overburden emplacement areas will continue to be progressively rehabilitated to minimise the size of the disturbance area and reduce environmental impacts. Overburden emplacement is designed to reduce double handling and allow for progressive rehabilitation.

Processing infrastructure activities and the location of tailings facilities and schedule for emplacement.

Coal will be fed into the CHPP or the raw coal bypass system depending on its quality. The product handling system uses a linear travelling slewing and luffing stacker to distribute coal to the product stockpiles. From there, the product coal will be reclaimed and conveyed to the trainload out facility and loaded onto trains. Coarse reject material will be diverted to a storage bin and loaded onto trucks for transported co-disposal into the overburden emplacement areas, or to suitable areas of the open cut. There are no tailings associated with MCCM.

Waste disposal and materials handling operations.

Waste streams at MCCM include general waste, hazardous waste, and sewage. EPL 20221 requires MCCM to monitor, remove, track and report waste on a regular basis. All domestic waste, including plant maintenance (sump oil, bitumen, kerosene, etc). will be collected and disposed of at the nearest authorised waste disposal site or an alternative site in agreed with the Narrabri Shire Council. Tyres will be collected and placed as deep into the waste rock emplacement area as reasonably practical, with a minimum of 20 metres of material to be dumped over all tyre disposal areas. Tyre dumps will be located more than 15 metres away

from any coal rejects or PAF material emplacement areas to minimise potential for spontaneous combustion. Tyres will be relocated in accordance with Whitehaven's internal Mine Tyre Disposal Environmental Procedure. In accordance with EPL 20221 no more than 400 tyres will be disposed of in pit during any single EPL year.

Key production milestones

MATERIAL	UNIT	YEAR 1	YEAR 2	YEAR 3
Stripped topsoil (if applicable)	(m ³)	167,000	115,000	35,000
Rock/overburden	(m ³)	71,000,000	73,000,000	74,000,000
Ore	(Mt)	11,500,000	12,000,000	12,500,000
Reject material¹	(Mt)	3,500,000	3,600,000	3,700,000
Product	(Mt)	8,600,000	8,600,000	9,500,000

¹ This includes coarse rejects, tailings and any other wastes resulting from beneficiation.

Three-year rehabilitation forecast

Rehabilitation planning schedule

Rehabilitation planning schedule

The Plan 2 figures outline proposed rehabilitation. To ensure that potential knowledge gaps are addressed, and that rehabilitation is undertaken as soon as reasonably practicable, a Rehabilitation Planning Schedule has been developed which provides defined milestones and outlines rehabilitation planning activities.

Stakeholder consultation

Maules Creek will continue to liaise with the Resources Regulator and the CCC regarding rehabilitation activities. There is no other stakeholder consultation proposed.

Rehabilitation studies, risk assessments and/or design work

Rehabilitation Design and Quality Assurance There is a detailed process for design and quality assurance completed by MCCM. These internal procedures are regularly reviewed and include steps for internal sign off of the different rehabilitation phases.

Void Management and Water Studies In preparation for the Final Void Mine Closure Plan due to the NSW Resources Regulator by December 2026, MCCM anticipates that it will undertake several groundwater modelling studies which include:

- Using the updated BTM complex groundwater flow model to simulate water level recovery in the final void and provide estimates of groundwater inflow for the water balance model;
- Collect spoil samples from the site and conduct laboratory testing to determine permeability and porosity (at emplaced measure) for use in updated groundwater modelling;
- Conduct additional column testing to resolve uncertainties including:
 - o Replacing deionised water with groundwater collected from bores or in-pit at the MCCM;
 - o Replacing crushed core with actual spoil material collected from the MCCM waste emplacements; and
 - o Use peristaltic pumps to pump groundwater through columns to represent gradual movement of groundwaters.

Risk Assessment The complete Risk Assessment is attached as Appendix B in the RMP. Treatment plans were identified as part of the risk assessment.

Rehabilitation research and trials

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS
---------------	--------------------	----------------------------	-------------	--------------------------------	--------

FWP0001
293

Rehabilitation maintenance and corrective actions

Maintenance Maules Creek proposed the following maintenance and corrective action over the next three years:

- Weed and feral animal control of rehabilitation;
- Erosion control works;
- Maintenance fertilising;
- Re-seeding;
- Repair of fence lines, access tracks and other general related land management activities.
- Follow up monitoring of revegetation and weed management works across the offset areas and associated adaptive management;
- Continued implementation and progression of research projects required under the EPBC approval ;
- Continuation of propagation and translocation programs for *Tylophora linearis* and *Pomaderris queenslandica*.

Rehabilitation schedule

Rehabilitation will continue on the northern overburden emplacement area, with this generally occurring in a westerly direction. Minor exploration site rehabilitation and short term (or temporary) rehabilitation will occur as required within the next three years. Plan 2A-C, the Mining and Rehabilitation Forecast, spatially outlines the rehabilitation schedule.

Subsidence remediation for underground operations

This section is not applicable. MCCM does not have any subsidence or underground workings at the site.

Progressive mining and rehabilitation statistics

Three-yearly forecast cumulative disturbance and rehabilitation progression

FORECAST	UNIT	YEAR 1	YEAR 2	YEAR 3
A Total surface disturbance footprint	(ha)	1,941.1	1,975.55	1,987.01
B Total active disturbance	(ha)	1,619.27	1,628.52	1,629.75
P Total new area of land proposed for active rehabilitation	(ha)	24.73	49.94	60.18

Rehabilitation key performance indicators (KPIs)

FORECAST	UNIT	YEAR 1	YEAR 2	YEAR 3
O Total new active disturbance area	(ha)	52.14	34.45	11.47
P Total new area of land proposed for active rehabilitation during the reporting period	(ha)	24.73	25.2	10.24
Q Annual rehabilitation to disturbance ratio		0.47	0.73	0.89

Attachment 1 – Reporting Definitions

REPORTING CATEGORY		DEFINITION
A	Total disturbance footprint – surface disturbance	<p>All areas within a mining lease that either have at some point in time or continue to pose a rehabilitation liability due to surface disturbance activities.</p> <p>The total disturbance footprint is the sum of the total active disturbance, decommissioning, landform establishment, growth medium development, ecosystem and land use establishment, ecosystem and land use development and rehabilitation completion (see definitions below).</p> <p>Underground mining operations should not include the footprint of underground mining areas/subsidence management areas in the total disturbance footprint.</p>
B	Total active disturbance	<p>Includes on-lease exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste rock emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped) and temporary stabilised areas (e.g. areas sown with temporary cover crops for dust mitigation and temporary rehabilitation).</p>
C	Rehabilitation – land preparation	<p>Includes the sum of all disturbed land within a mining lease that have commenced any, or all, of the following phases of rehabilitation – decommissioning, landform establishment and growth medium development.</p> <p>Refer to the glossary of terms in this document for the definition of these phases of rehabilitation.</p>
D	Ecosystem and land use establishment	<p>Includes the area which has been seeded/planted with the target vegetation species for the intended final land use. However, vegetation has not matured to a stage where it can be demonstrated that it will be sustainable for the long term and or require only a maintenance regime consistent with target reference/analogue sites.</p> <p>Typically, rehabilitation areas would be in this phase for at least two years (and usually more) before rehabilitation can be classified as being in the ecosystem and land use development phase. This phase does not apply to infrastructure areas that are being retained as part of final land use for the site.</p>

REPORTING CATEGORY		DEFINITION
O		The area of any new active disturbance that will be created during the next three years, as defined under definition A1 (definition A1 Table 5).
P		The sum of any new rehabilitation to be commenced in the next three years. These areas may be in the phases “Rehabilitation - Land Preparation” or the “Ecosystem & Land Use Establishment” (definitions C & D in Table 5).
Q		The rehabilitation to disturbance ratio (S / R) indicates how many hectares of new rehabilitation are undertaken for each hectare of land disturbed during the three years. A ratio of 1/1 indicates that the area of new rehabilitation and disturbance in that period are the same.

Attachment 2 – Definitions

WORD	DEFINITION
Active	In the context of rehabilitation, land associated with mining domains is considered 'active' for the period following disturbance until the commencement of rehabilitation.
Active mining phase of rehabilitation	In the context of rehabilitation, the active mining phase of rehabilitation constitutes the rehabilitation activities undertaken during mining operations such as salvaging and managing soil resources, salvaging habitat resources, and native seed collection. This phase also includes management actions taken during operations to manage risks to rehabilitation and enhance rehabilitation outcomes such as selective handling of waste rock and management of tailings emplacements.
Analogue site	In the context of rehabilitation, an analogue site is a 'reference site' that represents an example of the defining characteristics (such as vegetation composition and structure or agricultural productivity) of the final land use. Characteristics of analogue sites can be assessed to develop the rehabilitation objectives and completion criteria for final land use domains.
Annual rehabilitation report and forward program	As described in the Mining Regulation 2016.
Annual reporting period	As defined in the Mining Regulation 2016.
Closure	A whole-of-mine-life process, which typically culminates in the relinquishment of the mining lease. It includes decommissioning and rehabilitation to achieve the approved final land use(s).
Decommissioning	The process of removing mining infrastructure and removing contaminants and hazardous materials.
Decommissioning Phase of Rehabilitation	Activities associated with the removal of mining infrastructure and removal and/or remediation of contaminants and hazardous materials. In the context of the rehabilitation management plan this phase of rehabilitation may also include studies and assessments associated with decommissioning and demolition of infrastructure or works carried out to make safe or 'fit for purpose' built infrastructure to be retained for future use(s) following lease relinquishment.

WORD	DEFINITION
Department	The Department of Regional NSW.
Disturbance	See Surface Disturbance.
Disturbance area	<p>An area that has been disturbed and that requires rehabilitation.</p> <p>This may include areas such as on-licence exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped), and areas requiring rehabilitation that are temporarily stabilised (i.e. managed to minimise dust generation and/or erosion).</p>
Domain	<p>An area (or areas) of the land that has been disturbed by mining and has a specific operational use (mining domain) or specific final land use (final land use domain). Land within a domain typically has similar geochemical and/or geophysical characteristics and therefore requires specific rehabilitation activities to achieve the associated final land use.</p>
Ecosystem and Land Use Development	<p>This phase of rehabilitation consists of the activities to manage maturing rehabilitation areas on a trajectory to achieving the approved rehabilitation objectives and completion criteria.</p> <p>For vegetated land uses this phase may include processes to develop characteristics of functional self-sustaining ecosystems, such as nutrient recycling, vegetation flowering and reproduction, and increasing habitat complexity, and development of a productive, self-sustaining soil profile.</p> <p>This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.</p>
Ecosystem and Land Use Establishment	<p>This phase of rehabilitation consists of the processes to establish the approved final land use following construction of the final landform.</p> <p>For vegetated land uses this rehabilitation phase includes establishing the desired vegetation community and implementing land management activities such as weed control. This phase of rehabilitation may also include habitat augmentation such as installation of nest boxes.</p>
Exploration	Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

WORD	DEFINITION
Final landform and rehabilitation plan	As defined in the Mining Regulation 2016.
Final land use	As defined in the Mining Regulation 2016.
Form and way	Means the form and way approved by the Secretary. Approved form and way documents are available on the Department's website.
Growth Medium Development	<p>This phase of rehabilitation consists of activities required to establish the physical, chemical and biological components of the substrate required to establish the desired vegetation community (including short lived pioneer species).</p> <p>This phase may include spreading the prepared landform with topsoil and/or subsoil and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical and biological characteristics of the growth media, and actions to minimise loss of growth media due to erosion.</p>
Habitat	Has the same meaning as that term under the <i>Biodiversity Conservation Act 2016</i> and the <i>Fisheries Management Act 1994</i> (as relevant).
Indicator	An attribute of the biophysical environment (e.g. pH, topsoil depth, biomass) that can be used to approximate the progression of a biophysical process. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion criterion (i.e. defined end point). It may be aligned to an established protocol and used to evaluate changes in a system.
Land	As defined in the <i>Mining Act 1992</i> .
Landform Establishment	<p>This phase of rehabilitation consists of the processes and activities required to construct the final landform.</p> <p>In addition to profiling the surface of rehabilitation areas to the approved final landform profile this phase may include works to construct surface water drainage features, encapsulate problematic materials such as tailings, and prepare a substrate with the desired physical and chemical characteristics (e.g. rock raking or ameliorating sodic materials).</p>
Large mine	As defined in the Mining Regulation 2016.
Lease holder	The holder of a mining lease.

WORD	DEFINITION
Life of mine	The timeframe of how long a mine is approved to mine, from commencement to closure.
Mine rehabilitation portal	<p>Means the NSW Resources Regulator's online portal that lease holders must use (via a registered account) to:</p> <ul style="list-style-type: none"> ■ upload rehabilitation geographical information system (GIS) spatial data ■ develop rehabilitation GIS spatial data (using online tracing functions) ■ generate rehabilitation plans and rehabilitation statistics using the map viewer and Rehabilitation Key Performance Indicator functionalities. <p>Data submitted to the mine rehabilitation portal is collated in a centralised geodatabase for use by the NSW Resources Regulator to regulate rehabilitation performance of lease holders.</p>
Mining area	As defined in the <i>Mining Act 1992</i> .
Mining domain	A land management unit with a discrete operational function (e.g. overburden emplacement), and therefore similar geophysical characteristics, that will require specific rehabilitation treatments to achieve the final land use(s).
Mining land	As defined in the <i>Mining Act 1992</i> .
Native vegetation	Has the same meaning as that term under section 60B of the <i>Local Land Services Act 2013</i> .
Overburden	Material overlying coal or a mineral deposit.
Performance indicator	An attribute of the biophysical environment (for example pH, slope, topsoil depth, biomass) that can be used to demonstrate achievement of a rehabilitation objective. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion criterion, that is, a defined end point. It may be aligned to an established protocol and used to evaluate changes in a system.

WORD	DEFINITION
Phases of rehabilitation	<p>The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are:</p> <ul style="list-style-type: none"> ■ active mining ■ decommissioning ■ landform Establishment ■ growth medium development ■ ecosystem and land use establishment ■ ecosystem and land use development.
Progressive rehabilitation	The progress of rehabilitation towards achieving the approved rehabilitation completion criteria. This may be described in terms of domains, phases, performance indicators and rehabilitation completion criteria.
Rehabilitation Completion	<p>The final phase of rehabilitation when a rehabilitation area has achieved the approved rehabilitation objectives and rehabilitation completion criteria for the final land use. Rehabilitation areas may be classified as complete when the NSW Resources Regulator has determined in writing that the relevant rehabilitation obligations have been fulfilled following submission of <i>Form ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate</i> application by the lease holder.</p>
Rehabilitation Completion criteria	As defined in the Mining Regulation 2016.
Rehabilitation cost estimate	As defined in the Mining Regulation 2016.
Rehabilitation management plan	As defined in the Mining Regulation 2016.
Rehabilitation objectives	As defined in the Mining Regulation 2016.
Rehabilitation risk assessment	As defined in the Mining Regulation 2016.
Rehabilitation schedule	The defined timeframes for progressive rehabilitation set out in the forward program.

WORD	DEFINITION
Relevant stakeholders	Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes: <ul style="list-style-type: none"> ■ the relevant development consent authority ■ the local council ■ the relevant landholder(s) ■ community consultative committee (if required under the development consent) or equivalent consultative group ■ affected land holder(s) ■ government agencies relevant to the final land use ■ affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities) ■ local Aboriginal communities, and ■ any other person or body determined by the Minister to be a relevant stakeholder in relation to a mining lease.
Risk	The effect of uncertainty on objectives. It is measured in terms of consequences and likelihood (AS/NZS ISO 31000:2009).
Secretary	The Secretary of the Department.
Security deposit	An amount that a mining lease holder is required to provide and maintain under a mining lease condition, to secure funding for the fulfilment of obligations under the lease (including obligations that may arise in the future).
Surface disturbance	Includes activities that disturb the surface of the mining area, including mining operations, ancillary mining activities and exploration.
Tailings	A combination of the fine-grained solid material remaining after the recoverable metals and minerals have been extracted from the mined ore, and any process water ² .
Waste	Has the same meaning as that term under the <i>Protection of the Environment Operations Act 1997</i> .

² Commonwealth of Australia (DITR), 2007. *Tailings Management*.

Attachment 3 – Plans

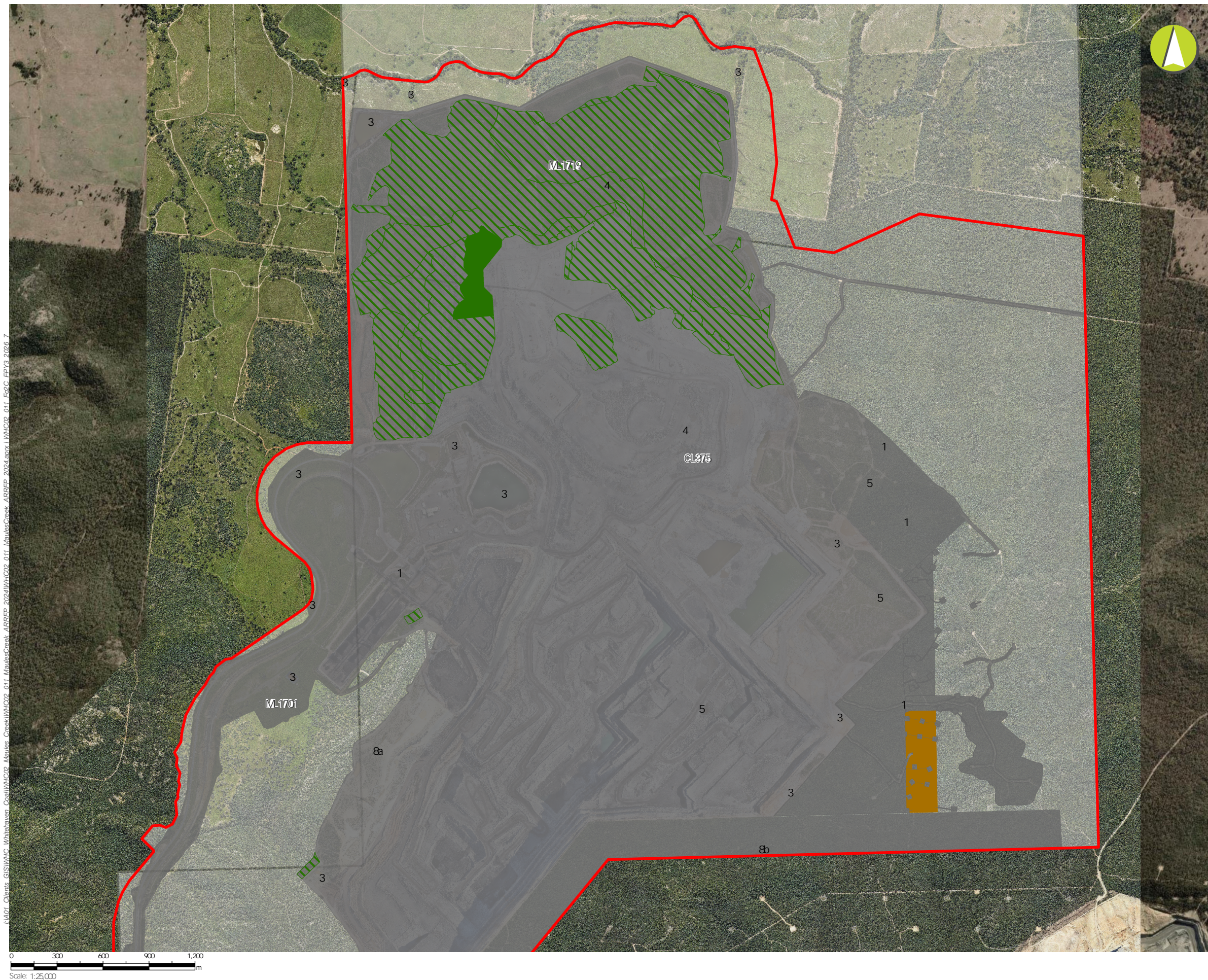
WHC02_011_Fg2A_FPY1_2024_V03.pdf

WHC02_011_Fg2B_FPY2_2025_V02.pdf

WHC02_011_Fg2C_FPY3_2026_V03.pdf

Forward Program (LARGE MINE) v2.1

AA01 Clients GIS\WHC Whitehaven Coal\WHC02 Maules Creek\WHC02 011 Maules Creek ARREP 2024\WHC02 011 Maules Creek ARREP 2024\WHC02 011 F&C EPV3 2026 7



LEGEND

- Project Approval Boundary
- Previous Rehabilitation
- Previous Disturbance
- Forecast Area Type - Year 3 (2026)
 - Forecast Land Prepared for Rehabilitation (2026)
 - Forecast Disturbance (2026)
- Current Authorisations
 - Coal - Current Titles

Maules Creek Mine

Mining and Rehabilitation Year 3 - 2026 PLAN 2C

Mine name	Maules Creek Mine
Plan name	Maules Creek Mine
Year of anticipated relinquishment	TBA following Portal Submission
Data theme submission ID No.	TBA following Portal Submission
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	5/02/2024