



**NSW
Resources
Regulator**

FWP0001386

METROPOLITAN COLLIERY FORWARD PROGRAM

Monday 1 January 2024 to Thursday 31 December 2026

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Summary

DETAIL	
Mine	Metropolitan Colliery
Reference	FWP0001386
Forward program commencement date	Monday 1 January 2024
Forward program end date	Thursday 31 December 2026
Forward program revision (if applicable)	
Contact	Stephen Love
Mining leases	ML 1610 (1992), CCL 703 (1973), MPL 320 (1973), ML 1702 (1992), CL 379 (1973)
Project location	Metropolitan Collieries Pty Ltd
Date of submission	Thursday 28 March 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

The Metropolitan Coal Mine is an underground coal mining operation located approximately 30 km north of Wollongong in NSW. Peabody Energy Australia Pty Ltd acquired 100 % ownership in October 2006. Peabody Energy Australia Pty Ltd changed the name of the Metropolitan Coal Mine operator to Metropolitan Coal Pty Ltd (Metropolitan Coal). Metropolitan Coal was granted approval for the Metropolitan Coal Project by the Minister for Planning on 22 June 2009 for the continuation, upgrade and extension of underground coal mining operations (Longwalls 20-27 and 301-317) and surface facilities at the Metropolitan Coal Mine. Mining operations are approved until 2032 under Project Approval 08_0149. The Surface Facilities Area includes administration buildings, workshop, bathhouse and ablution facilities, haul roads, access road, fuel and consumables storage facilities, hardstand areas, CHPP, stockpiles and associated coal handling infrastructure

Description of surface disturbance activities

Exploration activities

Exploration will occur from both surface to seam boreholes and underground in conjunction with pre extraction gas drainage. On average, Metropolitan Coal proposes to drill 1 to 2 boreholes each year of the Forward Program term. Further drilling is required to better define reserves under the Joint Ore Reserves Committee (JORC) Code. Further seismic exploration may occur utilising existing fire trails where possible.

Construction activities

Surface construction works in the Woronora Special Area will include the installation, upgrade and maintenance of environmental monitoring equipment (e.g. pluviometers, groundwater bores and gauging stations), access tracks, surface exploration activities (including seismic investigations) and other minor mining-related surface activities. Throughout this Forward Program term, continued maintenance and renewal activities will be undertaken at the surface facilities as required to ensure that the mine operates in a safe and efficient manner, cognisant of its requirements to manage heritage and environmental values. Surface works in the Woronora Special Area are conducted in consultation with WaterNSW through the submission of the Construction Management Plan – Surface Works Assessment Forms, or specific Environmental Management Plans where required by WaterNSW.

Mining schedule

Mining development method and sequencing and general mine features.

Currently there are no plans for mining other coal seams (i.e. other than the Bulli Seam) at the Metropolitan Coal Mine during this Forward Program term. Metropolitan Coal operates seven days a week, 24 hours a day on a rotating shift basis. Longwall 308 commenced extraction on 12 December 2022 and was completed in July 2023. Longwall 309 commenced on 28 July 2023 and continued through the remainder of 2023. The schedule and extraction of Longwall 310 will commence in February 2024 and is anticipated to be completed in September 2024. Longwalls 308-310 extraction will occur from north to south using retreating longwall mining methods for secondary extraction of a panel with a 138 m void width.

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

Approximately 1.3 Mt of coal reject would be produced over this Forward Program term. Coal reject is produced in two streams at the CHPP (i.e. coarse and fine rejects). Approximately 17% of the ROM coal processed in the CHPP is separated to the coal reject stream. Coal extracted from the underground mining operations is transferred by conveyor to the Surface Facilities Area. ROM coal is crushed, screened and washed at the CHPP. The majority of product coal is transported by train to the Port Kembla Coal Terminal (PKCT) (in Wollongong) for domestic and overseas customers. Coal rejects may be transported by rail or road to PKCT, and/or urban developments in the Wollongong and Shellharbour LGAs. Coal reject will be trucked by a licensed contractor from the Major Surface Facilities Area to these sites along the transport routes.

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

Capacity for on-site disposal of coal rejects in the Surface Facilities Area is largely constrained. Project coal reject disposal during this Forward Program term may include:

- transportation of coal rejects by rail to PKCT for shipment to international markets;
- continued transport of coal reject material off-site by truck until end 2026, at which time the Project Approval Conditions prohibit the export of any coal reject off site without the written approval of the Secretary of DPE; and/or
- disposal of coal rejects in the Camp Gully surface emplacement situated near the Surface Facilities Area (this facility was approved by the Wollongong City Council in 1991 but has not been constructed to date). Metropolitan Coal Mine may also utilise an underground coal wash reject emplacement plant which emplaces the fine fraction of the Coal Washery Rejects (CWR) stream.

Waste disposal and materials handling operations.

Waste disposal will continue to be undertaken in accordance with Metropolitan Coal's Waste Management Plan (WstMP). In accordance with the WstMP, the following activities are undertaken:

- waste streams are identified and the quantities generated are monitored;
- waste management measures are identified to minimise waste generation;

and • waste generated is appropriately stored, handled and disposed of. The transportation of coal rejects/waste material from the Metropolitan Coal Mine and road traffic of the operation in general is in accordance with the Metropolitan Coal Traffic Management Plan (TMP). The intent of the TMP is to minimise the traffic impacts of the Metropolitan Coal Mine on the residential areas and schools within Helensburgh. All domestic waste and general recyclable products would continue to be collected weekly by an appropriately licensed contractor. Waste batteries and scrap metals would continue to be stockpiled in a designated area and recycled by a scrap metal contractor. Waste oil would continue to be collected by a licensed contractor for off-site disposal or recycling. Used tyres would continue to be periodically collected by the tyre supplier, for recycling or disposal. No on-site rubbish disposal or landfill is proposed.

Key production milestones

MATERIAL	UNIT	YEAR 1	YEAR 2	YEAR 3
Stripped topsoil <small>(if applicable)</small>	(m ³)	0	0	0
Rock/overburden	(m ³)	0	0	0
Ore	(Mt)	2.2	2.2	2.4
Reject material¹	(Mt)	0.4	0.4	0.5
Product	(Mt)	1.8	1.8	1.9

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

Three-year rehabilitation forecast

Rehabilitation planning schedule

Rehabilitation planning schedule

It is anticipated that operations at the Surface Facilities Area will continue for at least another 8 years, therefore no rehabilitation activities are expected to be undertaken at the Surface Facilities Area during this Forward Program term. Underground mining of Longwalls 310 will continue throughout 2024. Subject to approval of the Longwalls 311-316 Extraction Plan application, Metropolitan Coal intends to continue mining of Longwalls 311-316 throughout the next three years. Therefore, rehabilitation during this Forward Program term consists of stream remediation works in accordance with the Metropolitan Coal Stream Remediation Plan.

Stakeholder consultation

Metropolitan Coal is committed to an open and constructive consultation program. This aims to:

- identify interested parties and stakeholders;
- inform government and other stakeholders of the nature and status of the Metropolitan Coal Mine by presenting information in a number of formats and venues, to facilitate a clear understanding of the Metropolitan Coal Mine;
- identify issues of concern to stakeholders for consideration in the Metropolitan Coal Mine planning and design process; and
- establish ongoing dialogue between Metropolitan Coal and government and community stakeholders.

Ongoing consultation during this Forward Program term will continue including regular discussions with the Community Consultative Committee (through meetings), the Wollongong City Council, and the Helensburgh and District Historical Society.

Rehabilitation studies, risk assessments and/or design work

Risks associated with rehabilitation and mine closure were identified during a rehabilitation risk assessment undertaken in December 2021, which is detailed in the Mine's RMP. Therefore, no rehabilitation studies, risk assessments and/or design work associated with finalising rehabilitation methodologies relating to establishment of the final landform, surface water management, final void management and tailings dam decommissioning are proposed within this Forward Program term.

Rehabilitation research and trials

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS
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Rehabilitation maintenance and corrective actions

The Metropolitan Coal Mine's RMP outlines the development of rehabilitation objectives and completion criteria for the preferred future land use for the Surface Facilities Area following the completion of mining activities. The Surface Disturbance Register within the RMP will be used to monitor the performance of the measures implemented to rehabilitate surface disturbance areas. Specific maintenance and corrective actions to be progressed in the next three years and progress of current actions will be included in future Forward Programs, in line with the Annual Rehabilitation Reports.

Rehabilitation schedule

Coal extraction will continue in Longwalls 308-310 during this Forward Program term. It is anticipated that operations at the Surface Facilities Area will continue for at least another 8 years, therefore no rehabilitation activities are expected to be undertaken at the Surface Facilities Area during the Forward Program term. Notwithstanding, Metropolitan Coal will continue works to vegetate the outer batters of the Turkey's Nest Dam and Camp Creek Gully during the reporting period. In the Underground Mining Area, the rehabilitation schedule during this Forward Program term includes:

- Metropolitan Coal will continue stream remediation on Waratah Rivulet (subject to access to these sites).
- Catchment improvement works will continue in the Woronora Catchment Area, namely, rehabilitation of the former quarry on Fire Road 9H and rehabilitation of the disused access track to the Darkes Forest Mine. Weather permitting, catchment improvement works in the Woronora Catchment Area will be undertaken as required throughout 2024.

Subsidence remediation for underground operations

During this Forward Program term, subsidence monitoring will be carried out in accordance with the Metropolitan Coal Longwalls 308-310 Extraction Plan Approvals. The Extraction Plan includes a Subsidence Monitoring Program that was prepared to validate subsidence predictions and analyse the relationship between the subsidence effects and subsidence impacts. During this Forward Program term, Metropolitan Coal will continue stream remediation on Waratah Rivulet. Stream remediation will be subject to access to these sites. For example, the catchment may be closed due to rainfall/bushfires; or high stream flows may prohibit remediation works.

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)	21.43	21.43	21.43
B Total active disturbance	(ha)	18.43	18.43	18.43
P Total new area of land proposed for active rehabilitation	(ha)	0	0	0

Rehabilitation key performance indicators (KPIs)

FORECAST	UNIT	YEAR 1	YEAR 2	YEAR 3
O Total new active disturbance area	(ha)			
P Total new area of land proposed for active rehabilitation during the reporting period	(ha)			
Q Annual rehabilitation to disturbance ratio				

Attachment 1 – Reporting Definitions

REPORTING CATEGORY	DEFINITION
<p>A Total disturbance footprint – surface disturbance</p>	<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>
<p>B Total active disturbance</p>	<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>
<p>C Rehabilitation – land preparation</p>	<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>
<p>D Ecosystem and land use establishment</p>	<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	<p>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.</p>
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	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation cost estimate	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation management plan	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation objectives	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation risk assessment	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation schedule	<p>The defined timeframes for progressive rehabilitation set out in the forward program.</p>

WORD	DEFINITION
Relevant stakeholders	<p>Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes:</p> <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

FP_Plan 2A.pdf

FP_Plan 2B.pdf

FP_Plan 2C.pdf

Forward Program (LARGE MINE) v2.1