



**NSW
Resources
Regulator**

FWP0001147

BOGGABRI COAL FORWARD PROGRAM

Sunday 1 January 2023 to Wednesday 31 December 2025

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Summary

DETAIL

| | |
|---|-------------------------------|
| Mine | Boggabri Coal |
| Reference | FWP0001147 |
| Forward program commencement date | Sunday 1 January 2023 |
| Forward program end date | Wednesday 31 December 2025 |
| Forward program revision (if applicable) | |
| Contact | Stewart Dunlop |
| Mining leases | ML 1755 (1992), CL 368 (1973) |
| Project location | BOGGABRI COAL PTY LIMITED |
| Date of submission | Friday 31 March 2023 |

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

Boggabri Coal Mine (BCM) is an open cut coal mine located 15 km north-east of the township of Boggabri in north-western NSW. BCM is managed by Boggabri Coal Operations Pty Ltd on behalf of Idemitsu Australia's (IA) subsidiary Boggabri Coal Pty Ltd and its JV partners (Chugoku Electric Power Australia Resources Pty Ltd and NS Boggabri Pty Limited). BCM operates in accordance with SSD09_0182 which was granted on 18 July 2012 which enables the continuation of open cut mining until the end of 2033. Mining operations are progressing northward, extracting up to 8.6 Mtpa of ROM coal utilising truck and shovel mining methods. Progressive rehabilitation of the overburden emplacement areas is undertaken as areas achieve the final landform design. Up to 4.2 Mtpa of ROM coal can be processed at the CHPP, with the ability to bypass ROM coal to produce high quality semisoft coking, PCI and thermal coal products which is transported to the Port of Newcastle by rail for sale to the export market.

Description of surface disturbance activities

Exploration activities

The MOP Amendment A dated March 2020 and subsequent Addendum dated December 2021 described activities between 2020 to 2024 which will continue for this forward program. BCOP's exploration drilling program for 2023 until end of 2025 is focused on further definition drilling of the coal resource and quality testing. Further environmental monitoring/testing (i.e. groundwater/hydrological testing) may also be undertaken. Exploration activities within the approved mine disturbance boundary at BCM were specifically described in the BCM Environmental Assessment (MOD 7, 2019), and have been subsequently approved under SSD09_0182. However, new approvals will be required to enable exploration drilling outside of the approved mine disturbance boundary to continue. Drilling during Forward Program term will be inside the approved mine disturbance footprint (SSD09_0182 & EPBC2009/5252), within CL368 and outside of the 250m wide vegetated corridor. Drilling will be undertaken to verify the limit of oxidation, coal quality and structure, and will occur as both open holes and fully cored drill holes. Core samples may be used to conduct testing (incl. fugitive emissions). Drill holes will be sumped and geophysically logged after completion. Holes below the pit floor and ahead of immediate operational clearing area will be cemented and rehabilitated. Boreholes will be drilled to base of coal basin. BCOPs EMS will be used to manage potential environmental impacts.

Construction activities

Construction activities proposed to be completed for the term of this Forward Program (i.e. 2 July 2022 to 31 December 2024) will include:

- Upgrades to existing mine infrastructure, including:
 - The Run of Mine (ROM) coal stockpiles are proposed to be revised, to reduce the quantity of topsoil rehandle;
 - The existing pre-shift information (PSI) facilities are proposed (following the receipt of relevant approvals) to be relocated closer to the mining area, to minimise shift changeover times; and
 - Refurbishment of the alignment of the former Leard Forest Road to provide light vehicle access to the new pre-start shift information (PSI) facilities.
- Water management infrastructure including:
 - Dirty water drains;
 - Dams; and
 - Pipelines and pumps associated with water transfers between storages.

If required, fill material will continue to be stockpiled within existing stockpile areas. All stockpiled material will be stored within the approved Project Boundary and areas previously approved for disturbance.

Mining schedule

Mining development method and sequencing and general mine features.

Mining activity during the next three years will involve a continuation of extraction within the A, C and E Pits. The development will continue in an eastern direction completing A Pit whilst also progressing in a northerly direction into C Pit and easterly direction into E Pit. Mining will continue along 100-metre-wide mining strips. Backfilling will continue progressively to the south. Coal will be mined from six seams; the Teston, Thornfield, Braymont, Bollol Creek, Jeralong and basal Merriown.

The Modification granted to SSD 09_0182 on the 23 March 2015 (MOD 4) allows for additional disturbance for expanding SD3, SD12 and the new ROM Haul Road. No further changes to mining operations have been granted in the latest modifications to SSD 09_0182 (i.e. MOD 5, MOD 6 and MOD 7).

Truck and excavator operations will continue to be undertaken to recover ROM coal which will be transported by truck to the onsite coal processing and rail transport facilities. In-pit ROM stockpile areas are also used within the active mining areas to provide temporary storage of ROM coal prior to transport to the Coal Handling and Preparation Plant (CHPP) for processing 6

and rail transport. SSD 09_0182 (as modified) permits the use of a dragline, although there are no immediate plans to use such plant.

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

Out-of-pit dumping will continue on the western and southern OEAs to a maximum height of Reduced Level (RL) of 395 m. The A and C Pits will continue to be progressively backfilled to the south.

The continuation of dumping within the western and southern OEAs will minimise haulage distances and contribute to the establishment of a landform that is generally consistent with the approved conceptual final landform.

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

Coal handling entails the utilisation of the coal handling infrastructure including the CHPP, product stockpile, ROM pad, TLO facility, and rail spur. The CHPP comprises a 1,500 tph bypass crusher and a 500 tph Coal Processing Plant (CPP) feed crusher. Product coal is transferred to the product coal stockpile utilising two slewing and luffing stackers. Product coal is then loaded onto trains via valves to a reclaim tunnel and TLO facility. The reclaim valves feed a conveyor with a capacity of approximately 5,000 tph. Part of the product stockpile is also used as a temporary storage area, to allow for stacking and rehandling. MOD 7 provided BCM with approval to use a coal stockpile area previously designated for coal from the neighbouring Tarrawonga Mine (subject to commercial agreement). Product coal from BCM is railed to the Port of Newcastle for export to international markets. CHPP fines are processed through a belt press filter system to reduce moisture content before being added back to the coarse reject and transferred to a load out bin. Trucks take the reject material from the bin to the operational pit for co-disposal with overburden material in the mining void. A temporary reject transfer area adjacent to the ROM pad is also used to manage the relocation of coarse reject from the CPP to the mining void. An Emergency Tailings Facility (ETF) is available to store fine rejects (as a last resort). All reject is covered with 5m of inert overburden.

Waste disposal and materials handling operations.

BCOP adopts the waste management hierarchy of avoid, reduce, reuse, recycle and dispose and includes the following waste management measures:

- General putrescible waste is collected and disposed of at an appropriate licensed waste management facility;
- Green waste is mulched and used within on site rehabilitation;
- All wash down areas have oil/water separating devices. Sediment, oils and grease is separated and water is reused onsite for haul road dust suppression. Any sediment collected during wash down activities is treated in the in-pit bioremediation area. Oily waste recovered is transported offsite by a licensed waste contractor for disposal;

- Scrap metal is separated onsite and collected by a recycling contractor for off-site recycling;
- Sewage is collected onsite in an aerated septic sewer system and reused on site for irrigation with sewage collected from in pit ablution facilities transported to licenced disposal facilities offsite;
- All waste oils and greases is collected by a licensed waste contractor for offsite recycling/disposal;
- Heavy earthmoving tyres are re-treaded and reused where possible; otherwise, they are buried in pit in accordance with site guidelines;
- Other recyclable wastes such as timber pallets, plastic, glass, and paper are collected for offsite recycling;
- Waste chemicals are transported offsite by waste contractor for disposal;
- Contaminated soil is treated in the onsite bioremediation area in accordance with internal procedures.

Key production milestones

| MATERIAL | UNIT | YEAR 1 | YEAR 2 | YEAR 3 |
|---|-------------------|------------|------------|------------|
| Stripped topsoil <small>(if applicable)</small> | (m ³) | 43,800 | 53,200 | 38,140 |
| Rock/overburden | (m ³) | 62,453,265 | 54,406,941 | 59,413,095 |
| Ore | (Mt) | 8.22 | 8.37 | 8.22 |
| Reject material¹ | (Mt) | 1.61 | 1.67 | 1.63 |
| Product | (Mt) | 6.7 | 7.05 | 7 |

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

Three-year rehabilitation forecast

Rehabilitation planning schedule

Rehabilitation planning schedule

BCOP propose to construct a free draining landform that integrates with the surrounding catchments. Initial batter slope modelling indicates a linear batter gradient of 10° (17.5%) with lifts to 20m initially constructed with diversion banks (berms) and removed once target vegetation cover levels are achieved provides a stable landform. The OEA will be progressively formed and shaped in a manner consistent with the Conceptual Final Landform design illustrated within SSD 09_0182. As mining progresses, the final landform design will continue to be modified to account for the inherent variability in the mine plan. Nonetheless, the key requirements of the final void will continue to underpin future iterations of the landform to ensure they are able to be met. The activities proposed over the next three years are unlikely to substantially alter the characteristics of the final void shown in the Conceptual Final Landform design as illustrated in Appendix 9 of SSD 09_0182. A Rehabilitation Risk Assessment was undertaken in March 2022 to identify the key risks to rehabilitation activities achieving the rehabilitation objectives and land uses for the BCM. The risk assessment identified a number of key controls which are implemented to manage rehabilitation risks during each rehabilitation phase. The key controls identified during the risk assessment have been incorporated into the rehabilitation methods described in the RMP.

Stakeholder consultation

BCOP is a long-standing member of the community, providing employment opportunities, supporting local businesses, and developing strong relationships across the region. BCOP works with the local communities of Boggabri, Narrabri, Gunnedah, and the surrounding areas where its staff and suppliers live.

BCOP works with an open and transparent Community Consultative Committee (CCC) and engages with them regarding the mine's operation, to help keep residents up-to-date with our operations, environmental management and community initiatives. The CCC meets quarterly and is made up of active community members who live and work in Boggabri and the surrounding region. Members are approved by the State Government and represent a variety of interest groups, businesses, and residents. The CCC minutes are published online after each meeting.

BCOP has informed the community members that they may contact the site at any time to lodge complaints or raise enquiries regarding the operations at BCM. The Rehabilitation Management Plan has been prepared and will be distributed to the DPE, Forestry Corporation of NSW, DPE-Water, BCD, North West LLS, Narrabri Council and the CCC. The RMP will

subsequently be revised to address any comments received from these parties. BCOP will also continue to liaise with the Resources Regulator over its approval of the Final Landform and Rehabilitation Objectives (and then Completion Criteria). The Final Void and Mine Closure Plan is also under preparation.

Rehabilitation studies, risk assessments and/or design work

The Final Void and Mine Closure Plan to be developed by the end of 2025 will require the completion of extensive geochemical sampling, modelling and hydrological studies and mine planning work. Background studies have previously progressed and further work programs are planned to be commenced.

BCOP currently conducts an extensive monitoring program for flora and fauna communities which will be continued. Information collected from this work will be used to demonstrate the overall success of ecosystem rehabilitation.

Natural hollow development in trees takes many decades. Accordingly in areas of active rehabilitation, the installation of nest boxes is essential to provide habitat for displaced fauna. Nest box installation will continue to occur within rehabilitation areas, which will be followed by ongoing monitoring of nest box usage by fauna.

BCOP has commenced a monitoring program to evaluate the thinning of eucalypts within the rehabilitation areas to enable the ground layer to develop.

BCOP has previously commissioned an investigation in the suitability of the growth media in rehabilitation. The recommendations from this work has been incorporated in the rehabilitation methodology at BCM. Growth media is regularly tested and analysed for its suitability for rehabilitation and is ameliorated where required.

The above monitoring programs and trials will continue during the term of the forward program.

Rehabilitation research and trials

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

FWP0001147

Rehabilitation maintenance and corrective actions

Monitoring of rehabilitation areas and analogue sites will be undertaken by specialist independent consultants on an annual basis using a modified Landscape Function Analysis methodology. Ecological rehabilitation monitoring will be undertaken at three replicate sites per each stage of rehabilitation on a 1:14,000 scale to provide statistically valid data that is used to guide rehabilitation maintenance activities.

Maintenance/contingency activities may include a range of activities including:

- Supplementary seeding of vegetated areas;
- Weed and pest control;
- Application of soil ameliorants; and
- Repair of any eroded areas.

Maintenance and corrective actions over the next three years will continue to focus on the monitoring and identification of areas requiring further control and/or remedial actions.

Due to the above average rainfall which has been experienced over the past 12-months, there are some areas of erosion which have been identified and are to be subject to a detailed work program. This work program is to be undertaken following the review and advice from an independent rehabilitation specialist.

Rehabilitation schedule

BCOP is currently progressing an application to modify SSD 09_0182 (MOD 8) with the NSW Government (yet to be approved) which previously proposed to infill the area for the final east to west drain. This proposed change to the final landform design resulted in BCM's mine plans being adjusted (since mid-2020) to minimise the need to disturb previously rehabilitated areas in the event that the MOD 8 application is approved. An addendum was submitted to the Mining Operations Plan (2020-2024) on 21 December 2021 which included a revised rehabilitation schedule for 2020 to 2022 calendar years. An Amendment to MOD 8 was made at the end of 2022 to modify the mine plan, which means that the east west drain will remain in the landform and enable rehabilitation to continue.

Over the next three years, it is proposed that rehabilitation activities will continue on the OEA, focusing on the rehabilitation of areas which are available on the shaped OEA for rehabilitation to the currently approved Conceptual Final Landform design.

Provided MOD 8 is approved, this Forward Program and associated spatial files will continue to be revised and updated to reflect the modified mine plans and rehabilitation progression on the main OEA.

Subsidence remediation for underground operations

The BCM is not within a mine subsidence district and no underground mining activities are proposed. As such, mine subsidence management is not relevant to this Forward Program. There is various remediation works to be undertaken on the rehabilitated areas of the OEA to address erosion matters as a result of the extensive rainfall received over the past three years.

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) | 1,518.89 | 1,545.54 | 1,564.59 |
| B Total active disturbance | (ha) | 1,190.89 | 1,169.06 | 1,188.11 |
| C Land prepared for rehabilitation | (ha) | 47.72 | 96.21 | 96.21 |
| D Ecosystem and land use establishment | (ha) | 0 | 0 | 0 |

Rehabilitation key performance indicators (KPIs)

| FORECAST | UNIT | YEAR 1 | YEAR 2 | YEAR 3 |
|--|------|--------|--------|--------|
| O Total new active disturbance area | (ha) | 21.94 | 26.66 | 19.05 |
| P Area proposed for active rehabilitation | (ha) | 47.72 | 48.48 | |
| Q Annual rehabilitation to disturbance ratio | | 2.18 | 1.82 | |

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 | The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are: <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 | 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. |
| 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

230331 BCM Plan 2A - FWP Year 1 (2023).pdf

230331 BCM Plan 2B - FWP Year 2 (2024).pdf

230331 BCM Plan 2C - FWP Year 3 (2025).pdf

Forward Program (LARGE MINE) v2.1

Plan 2A Mining and Rehabilitation – Year 1 (2023)



Legend

- Forecast Data Year1**
-  Forecast Disturbance
 -  Forecast Land Prepared for Rehabi
 -  Ecosystem and Land Use Establish
-  Project Approval Boundary
-  Mine Operations Area
- World Imagery**
- Low Resolution 15m Imagery
 - High Resolution 60cm Imagery
 - High Resolution 30cm Imagery
- Citations

1: 53,459 



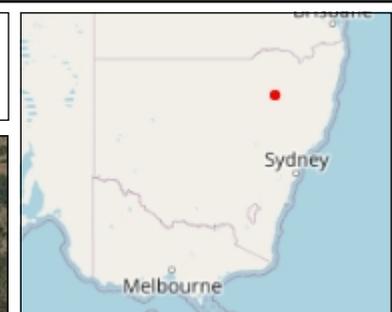
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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

Boggabri Coal
Plan 2A Mining and Rehabilitation – Year 1 (2023)
31 March 2023
Submission ID 4530

Plan 2B Mining and Rehabilitation – Year 2 (2024)



Legend

- Forecast Data Year2**
-  Forecast Disturbance
 -  Forecast Land Prepared for Rehabi
 -  Ecosystem and Land Use Establish
- Project Approval Boundary**
-  Project Approval Boundary
- Mine Operations Area**
-  Mine Operations Area
- World Imagery**
- Low Resolution 15m Imagery
 - High Resolution 60cm Imagery
 - High Resolution 30cm Imagery
- Citations**

1: 53,459 



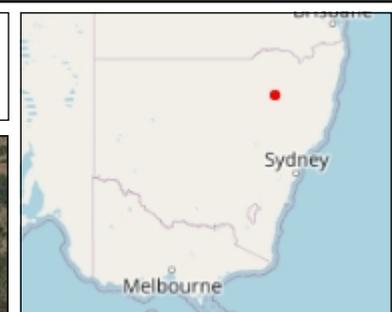
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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

Boggabri Coal
Plan 2B Mining and Rehabilitation – Year 2 (2024)
31 March 2023
Submission ID 4531

Plan 2C Mining and Rehabilitation – Year 3 (2025)



Legend

- Forecast Data Year3**
- Forecast Disturbance
 - Forecast Land Prepared for Rehabi
 - Ecosystem and Land Use Establish
- Project Approval Boundary**
- Project Approval Boundary
- Mine Operations Area**
- Mine Operations Area
- World Imagery**
- Low Resolution 15m Imagery
 - High Resolution 60cm Imagery
 - High Resolution 30cm Imagery
- Citations**

1: 53,459



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Notes

Boggabri Coal
Plan 2C Mining and Rehabilitation – Year 3 (2025)
31 March 2023
Submission ID 4532