



ARR0001510

## **BLOOMFIELD MINE ANNUAL REHABILITATION REPORT**

Monday 1 April 2024 to Monday 31 March 2025

## Summary table

| DETAIL                                 |                                |
|----------------------------------------|--------------------------------|
| Mine                                   | Bloomfield Mine                |
| Reference                              | ARR0001510                     |
| Annual report period commencement date | Monday 1 April 2024            |
| Annual report period end date          | Monday 31 March 2025           |
| Forward program                        | FWP0001420                     |
| Mining leases                          | ML 1738 (1992), CCL 761 (1973) |
| Lease holder(s)                        | Bloomfield Collieries Pty Ltd  |
| Contact                                | Simon Grassby                  |
| Date of submission                     | Tuesday 27 May 2025            |

## Important

The department may make the information in your report 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 report to be confidential, please communicate this to the department via the message function on this submission within the NSW Resources Regulator Portal.

## Mine details

## **Project description**

The Colliery operates in accordance with Project Approval (PA) 07\_0087 with approved production levels of 1.3 Mtpa of Run of Mine (ROM) coal. Mining operations may take place until 31 December 2030. The Coal Handling and Processing Plant (CHPP), associated infrastructure and tailings dam are approved under the Abel Coal Project (PA 05\_0136). The Colliery is a multi-seam, multi bench system, mining up to 13 seams or splits. Heavy earth moving equipment delivers the ROM coal to the onsite CHPP via internal haul roads. Processing includes size reduction, washing and screening. Product coal is stockpiled adjacent to the CHPP before being loaded into rail wagons at the rail loading facility and transported by rail to the Port of Newcastle. The Colliery has approval to operate 24 hours per day, seven days per week, and employs approximately 60 personnel across its operations. Areas have been progressively rehabilitated with approximately 512 hectares of disturbed land rehabilitated to da

### Life of mine

3 years

### Current development consents, leases and licences

Development consents granted under the Environmental Planning and Assessment Act 1979

SSI-22338205SSI-2233 PA07-0087 (MOD4) PA05-0136 (MOD3) PA05-0136 (MOD3) PA05-0136 (MOD3) PA05-0136 (MOD3) PA05-0136 (MOD3) PA05-0136 (MOD3)

PA05-0136 (MOD3) PA05-0136 (MOD3)

Authorisations covering the mining area granted under the Mining Act 1992

ML 1738 (1992), CCL 761 (1973)

Any other approvals, licences, or authorities issued by government agencies that are relevant to the progress of mining operation and rehabilitation activities

Water Licence 20AL217062 WAL 41506 Ancillary Mining Activity AMA1001 EPL396

Summary of the scope and/or purpose of the new applications or modifications to existing approvals (if applicable)

Mining operations under existing approval may take place until 31 December 2030. There is currently a proposed development consent modification being prepared that seeks to continue mining operations for another 5 years, until 31 December 2035. Mining is proposed to occur adjoining the Creek Cut Area and the Workshop Area. The modification does not involve an increase in production, additional equipment or additional infrastructure.

### Changes to land ownership and land use

During the reporting period there has been no changes to the land ownership and land use related to the land. Ashtonfield Pty Ltd owns most of the land at the Colliery covered by ML1738. Ashtonfield Pty Ltd is part of the Bloomfield Group.

### NSW Resources Regulator

# Surface disturbance and rehabilitation activities during the reporting period

Surface disturbance and rehabilitation activities that were conducted and an analysis of the progress against the rehabilitation schedule

During the reporting period no land was disturbed for mining operations. During the 2024 reporting period 5.9 Ha to the west of the current pit was prepared for rehabilitation however due to the proposed development consent modification rehabilitation in this area is on hold since under the proposed modification further mining may occur in the area. In the previous Forward Program, 4 Ha on the southern section of the U Cut Tailings Facility was to be progressed to ecosystem and land use establishment during this reporting period (ie Year 1). During this reporting period 7 Ha on the southern section of the U Cut Tailings Facility was progressed to ecosystem and land use establishment. This represents an additional 3 Ha which was originally planned to be carried out in Year 2 of the previous Forward Program. In addition, 8 Ha on the southern section of the S Cut and mining lease has been prepared for rehabilitation and will be progressed to ecosystem and land use establishment during period.

#### Rehabilitation planning activities that were conducted, including any specialist studies

Gaps in knowledge were identified as part of the detailed closure planning process and specialist studies were initiated in late 2021 to further inform the detailed closure plan. The following key deliverables were completed during the reporting period: • Detailed designs for the removal of large dams as part of mine closure planning. • Fieldwork completed for ecological assessments of legacy areas such as existing dams walls and other areas potentially requiring ground disturbance. • Progressing of final landform design of the U Cut Tailings Storage Facility by undertaking additional investigations of permeability of the capping material as safe access permits. • Consultation with Resource Regulator regarding completed risk assessments for old underground entries and agreement on a formal process to progress assessment by Resource Regulator.

#### Overview of subsidence repair and/or remediation works undertaken

None undertaken.

#### Overview of rehabilitation management and maintenance activities

During the reporting period rehabilitation maintenance activities involved weed control activities. Contract weed-sprayers are employed in addition to mechanical support from a slasher when required. Weed control works included rehabilitation areas and remnant



vegetation within the Project Area as well as land outside the project area under the control of the Bloomfield Group. No Class 1 or Class 2 declared weeds were identified onsite.

Details of any rehabilitation actions taken as required by any letters, notices or directions issued by government agencies, including the NSW Resources Regulator

None required.

#### Details of any rehabilitation areas that have achieved the final land use

N/A

#### **Key production milestones**

| MATERIAL                            | UNIT | FWP0001420 YEAR 1 | THIS REPORT |
|-------------------------------------|------|-------------------|-------------|
| Stripped topsoil<br>(if applicable) | (m³) | 0                 | 0           |
| Rock/overburden                     | (m³) | 4,000,000         | 3,889,000   |
| Ore                                 | (Mt) | 0.6               | 0.48        |
| Reject material <sup>1</sup>        | (Mt) | 0.2               | 0.15        |
| Product                             | (Mt) | 0.4               | 0.33        |

<sup>&</sup>lt;sup>1</sup> This includes coarse rejects, tailings and any other wastes resulting from beneficiation.

## Disturbance and rehabilitation statistics

### Current disturbance and rehabilitation progression

|    | ELEMENT                                              | UNIT | THIS REPORT |
|----|------------------------------------------------------|------|-------------|
| A1 | Total disturbance footprint –<br>surface disturbance | (ha) | 934.73      |
| В  | Total active disturbance                             | (ha) | 408.18      |
| С  | Rehabilitation – land<br>preparation                 | (ha) | 14.03       |
| D  | Ecosystem and land use establishment                 | (ha) | 0           |
| E  | Ecosystem and land use development                   | (ha) | 486.79      |
| F  | Rehabilitation completion                            | (ha) | 25.73       |

### Rehabilitation key performance indicators (KPIs)

|   | ELEMENT                                                        | UNIT | THIS REPORT |
|---|----------------------------------------------------------------|------|-------------|
| G | New disturbance area                                           | (ha) | 0           |
| н | New rehabilitation commenced<br>during annual reporting period | (ha) | 3.07        |
| I | Established rehabilitation                                     | (ha) | 512.52      |
| J | Annual rehabilitation to<br>disturbance ratio                  | %    |             |
| К | Rehabilitated land to total mine footprint                     | %    | 54.83       |

## Progressive achievement of established rehabilitation

|   | ELEMENT                                                            | UNIT | THIS REPORT |
|---|--------------------------------------------------------------------|------|-------------|
| L | Established rehabilitation for agricultural final land uses        | %    | 97.77       |
| Μ | Established rehabilitation for native ecosystem final land uses    | %    | 0           |
| Ν | Established rehabilitation for other/non-vegetated final land uses | %    | 2.23        |

### Variation to the rehabilitation schedule

#### Identify the components of the most recent forward program that were not achieved

All components of the recent forward program were achieved and exceeded.

#### Key factors that delayed progressive rehabilitation

No delays to progressive rehabilitation schedule.

Outline actions that will be included in the forward program and carried out to minimise disturbance and undertake progressive rehabilitation as far as reasonably practical

N/A

### NSW Resources Regulator

## Rehabilitation monitoring and research findings

### Rehabilitation monitoring

#### The rehabilitation monitoring carried out in the annual reporting period

The 2024-25 reporting period was not one of the monitoring years therefore no monitoring results are reported in this Annual Rehabilitation Report. The next round of monitoring will be conducted in 2025-26 reporting period and the results will be presented in the 2025-26 Annual Rehabilitation Report. As stated, this reporting period was not one of the monitoring years therefore no rehabilitation monitoring results are reported. The next round of monitoring will be presented in the next report. However, key findings of the 2023 monitoring program showed an overall consistent and satisfactory performance at rehabilitation sites across Bloomfield Colliery. Generally, results were stable or improving over previous years, with exceptions of results that can be attributed to temporary drought conditions. Overall, the results of 2023 and previous combined indicate rehabilitation sites are on a trajectory leading to the rehabilitation objective of a safe and stable landforms compatible with the surrounding landscape and with a land capability suitable for grazing.

# Status of performance against rehabilitation objectives and rehabilitation completion criteria

### The monitoring program that has been implemented

The rehabilitation monitoring program is undertaken in accordance with the Bloomfield Group's monitoring protocol as specified in the RMP. The monitoring protocol included the assessment of a range of performance metrics relating to ground cover, landscape function, erosion, vegetation, weeds and soil properties. Based on the analysed and interpreted field collected data, an overall assessment of rehabilitation performance was undertaken against the relevant rehabilitation objectives and completion criteria defined in Bloomfield's RMP. The monitoring program is based on the Landscape Function Analysis (LFA) tool developed by the CSIRO. LFA is the core of the monitoring procedures and uses visually assessed indicators of soil surface processes that gauge how effectively a hillslope is operating as a biophysical system. It is mainly based on processes involved in surface hydrology: rainfall, infiltration, runoff, erosion, plant growth and nutrient cycling. In addition to LFA monitoring, the monitoring program also assesses the performance of rehabilitated lands in terms of ground cover protection, erosion, vegetation community composition and structure, soil properties and pasture productivity.

### NSW Resources Regulator

Are all rehabilitation areas in Landform Establishment phase or higher represented in the monitoring program to assess performance against the rehabilitation objectives and approved or, if not yet approved rehabilitation completion criteria and final landform and rehabilitation plan?

Yes

Year rehabilitation areas will be included as part of the monitoring program

An appraisal of whether rehabilitation is moving towards achieving the proposed rehabilitation objectives, approved or, if not yet approved, rehabilitation completion criteria and final landform and rehabilitation plan as soon as reasonably practicable.

The 2024-25 reporting period was not one of the monitoring years therefore no monitoring results are reported in this Annual Rehabilitation Report. The next round of monitoring will be conducted in 2025-26 reporting period and the results will be presented in the 2025-26 Annual Rehabilitation Report. However, the results of 2023 monitoring program and previous programs combined indicate rehabilitation sites are on a trajectory leading to the rehabilitation objective of a safe and stable landforms compatible with the surrounding landscape and with a land capability suitable for grazing. Based on the analysed and interpreted field collected data, an overall assessment of rehabilitation performance was undertaken against the relevant rehabilitation objectives and completion criteria defined in Bloomfield's RMP.

#### **Appraisal description**

Rehabilitation is moving towards achieving the final land use as soon as reasonably practicable.

#### Rehabilitation monitoring program findings

Rehabilitation monitoring at Bloomfield is carried on a biennial basis (i.e. every 2 years) and did not commence until 2008, at the time where much of the existing rehabilitated areas were already established. Monitoring events were subsequently conducted in 2011, 2013, 2015, 2017, 2019, 2021 and 2023. The monitoring program currently includes a total of 30 monitoring sites, comprised of 28 sites within the rehabilitated areas plus two analogue sites. The 2024-25 reporting period was not one of the monitoring years therefore no monitoring will be conducted in 2025-26 reporting period and the results will be presented in the 2025-26 Annual Rehabilitation Report. As stated, this reporting period was not one of the monitoring of the monitoring years therefore no monitoring will be presented in the next report. However, key findings of the 2023 monitoring program showed an overall consistent and satisfactory performance at rehabilitation sites across Bloomfield Colliery. Generally, results were stable or improving over previous years, with exceptions of results that can be attributed to temporary drought conditions. Overall, the results of 2023 and previous combined indicate rehabilitation sites are on a trajectory leading

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to the rehabilitation objective of a safe and stable landforms compatible with the surrounding landscape and with a land capability suitable for grazing.

Performance issues and their causes including identification of any knowledge gaps that must be addressed

Nil



### Outcomes of rehabilitation research and trials

| RRT<br>NUMBER  | PROJECT/TRIAL<br>NAME            | OBJECTIVE OF TRIAL/PROJECT                                              | METHODOLOGY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EXPECTED DATE<br>OF COMPLETION | STATUS  | ON<br>TRACK? |
|----------------|----------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------|--------------|
| RRT000109<br>5 | Grazing Land<br>Monitoring Trial | Monitoring the productivity of rehabilitated pasture<br>through grazing | Measurements of soil sustainability and<br>productivity (and to determine soil<br>amelioration and fertiliser requirements).<br>Measurements and indicators of the health<br>and productivity of vegetation/pasture growth<br>on the land. Develop some key indicators of<br>and best management practices for pastures<br>on rehabilitated land. Provide<br>recommendations for best management<br>practices for future grazing. Provide a<br>comparison of the grazing potential of the<br>rehabilitated land and the adjacent analogue<br>pastures. | 31 Dec 2030                    | Ongoing | Yes          |



### Outcomes of completed trials and research

N/A

## Attachment 1 – Reporting Definitions

| REP | ORTING CATEGORY                                      | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A1  | Total disturbance footprint<br>– surface disturbance | 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.                                                                                                                                                                                                                                                                                                                              |
|     |                                                      | The total disturbance footprint is the sum of the total active disturbance,<br>decommissioning, landform establishment, growth medium development,<br>ecosystem and land use establishment, ecosystem and land use<br>development and rehabilitation completion (see definitions below).                                                                                                                                                                                                  |
|     |                                                      | Underground mining operations should not include the footprint of underground mining areas/subsidence management areas in the total disturbance footprint.                                                                                                                                                                                                                                                                                                                                |
| A2  | Underground Mining Area                              | Underground mining operations areas/subsidence management areas.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| В   | Total active disturbance                             | Includes on-lease exploration areas, stripped areas ahead of mining,<br>infrastructure areas, water management infrastructure, sewage treatment<br>facilities, topsoil stockpile areas, access tracks and haul roads, active<br>mining areas, waste rock emplacements (active/unshaped/in or out-of-pit),<br>tailings dams (active/unshaped/uncapped) and temporary stabilised areas<br>(e.g. areas sown with temporary cover crops for dust mitigation and<br>temporary rehabilitation). |
| С   | Rehabilitation – land<br>preparation                 | Includes the sum of all disturbed land within a mining lease that have<br>commenced any, or all, of the following phases of rehabilitation –<br>decommissioning, landform establishment and growth medium<br>development.<br>Refer to the glossary of terms in this document for the definition of these<br>phases of rehabilitation.                                                                                                                                                     |

| REP | ORTING CATEGORY                                                   | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D   | Ecosystem and land use<br>establishment                           | Includes the area which has been seeded/planted with the target<br>vegetation species for the intended final land use. However, vegetation<br>has not matured to a stage where it can be demonstrated that it will be<br>sustainable for the long term and or require only a maintenance regime<br>consistent with target reference/analogue sites.<br>Typically, rehabilitation areas would be in this phase for at least two years<br>(and usually more) before rehabilitation can be classified as being in the<br>ecosystem and land use development phase. This phase does not apply to<br>infrastructure areas that are being retained as part of final land use for the<br>site. |
| E   | Ecosystem and Land Use<br>Development                             | Rehabilitation has matured to a level where target revegetation outcomes<br>are on a trajectory towards meeting the final rehabilitation objectives and<br>rehabilitation completion criteria (as verified by monitoring).<br>This phase includes infrastructure areas that are to be retained for an<br>approved post mining land use, following completion of all necessary<br>measures to render the infrastructure fit for this purpose (for example<br>structural integrity).                                                                                                                                                                                                      |
| F   | Rehabilitation Completion                                         | The NSW Resources Regulator has determined in writing that the mining area has achieved the approved rehabilitation objectives and approved rehabilitation completion criteria and final landform and rehabilitation plan following the submission of <i>Form: ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate and/or notification of mine or petroleum site closure.</i>                                                                                                                                                                                                                                                                                  |
| G   | New active disturbance<br>area                                    | The area of any new active disturbance that has been created during the annual reporting period (definition A1 in Table 5).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Η   | New rehabilitation<br>commenced during annual<br>reporting period | The sum of any new rehabilitation commenced in the annual reporting period. These areas may be in the rehabilitation land preparation phase or the ecosystem & land use establishment phase (definitions C and D in Table 5).                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| I   | Established rehabilitation<br>(hectares)                          | The total area of land that is verified to be within either the ecosystem and land use development phase or the rehabilitation completion phase (definitions E & F in Table 5).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| REPORTING CATEGORY |                                                                                     | DEFINITION                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| J                  | Annual rehabilitation to<br>disturbance ratio                                       | The rehabilitation to disturbance ratio (H/G) indicates how many hectares<br>of new rehabilitation are undertaken for each hectare of land disturbed<br>during the year. A ratio of 1/1 indicates that the area of new rehabilitation<br>and disturbance in that year are the same.                                                                                              |
| К                  | % Rehabilitated land to total mine footprint                                        | The proportion of the total mine footprint (area of land that has been disturbed by past or present surface disturbance activities) that has established rehabilitation (I/A1 x 100). For open cut mining, the proportion of the total mine footprint verified to be "established rehabilitation" should substantially increase as an operation progresses towards mine closure. |
| L                  | Established rehabilitation<br>for agricultural final land<br>uses (hectares)        | The percentage of total area of land that is verified to be within either the ecosystem and land use development phase or the rehabilitation completion phase (definitions E & F in Table 5) that have been returned to an agricultural final land use.                                                                                                                          |
| М                  | Established rehabilitation<br>for native ecosystem final<br>land uses (hectares)    | The percentage of total area of land that is verified to be within either the ecosystem and land use development phase or rehabilitation completion phase (definitions E & F in Table 5) that have been returned to native ecosystem final land use.                                                                                                                             |
| N                  | Established rehabilitation<br>for other/non-vegetated<br>final land uses (hectares) | The percentage of total area of land that is verified to be within either the ecosystem and land use development phase or the rehabilitation completion phase (definitions E & F in Table 5) that have been returned to other/non-vegetated final land use.                                                                                                                      |

## Attachment 2 – Definitions

| WORD                                                   | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Active                                                 | In the context of rehabilitation, land associated with mining domains is considered<br>'active' for the period following disturbance until the commencement of<br>rehabilitation.                                                                                                                                                                                                                                                                                                                            |
| Active mining phase of rehabilitation                  | In the context of rehabilitation, the active mining phase of rehabilitation constitutes<br>the rehabilitation activities undertaken during mining operations such as salvaging<br>and managing soil resources, salvaging habitat resources, and native seed collection.<br>This phase also includes management actions taken during operations to manage risks<br>to rehabilitation and enhance rehabilitation outcomes such as selective handling of<br>waste rock and management of tailings emplacements. |
| Analogue site                                          | In the context of rehabilitation, an analogue site is a 'reference site' that represents<br>an example of the defining characteristics (such as vegetation composition and<br>structure or agricultural productivity) of the final land use. Characteristics of analogue<br>sites can be assessed to develop the rehabilitation objectives and completion criteria<br>for final land use domains.                                                                                                            |
| Annual rehabilitation<br>report and forward<br>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<br>Phase of<br>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                        | An area that has been disturbed and that requires rehabilitation.<br>This may include areas such as on-licence exploration areas, stripped areas ahead of<br>mining, infrastructure areas, water management infrastructure, sewage treatment<br>facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas,<br>waste emplacements (active/unshaped/in or out-of-pit), tailings dams<br>(active/unshaped/uncapped), and areas requiring rehabilitation that are temporarily<br>stabilised (i.e. managed to minimise dust generation and/or erosion).                                                                                                                              |
| Domain                                  | 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.                                                                                                                                                                                                                                                                                                                                        |
| Ecosystem and Land<br>Use Development   | <ul> <li>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.</li> <li>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.</li> <li>This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.</li> </ul> |
| Ecosystem and Land<br>Use Establishment | This phase of rehabilitation consists of the processes to establish the approved final<br>land use following construction of the final landform.<br>For vegetated land uses this rehabilitation phase includes establishing the desired<br>vegetation community and implementing land management activities such as weed<br>control. This phase of rehabilitation may also include habitat augmentation such as<br>installation of nest boxes.                                                                                                                                                                                                                                                               |
| Exploration                             | Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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| 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<br>Development           | 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.                                                                                                                                                                                        |
|                                        | This phase may include spreading the prepared landform with topsoil and/or subsoil<br>and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical<br>and biological characteristics of the growth media, and actions to minimise loss of<br>growth media due to erosion.                                                                                                                                 |
| 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<br>be used to approximate the progression of a biophysical process. It can be measured<br>and audited to demonstrate (and track) the progress of an aspect of rehabilitation<br>towards a desired completion criterion (i.e. defined end point). It may be aligned to<br>an established protocol and used to evaluate changes in a system. |
| Land                                   | As defined in the <i>Mining Act 1992</i> .                                                                                                                                                                                                                                                                                                                                                                                        |
| Landform<br>Establishment              | This phase of rehabilitation consists of the processes and activities required to construct the final landform.                                                                                                                                                                                                                                                                                                                   |
|                                        | In addition to profiling the surface of rehabilitation areas to the approved final<br>landform profile this phase may include works to construct surface water drainage<br>features, encapsulate problematic materials such as tailings, and prepare a substrate<br>with the desired physical and chemical characteristics (e.g. rock raking or ameliorating<br>sodic materials).                                                 |
| 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.                                                                                                                                                                                                                                                                                                                                                       |
| <ul> <li>Mine rehabilitation portal</li> <li>Means the NSW Resources Regulator's online portal that lease holders must or registered account) to:         <ul> <li>upload rehabilitation geographical information system (GIS) spatial</li> <li>develop rehabilitation GIS spatial data (using online tracing function</li> <li>generate rehabilitation plans and rehabilitation statistics using the viewer and Rehabilitation Key Performance Indicator functionalities</li> <li>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.</li> </ul> </li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 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</i> 2013.                                                                                                                                                                                                                                                                                                                                           |
| 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<br>rehabilitation           | The stages and sequences of actions required to rehabilitate disturbed land to achieve<br>the final land use. The phases of rehabilitation are:<br>active mining<br>decommissioning<br>landform Establishment<br>growth medium development<br>ecosystem and land use establishment<br>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<br>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<br>Completion criteria | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| Rehabilitation cost<br>estimate       | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| Rehabilitation<br>management plan     | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| Rehabilitation<br>objectives          | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| Rehabilitation risk<br>assessment     | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| Rehabilitation<br>schedule            | The defined timeframes for progressive rehabilitation set out in the forward program.                                                                                                                                                                                                                                                                                                                                                                                                                            |  |

| WORD                  | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Relevant stakeholders | <ul> <li>Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes: <ul> <li>the relevant development consent authority</li> <li>the local council</li> <li>the relevant landholder(s)</li> <li>community consultative committee (if required under the development consent) or equivalent consultative group</li> <li>affected land holder(s)</li> <li>government agencies relevant to the final land use</li> <li>affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities)</li> <li>local Aboriginal communities, and</li> <li>any other person or body determined by the Minister to be a relevant stakeholder in relation to a mining lease.</li> </ul> </li> </ul> |  |
| 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   | <b>rbance</b> Includes activities that disturb the surface of the mining area, including mining operations, ancillary mining activities and exploration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| Tailings              | metals and minerals have been extracted from the mined ore, and any process water <sup>2</sup> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| Waste                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |

<sup>&</sup>lt;sup>2</sup> Commonwealth of Australia (DITR), 2007. *Tailings Management*.



## Attachment 3 – Rehabilitation Complaints

| DATE COMPLAINANT COMPLAINT DETAILS | RESPONSE DETAILS | STATUS OF<br>RESPONSE | DATE RESPONSE<br>COMPLETED<br>(IF APPLICABLE) |
|------------------------------------|------------------|-----------------------|-----------------------------------------------|
|------------------------------------|------------------|-----------------------|-----------------------------------------------|



## Attachment 4 – Stakeholder consultation

| DATE        | STAKEHOLDER                                   | CONSULTATION<br>ACTIVITIES AND FORMS                     | MATTERS SUBJECT TO CONSULTATION                                                                                                                       | ACTIONS TAKEN                                                                                  |
|-------------|-----------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 8 Jul 2024  | Community Consultation<br>Committee           | On site meetings (multiple<br>8/7/24, 18/11/24, 10/3/25) | Progress update development consent modification;<br>biodiversity offsets; general review of operations and<br>rehabilitation.                        | Refer minutes CCC meetings on Bloomfield website                                               |
| 16 Jun 2023 | NSW Department of Planning<br>and Environment | On site meeting and site inspection.                     | Operations and rehabilitation inspection; progress on development consent modification.                                                               | No actions required                                                                            |
| 13 Apr 2024 | Community                                     | Hunter Valley Steamfest sponsorship and exhibition       | Provide exhibition and consultation with community members on progress of Development Consent modification.                                           | No actions required                                                                            |
| 15 Oct 2024 | NSW Resource Regulator                        | On site meeting and site inspection.                     | Revegetation Targeted Assessment Program (TAP).<br>Focused on how revegetation is being undertaken to<br>achieve sustainable rehabilitation outcomes. | Implementation of recommendations ongoing and subject to future TAP's undertaken by regulator. |

NSW Resources Regulator

## Attachment 5 – Plans

2025 Plan 1A.pdf 2025 Plan 1B.pdf

Annual Report (LARGE MINE) v1.11





FWP0001638

## BLOOMFIELD MINE FORWARD PROGRAM

Tuesday 1 April 2025 to Friday 31 March 2028

## Summary

| DETAIL                                   |                                |
|------------------------------------------|--------------------------------|
| Mine                                     | Bloomfield Mine                |
| Reference                                | FWP0001638                     |
| Forward program commencement date        | Tuesday 1 April 2025           |
| Forward program end date                 | Friday 31 March 2028           |
| Forward program revision (if applicable) |                                |
| Contact                                  | Simon Grassby                  |
| Mining leases                            | ML 1738 (1992), CCL 761 (1973) |
| Project location                         | Bloomfield Collieries Pty Ltd  |
| Date of submission                       | Tuesday 27 May 2025            |

## 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 Colliery operates in accordance with Project Approval (PA) 07\_0087 with approved production levels of 1.3 Mtpa of Run of Mine (ROM) coal. Mining operations may take place until 31 December 2030. The Coal Handling and Processing Plant (CHPP), associated infrastructure and tailings dam are approved under the Abel Coal Project (PA 05\_0136). The Colliery is a multi-seam, multi bench system, mining up to 13 seams or splits. Heavy earth moving equipment delivers the ROM coal to the onsite CHPP via internal haul roads. Processing includes size reduction, washing and screening. Product coal is stockpiled adjacent to the CHPP before being loaded into rail wagons at the rail loading facility and transported by rail to the Port of Newcastle. The Colliery has approval to operate 24 hours per day, seven days per week, and employs approximately 60 personnel across its operations. Areas have been progressively rehabilitated with approximately 512 hectares of disturbed land rehabilitated to date

### Description of surface disturbance activities

### **Exploration activities**

There are currently no proposed exploration activities for the next 3 years. While there are no currently proposed exploration activities, in Year 1 there will be a drilling campaign for the purpose of refining the existing fugitive gas model.

#### **Construction activities**

No further construction activities are planned for the Colliery.

#### Mining schedule

Mining development method and sequencing and general mine features.

The remaining area to be mined is located in the south-western section of ML1738. Mining is to continue within the combined Creek Cut and S Cut pit area over the duration of the forward plan. Mining will advance to the west and north and will cease with the completion of mining. The mining technique at Bloomfield Colliery is a multi-seam bench system which mines numerous seams and splits, mining down to the Big Ben seam.



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

Waste rock mined in the combined S Cut and Creek Cut pits will continue to be placed in pit behind active mining. Following blasting the overburden materials will be loaded by excavator into 180t and 220t capacity haul trucks and transported to the nominated in-pit emplacement area. Load and haul placement of the overburden material will be supplemented by throw blasting and dozer push wherever possible. Backfilled areas are shaped for rehabilitation when filling reaches final landform design.

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

The Bloomfield Coal Handling and Preparation Plant (CHPP) will continue to operate as installed. Heavy earth moving equipment delivers the ROM coal to the onsite CHPP via internal haul roads. ROM coal is processed at the CHPP. Processing includes size reduction, washing and screening. Product coal is stockpiled adjacent to the CHPP before being loaded into rail wagons at the Bloomfield rail loading facility and transported by rail to the Port Waratah Coal Services terminal at the Port of Newcastle. The CHPP coarse reject is currently mixed with overburden material and placed back into open cut pits. This process will continue throughout the forward program which assists in filling voids in preparation for surface rehabilitation. Fine tailings emplacement will continue at the U cut tailings facility in Years 1 and 2. During Year 2 emplacement of fine tailings will move to the open cut void. Tailings deposition lines will continue to be repositioned to suit the progressive tailings capping and rehabilitation program, with secondary flocculation continued to be used if required.

#### Waste disposal and materials handling operations.

General waste minimisation principles (i.e., reduce, re-use and recycling) are currently implemented at the Colliery to minimise the quantity of wastes that require off-site disposal. Key waste streams currently being produced at the Colliery include: • Waste Oil and oil filters: Stored in specific receptacles and collected periodically by licensed waste contractors. • Waste metal: The Colliery has a scrap metal program which has a high rate of onsite re-use of steel. If steel is deemed not suitable for re-use, scrap metal is stored in specific receptacles and sold for recycling. • Waste tyres: up to 50 tonnes of used tyres can be disposed in the mine void. In accordance with EPL requirements, waste tyres will be covered by at least 20 m of inert material beneath rehabilitated surfaces. Disposal volumes reported annually to the EPA. • Hydrocarbon contaminated soils: Hydrocarbon contaminated soils will be treated onsite and tested in a land farm facility as per the Rehabilitation Action Plan (RAP) before disposal in open cut pit. General waste: General waste is placed in 1.5m3 and 3m3 bins and collected by licensed waste contractor for disposal. • Wastepaper and cardboard: Recycling bins are provided for wastepaper and cardboard. These are regularly serviced by a licensed waste contractor. All general domestic waste and general recyclable products will continue to be collected by an appropriately licensed contractor.



### **Key production milestones**

| MATERIAL                            | UNIT              | YEAR 1    | YEAR 2    | YEAR 3    |
|-------------------------------------|-------------------|-----------|-----------|-----------|
| Stripped topsoil<br>(if applicable) | (m <sup>3</sup> ) | 0         | 0         | 0         |
| Rock/overburden                     | (m³)              | 4,700,000 | 5,200,000 | 5,600,000 |
| Ore                                 | (Mt)              | 0.6       | 0.7       | 0.6       |
| Reject material <sup>1</sup>        | (Mt)              | 0.2       | 0.3       | 0.2       |
| Product                             | (Mt)              | 0.4       | 0.4       | 0.4       |

<sup>&</sup>lt;sup>1</sup> This includes coarse rejects, tailings and any other wastes resulting from beneficiation.



## Three-year rehabilitation forecast

### Rehabilitation planning schedule

#### **Rehabilitation planning schedule**

Rehabilitation Schedule Year 1 (YEM2026): In Year 1, mining will continue within the combined Creek Cut and S Cut area. An area of 5.9 Ha to the west of the current active pit will remain prepared for rehabilitation with the landform established pending outcome of Development Consent (PA07\_0087) Modification. An 8 Ha area of land on the southern section of S Cut and mining lease will progress to ecosystem and land use establishment with the application of ameliorants and seeding. A further area of 2.3 Ha on the western section of the U Cut Tailings Storage Facility will be shaped in preparation for rehabilitation. Rehabilitation Schedule Year 2 (YEM2027): In Year 2, mining will continue within the combined Creek cut and S Cut area. An area of 6.1 Ha of land on the western section of the U Cut Tailings Storage Facility will progress to ecosystem and land use establishment with the application of ameliorants and seeding. An additional area of 3.4 Ha on the on the eastern section of the U Cut Tailings Storage Facility will progress to ecosystem and land use establishment with the application of ameliorants and seeding. **Rehabilitation Schedule** Year 3 (YEM2028): In Year 3, mining will continue within the combined Creek cut and S Cut area. An area of 3.5 Ha on the northern southern section of the U Cut Tailings Storage Facility will be shaped in preparation for rehabilitation.

#### Stakeholder consultation

Community Consultative Committee – 4 monthly meetings.
 Workforce consultation – in particular regarding mine life.
 Government departments (Resource Regulator, Department of Planning and Environment, EPA, other) – DA Modification and closure planning, as required.

#### Rehabilitation studies, risk assessments and/or design work

Detailed closure studies were undertaken to fill in knowledge gaps identified as part of the detailed rehabilitation risk assessment process. Some recommendations require further studies to be carried out over the Forward Program: • To assist finalising final landform design of the U Cut Tailings Storage Facility undertake further investigation of permeability of the capping material in the capping design process during the Forward Program as safe access permits. • Fieldwork has been completed on legacy areas such as existing dam walls requiring further ecological assessment with the preparation of the biodiversity assessment report to be finalised during Year 1. • Completion and submission of ESF2 applications to Resource Regulator covering old underground entries identified in the completed risk assessment report and recommendations for sealing to be carried out during the Forward



Program. • Update of existing Rehabilitation Risk Assessment as identified in the Resource Regulator's Revegetation TAP.



### Rehabilitation research and trials

| RRT<br>NUMBER | PROJECT/TRIAL NAME               | OBJECTIVE OF TRIAL/PROJECT                                           | METHODOLOGY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EXPECTED DATE<br>OF COMPLETION | STATUS  |
|---------------|----------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------|
| RRT0001095    | Grazing Land Monitoring<br>Trial | Monitoring the productivity of rehabilitated pasture through grazing | Measurements of soil sustainability and<br>productivity (and to determine soil<br>amelioration and fertiliser requirements).<br>Measurements and indicators of the health<br>and productivity of vegetation/pasture<br>growth on the land. Develop some key<br>indicators of and best management<br>practices for pastures on rehabilitated land.<br>Provide recommendations for best<br>management practices for future grazing.<br>Provide a comparison of the grazing<br>potential of the rehabilitated land and the<br>adjacent analogue pastures. | 31 Dec 2030                    | Ongoing |

### Rehabilitation maintenance and corrective actions

Rehabilitation monitoring is undertaken in accordance with the Rehabilitation Management Plan. The monitoring program is based on the Landscape Function Analysis (LFA) tool developed by the CSIRO and is carried out on a biennial basis. The next program is scheduled for late 2025 (Year 1). In addition, a monitoring program is undertaken to assess progress in achieving a long term sustainable agricultural land use of the rehabilitated land. These areas of rehabilitated mined lands have been grazed with beef cattle. The program is carried out on a biennial basis and is run over a full year on a quarterly basis to provide data covering summer, autumn, winter and spring conditions. Maintenance activities to be conducted during the forward program includes ongoing weed treatment across disturbed and undisturbed areas of the Mining Lease. Also, the annual feral dog baiting program will continue in consultation with large land holders in the area and Local Land Services. It is envisaged that this monitoring / inspection program will be continued as required until it can be demonstrated that the rehabilitation has satisfied the closure criteria. Specific maintenance and corrective actions to be progressed in the next three years and progress of current actions will be included in Annual Rehabilitation Reports.

## Rehabilitation schedule

For this Forward Program the rehabilitation schedule covering Year 1, Year 2 and Year 3 is outlined in the previous sections. Progressive rehabilitation will be undertaken as soon as practical following the active mining phase. In the short term, priority will be given to the completion of rehabilitation along the southern boundary of the site and the U Cut Tailings Storage Facility.

## Completion of rehabilitation

None planned at this stage.

## Subsidence remediation for underground operations

Sink holes associated with shallow workings occur infrequently in the rehabilitated areas on the western side of the Mining Lease. Operations currently being undertaken at the Colliery do not include underground mining, and therefore risk of subsidence is not increased. If subsidence potholes are identified, the standard management procedure is to flag off and isolate the depression from access, back fill and monitor the area for further subsidence. Once deemed stable, the area will then be rehabilitated, and periodic inspections will continue. Waste emplacement areas are monitored for signs of uneven or excessive displacement that may alter drainage patterns or present a safety risk. If excessive displacement is identified, then repair works will be carried out.



## Progressive mining and rehabilitation statistics

# Three-yearly forecast cumulative disturbance and rehabilitation progression

|    | FORECAST                                                        | UNIT | YEAR 1 | YEAR 2 | YEAR 3 |
|----|-----------------------------------------------------------------|------|--------|--------|--------|
| A1 | Total disturbance<br>footprint - surface<br>disturbance         | (ha) | 934.73 | 934.73 | 934.73 |
| В  | Total active disturbance                                        | (ha) | 392    | 382.53 | 379.02 |
| Ρ  | Total new area of land<br>proposed for active<br>rehabilitation | (ha) | 16.18  | 25.65  | 29.16  |

### Rehabilitation key performance indicators (KPIs)

|   | FORECAST                                                                                | UNIT | YEAR 1 | YEAR 2 | YEAR 3 |
|---|-----------------------------------------------------------------------------------------|------|--------|--------|--------|
| 0 | Total new disturbance<br>area during reporting<br>period                                | (ha) |        |        |        |
| Ρ | Total new area of land<br>proposed for<br>rehabilitation during the<br>reporting period | (ha) | 16.18  | 9.47   | 3.51   |

Q Annual rehabilitation to disturbance ratio

## Attachment 1 – Reporting Definitions

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

| REPORTING CATEGORY | DEFINITION                                                                                                                                                                                                                                                                                     |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0                  | 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).                                                                                                                                               |
| Ρ                  | 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<br>of new rehabilitation are undertaken for each hectare of land disturbed<br>during the three years. A ratio of 1/1 indicates that the area of new<br>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<br>'active' for the period following disturbance until the commencement of<br>rehabilitation.                                                                                                                                                                                                                                                                                                                            |
| Active mining phase of rehabilitation                  | In the context of rehabilitation, the active mining phase of rehabilitation constitutes<br>the rehabilitation activities undertaken during mining operations such as salvaging<br>and managing soil resources, salvaging habitat resources, and native seed collection.<br>This phase also includes management actions taken during operations to manage risks<br>to rehabilitation and enhance rehabilitation outcomes such as selective handling of<br>waste rock and management of tailings emplacements. |
| Analogue site                                          | In the context of rehabilitation, an analogue site is a 'reference site' that represents<br>an example of the defining characteristics (such as vegetation composition and<br>structure or agricultural productivity) of the final land use. Characteristics of analogue<br>sites can be assessed to develop the rehabilitation objectives and completion criteria<br>for final land use domains.                                                                                                            |
| Annual rehabilitation<br>report and forward<br>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<br>Phase of<br>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                        | An area that has been disturbed and that requires rehabilitation.<br>This may include areas such as on-licence exploration areas, stripped areas ahead of<br>mining, infrastructure areas, water management infrastructure, sewage treatment<br>facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas,<br>waste emplacements (active/unshaped/in or out-of-pit), tailings dams<br>(active/unshaped/uncapped), and areas requiring rehabilitation that are temporarily<br>stabilised (i.e. managed to minimise dust generation and/or erosion).                                                                                                                              |
| Domain                                  | 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.                                                                                                                                                                                                                                                                                                                                        |
| Ecosystem and Land<br>Use Development   | <ul> <li>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.</li> <li>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.</li> <li>This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.</li> </ul> |
| Ecosystem and Land<br>Use Establishment | This phase of rehabilitation consists of the processes to establish the approved final<br>land use following construction of the final landform.<br>For vegetated land uses this rehabilitation phase includes establishing the desired<br>vegetation community and implementing land management activities such as weed<br>control. This phase of rehabilitation may also include habitat augmentation such as<br>installation of nest boxes.                                                                                                                                                                                                                                                               |
| Exploration                             | Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## BLOOMFIELD MINE FORWARD PROGRAM

FWP0001638 | Tuesday 1 April 2025 to Friday 31 March 2028

| 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<br>Development           | This phase of rehabilitation consists of activities required to establish the physical,<br>chemical and biological components of the substrate required to establish the desired<br>vegetation community (including short lived pioneer species.<br>This phase may include spreading the prepared landform with topsoil and/or subsoil<br>and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical<br>and biological characteristics of the growth media, and actions to minimise loss of<br>growth media due to erosion. |
| 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<br>be used to approximate the progression of a biophysical process. It can be measured<br>and audited to demonstrate (and track) the progress of an aspect of rehabilitation<br>towards a desired completion criterion (i.e. defined end point). It may be aligned to<br>an established protocol and used to evaluate changes in a system.                                                                                                                     |
| Land                                   | As defined in the <i>Mining Act 1992.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Landform<br>Establishment              | This phase of rehabilitation consists of the processes and activities required to construct the final landform.<br>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).                                                              |
| 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<br>portal | <ul> <li>Means the NSW Resources Regulator's online portal that lease holders must use (via a registered account) to: <ul> <li>upload rehabilitation geographical information system (GIS) spatial data</li> <li>develop rehabilitation GIS spatial data (using online tracing functions)</li> <li>generate rehabilitation plans and rehabilitation statistics using the map viewer and Rehabilitation Key Performance Indicator functionalities.</li> </ul> </li> <li>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.</li> </ul> |
| 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</i> 2013.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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.                                                                                                                                                                                                                                   |

### **BLOOMFIELD MINE FORWARD PROGRAM** FWP0001638 | Tuesday 1 April 2025 to Friday 31 March 2028

| WORD                                  | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Phases of<br>rehabilitation           | The stages and sequences of actions required to rehabilitate disturbed land to achieve<br>the final land use. The phases of rehabilitation are:<br>active mining<br>decommissioning<br>landform Establishment<br>growth medium development<br>ecosystem and land use establishment<br>ecosystem and land use development.                                                                                                                                                                                        |
| Progressive<br>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<br>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<br>Completion criteria | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rehabilitation cost<br>estimate       | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rehabilitation<br>management plan     | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rehabilitation<br>objectives          | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rehabilitation risk<br>assessment     | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rehabilitation<br>schedule            | The defined timeframes for progressive rehabilitation set out in the forward program.                                                                                                                                                                                                                                                                                                                                                                                                                            |

| WORD                  | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relevant stakeholders | <ul> <li>Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes: <ul> <li>the relevant development consent authority</li> <li>the local council</li> <li>the relevant landholder(s)</li> <li>community consultative committee (if required under the development consent) or equivalent consultative group</li> <li>affected land holder(s)</li> <li>government agencies relevant to the final land use</li> <li>affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities)</li> <li>local Aboriginal communities, and</li> <li>any other person or body determined by the Minister to be a relevant stakeholder in relation to a mining lease.</li> </ul> </li> </ul> |
| 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 <sup>2</sup> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Waste                 | Has the same meaning as that term under the <i>Protection of the Environment Operations Act 1997</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

<sup>&</sup>lt;sup>2</sup> Commonwealth of Australia (DITR), 2007. *Tailings Management*.



## Attachment 3 – Plans

2025 Plan 2A Year 1.pdf 2025 Plan 2B Year 2.pdf 2025 Plan 2C Year 3.pdf

Forward Program (LARGE MINE) v2.5