NSW GOVERNMENT

NSW Resources Regulator

ARR0001050

BENGALLA MINE ANNUAL REHABILITATION REPORT

Saturday 1 January 2022 to Saturday 31 December 2022

Contents

Summary table

DETAIL	
Mine	Bengalla Mine
Reference	ARR0001050
Annual report period commencement date	Saturday 1 January 2022
Annual report period end date	Saturday 31 December 2022
Forward program	FWP0001057
Mining leases	ML 1469 (1992), ML 1397 (1992), ML 1729 (1992), ML 1450 (1992), ML 1711 (1992), ML 1728 (1992), ML 1796 (1992)
Lease holder(s)	Bengalla Mining Company Pty Limited
Contact	Craig White
Date of submission	Friday 31 March 2023

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

Bengalla Mine (Bengalla) is located approximately 4 km west of Muswellbrook and is operated by Bengalla Mining Company Pty Limited (BMC) on behalf of the Bengalla Joint Venture (New Hope Bengalla Pty Limited (80%) and Taipower Bengalla Pty Limited (20%)).

Bengalla operates in accordance with development consent State Significant Development 5170 (SSD 5170) which was granted on 3 March 2015 and has been modified on five occasions at the date of this Forward Program. SSD 5170 (as modified) provides approval for open cut multi-seam coal mining operations until 28 February 2039. Mining advances towards the west, extracting up to 15 Mtpa of ROM coal utilising dragline and truck and shovel mining methods. Progressive rehabilitation of the Overburden Emplacement Area (OEA) is undertaken as the final landform is achieved. ROM coal is processed at the Bengalla CHPP to produce a thermal coal product which is then loaded onto trains at the rail loading facility for transport.

Life of mine

44 years

Current development consents, leases and licences

Development consents granted under the *Environmental Planning and Assessment Act 1979*

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Authorisations covering the mining area granted under the *Mining Act 1992*

ML 1469 (1992), ML 1397 (1992), ML 1729 (1992), ML 1450 (1992), ML 1711 (1992), ML 1728 (1992), ML 1796 (1992)

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

EPBC Approval 2012/6378
Environment Protection Licence (EPL) 6538

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

Prior to the Reporting Period BMC sought a modification to SSD-5170 under section 4.55(2) of the EP&A Act (Modification 5) to facilitate additional mining related activities. The Modification Application and supporting Modification Report was placed on public exhibition from 13 January 2022 until 28 January 2022. Five submissions were received by the Department of Planning and Environment (DPE) during the public exhibition period. A Submissions Report and supplementary Response to Additional Information was submitted during the Reporting Period to respond to issues raised during the exhibition period.

Modification 5 was approved on the 24 February 2023 (outside of the Reporting Period (27 June 2022 to 31 December 2022)) and includes the following activities:

- Operation of a mobile rock crushing facility and ancillary equipment, and use of crushed rock onsite;

- Geotechnical investigations and prospecting operations;

- Realignment of the Western Diversion Levee within the approved Disturbance Boundary;

- Enlargement of the ROM coal stockpile;

- Upgrade of the Southern Endwall Road adjacent to the Southern visual bund, which may require removal of part of the visual bund (to be replaced by an equivalent measure);

- Disposal of tyres in pit; and

- Minor administrative changes to conditions of SSD-5170.

Other changes included EL9431 was granted on the 4 July 2022 extending beyond ML1729 to the west.

Changes to land ownership and land use

There have been no changes to BMC land ownership and related land use during the Reporting Period relevant to SSD-5170 (as modified). Certain private properties have rights to acquisition or mitigation upon request to BMC.

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

Mining operations continued to progress to the west as approved by SSD-5170 (as modified). The main OEA is located to the east of the active mining area and continued to advance to the west. Surface disturbance activities relevant to Bengalla and in accordance with SSD-5170 (as modified) occurred. During the Reporting Period absorption of Mount Pleasant Operation (now redundant) rail area and associated infrastructure and disturbance within BMC ML 1796 south of Wybong Road into Bengalla was completed.

Large-scale remediation, rehabilitation and revegetation works are ongoing at Bengalla. The progressive installation of HDWV primarily over existing rehabilitation areas across the southern and eastern OEA over a five year-period from 2020-2024 is continuing. An effect of this HDWV installation is that rehabilitation polygons relative to the original rehabilitation areas and the HDWV areas are overlapping resulting in the area of Ecosystem and Land Use Establishment being larger than what is insitu at Bengalla.

No new rehabilitation was completed during the Reporting Period. BMC applied to the Secretary for approval in December 2022 to change the annual Reporting Period and date for submission of the Annual Rehabilitation Report and Forward Program so that it relates to the previous calendar year and is due by the end of March each year. As such the schedule presented in the previous Forward Program does not align with this Annual Rehabilitation Report.

Rehabilitation planning activities that were conducted, including any specialist studies

Rehabilitation planning activities were completed during the Reporting Period to align Bengalla with the requirements under the NSW Rehabilitation Reforms. In accordance with clause 7 of Schedule 8A of the Mining Regulation 2016, BMC completed a rehabilitation risk assessment (Risk Assessment) in March 2022 to:

a) Identify, assess and evaluate the rehabilitation related risks to the Rehabilitation Objectives, Rehabilitation Completion Criteria and Final Land Use; and

b) Identify the measures to be implemented to eliminate, minimise or mitigate those risks.

The Risk Assessment identified a number of controls which are proposed to be implemented to manage rehabilitation risks during each rehabilitation phase. The controls identified during the Risk Assessment have been incorporated into the Rehabilitation Management Plan (RMP) where appropriate.

Due to the ongoing La Nina access to the OEA was limited to conduct maintenance. Hence focus regarding maintenance of the OEA was to undertake design where required to enable repairs when safe to do so, for example, a design was undertaken on a geofluv structure.

Overview of subsidence repair and/or remediation works undertaken

No underground mining is undertaken at Bengalla and hence no subsidence repairs were undertaken during the reporting period.

Overview of rehabilitation management and maintenance activities

Ongoing weed and feral animal inspections and control programs continued to be undertaken in accordance with the Biodiversity Management Plan. Weed and pest control at Bengalla is undertaken through targeted chemical and baiting applications. During 2022, rehabilitation areas and topsoil stockpiles were treated for weed infestation. Target weed species included African boxthorn, galenia and prickly pear. Chemicals used during the Reporting Period include Glyphosate with metsulfuron, Grazon Extra and Garlon 600.

A pig control program was conducted during 2022 at various locations across Bengalla. Feral pigs were trapped utilising a penning system and then disposed of humanely. A dog baiting program at Bengalla occurred in the Autumn and Spring. Each program was undertaken in conjunction with Local Land Service and local wild dog associations. This initiative formed part of a broader scale baiting program targeting foxes and wild dogs in the Hunter Valley. Baiting included 1080 poison baits in addition to ejector capsule baits and each baiting program period extended for three.

Due to the ongoing La Nina access to the OEA was limited to conduct maintenance. Hence focus regarding maintenance of the OEA was to undertake design where required to enable repairs when safe to do so, for example, a design was undertaken on a geofluv structure.

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

No regulatory actions in relation to rehabilitation have been received by BMC during the Reporting Period.

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

Whilst monitoring has demonstrated that areas of rehabilitation are trending towards the final land use objectives and completion criteria, no areas of rehabilitation have achieved Rehabilitation Completion during the Reporting Period.

Key production milestones

MATERIAL	UNIT	FWP0001057 YEAR 1	THIS REPORT
Stripped topsoil (if applicable)	(m^3)	47,083	51,196
Rock/overburden	(m^3)	62.5	24.6
Ore	(Mt)	12.7	5.3
Reject material[1]	(Mt)	2	1.4
Product	(Mt)	10.3	4

[1] 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
A	**Total surface disturbance footprint**	(ha)	1,375.92
B	**Total active disturbance**	(ha)	879.66
C	**Land prepared for rehabilitation**	(ha)	0
D	**Ecosystem and land use establishment**	(ha)	496.26
E	**Ecosystem and land use development**	(ha)	0
F	**Rehabilitation completion**	(ha)	0

Rehabilitation key performance indicators (KPIs)

	ELEMENT	UNIT	THIS REPORT
G	**Total new active disturbance area**	(ha)	NA - this value will display after 2nd year ARR submission as calculation relies on comparison between sequential yearly ARR data
H	**New rehabilitation commenced during annual reporting period**	(ha)	NA - this value will display after 2nd year ARR submission as calculation relies on comparison between sequential yearly ARR data
I	**Established rehabilitation**	(ha)	0
J	**Annual rehabilitation to disturbance ratio**	%	NA - this value will display after 2nd year ARR submission as calculation relies on comparison between sequential yearly ARR data
K	**Rehabilitated land to total mine footprint**	%	0

Progressive achievement of established rehabilitation

	ELEMENT	UNIT	THIS REPORT
L	**Established rehabilitation - agricultural final land uses**	%	0
M	**Established rehabilitation - native ecosystem final land uses**	%	0
N	**Established rehabilitation - other/non-vegetated final land uses**	%	0

Variation to the rehabilitation schedule

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

Rehabilitation at Bengalla is undertaken in accordance with SSD-5170 (as modified), the Forward Program and the life of mine rehabilitation schedule subject to operational requirements. No new rehabilitation was completed during the Reporting Period.

Key factors that delayed progressive rehabilitation

BMC applied to the Secretary for approval (via the NSW Resources Regulator portal) in December 2022 to change the annual Reporting Period and date for submission of the Annual Rehabilitation Report and Forward Program so that it relates to the previous calendar year and is due by the end of March each year. As such the schedule presented in the previous Forward Program does not align with this Annual Rehabilitation Report.

This Annual Rehabilitation Report has been prepared to provide a summary of the rehabilitation performance of Bengalla over the Reporting Period from 27 June 2022 to 31 December 2022. The rehabilitation schedule predictions for Year 1 in the most recent Forward Program covered the period from 27 June 2022 to 26 June 2023.

Additional delays have been experienced as a result of two years of above average rainfall since early 2020. The Muswellbrook region has also experienced a number of heavy rainfall events which have impacted landform stability and increased surface erosion.

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

Rehabilitation at Bengalla is undertaken progressively and as soon as practicable after the completion of surface preparation. Inert capping material and topsoil is spread over areas to be

rehabilitated, to maintain topsoil quality and take advantage of native seed banks if present. This minimises the areas of disturbed land; reduces future rehabilitation liabilities; minimises visual impacts and helps suppress the potential for wind-blown dust and erosion.

Seeding of a rehabilitation area commences as soon as practicable after scarification, if required, tube stock may be planted. Seeding and tube stock planting is preferably sown in Autumn and/or Spring when there is seasonal rain with cooler growing conditions. A cover crop may be applied if meteorological or seasonal conditions are not conducive to rehabilitation species seeding or the pasture rehabilitation species seed is unavailable.

Due to the ongoing La Nina access to the OEA was limited to conduct maintenance. Hence focus regarding maintenance of the OEA was to undertake design where required to enable repairs when safe to do so, for example, a design was undertaken on a geofluv structure.

Rehabilitation monitoring and research findings

Rehabilitation monitoring

The rehabilitation monitoring carried out in the annual reporting period

Rehabilitation at Bengalla is carried out progressively and as soon as reasonably practicable following disturbance. The Rehabilitation Monitoring and Audit 2022 (Koru Environmental, 2023) concluded:

· The Class III pasture rehabilitation continued to display a satisfactory performance, with high vegetative cover dominated by productive and palatable tropical pasture grasses, high biomass and feed quality, and minimal weed incidence;

· Areas of historic HDWV rehabilitation are well established and have shown minimal change in condition during the Reporting Period with some infill planting still required;

· Recent HDWV rehabilitation (established since 2020) was variable in condition, influenced by the different revegetation techniques and approaches implemented.

Status of performance against rehabilitation objectives and rehabilitation completion criteria

The monitoring program that has been implemented

The Rehabilitation Monitoring and Audit 2022 (Koru Environmental, 2023) includes an assessment of rehabilitation performance against the proposed rehabilitation objectives, proposed rehabilitation completion criteria and final landform design described in the RMP. The report recommended remedial actions including:

· Suggested erosion repairs required at contour banks, drainage channels and more generally across the rehabilitated landform;

· Priority areas and species for any upcoming weed control programs;

· Continued implementation of the HDWV program including infill planting;

· Increased focus on habitat augmentation and placement of features; and

· Continued implementation of the Annual Monitoring Program to align with the RMP.

Generally, the completed rehabilitation areas are progressing towards the achievement of the proposed rehabilitation objectives, proposed rehabilitation completion criteria and final landform design described in the RMP.

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?

NO

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

N/A

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.

Generally, the completed rehabilitation areas are progressing towards the achievement of the proposed rehabilitation objectives, proposed rehabilitation completion criteria and final landform design described in the RMP. As noted above, there are some areas which require further attention and are subject to ongoing work programs.

Appraisal description

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

Rehabilitation monitoring program findings

Rehabilitation monitoring at Bengalla is undertaken annually through the implementation of the following:

- A transect-based monitoring program; and
- A rehabilitation walkover audit.

During the Reporting Period, rehabilitation monitoring was undertaken during November 2022 in accordance with the requirements of the RMP. The program focussed on new areas of retrofitted HDWV and the continued long term monitoring program in the OEA rehabilitation areas of pasture and HDWV rehabilitation.

Large-scale remediation, rehabilitation and revegetation works are ongoing at Bengalla to establish HDWV across the southern and eastern OEA over a five year-period from 2020-2024.

Visual inspections of rehabilitation areas are undertaken to confirm appropriate landform construction vegetative cover, incidents of weeds and feral animals, water storages and quality, evidence of erosion and any visible evidence of hazards or potential risks to successful rehabilitation.

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

Modification 5 was approved on the 24 February 2023. Schedule 3, Condition 47 of SSD-5170 (as modified) requires the preparation of a Rehabilitation Management Strategy. BMC will submit the strategy by 24 February 2024 following consultation with relevant stakeholders.

Outcomes of rehabilitation research and trials

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	UPDATED DATE OF COMPLETION	STATUS	ON TRACK?	ON TRACK UPDATE
ARR0001050								

Outcomes of completed trials and research

N/A

Attachment 1 – Reporting Definitions

REPORTING CATEGORY		DEFINITION
A1	Total disturbance footprint – 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, decommissioning, landform establishment, growth medium development, ecosystem and land use establishment, ecosystem and land use 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.
B	Total active disturbance	Includes on-lease exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste rock emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped) and temporary stabilised areas (e.g. areas sown with temporary cover crops for dust mitigation and temporary rehabilitation).
C	Rehabilitation – land preparation	Includes the sum of all disturbed land within a mining lease that have commenced any, or all, of the following phases of rehabilitation– decommissioning, landform establishment and growth medium development. Refer to the glossary of terms in this document for the definition of these phases of rehabilitation.

REPORTING CATEGORY		DEFINITION
D	Ecosystem and land use establishment	Includes the area which has been seeded/planted with the target vegetation species for the intended final land use. However, vegetation has not matured to a stage where it can be demonstrated that it will be sustainable for the long term and or require only a maintenance regime consistent with target reference/analogue sites. Typically, rehabilitation areas would be in this phase for at least two years (and usually more) before rehabilitation can be classified as being in the ecosystem and land use development phase. This phase does not apply to infrastructure areas that are being retained as part of final land use for the site.
E	Ecosystem and Land Use Development	Rehabilitation has matured to a level where target revegetation outcomes are on a trajectory towards meeting the final rehabilitation objectives and rehabilitation completion criteria (as verified by monitoring). This phase includes infrastructure areas that are to be retained for an approved post mining land use, following completion of all necessary measures to render the infrastructure fit for this purpose (for example 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 *Form: ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate and/or notification of mine or petroleum site closure.*
G	New active disturbance area	The area of any new active disturbance that has been created during the annual reporting period (definition A1 in Table 5).
H	New rehabilitation commenced during annual 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 (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 disturbance ratio	The rehabilitation to disturbance ratio (H/G) indicates how many hectares of new rehabilitation are undertaken for each hectare of land disturbed during the year. A ratio of 1/1 indicates that the area of new rehabilitation and disturbance in that year are the same.
K	% 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 for agricultural 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 an agricultural final land use.
M	Established rehabilitation for native ecosystem 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 rehabilitation completion phase (definitions E & F in Table 5) that have been returned to native ecosystem final land use.
N	Established rehabilitation for other/non-vegetated 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 'active' for the period following disturbance until the commencement of rehabilitation.
Active mining phase of rehabilitation	In the context of rehabilitation, the active mining phase of rehabilitation constitutes the rehabilitation activities undertaken during mining operations such as salvaging and managing soil resources, salvaging habitat resources, and native seed collection. This phase also includes management actions taken during operations to manage risks to rehabilitation and enhance rehabilitation outcomes such as selective handling of waste rock and management of tailings emplacements.
Analogue site	In the context of rehabilitation, an analogue site is a 'reference site' that represents an example of the defining characteristics (such as vegetation composition and structure or agricultural productivity) of the final land use. Characteristics of analogue sites can be assessed to develop the rehabilitation objectives and completion criteria for final land use domains.
Annual rehabilitation report and forward program	As described in the Mining Regulation 2016.
Annual reporting period	As defined in the Mining Regulation 2016.
Closure	A whole-of-mine-life process, which typically culminates in the relinquishment of the mining lease. It includes decommissioning and rehabilitation to achieve the approved final land use(s).
Decommissioning	The process of removing mining infrastructure and removing contaminants and hazardous materials.
Decommissioning Phase of Rehabilitation	Activities associated with the removal of mining infrastructure and removal and/or remediation of contaminants and hazardous materials. In the context of the rehabilitation management plan this phase of rehabilitation may also include studies and assessments associated with decommissioning and demolition of infrastructure or works carried out to make safe or 'fit for purpose' built infrastructure to be retained for future use(s) following lease relinquishment.

WORD	DEFINITION
Department	The Department of Regional NSW.
Disturbance	See Surface Disturbance.
Disturbance area	An area that has been disturbed and that requires rehabilitation. This may include areas such as on-licence exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped), and areas requiring rehabilitation that are temporarily stabilised (i.e. managed to minimise dust generation and/or erosion).
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 Use Development	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. 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. This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.
Ecosystem and Land Use Establishment	This phase of rehabilitation consists of the processes to establish the approved final land use following construction of the final landform. For vegetated land uses this rehabilitation phase includes establishing the desired vegetation community and implementing land management activities such as weed control. This phase of rehabilitation may also include habitat augmentation such as installation of nest boxes.
Exploration	Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

WORD	DEFINITION
Final landform and rehabilitation plan	As defined in the Mining Regulation 2016.
Final land use	As defined in the Mining Regulation 2016.
Form and way	Means the form and way approved by the Secretary. Approved form and way documents are available on the Department's website.
Growth Medium Development	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 and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical and biological characteristics of the growth media, and actions to minimise loss of growth media due to erosion.
Habitat	Has the same meaning as that term under the *Biodiversity Conservation Act 2016* and the *Fisheries Management Act 1994* (as relevant).
Indicator	An attribute of the biophysical environment (e.g. pH, topsoil depth, biomass) that can be used to approximate the progression of a biophysical process. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion criterion (i.e. defined end point). It may be aligned to an established protocol and used to evaluate changes in a system.
Land	As defined in the *Mining Act 1992.*
Landform 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 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 portal	Means the NSW Resources Regulator's online portal that lease holders must use (via a registered account) to: ■ upload rehabilitation geographical information system (GIS) spatial data ■ develop rehabilitation GIS spatial data (using online tracing functions) ■ generate rehabilitation plans and rehabilitation statistics using the map viewer and Rehabilitation Key Performance Indicator functionalities. 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.
Mining area	As defined in the *Mining Act 1992*.
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 *Mining Act 1992.*
Native vegetation	Has the same meaning as that term under section 60B of the *Local Land Services Act 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 rehabilitation	The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are: ■ active mining ■ decommissioning ■ landform Establishment ■ growth medium development ■ ecosystem and land use establishment ■ ecosystem and land use development.
Progressive rehabilitation	The progress of rehabilitation towards achieving the approved rehabilitation completion criteria. This may be described in terms of domains, phases, performance indicators and rehabilitation completion criteria.
Rehabilitation Completion	The final phase of rehabilitation when a rehabilitation area has achieved the approved rehabilitation objectives and rehabilitation completion criteria for the final land use. Rehabilitation areas may be classified as complete when the NSW Resources Regulator has determined in writing that the relevant rehabilitation obligations have been fulfilled following submission of *Form ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate* application by the lease holder.
Rehabilitation Completion criteria	As defined in the Mining Regulation 2016.
Rehabilitation cost estimate	As defined in the Mining Regulation 2016.
Rehabilitation management plan	As defined in the Mining Regulation 2016.
Rehabilitation objectives	As defined in the Mining Regulation 2016.
Rehabilitation risk assessment	As defined in the Mining Regulation 2016.
Rehabilitation schedule	The defined timeframes for progressive rehabilitation set out in the forward program.

WORD	DEFINITION
Relevant stakeholders	Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes: ■ the relevant development consent authority ■ the local council ■ the relevant landholder(s) ■ community consultative committee (if required under the development consent) or equivalent consultative group ■ affected land holder(s) ■ government agencies relevant to the final land use ■ affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities) ■ local Aboriginal communities, and ■ any other person or body determined by the Minister to be a relevant stakeholder in relation to a mining lease.
Risk	The effect of uncertainty on objectives. It is measured in terms of consequences and likelihood (AS/NZS ISO 31000:2009).
Secretary	The Secretary of the Department.
Security deposit	An amount that a mining lease holder is required to provide and maintain under a mining lease condition, to secure funding for the fulfilment of obligations under the lease (including obligations that may arise in the future).
Surface disturbance	Includes activities that disturb the surface of the mining area, including mining operations, ancillary mining activities and exploration.
Tailings	A combination of the fine-grained solid material remaining after the recoverable metals and minerals have been extracted from the mined ore, and any process water[2].
Waste	Has the same meaning as that term under the *Protection of the Environment Operations Act 1997*.

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

Attachment 3 – Rehabilitation Complaints

DATE	COMPLAINANT	COMPLAINT DETAILS	RESPONSE DETAILS	STATUS OF RESPONSE	DATE RESPONSE COMPLETED (IF APPLICABLE)
25 Oct 2022	Private resident located on Yarraman Rd Wybong	At approximately 8:36 AM on 25/10/22 the complainant phoned the complaints line in regard to spontaneous combustion odour being detected on Wybong Road. Complainant also requested information on rehabilitation works along Wybong Road.	Senior Env Advisor returned call to complainant and explained an inspection was undertaken which confirmed no visible evidence of spontaneous combustion however odours were detected. Wind direction did not support that the source was related to BMC activities. A copy of BMC Forward Program was provided to the complainant via email (3/11/22). The Forward Program was also discussed at the following at the following CCC meeting 23/11/22 at the request of the complainant.	Finalised	23 Nov 2022

Attachment 4 – Stakeholder consultation

DATE	STAKEHOLDER	CONSULTATION ACTIVITIES AND FORMS	MATTERS SUBJECT TO CONSULTATION	ACTIONS TAKEN
24 Aug 2022	CCC	CCC Meeting 24 August 2022	· Rehab reforms - Polygons are required to be provided regarding annual rehabilitation; · The Resources Regulator requires a Forward Plan; · The RMP replaces the MOP; · Bengalla is required to dehab all the rehabilitation completed for the last 22 years and install High Density Woody Vegetation (HDWV); · Completed 41 hectares of HDWV tube stock planting. When planting the tube stocks the roots of the plants go into the overburden; and · Continuing to manage the clay and topsoil stockpiles.	Share photos of the rehabilitation areas at BMC. Mainly tube stock plantings.
25 Oct 2022	Complainant - landholder	Email, follow up via phone and email.	· Complainant requested information on the rehabilitation works along Wybong Road; · A copy of BMC Forward Program was forwarded to the complainant via email 3 November 2022; and · The Forward Program was also discussed at the following CCC meeting at the request of the complainant.	· Forward Program forwarded to the complainant via email; and · Forward Program discussed in CCC meeting.
23 Nov 2022	CCC	CCC Meeting 23 November 2022	· HDWV installation areas presented; and · Forward Program years 1, 2 and 3 plans presented.	Share photos of the rehabilitation areas at BMC. Mainly tube stock plantings. Provide presentation to De-Anne Douglas.
31 Mar 202	Various	Annual Review	Details rehabilitation activities undertaken during the	Identifies any emerging issues, recommends appropriate

DATE	STAKEHOLDER	CONSULTATION ACTIVITIES AND FORMS	MATTERS SUBJECT TO CONSULTATION	ACTIONS TAKEN
2			Reporting Period that support progression towards the final land use and rehabilitation objectives. The Annual Review relevantly includes: · A summary of mining operations; · A summary of rehabilitation activities; · Environmental performance; · Trends in monitoring data; · Non-compliances and actions that were or are being taken to ensure compliance; and · Proposed activities for the next Reporting Period.	measures to be implemented to improve the environmental performance of the development.

Attachment 5 – Plans

Plan 1A attachment not provided.

Plan 1B attachment not provided.