

ARR0001082

RIXS CREEK MINE ANNUAL REHABILITATION REPORT

Friday 1 April 2022 to Friday 31 March 2023



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Summary table

DETAIL	
Mine	Rixs Creek Mine
Reference	ARR0001082
Annual report period commencement date	Friday 1 April 2022
Annual report period end date	Friday 31 March 2023
Forward program	FWP0001037
Mining leases	CL 352 (1973), ML 1649 (1992), ML 1803 (1992), ML 1648 (1992), CL 357 (1973), ML 1725 (1992), ML 1650 (1992), ML 1651 (1992), ML 1630 (1992), ML 1432 (1992)
Lease holder(s)	BLOOMFIELD COLLIERIES PTY LTD
Contact	Chris Quinn
Date of submission	

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

Rix’s Creek Mine is wholly owned and operated by Bloomfield Collieries Pty Limited (BCL) an Australian owned company. The mine consists of Rix’s Creek North (RCN) and Rix’s Creek South (RCN) which are formally two separate mines. Each includes an approved open cut operation and CHPP facilities, with a rail loop located at RCN.

Life of mine

17 years

Current development consents, leases and licences

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

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

CL 352 (1973), ML 1649 (1992), ML 1803 (1992), ML 1648 (1992), CL 357 (1973), ML 1725 (1992), ML 1650 (1992), ML 1651 (1992), ML 1630 (1992), ML 1432 (1992)

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

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

N/A

Changes to land ownership and land use

Bloomfield Collieries Pty Ltd purchased private residence Lot 66 DP 752499 for the purpose of residence and grazing area.

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 Rix's Creek Mine progressed with the disturbance of the Western out of Pit dump area (WOOPD) and WH11 near the high-wall in West Pit. 29.54ha of land was disturbed. The planned disturbance for the Year Ending March (YEM) 2023 reporting period was planned to be 69.87ha. The Dulwich pre-strip block in Camberwell Pit was delayed due to production impacts caused by rain events. Dulwich pre-strip area will be progressed in YEM24. Mining was also delayed in West pit operations, this was due to delays in production due to wet weather events.

During the reporting period, 7.45ha of rehabilitation occurred at the Old North Pit location and 9.03ha was completed in Arties Pit South. A total 16.48 ha of rehabilitation occurred during the reporting period. This was greater than the 14.9ha specified in the Year 1 forward program. A slightly larger area was completed in the Arties Pit South and Old North Pit Areas.

Rehabilitation planning activities that were conducted, including any specialist studies

A Quality Assurance and Quality Control rehabilitation process was implemented during the reporting period. The QA/QC system provides an integrated process for the design, approval, construction and documentation to meet the requirements of the rehabilitation records guideline.

Further refinements to the QA/QA system will continue to improve the rehabilitation process.

Agronomist reports relating to topsoil and subsoil samples in pre-strip areas were completed to identify the quality of topsoil to be reclaimed.

Biosolid pre-application reports for Arties Pit South and Old North Pit rehabilitation were completed to determine rates of biosolid application. Rix's Creek Mine applies biosolids to boost organic matter, soil nutrient levels and improve vegetation growth and groundcover.

Overview of subsidence repair and/or remediation works undertaken

No subsidence repairs were undertaken during the reporting period.

Overview of rehabilitation management and maintenance activities

Following a rehabilitation inspection in August 2022, minor surface rilling was found after an intense rain event. A visual inspection was undertaken of the drainage lines and it was

determined that the minor sheet riling occurred from the intense rainfall after a recently completed area of rehabilitation. Remediation of the minor rill erosion and re- seeding was undertaken at the Arties Pit south Rehab site.

Following recommendations from the 2021 rehabilitation monitoring report, it was recommended that periodic slashing be undertaken in areas of high biomass with tall abundant ground cover in order to improve yield quality. Five areas which were not currently grazed by cattle were identified and mulching of these areas was undertaken in September 2022.

In October 2022, 80ha of the West Pit South rehabilitation agistment area was reseeded via aerial seeding. Independent agronomist advice provided the required fertiliser rates as well as the seed rates of White Clover and Wolly Pod Vetch.

Weed management was undertaken during the period. Six priority weeds were identified in rehabilitation monitoring report in 2021. A weed action plan was undertaken with a land management service provider completing weed management focusing on Galenia, Acacia Saligna, Coolatai grass, African boxthorn prickly pear.

Wild Dog and Fox baiting was undertaken during the reporting period. 92 baits were presented over 42 monitoring stations with 22 takes from foxes and 16 takes from wild dogs.

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

There was no correspondence or direction issued by government agencies including Resources Regulator during the reporting period. The Department of Planning and Environment completed a site inspection of operations and rehabilitation on the 22 November 2022. No formal correspondence was received regarding rehabilitation

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

As per Clause 6 Schedule *A to the Mining Regulation 2016, the Resource Regulator has not signed off on rehabilitation areas that have achieved final land use during the reporting period.

Key production milestones

MATERIAL	UNIT	FWP0001037 YEAR 1	THIS REPORT
Stripped topsoil (if applicable)	(m ³)	125,000	31,168
Rock/overburden	(m ³)	14,365,000	10,340,714
Ore	(Mt)	3.73	2.97
Reject material¹	(Mt)	2.03	1.92
Product	(Mt)	1.5	1.24

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

Disturbance and rehabilitation statistics

Current disturbance and rehabilitation progression

ELEMENT	UNIT	FWP0001037 YEAR 1	THIS REPORT
A Total surface disturbance footprint	(ha)	2,249.84	2,185.7
B Total active disturbance	(ha)	1,432.15	1,355.68
C Land prepared for rehabilitation	(ha)	25.46	16.48
D Ecosystem and land use establishment	(ha)	132.77	50.57
E Ecosystem and land use development	(ha)	N/A	762.97
F Rehabilitation completion	(ha)	N/A	0

Rehabilitation key performance indicators (KPIs)

ELEMENT	UNIT	FWP0001037 YEAR 1	THIS REPORT
G Total new active disturbance area	(ha)	98.02	29.54
H New rehabilitation commenced during annual reporting period	(ha)	84.84	16.48
J Annual rehabilitation to disturbance ratio	%	0.87	0.56
I Established rehabilitation	(ha)	N/A	762.97
K Rehabilitated land to total mine footprint	%	N/A	34.91

Progressive achievement of established rehabilitation

ELEMENT		UNIT	THIS REPORT
L	Established rehabilitation - agricultural final land uses	%	97.64
M	Established rehabilitation - native ecosystem final land uses	%	1.06
N	Established rehabilitation - other/non-vegetated final land uses	%	1.31

Variation to the rehabilitation schedule

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

A total of 16.49ha of rehabilitation land preparation was achieved compared to the 14.9ha of rehabilitation planned for the YEM23 reporting period. This results in a 1.59 more rehabilitation that scheduled in YEM23.

Within the Old North Pit rehabilitation in Rix's Creek South, delays from rainfall in March 2023 prevented a small section of the proposed YEM23 rehabilitation polygon on the eastern side from amelioration and seeding. This was completed in April 2023.

Within the Arties Pit South, a small section was not progressed to the North of proposed YEM23 Arties Pit South rehabilitation polygon. This is planned to be completed in YEM24.

Overall, more rehabilitation was established compared to rehabilitation scheduled within the reporting period.

Key factors that delayed progressive rehabilitation

During the reporting period Rix's Creek Mine progressed with the disturbance of the Western out of pit dump area (WOOPD) and WH11 near the high-wall. 29.54ha of land was disturbed as per the land disturbance procedure. The planned disturbance for the Year Ending March (YEM) 2023 reporting period was planned to be 69.87ha. The Dulwich pre-strip block in Camberwell Pit was delayed due to production impacts caused by rain events. At the end of YEM23 Rix's Creek Mine was over 4 Million BCM behind overburden targets. Dulwich pre-strip area is planned for disturbance in YEM24. Mining is also planning to progress to the North of west pit operations in YEM24 opening up more mine areas. Even though Rix's Creek Mine didn't achieve its coal or production targets, the rehabilitation target was achieved.

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

Rix's Creek Mine has approval to mine to 2040 at Rix's Creek South and operations are in the process of opening up new mining areas in West Pit operations. As mining progresses north, there will be some years where disturbance will be larger than the proposed rehabilitation target. Overtime as the emplacement areas reach final landform, there will be more opportunity to increase the rehabilitation of final shaped areas and reduce the disturbance ratio compared to active disturbance areas.

Rehabilitation monitoring and research findings

Rehabilitation monitoring

The rehabilitation monitoring carried out in the annual reporting period

Rehabilitation monitoring was conducted by an independent Consultant in November 2021. Rehabilitation monitoring is planned to be completed in 2023. Key findings of the rehabilitation monitoring program include the following:

Landscape function yielded excellent results in terms of stability, and moderately good results for nutrient cycling indices, however infiltration results remain low. Analogue sites experienced a trajectory similar to the rehabilitated sites, which indicates a trend towards slow landscape scale recovery after the prolonged period of drought.

Land and soil capability were generally quite good across all rehabilitated areas. Rehabilitated sites performed similar to, or better than Analogue Sites and generally within acceptable completion criteria.

Stability remains high and erosion issues remain minor.

Ground cover percentage has increased overall dramatically since 2019, and indicates a trend towards recovery. Recolonisation is slower at Tree Sites than Pasture Sites.

Species diversity has increased greatly since the 2019 monitoring event, and now remains on an upward trajectory. However, it is likely that the bulk of this diversity is made up of annual weeds.

The majority of sites with mid and upper storeys appeared to be in good health and condition however did not exhibit obvious signs of natural regeneration.

Topsoil cover was limited at some older rehabilitated sites; however, their vegetative performance was not impacted.

Status of performance against rehabilitation objectives and rehabilitation completion criteria

The monitoring program that has been implemented

Rehabilitation monitoring was conducted by an independent Consultant in November 2021. Rehabilitation monitoring is planned to be completed in 2023. The monitoring program monitors land and soil capability, stability and erosion, presence of noxious weeds on rehabilitation land, ground cover and species diversity. Soil analysis is conducted from each rehabilitation site. Rehabilitation inspections are also completed during the rehabilitation and post rehabilitation phases.

Rix's Creek Mine also undertake a cattle grazing program to assess the capability and suitability of pastures on rehabilitation and undisturbed land for a long term sustainable cattle grazing.

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.

A rehabilitation grazing program was undertaken at Rix's Creek Mine during the reporting period to assess the capability and suitability of pastures for a long-term sustainable grazing. The grazing program will continue for the life of mine

A summary progress monitoring report from December 2021 to January 2023 provides the following summary:

- Pasture feed quality has been maintained at a higher level for rehabilitated pasture than the native pastures on the analogue site. The feed quality of the rehabilitated pastures can support good livestock growth and production.
- Protective ground cover levels in Rehabilitated and Analogue pastures were maintained above the minimum 70% required to minimize erosion risk and maintain a stable soil cover. On average the rehabilitated pastures had a ground cover of 91% and the analogue pasture 92% across the twelve month monitoring period. These high levels indicate the stability of the pastures on both rehabilitation and native areas was remarkably good.
- Pasture Herbage Biomass levels have been maintained above livestock threshold levels. Pasture Biomass levels have reached higher levels in the rehabilitated pastures than the native pasture paddocks. The high Biomass levels have allowed a buildup of litter on the soil surface. This is beneficial for ground cover as well building up organic carbon levels.

Appraisal description

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

Rehabilitation monitoring program findings

Rix's Creek Mine undertake biennial rehabilitation monitoring. Detailed rehabilitation monitoring will be completed in 2023 and reported on in the next Annual Rehabilitation Report.

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

Weed cover scores increased overall this year. Particular areas of infestation warranting management. Rix's Creek Mine has prepared a weed management plan to reduce weeds onsite.

Pasture performance was improved in 2021, however pasture could benefit from slashing excess material to improve yield quality. Six of 28 sites exceeded the upper limit of pasture yield quality, with excess green dry matter above 2500 kgDM/ha. The sites that exceeded the acceptable ranges tended to be located in areas that cattle are either not able to graze, or are on exposed slopes, and so do not experience any grazing pressure other than light grazing from macropods. Rix's Creek Mine conducted a targeted mulching campaign of the six areas that exceeded the upper limit pasture yield quality. The sites that have been regularly exposed to grazing have yielded results that fall within the acceptable ranges of pasture yield.

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
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ARR000108

Outcomes of completed trials and research

N/A

Attachment 1 – Reporting Definitions

REPORTING CATEGORY		DEFINITION
A1	Total disturbance footprint – surface disturbance	<p>All areas within a mining lease that either have at some point in time or continue to pose a rehabilitation liability due to surface disturbance activities.</p> <p>The total disturbance footprint is the sum of the total active disturbance, decommissioning, landform establishment, growth medium development, ecosystem and land use establishment, ecosystem and land use development and rehabilitation completion (see definitions below).</p> <p>Underground mining operations should not include the footprint of underground mining areas/subsidence management areas in the total disturbance footprint.</p>
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	<p>Includes the sum of all disturbed land within a mining lease that have commenced any, or all, of the following phases of rehabilitation– decommissioning, landform establishment and growth medium development.</p> <p>Refer to the glossary of terms in this document for the definition of these phases of rehabilitation.</p>

REPORTING CATEGORY	DEFINITION
D Ecosystem and land use establishment	<p>Includes the area which has been seeded/planted with the target vegetation species for the intended final land use. However, vegetation has not matured to a stage where it can be demonstrated that it will be sustainable for the long term and or require only a maintenance regime consistent with target reference/analogue sites.</p> <p>Typically, rehabilitation areas would be in this phase for at least two years (and usually more) before rehabilitation can be classified as being in the ecosystem and land use development phase. This phase does not apply to infrastructure areas that are being retained as part of final land use for the site.</p>
E Ecosystem and Land Use Development	<p>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).</p> <p>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).</p>
F Rehabilitation Completion	<p>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>.</p>
G New active disturbance area	<p>The area of any new active disturbance that has been created during the annual reporting period (definition A1 in Table 5).</p>
H New rehabilitation commenced during annual reporting period	<p>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).</p>
I Established rehabilitation (hectares)	<p>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).</p>

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 ($I/A1 \times 100$). 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	<p>An area that has been disturbed and that requires rehabilitation.</p> <p>This may include areas such as on-licence exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped), and areas requiring rehabilitation that are temporarily stabilised (i.e. managed to minimise dust generation and/or erosion).</p>
Domain	<p>An area (or areas) of the land that has been disturbed by mining and has a specific operational use (mining domain) or specific final land use (final land use domain). Land within a domain typically has similar geochemical and/or geophysical characteristics and therefore requires specific rehabilitation activities to achieve the associated final land use.</p>
Ecosystem and Land Use Development	<p>This phase of rehabilitation consists of the activities to manage maturing rehabilitation areas on a trajectory to achieving the approved rehabilitation objectives and completion criteria.</p> <p>For vegetated land uses this phase may include processes to develop characteristics of functional self-sustaining ecosystems, such as nutrient recycling, vegetation flowering and reproduction, and increasing habitat complexity, and development of a productive, self-sustaining soil profile.</p> <p>This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.</p>
Ecosystem and Land Use Establishment	<p>This phase of rehabilitation consists of the processes to establish the approved final land use following construction of the final landform.</p> <p>For vegetated land uses this rehabilitation phase includes establishing the desired vegetation community and implementing land management activities such as weed control. This phase of rehabilitation may also include habitat augmentation such as installation of nest boxes.</p>
Exploration	Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

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

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

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

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

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

Attachment 2 – Rehabilitation Complaints

DATE	COMPLAINANT	COMPLAINT DETAILS	RESPONSE DETAILS	STATUS OF RESPONSE	DATE RESPONSE COMPLETED (IF APPLICABLE)
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Attachment 3 – Stakeholder consultation

DATE	STAKEHOLDER	CONSULTATION ACTIVITIES AND FORMS	MATTERS SUBJECT TO CONSULTATION	ACTIONS TAKEN
22 Nov 2022	Department of planning and Environment	A site inspection of Rix's Creek Mine was undertaken.	Site inspection of operations which included a rehabilitation inspection.	No written correspondence in regarding rehabilitation occurred.
26 Oct 2022	Community	Consultation during. Reporting period included: -Issue of community newsletter -Website update -CCC meetings -Singleton Coal Festival site inspections -Bloomfield Family Day Rehabilitation inspections -Upper Hunter Mining Dialogue school tours	Rehabilitation progress which involved a site inspection, review of progress with rehabilitation requirements.	CCC and community inspected rehabilitation. Overall there were positive comments regarding the rehabilitation at Rix's Creek Mine.

Attachment 4 – Plans

Plan 1A - Current status of mining and rehabilitation.pdf

Plan 1B - Current landform contours.pdf

Annual Report (LARGE MINE) v1.3