



**NSW
Resources
Regulator**

ARR0001214

POTOSI OPERATIONS ANNUAL REHABILITATION REPORT

Sunday 1 January 2023 to Sunday 31 December 2023

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Summary table

DETAIL	
Mine	Potosi Operations
Reference	ARR0001214
Annual report period commencement date	Sunday 1 January 2023
Annual report period end date	Sunday 31 December 2023
Forward program	FWP0001093
Mining leases	CML 5 (1973), CML 6 (1973)
Lease holder(s)	Perilya Broken Hill Limited
Contact	Jack Flanagan
Date of submission	Monday 11 March 2024

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 Potosi Mine, located approximately 5km northeast of the Broken Hill central business district, is owned and operated by Perilya Broken Hill Limited, a wholly owned subsidiary of Perilya Limited. The Company acquired the Mine from Pasminco Limited in 2002. The current development consent for the Mine, DA 448/2004, does not specify a mine life or end date for mining operations. Based on current production rates at the Mine and the extent of known mineral resources, mining operations are anticipated to be completed by December 2024. However, the identification of further mineralisation to the current production schedule may result in the mine life being extended. In December 2010, DA 448/2004 was amended to permit the construction and operation of the Silver Peak Box Cut, Portal and associated decline, construction of associated infrastructure including the temporary waste rock stockpiling area, and transportation of ore material via road to the Southern Operations Concentrator.

Life of mine

1 years

Current development consents, leases and licences

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

[Redacted]

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

CML 5 (1973), CML 6 (1973)

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

- EPL 2683 (2000)
- Temporary Licence over Wilyama Common for Sediment Basin and ROM Pad (2010)
- EL 6689 (2007)
- Licence to Store Explosives – No.XSTR100108 (2010)
- EL 5879 (2001)
- Excavation – Groundwater WAL40959 (2016)
- EL 7225 (2008)
- EL 6774 (2007)
- EL 7703 (2023)

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

No changes to approvals during the reporting period.

Changes to land ownership and land use

No changes to land ownership/land use during the reporting period.

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

No new areas of surface disturbance occurred during the reporting period. Ongoing auxiliary works on roads and buildings were undertaken to upgrade and maintain performance of site facilities as described in construction and mining schedule sections of the forward program. Target seeding occurred during the reporting period as part of rehabilitation activities. The target ecosystem for the seeding areas identified in Plan 1 is native ecosystem, described by analogue sites at flats which is mixed Acacia and chenopod shrubland. Hydroseeding on the waste rock areas was applied at 40-50% cover at an aggregate seeding rate (kg/ha) of 12 for the eastern section and 14.4 for the western section. Additional soil treatments (cryptobiotic soils) were applied to the fenced western section of the rehabilitation (Iron Barron and Moonabie soil) to trial as a possible soil ameliorate option.

Rehabilitation planning activities that were conducted, including any specialist studies

The Hydromulching trials continue to be planned from the previous reporting period at the Mine to confirm the efficacy of hydromulching as a method for application to seed onto areas within the Mine Site. The trials aim to start within 1.3 ha of Potosi waste rock emplacement batters. Monitoring of vegetation growth in hydromulched trial areas was planned in the reporting period to be conducted in 2024. Seed mix used for the trials will be generally consistent with species identified as occurring within the Rocky Ridge vegetation community type, however additional species may be included based on the results of the monitoring.

Overview of subsidence repair and/or remediation works undertaken

Potosi has no active surface subsidence areas, no remediation works have been undertaken during the reporting period.

Overview of rehabilitation management and maintenance activities

During the 2021 reporting period, Perilya developed a weed management plan with a schedule of four seasonally weed management campaigns across the site with a focus on newly seeded areas. Four campaigns occurred during the reporting period in February, May, July and September. The current methodology involves spot spraying weeds of concern (Salvation Jane, Mexican Poppy, Mustard Weed) identified in the Perilya weed management plan. A trial of feral animal control around rehabilitation areas continued from the previous reporting

period with fencing of a section of rehabilitation to determine the effectiveness in excluding feral animals from rehabilitation areas during early growth phase.

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

No rehabilitation actions were issued by government agencies during the reporting period.

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

During the reporting period rehabilitation objectives were submitted for review and approval by the NSW Resources Regulator, at the time of reporting no final land use criteria have been approved.

Key production milestones

MATERIAL	UNIT	FWP0001093 YEAR 1	THIS REPORT
Stripped topsoil (if applicable)	(m ³)	0	0
Rock/overburden	(m ³)	187,959	12,845
Ore	(Mt)	182,353	0.21
Reject material¹	(Mt)	0	0
Product	(Mt)	22,937	0.02

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)	53.72
B Total active disturbance	(ha)	49.47
C Land prepared for rehabilitation	(ha)	0
D Ecosystem and land use establishment	(ha)	4.25
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

The planned seeding in most recent forward program was achieved through the hydroseeding trials occurring on the waste rock tailings areas. Additionally, areas scheduled for the reporting period and 2024 occurred early during the 2022 reporting period as methods of application and access changed, to allow seeding to occur at a faster rate. This process will continue to be ongoing and will progress in the next reporting period to support new mapping requirements which are outlined in the proposed rehabilitation objectives and completion criteria.

Key factors that delayed progressive rehabilitation

Rehabilitation progression has been delayed due to personnel changes and changes to final landform designs.

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

There is no planned increase in new surface disturbance as part of the current operation, all new approved operational areas will occur on existing disturbed areas. Research and trials on knowledge gaps for the proposed final land use have been identified through risk assessment and rehabilitation objectives and completion criteria. Progression of rehabilitation has been scheduled as soon as practical following end of operational use and completion of related research and trials.

Rehabilitation monitoring and research findings

Rehabilitation monitoring

The rehabilitation monitoring carried out in the annual reporting period

The October 2023 EFA monitoring survey described above indicated that ecosystem and landscape diversity and structure were functioning poorly when compared to the areas of surrounding remnant vegetation. This is likely due to the recency of the completion of rehabilitation in 2021 and 2022, and below average rainfall recorded since this time, particularly in the last 12 months. GHD (2023) indicates that diversity within the remnant areas would be expected to increase if completed closer to late winter or spring and following reasonable rainfall. If rehabilitation has not improved in subsequent years following adequate rainfall, additional measures should be implemented to:

- Control goat numbers
- Source topsoil and;
- Apply additional seed material, either naturally through topsoil, or through follow-up hydroseeding

Status of performance against rehabilitation objectives and rehabilitation completion criteria

The monitoring program that has been implemented

As per the RMP, EFA assessments of rehabilitation areas was undertaken in October 2023 in the northeast rehabilitation areas of the Mine to establish a baseline understanding of rehabilitation areas. Perilya engaged GHD to conduct monitoring of soil stability and vegetation regeneration at a number of rehabilitated Waste Rock Storage Areas (WRSAs), to help develop completion criteria for these domains. Baseline data was collected for flora diversity, structure, cover and weed cover, soil stability, water infiltration and nutrient cycling for comparison of rehabilitated WRSAs with remnant surrounding vegetation. Nineteen monitoring sites were established both within the rehabilitated areas (11) and in strategically selected control sites (8) in areas of remnant native vegetation within the surrounding Mine Site. The results of EFA monitoring will also be compared against the triggers outlined in Section 10 of the RMP and additional management actions implemented as required. These additional management actions may include, but would not be limited to:

- growth medium amelioration (e.g. fertiliser or organic matter application);
- reseeding of areas with seed of target species where species assemblages are not consistent with those of analogue sites; and
- engaging a suitably qualified expert to provide recommendations to improve rehabilitation outcomes.

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?

0

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

2024

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.

"Ongoing development to establish agreed rehabilitation objectives and completion criteria are schedule to be addressed over the next two to three years. Rehabilitation areas indicated in Plan 1A are newly established and will be accessed as elements of rehabilitation objectives and completion criteria are confirmed. Rehabilitation is in an early phase and continued consultation on knowledge gaps has been planned to ensure progression to final landform."

Appraisal description

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

Rehabilitation monitoring program findings

As described in the rehabilitation management plan (RMP), ecosystem function analysis (EFA) assessments will form the primary monitoring method used to assess the progress of rehabilitation towards rehabilitation criteria. Details of the methods and results of the EFA assessment of rehabilitation areas in the current reporting period are described in the sections below. The EFA assessments aim to monitor ecosystem structure and performance, monitor soil stability, and monitor vegetation diversity and regeneration at a number of rehabilitated Waste Rock Storage Areas (WRSAs), to help develop completion criteria for these areas. The RMP details the following measures that will be implemented to monitor revegetation regeneration during ecosystem development phase of rehabilitation:

- Undertake Ecosystem Function Analysis (EFA) assessments within the first three years following initial vegetation establishment activities, subject to confirmation of favourable rainfall conditions.
- Undertake EFA assessments every three years following the initial assessment until target values are achieved.

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

Knowledge gaps that have been identified relating to topsoil resources, use of waste rock in final land use, management of Historic Heritage items and final land use options for areas

classified as contaminated. The following research, trials and plans have been schedule to address the knowledge gaps. • Hydromulching Trials (RRT000143) • Growth Medium Development Study (RRT0001067) • Remediation Options Assessment (RRT0001064) • Program of Kinetic Column Leach Testing (RRT000XXX) • Heritage Implementation Plan (RRT0001066) • Heritage Interpretation Plan (RRT0001068) • Closure Management Plan (RRT0001065)

Outcomes of rehabilitation research and trials

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS	ON TRACK?
RRT000104 3	Hydromulching Trials	To confirm the efficacy of hydromulching as a method for application of seed onto areas within the Mine Site, particularly lower batters of Potosi WRE.	Trial to start within area of approx. 1.3ha within Potosi WRE batters. Seed mix will be generally consistent with species identified as occurring within the Rocky Ridge vegetation community type, however additional species may be included. Monitoring of vegetation growth in hydromulched trial areas will be undertaken in accordance with Section 8.2 of the Rehabilitation Management Plan for the Mine.	31 Dec 2026	Ongoing	Yes
RRT000106 4	Remediation Options Assessment	Provide risk based approach on best option analyses for remediating a highly contaminated area.	Risk analysis of options with consideration of potential health and environmental impacts. The assessment will concentrate on highly contaminated areas, including the following. <ul style="list-style-type: none"> • McCulloch’s Flat at North Mine. • Historic tailings adjacent to Site AB at Southern Operations. The focus of the assessment will be on treatment options including extraction and capping of contaminated material.	31 Dec 2023	Ongoing	Yes
RRT000106 5	Closure Management Plan	Define action plans for multiple key closure assessments.	1. Engineer Assessment of Structures - establish assessment requirements for retained structures, and stability requirements	31 Dec 2026	Not started	Yes

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RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS	ON TRACK?
			for historic TSF. 2. Contaminated Site Assessment - establish procedure for sampling and testing of contaminated materials. 3. Post-Closure Surface and Groundwater Assessment - establish target water quality parameters for final land use. 4. Hazardous Materials Assessment - identify/investigate hazardous materials and their management requirements.			
RRT0001066	Heritage Interpretation Plan	Record/present the heritage values of individual historic heritage items within the Mine and guide future tourism land uses within the Mine Site.	<ul style="list-style-type: none"> • identify opportunities for tourism and educational experiences associated with historic heritage items and the Company's three mine sites in Broken Hill more broadly. • identify any additional structures and/or infrastructure which need to be retained to support final tourism land uses. • determine the types of structures and/or infrastructure which need to be constructed to support final tourism land uses (e.g. access roads, lookout areas, signage) and the best locations for these. 	30 Jun 2025	Not started	Yes
RRT0001067	Growth Medium Development Study	Assessing amelioration options for existing growth medium resource stockpiles and comparing characteristics with analogue sites.	<ul style="list-style-type: none"> • Characterise existing stockpiled growth medium resources at the Mine Site. • Assess the suitability of stockpiled growth medium for revegetation by comparing key characteristics with those of growth medium at analogue sites. • Determine the need for any growth medium amelioration to support revegetation. 	31 Dec 2024	Not started	Yes

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RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS	ON TRACK?
RRT0001068	Heritage Implementation Plan	Provide framework for the assessment of individual historic heritage items based on the decision matrix provided in the Strategic Historic Heritage Management Plan (SHHMP).	<ul style="list-style-type: none">• identify appropriate management actions and outcomes for individual historic heritage items by applying the decision matrix provided in the SHHMP.• provide a schedule for the management and prioritisation of individual heritage items across the Company's three mine sites in Broken Hill.• identify any legislative requirements for development consent, licences and/or permits prior to the demolition or alteration of individual heritage items, as required.	31 Dec 2024	Not started	Yes

Outcomes of completed trials and research

N/A

Attachment 1 – Reporting Definitions

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

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	<p>The progress of rehabilitation towards achieving the approved rehabilitation completion criteria. This may be described in terms of domains, phases, performance indicators and rehabilitation completion criteria.</p>
Rehabilitation Completion	<p>The final phase of rehabilitation when a rehabilitation area has achieved the approved rehabilitation objectives and rehabilitation completion criteria for the final land use. Rehabilitation areas may be classified as complete when the NSW Resources Regulator has determined in writing that the relevant rehabilitation obligations have been fulfilled following submission of <i>Form ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate</i> application by the lease holder.</p>
Rehabilitation Completion criteria	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation cost estimate	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation management plan	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation objectives	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation risk assessment	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation schedule	<p>The defined timeframes for progressive rehabilitation set out in the forward program.</p>

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

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

Attachment 3 – Rehabilitation Complaints

DATE	COMPLAINANT	COMPLAINT DETAILS	RESPONSE DETAILS	STATUS OF RESPONSE	DATE RESPONSE COMPLETED (IF APPLICABLE)
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Attachment 4 – Stakeholder consultation

DATE	STAKEHOLDER	CONSULTATION ACTIVITIES AND FORMS	MATTERS SUBJECT TO CONSULTATION	ACTIONS TAKEN
5 Jul 2023	Resources Regulator	Teams Meeting	Rehabilitation and Environmental Monitoring	No actions required
22 Jun 2023	Environmental Protection Agency	Site Visit	Rehabilitation and Environmental Monitoring	No actions required
13 Jul 2023	Resources Regulator	Teams Meeting	Rehabilitation and Environmental Monitoring	No actions required
4 Sep 2023	Resources Regulator	Teams Meeting	Discussions regarding NTCE0012829 and NTCE0012572 issued by the Resources Regulator. The notices and meeting focused on the need for a materials characterisation program and TSF Closure Program Status Update	The Company has engaged ATC Williams and SRK Consulting to progress with the "Southern Operations Tailings Storage Facilities: TSF Closure Program Status Update" and the Materials Characterisation Program

Attachment 5 – Plans

Plan 1A.pdf

Plan 1B.pdf

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