



**Resources  
Regulator**

ARR0001733

# **BUCKAROO MINE ANNUAL REHABILITATION REPORT**

**Tuesday 18 February 2025 to Tuesday 17 February 2026**

## Summary table

Detail	
<b>Mine</b>	Buckaroo Mine
<b>Reference</b>	ARR0001733
<b>Annual report period commencement date</b>	Tuesday 18 February 2025
<b>Annual report period end date</b>	Tuesday 17 February 2026
<b>Forward program</b>	FWP0001624
<b>Mining leases</b>	ML 919 (1973)
<b>Lease holder(s)</b>	R.K. Murdoch Pty Limited
<b>Contact</b>	Liz Densley
<b>Date of submission</b>	Wednesday 15 April 2026
<b>Document URL</b> <small>Security reminder: Please exercise caution before opening external links. If a link appears suspicious, avoid clicking it and report it to the Resources Regulator.</small>	

## Important

The department may make the information in your program and any supporting information available for inspection by members of the public, including by publication on its website or by displaying the information at any of its offices. If you consider any part of your program to be confidential, please communicate this to the department via the message function on this submission within the Resources Regulator Portal.

## Mine Details

### Project description

The site has two pits referred to as Pit 1 Limestone quarry and Pit 2 Dolomite quarry. The Pit 1 limestone quarry has been worked historically for a longer period and the footprint is not being expanded. Pit 2 Dolomite quarry has been focus of most work the previous Mining Operations Plan and will see an increase in area over the life of the RMP.

### Life of mine

24 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***

[ML 919 \(1973\)](#)

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

**rehabilitation activities**

[Redacted]

**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**

N/A

## 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 additional surface disturbance was undertaken during the reporting period, with all mining activities confined to the existing approved disturbance footprint and active voids. This is consistent with the schedule presented in the previous Annual Rehabilitation Report and Forward Program. Rehabilitation activities during the period were limited to the ongoing monitoring and maintenance of existing rehabilitation areas (Areas 1–3), which are progressing through the Growth Medium Development phase. Activities included routine inspections of landform stability, surface water management structures and vegetation establishment, with minor maintenance undertaken as required. No new areas of rehabilitation were established during the reporting period, consistent with the approved mining and rehabilitation schedule, which does not provide for progressive rehabilitation due to the nature of operations. Overall, rehabilitation progress is consistent with the previous Forward Program, with existing rehabilitation areas continuing to demonstrate progression toward ecosystem and land use establishment. No material inconsistencies with relevant development consent or rehabilitation obligations were identified during the reporting period.

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

No specific rehabilitation planning activities or specialist studies were undertaken during the reporting period. Rehabilitation methodologies, including landform design and surface water management, are established in the approved Rehabilitation Management Plan and continue to be implemented. Activities during the period were limited to routine monitoring and adaptive management of existing rehabilitation areas, with no requirement for additional studies relating to contamination, heritage, landform design or demolition.

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

No subsidence repair or remediation works were required or undertaken during the reporting period, as the operation does not involve underground mining and no subsidence impacts are present.

## Overview of rehabilitation management and maintenance activities

Rehabilitation management and maintenance activities during the reporting period were limited to routine monitoring and minor corrective actions within existing rehabilitation areas (Areas 1–3). This included inspections of vegetation establishment, groundcover and landform stability, and maintenance of surface water and erosion control measures where required. Localised weed control and minor supplementary actions were undertaken to support vegetation establishment. Exclusion fencing was installed in Rehabilitation Area 3 to restrict access by grazing animals (including goats and sheep) and assist vegetation establishment. The effectiveness of this measure will be monitored. No significant rehabilitation issues were identified and no major intervention works were required.

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

No physical action. Regulator required publication to documentation on Web site which was completed in November 2025.

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

Nil.

## Key production milestones

MATERIAL	UNIT	FWP0001624 YEAR1	THIS REPORT
<b>Stripped topsoil</b> (if applicable)	(m <sup>3</sup> )	0	0
<b>Rock/overburden</b>	(m <sup>3</sup> )	10,000	0
<b>Ore</b>	(Mt)	0	0
<b>Reject material<sup>1</sup></b>	(Mt)	0	0
<b>Product</b>	(Mt)	150,000	150,000

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

## Disturbance and rehabilitation statistics

### Current disturbance and rehabilitation progression

ELEMENT	UNIT	THIS REPORT
A1 Total disturbance footprint - surface disturbance	(ha)	23.33
B Total active disturbance	(ha)	18.44
C Rehabilitation - land preparation	(ha)	4.89
D Ecosystem and land use establishment	(ha)	0
E Ecosystem and land use development	(ha)	0
F Rehabilitation completion	(ha)	0

## Rehabilitation key performance indicators (KPIs)

ELEMENT		UNIT	THIS REPORT
G	New disturbance area	(ha)	0
H	New rehabilitation commenced during annual reporting period	(ha)	0
I	Established rehabilitation	(ha)	0
J	Annual rehabilitation to disturbance ratio	%	
K	Rehabilitated land to total mine footprint	%	0

## Progressive achievement of established rehabilitation

	ELEMENT	UNIT	THIS REPORT
L	Established rehabilitation for agricultural final land uses	%	0
M	Established rehabilitation for native ecosystem final land uses	%	0
N	Established rehabilitation for 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

N/A

Key factors that delayed progressive rehabilitation

N/A

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

N/A

## Rehabilitation monitoring and research findings

### Rehabilitation monitoring

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

The three areas of rehabilitation are small and close to the current operations, therefore monitoring is both casual and formal in nature. a regular inspection is undertaken quarterly as required.

### Status of performance against rehabilitation objectives and rehabilitation completion criteria

#### The monitoring program that has been implemented

Recent review of the rehabilitation objectives, following the roadshow undertaken by the Resources Regulator (in Newcastle) has indicated that Areas 2 and 3 could progress towards completion in the next three years. All other areas remain active.

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

Yes

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

#### An appraisal of whether rehabilitation is moving towards achieving the proposed rehabilitation objectives, approved or, if not yet approved,

**rehabilitation completion criteria and final landform and rehabilitation plan as soon as reasonably practicable.**

As noted above, the rehabilitation in particular Areas 2 and 3 is moving towards achieving the final landform.

**Appraisal description**

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

**Rehabilitation monitoring program findings**

No specific findings

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

Nil

## Outcomes of rehabilitation research and trials

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS	ON TRACK?
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**Outcomes of completed trials and research**

N/A

## Attachment 1 - Reporting Definitions

REPORTING CATEGORY		DEFINITION
<b>A1</b>	<b>Total disturbance footprint - surface disturbance</b>	<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>
<b>A2</b>	<b>Underground Mining Area</b>	Underground mining operations areas/subsidence management areas.
<b>B</b>	<b>Total active disturbance</b>	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).
<b>C</b>	<b>Rehabilitation - land preparation</b>	Includes the sum of all disturbed land within a mining lease that have commenced any, or all, of

REPORTING CATEGORY	DEFINITION
	<p>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>
<b>D</b>	<p><b>Ecosystem and land use establishment</b></p> <p>Includes the area which has been seeded/planted with the target vegetation species for the intended final land use. However, vegetation has not matured to a stage where it can be demonstrated that it will be sustainable for the long term and or require only a maintenance regime consistent with target reference/analogue sites.</p> <p>Typically, rehabilitation areas would be in this phase for at least two years (and usually more) before rehabilitation can be classified as being in the ecosystem and land use development phase. This phase does not apply to infrastructure areas that are being retained as part of final land use for the site.</p>
<b>E</b>	<p><b>Ecosystem and Land Use Development</b></p> <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>

REPORTING CATEGORY		DEFINITION
<b>F</b>	<b>Rehabilitation Completion</b>	The 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: <i>Rehabilitation completion and/or review of rehabilitation cost estimate and/or notification of mine or petroleum site closure</i> .
<b>G</b>	<b>New active disturbance area</b>	The area of any new active disturbance that has been created during the annual reporting period (definition A1 in Table 5).
<b>H</b>	<b>New rehabilitation commenced during annual reporting period</b>	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).
<b>I</b>	<b>Established rehabilitation (hectares)</b>	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).
<b>J</b>	<b>Annual rehabilitation to disturbance ratio</b>	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.
<b>K</b>	<b>% Rehabilitated land to total mine footprint</b>	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.

REPORTING CATEGORY		DEFINITION
<b>L</b>	<b>Established rehabilitation for agricultural final land uses (hectares)</b>	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.
<b>M</b>	<b>Established rehabilitation for native ecosystem final land uses (hectares)</b>	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.
<b>N</b>	<b>Established rehabilitation for other/non-vegetated final land uses (hectares)</b>	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
<b>Active</b>	In the context of rehabilitation, land associated with mining domains is considered 'active' for the period following disturbance until the commencement of rehabilitation.
<b>Active mining phase of rehabilitation</b>	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.
<b>Analogue site</b>	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.
<b>Annual rehabilitation report and forward program</b>	As described in the Mining Regulation 2016.
<b>Annual reporting period</b>	As defined in the Mining Regulation 2016.
<b>Closure</b>	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).

WORD	DEFINITION
<b>Decommissioning</b>	The process of removing mining infrastructure and removing contaminants and hazardous materials.
<b>Decommissioning Phase of Rehabilitation</b>	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.
<b>Department</b>	Department of Primary Industries and Regional Development.
<b>Disturbance</b>	See Surface Disturbance.
<b>Disturbance area</b>	<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>
<b>Domain</b>	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

WORD	DEFINITION
	activities to achieve the associated final land use.
<b>Ecosystem and Land Use Development</b>	<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>
<b>Ecosystem and Land Use Establishment</b>	<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>
<b>Exploration</b>	Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.
<b>Final landform and rehabilitation plan</b>	As defined in the Mining Regulation 2016.

WORD	DEFINITION
<b>Final land use</b>	As defined in the Mining Regulation 2016.
<b>Form and way</b>	Means the form and way approved by the Secretary. Approved form and way documents are available on the department's website.
<b>Growth Medium Development</b>	<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>
<b>Habitat</b>	Has the same meaning as that term under the Biodiversity Conservation Act 2016 and the Fisheries Management Act 1994 (as relevant).
<b>Indicator</b>	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.
<b>Land</b>	As defined in the Mining Act 1992.

WORD	DEFINITION
<b>Landform Establishment</b>	<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>
<b>Large mine</b>	As defined in the Mining Regulation 2016.
<b>Lease holder</b>	The holder of a mining lease.
<b>Life of mine</b>	The timeframe of how long a mine is approved to mine, from commencement to closure.
<b>Mine rehabilitation portal</b>	<p>Means the Resources Regulator's online portal that lease holders must use (via a registered account) to:</p> <ul style="list-style-type: none"> <li>▪ upload rehabilitation geographical information system (GIS) spatial data</li> <li>▪ develop rehabilitation GIS spatial data (using online tracing functions)</li> <li>▪ generate rehabilitation plans and rehabilitation statistics using the map viewer and Rehabilitation Key Performance Indicator functionalities.</li> </ul> <p>Data submitted to the mine rehabilitation portal is collated in a centralised geodatabase for use by</p>

WORD	DEFINITION
	the Resources Regulator to regulate rehabilitation performance of lease holders.
<b>Mining area</b>	As defined in the Mining Act 1992.
<b>Mining domain</b>	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).
<b>Mining land</b>	As defined in the Mining Act 1992.
<b>Native vegetation</b>	Has the same meaning as that term under section 60B of the Local Land Services Act 2013.
<b>Overburden</b>	Material overlying coal or a mineral deposit.
<b>Performance indicator</b>	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.
<b>Phases of rehabilitation</b>	The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are:

WORD	DEFINITION
	<ul style="list-style-type: none"> <li>▪ active mining</li> <li>▪ decommissioning</li> <li>▪ landform Establishment</li> <li>▪ growth medium development</li> <li>▪ landform Establishment</li> <li>▪ ecosystem and land use establishment</li> <li>▪ ecosystem and land use development</li> </ul>
<b>Progressive rehabilitation</b>	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.
<b>Rehabilitation Completion</b>	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 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 application</i> by the lease holder.
<b>Rehabilitation Completion criteria</b>	As defined in the Mining Regulation 2016.
<b>Rehabilitation cost estimate</b>	As defined in the Mining Regulation 2016.

<b>WORD</b>	<b>DEFINITION</b>
<b>Rehabilitation management plan</b>	As defined in the Mining Regulation 2016.
<b>Rehabilitation objectives</b>	As defined in the Mining Regulation 2016.
<b>Rehabilitation risk assessment</b>	As defined in the Mining Regulation 2016.
<b>Rehabilitation schedule</b>	The defined timeframes for progressive rehabilitation set out in the forward program.
<b>Relevant stakeholders</b>	<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"> <li>▪ the relevant development consent authority</li> <li>▪ the local council</li> <li>▪ the relevant landholder(s)</li> <li>▪ community consultative committee (if required under the development consent) or equivalent consultative group</li> <li>▪ affected land holder(s)</li> <li>▪ government agencies relevant to the final land use</li> <li>▪ affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities)</li> <li>▪ local Aboriginal communities, and</li> <li>▪ any other person or body determined by the Minister to be a relevant stakeholder in relation to</li> </ul>

WORD	DEFINITION
	a mining lease.
<b>Risk</b>	The effect of uncertainty on objectives. It is measured in terms of consequences and likelihood (AS/NZS ISO 31000:2009).
<b>Secretary</b>	The Secretary of the department.
<b>Security deposit</b>	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).
<b>Surface disturbance</b>	Includes activities that disturb the surface of the mining area, including mining operations, ancillary mining activities and exploration.
<b>Tailings</b>	A combination of the fine-grained solid material remaining after the recoverable metals and minerals have been extracted from the mined ore, and any process water <sup>2</sup> .
<b>Waste</b>	Has the same meaning as that term under the <i>Protection of the Environment Operations Act 1997</i> .

<sup>2</sup>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
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## Attachment 5 - Plans

Plan 1A attachment not provided.

Plan 1B attachment not provided.