

GLENCORE

Glencore Coal Assets Australia Coal Mine Rehabilitation 2024 Update



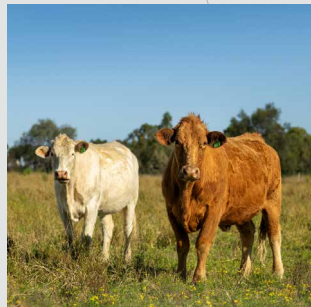
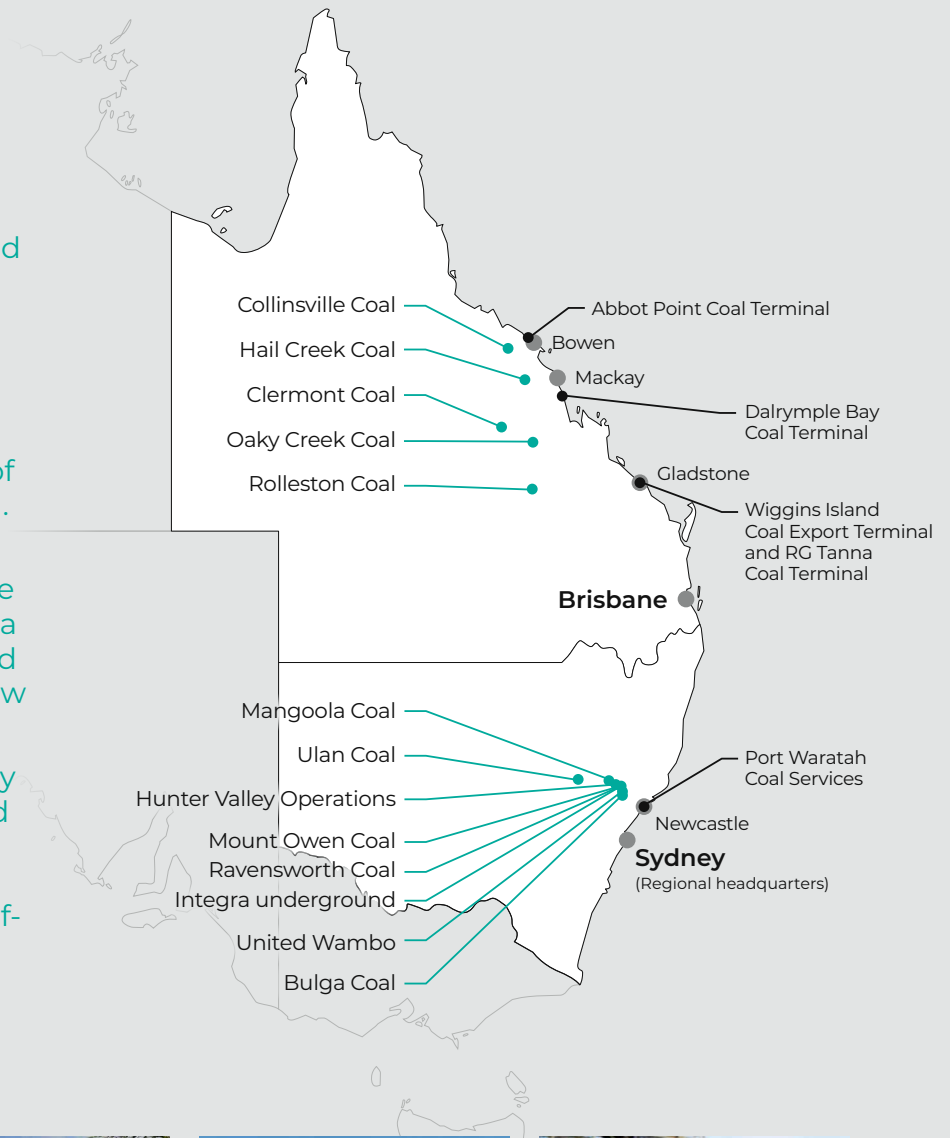
About us

Glencore is one of Australia's largest coal producers. We operate a mixture of open cut and underground coal mines in New South Wales and Queensland, providing work for about 10,000 people.

In 2024, we managed the production of 95 million tonnes of saleable thermal and coking coal.

Our coal is exported from five ports: the Abbot Point, Dalrymple Bay, Wiggins Island and RG Tanna coal terminals in Queensland, and from the Port of Newcastle in New South Wales.

At every site, we aim to effectively manage and rehabilitate the land we mine to minimise our active mining footprint. This helps to ensure the land is returned to self-sustaining native ecosystems, agricultural use or other suitable purposes.



Contents

Our rehabilitation investment	1
Our approach to rehabilitation	3
Case study: Mangoola Coal, New South Wales	5
Planning for mine closure	7
Case study: Newlands Coal, Queensland	9
Rehabilitation certification	11
Case study: Rolleston Coal, Queensland	12
Case study: Liddell Coal, New South Wales	13

Cover image: Mangoola Coal rehabilitation area.

Our rehabilitation investment

Our operations progressively rehabilitate previously mined land. We aim to begin rehabilitating land as soon as practical after it is no longer needed for mining activities to minimise our active mining footprint. This often begins before the end of mine-life. Land is returned to self-sustaining native ecosystems, agricultural use or other suitable purposes to meet government regulations and approval requirements.



In 2024 our coal operations rehabilitated the largest amount of land ever in a single year.

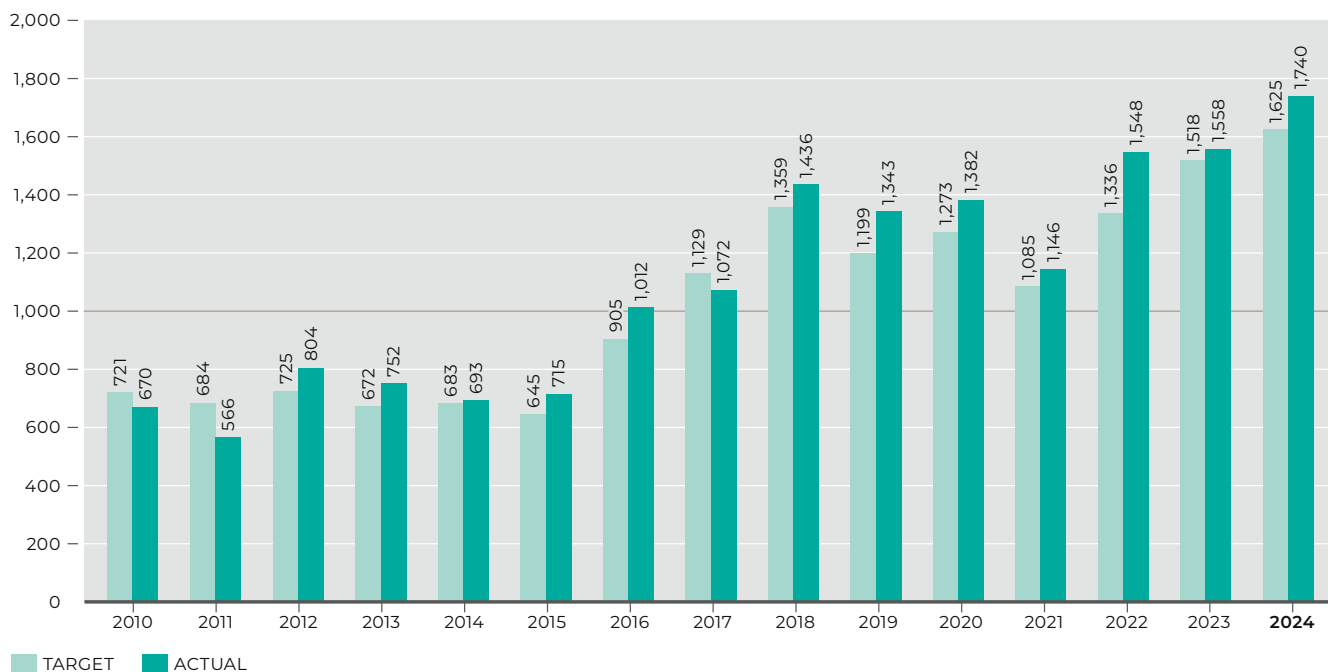
- 1,740 ha
rehabilitation completed in 2024

- 300 ha
certified by government regulators as meeting completion criteria

- 1,000 ha
for nine years in a row, we have rehabilitated more than 1,000ha

- 2,901 ha
our total certified rehabilitated land

REHABILITATION 2010–2024 (ha)
ANNUAL TARGET VERSUS ACTUAL



At Glencore, we recognise that we are temporary custodians of the land on which we operate. Rehabilitation planning starts early in a mine’s life, so the work can be budgeted, resourced and delivered progressively. This booklet details how we approach rehabilitation and highlights some of our successful rehabilitation projects.

An aerial photograph of a lush, green forested hillside. A white utility vehicle with a red flag on its roof is parked on a dirt road that winds through the trees. The sky is clear and blue. A large teal circular graphic is overlaid on the top left of the image, containing white text.

Rehabilitation
planning begins before
any land is disturbed. This
includes design of a final
landform and post-mining
land use in accordance
with the Environmental
and Social Impact
Assessment.

Our approach to rehabilitation

We aim to begin planning for rehabilitation before mining starts so we can rehabilitate land as soon as practicable after it's no longer needed for mining. This can reduce the time it takes to return land to its final use as well as minimise the rehabilitation to complete at the end of mining.

Integrating rehabilitation with mine planning can allow for other land uses, like grazing or conservation during operations and helps mitigate dust and air quality impacts by reducing the amount of disturbed land.

Rehabilitation planning begins before any land is disturbed. This includes design of a final landform and post-mining land use in accordance with the

environmental and social impact assessment (ESIA) process all mines go through when seeking approval to commence mining.

Once mining begins, rehabilitation is included in a mine's ongoing planning process to provide for progressive rehabilitation in accordance with the overall final landform.



1

Whilst mining, our teams help create the final landform. Bulldozers and other equipment, often using GPS guidance systems, move overburden and topsoil to shape the landform to design.



2

Once land has been mined, we prepare the surface for rehabilitation by placing topsoil and installing contours to control erosion. Surface compaction is reduced by following suitable topsoil placement methods and cross-ripping prior to using fertilisers. Gypsum is used to assist with water penetration (or better soil structure) and increase nutrient intake. Fertiliser helps the rapid establishment of vegetation for pasture.




3

Adding and managing topsoil is an important part of the process. In some areas, we use mulched vegetation and topsoil from land being mined. We aim to avoid repeated handling or stockpiling of topsoil because this interferes with its biological functions and natural seed banks.



4

Seed mixes are selected based on the vegetation type or pasture mix required to support pre-determined land uses. Maintaining the rehabilitated area through weed management and erosion monitoring is critical. Regular flora and fauna monitoring helps determine how successful our rehabilitation has been and tracks establishment towards final completion criteria.



The team is enthusiastic about showcasing the rehabilitation via tours as well as offering an immersive desktop virtual reality experience.

About Mangoola Coal

Mangoola is based in the Wybong area, 20 kilometres west of Muswellbrook and 10 kilometres north of Denman in the Hunter Valley, New South Wales. The mine produces thermal coal suitable for export and domestic use.



Scan the QR code to experience the rehabilitation work at Mangoola Coal for yourself via desktop virtual reality.

Case Study

Mangoola Coal, New South Wales

Our Mangoola Open Cut operation was one of the first to implement a new standard for mine rehabilitation in the Hunter Valley, with its use of an innovative GeoFluv-based landform design, and the team continues to share their knowledge with the community.

In 2024, many visitors, including students from local schools, toured Mangoola mine to see the ongoing rehabilitation efforts and gain insights into the GeoFluv landform design.

GeoFluv is a program used to design landforms which mimic natural topography and water runoff so that rehabilitated land looks and functions consistently with the environment around it.

Research conducted prior to mining at Mangoola included studies on overburden and topsoil, hydrological modelling, and natural creek alignments. This laid the foundation for the sites' rehabilitation plan and landform design.

Collaboration was key, with mine planners and environmental scientists working alongside external specialists to develop a strategy that managed water runoff naturally, with the aim of mirroring local creek systems and reducing the potential for erosion.

Mangoola's Environment and Community Manager, Robyn Ellis, said along with the GeoFluv landform design, vegetation also plays a crucial role in the success of the rehabilitation.

"We have collected seeds from different plant species, which are locally sourced and treated to give them the best chance of growing," Robyn said.

"The seed is then spread in the rehabilitation areas in specific locations based on the topography, slope, aspect, and soil application, to support local biodiversity for the long-term."

The results speak for themselves. As of December 2024, more than 1,000 hectares have been rehabilitated across the site. The team is enthusiastic about showcasing the rehabilitation via tours of the operation as well as offering an immersive desktop virtual reality experience.

"We are constantly challenging ourselves to look for ways to improve and we believe that's reflected in our rehabilitation," Robyn said.

"We are proud of what we have achieved so far and are pleased to be able to share our efforts with the broader community."



Above: A frog pond constructed within the area. Top right: Rehabilitation around the significant Anvil Hill feature. Bottom right: Main pit and Wybong Pit rehabilitation.

Left: Research conducted prior to mining at Mangoola included studies on overburden and topsoil, hydrological modelling, and natural creek alignments. This laid the foundation for the sites' rehabilitation plan and landform design.



Planning for mine closure

A great deal of planning goes in to preparing for mine closure before mining even begins. A mine's closure outcome is conceptually planned during its approvals process. An Environmental Impact Statement outlines a final landform and land use.

Planning for each mine's closure is different, guided by regulatory approvals, the site's regional context, long-term post-mining land uses and consultation with stakeholders.

The importance of an Annual Rehabilitation and Closure Plan

Each mine creates an Annual Rehabilitation and Closure Plan (ARCP) tailored to its current phase, including budgeting for progressive land rehabilitation. Glencore also lodges environmental bonds for each mine with state governments.

A key ARCP component is the Annual Closure Risk Assessment, which seeks to identify and manage closure risks early on. This allows for budgeted rehabilitation and avoids costly late-stage work.

An internal Mine Closure Control Group oversees the last few years of closure planning and execution, with increasing detail as closure nears.

Glencore's mine closure planning and rehabilitation approach aims to deliver sustainable post-mining land uses in accordance with our approvals.

Glencore's mine closure planning and rehabilitation approach aims to deliver sustainable post-mining land uses in accordance with our approvals.



In 2017, Newlands Coal became the first Bowen Basin coal mine to have regulators certify the rehabilitation of 73 hectares of mine spoil while still operating.

About Newlands Coal

Newlands Coal is an open cut mine in a closure phase, located 33 kilometres north-west of the township of Glenden, in the northern part of Queensland's Bowen Basin. In 2023, Newlands Coal Mine came to the end of its mine life, as planned, after 40 years of operation.

Case study

Newlands Coal, Queensland

Our Newlands mine in Central Queensland ceased production in 2023 and is now a large-scale mine rehabilitation project. In 2024, the closure project spent more than \$234 million on rehabilitation. This included reshaping overburden spoil, spreading topsoil and seeding of 637 hectares of previously mined land for either native woodland or pasture.

“Mine closure is not riling the last coal, then walking away,” says Craig Bushell, Environment and Community Manager at Newlands.

“The first stage of rehabilitation is reshaping of the mined overburden to change it into a final landform. Then we bring in topsoil, put in water management features like contour banks and rock chutes, and then we seed it. After that, there’s a period of monitoring and maintenance that can go for upwards of 15 to 20 years.”

Around 70% of the land that will be rehabilitated at Newlands will be returned to grazing pastures. The remaining land will be returned to native woodland.

“We have over 32 different seed species for the rehabilitation, from Eucalyptus to Acacia through to grasslands, both native and introduced,” Craig says.

“In some rehabilitation areas, we’ve also utilised cattle to work the soil and improve its quality. It’s been successful and has highlighted the great collaboration between mining and agriculture.”

In 2017, the mine became the first Bowen Basin coal mine to have regulators certify the rehabilitation of 73 hectares of mine spoil while still operating. This was followed by sign-off on another 138 hectares in 2021.

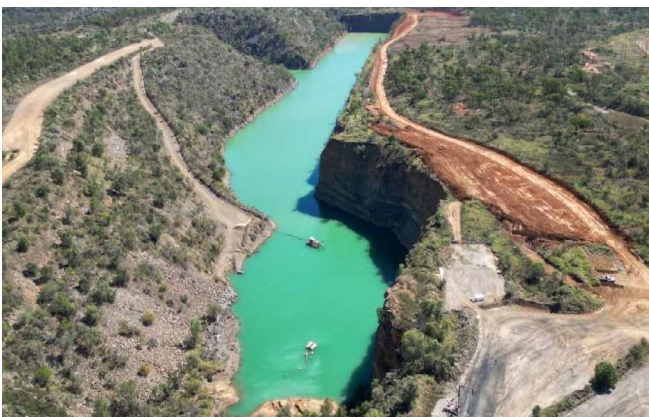
In 2024, Newlands submitted a further 502 hectares of rehabilitation to the Queensland Government for certification.



Ramp 10 looking up the ramp – February 2023.



Ramp 10, showing progressive rehabilitation works – August 2024.



Above: Ramp 9 looking north – August 2023.

Left: Ramp 8 south, main deposit rehabilitation .



Ramp 9, showing progressive rehabilitation works – August 2024.



Rehabilitation certification

Mines must meet government requirements and approval obligations so that mined land is returned to an approved post-mining land use such as self-sustaining native ecosystems, agricultural use or other suitable purposes.

Governments have processes to assess and certify whether rehabilitation meets a range of rehabilitation objectives and completion criteria. The criteria cover aspects such as treatment of any redundant mining infrastructure, landform stability, water management and site drainage, vegetation and, in some cases, native fauna.

The government has signed off 15 of our rehabilitation areas as meeting completion criteria since 2017. The total area certified covers 2,901 hectares across eight of our mining operations in Queensland and New South Wales.

Glencore is currently in the process of seeking certification of further rehabilitation areas.

Certified rehabilitation at Glencore Coal mine sites

- Baal Bone Colliery, NSW (70.7 hectares)
- Collinsville Mine, QLD (99.5 hectares)
- Newlands Mine, QLD (211.9 hectares)
- Rolleston Mine, QLD (828.8 hectares)
- Ulan Mine, NSW (126 hectares)
- Westside Mine, NSW (38 hectares)
- Liddell Coal, NSW (52 hectares)
- Oaky Creek Coal, QLD (1,475 hectares)

The total area that has received rehabilitation certification covers 2,901 hectares across eight of our operations in both Queensland and New South Wales.



Meteor Creek rehabilitation.

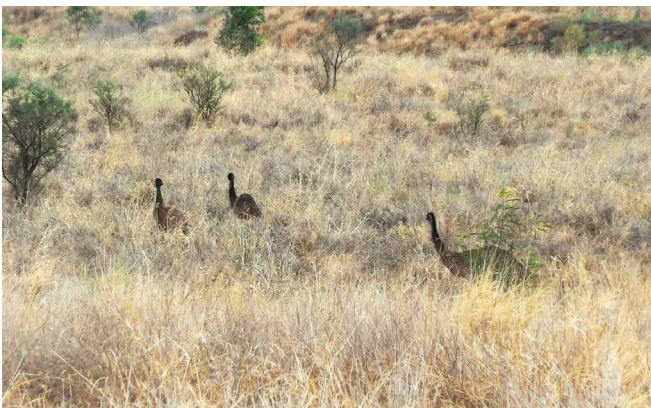
Case study

Rolleston Coal, Queensland

Our Rolleston Open Cut operation in Central Queensland has received government sign-off on 828 hectares of rehabilitation, equivalent to 51% of the site's total rehabilitation work.

The operation received its latest government sign-off on almost 248 hectares in early 2024, representing the fourth successful application from the site, having achieved sign-off on 194 hectares in 2022, 166 hectares in 2019 and around 220 hectares in 2018.

“For us, receiving government certification solidifies that our processes and procedures are working to deliver high quality rehabilitation outcomes,” shared Paul Sear, Rolleston Open Cut Operations Manager.



Emus in Bootes Creek rehabilitation.

“Our people genuinely care about rehabilitating the land once it’s no longer needed for mining activities, and we believe our performance reflects that dedication and hard work in the rehabilitation space.”

The most recent certification spans three areas – Bootes Creek, Bootes West and Spring Creek – and consists of agricultural grazing pastures and grasslands.

“Meeting closure criteria on these areas of our rehabilitation is the culmination of years of effort,” Rolleston’s Environment and Community Manager Ken Dixon said.

“We appreciate the importance of returning land to productive and sustainable uses once mining activity is complete and we’re incredibly proud of our performance to date.”



Case Study

Liddell Coal, New South Wales

In 2024, Liddell Coal received New South Wales Government sign-off on 52 hectares of rehabilitated mined land, achieving this milestone within a year of ceasing operations.

The certified rehabilitation consists of agricultural grazing pasture and has met all closure criteria and objectives set out by the Department of Planning and Environment and the New South Wales Resources Regulator.

Sean Pigott, Environment and Community Manager at Liddell Coal, said closure planning and rehabilitation work began while the mine was still operational.



Liddell team members pictured with cattle grazing on certified rehabilitation.

“To achieve government sign-off on 52 hectares of rehabilitation within the 12 months since operations closed is a great achievement for our site and reflects the importance of progressive rehabilitation throughout the mine’s life,” Sean said.

“This rehabilitation also represents the first sign-off under the latest New South Wales rehabilitation reforms, which support best practice mine site rehabilitation and sustainable final land uses following the completion of mining.”


In 2024, more than \$4 million was spent on rehabilitation at Liddell, including seeding of almost 50 hectares of land for native woodland and pasture.

JUNE 2025


glencore.com.au


 facebook.com/GlencoreCoalAustralia

 @GlencoreAustralia

 @glencore.aus

 @GlencoreVideos

 @glencore.aus

 @GlencoreAus

Glencore Coal Assets Australia Pty Limited

ABN 48 163 821 298

Level 44, Gateway
1 Macquarie Place
Sydney New South Wales 2000
Australia

T. +61 2 8247 6300

F. +61 2 9251 4740