Mangoola Coal

Annual Rehabilitation Report and Forward Program

Prepared for:
Mangoola Coal Operations Pty Limited

31 March 2023

PREPARED BY:

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DISCLAIMER

DOCUMENT CONTROL

Reference	Date	Prepared	Authorised
Annual Rehabilitation Report and Forward Program (ARRFP)	31 March 2023	Jessica Coffey	Brooke York

SUMMARY TABLE

Name of mine:	Mangoola Open Cut	
Annual Rehabilitation Report and Forward Program Period:	**START DATE:**	**END DATE:**
	1 January 2022	31 December 2022
Annual Rehabilitation Report and Forward Program Period revision dates and version numbers:	Revision 1	
Mining leases	**No.**	**Expiry**
	ML 1626	20/11/2029
	ML 1747	05/12/2037
	ML 1817	27/10/2042
	ML 1815	29/09/2042
Name of Lease holder(s)	Mangoola Coal Operations Pty Limited	
Date of Submission	31 March 2023	

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1. PART 1 – ANNUAL REHABILITATION REPORT

1.1. Mining Details

1.1.1. Project Description

Provide a description of the mining project. The description must be consistent with the development consent for the mine. (1000 characters)

Mangoola Coal Mine (Mangoola) is a truck and shovel, open cut coal mine operated by Mangoola Coal Operations Pty Ltd which is owned by Glencore Coal Pty Ltd (Glencore). Project Approval (PA) 06_0014 was granted on 7 June 2007 and authorised the extraction of up to 13.5 million tonnes per annum (Mtpa) Run of Mine (ROM) coal from within Mining Lease (ML) 1626, as well as operation of a Coal Handing and Preparation Plant (CHPP) and train loading facility. The site also holds ML1747. In April 2021 the NSW Independent Planning Commission (IPC) approved the Mangoola Coal Continued Operations (MCCO) Project (SSD 8642) which allows for continued mining in the Southern Mining Area, as well as a new mining area to the north of Wybong Road referred to as the Northern Extension Area (ML1815 and ML1817).

This Annual Rehabilitation Report covers the 12 month period from 1 January 2022 to 31 December 2022.

Provide estimated time of mine (in years).

Mining operations for the project may take place until 31 December 2030.

1.1.2. Current development consents, leases and licences

This section must show (in a table) the following approvals, or any new approvals for the mining area documented in the rehabilitation management plan:

- *development consents granted under the Environmental Planning and Assessment Act 1979*
- *authorisations covering the mining area (including mining leases and exploration licences, and assessment leases and) granted under the Mining Act 1992*
- *any other approvals, licences, or authorities issued by government agencies that are relevant to the progress of mining operation and rehabilitation activities.*

***Note:** Current Development Consents, leases will auto populate in the Portal.*

Other approvals, licences, or authorities issued are listed below:

Environment Protection Licence (EPL): EPL 12894

Environment Protection and Biodiversity Conservation Act Approval: EPBC No. 2018/8280

Surface Water Licences: 20AL200112, 20AL200456, 20AL200457, 20AL200578, 20AL200579, 20AL200676, 20AL200912, 20AL200913, 20AL200915, 20AL200933, 20AL200934, 20AL201081, 20AL201085, 20AL201086, 20AL201156, 20AL201324, 20AL201325, 20AL201469, 20AL201722, 20AL203080, 20AL202949, 20AL202878, 20AL202522, 20AL202524, 20AL202525, 20AL202531, 20AL202554, 20AL202561, 20AL202562, 20AL202569, 20AL202658, 20AL201639, 20AL201640, 20AL201869, 20AL201870, 20AL202589, 20AL202610, 20AL203156, 20AL203157, 20AL203174, 20AL203206, 20AL203182, 20AL203183, 20AL203184, 20AL203320, 20AL203370, 20AL203454, 20AL202591, 20AL202592, 20AL209242, 20AL209198, 20AL209241, 20AL204331, 20AL213134, 20AL213135, 20AL202631, 20AL202639, 20AL202643, 20AL202647, 20CA202655, 20CA202656, 20AL202699.

Groundwater Licences: 20CA202449, 20CA202451, 20CA202463, 20CA202482, 20CA208143, 20CA208033, 20CA207847, 20CA208151, 20CA208171, 20CA208179, 20CA209155, 20CA209151, 20CA209157, 20CA209199, 20CA209147, 20CA212344, WAL 41561, 20WA216010, 20WA207550, 20WA214821, 20WA207593, 20WA207594, 20WA209128, 20WA215330, 20WA207651, 20WA215537, 20WA207655, 20WA207668, 20WA209113, 20WA212410, 20WA209136, 20WA209112, 20WA215016, 20WA215082, 20WA215502, 20WA207649, 20BL172827, 20BL171778, 20BL171860, 20BL171861, 20BL171862, 20BL171864, 20BL171865, 20BL171867, 20BL172567, 20BL172568, 20BL172569, 20BL172570, 20BL172573, 20BL172788, 20BL172789, 20BL172790, 20BL172806, 20BL172808, 20BL172809, 20BL172811, 20BL172812, 20BL172813, 20BL172814, 20BL168135, 20BL168414, 20BL168696, 20BL168743, 20WA216315, 20WA207700, 20WA209139, 20WA207718, 20WA215573, 20WA215826, 20BL167003, 20CA211849

If there have been changes to the status of these approvals during the annual reporting period, the lease holder must include a summary of the scope and/or purpose of the new applications or modifications to existing approvals. (1500 characters)

No changes to the status of these approvals have occurred during the 2022 reporting period.

1.1.3. Land ownership and land use

This section must provide details of any changes to land ownership and land use related to the land, that has occurred during the annual reporting period and/or as recorded in the rehabilitation management plan. (250 characters)

No changes to land ownership or land use have occurred during the 2022 reporting period.

1.2. Complaints

This section must list (in a table) any complaints received during the reporting period in relation to rehabilitation and provide details of the response(s) to these complaints.

***Note:** Were any complaints received during the reporting period in relation to rehabilitation? Portal has a (Yes/No) check box. **Attach relevant documentation in portal**.*

No complaints received in relation to rehabilitation.

1.3. Stakeholder Consultation

This section must summarise, in a table, stakeholder consultation about rehabilitation undertaken during the annual reporting period.

This summary must identify:

- *each relevant stakeholder (e.g. the NSW Resources Regulator, other government agencies, landholders, community)*
- *the consultation activities and forms of consultation*
- *the matters subject to consultation*
- *actions taken by the lease holder in response to matters raised by any stakeholder in relation to rehabilitation.*

***Note:** Information in Table 1 to be transcribed to table in Portal*

Table 1: Stakeholder Consultation 1 January 2022 to 31 December 2022

No.	Date	Stakeholder	Consultation Form	Matters	Actions
1	01/02/2022	Community Consultative Committee (CCC)	Quarterly Meeting	Operational update to CCC members	None relating to rehabilitation
2	03/05/2022	Community Consultative Committee (CCC)	Quarterly Meeting	Operational update to CCC members	None relating to rehabilitation
3	09/08/2022	Community Consultative Committee (CCC)	Quarterly Meeting	Operational update to CCC members	None relating to rehabilitation
4	10/11/2022	Resources Regulator	Email	FLRP1094 refusal email.	Amendments to data uploaded to the Portal. FLRP was resubmitted 30/11/2022.
5	08/11/2022	Community Consultative Committee (CCC)	Quarterly Meeting	Operational update to CCC members	None relating to rehabilitation
6	28/06/2022	Community	Newsletter	Operational update to community	None relating to rehabilitation
7	01/12/2022	Community	Newsletter	Operational update to community	None relating to rehabilitation
8	13/12/2022	Resources Regulator	Email	Approval to amend submission and reporting dates for the Forward Plan.	None

1.4. Surface Disturbance Activities

This section must provide an overview of significant surface disturbance activities, including mining operations, ancillary mining activities and exploration carried out on the mining area, and rehabilitation activities that were undertaken during the annual reporting period. Information in this section must be consistent with spatial information depicted on Plan 1 – Status of mining and rehabilitation at completion of annual reporting period (refer to section 1.6).

***Note**: Plan 1A and Plan 1B are submitted in this section. Information in this section must include, but is not limited to, the following:*

A description of the surface disturbance and rehabilitation activities that were conducted, and, an analysis of the progress against the schedule presented in the previous annual rehabilitation report and forward program, as well as any relevant development consent. (1500 characters)

Throughout the reporting period, three explorations holes were drilled, 24 Limit of Oxidation (LOX) holes were drilled, and two groundwater monitoring bores were installed. In July 2022 Mangoola submitted an EFS4 application for the exploration of a further 11 boreholes within Authorisation Lease (AL) 9.

Construction works associated with the MCCO Project have been ongoing during 2022, including:

- Big Flat Creek culverts (3 x 3m steel culverts capable of conveying a 1:250 year rainfall event)
- Clean Water Diversion Drain 1 (enables clean water to be diverted around the future mining area)
- A number of water management infrastructure items including Sedimentation Dams, Transfer Dam and Catch Drains
- Visual bunds (VB4 and VB2) and flood protection levee along Wybong Road
- Relocation of 11kV transmission lines and Telstra services
- Vegetation clearing and removal of redundant dwellings
- Revisions to the environmental monitoring network as per approved management plan required by SSD 8642.

Coal extraction continued in the existing Southern Mining Area in the Main Pit and the South Pit. Construction of the box cut commenced in the Northern Extension Area during 2022 however no coal has been extracted from this area.

Rehabilitation was undertaken within overburden emplacement areas in the Southern Mining Area. Disturbance and rehabilitation areas are generally in alignment with 2022 predictions made in the previous Forward Program and the EA.

Describe any rehabilitation planning activities that were conducted, including any specialist studies. Examples: contamination, heritage, landform design and demolition. (1500 characters)

The following rehabilitation planning activities were conducted during 2022:

- No contamination or demolition studies were conducted
- Due diligence inspection of heritage sites is undertaken ahead of disturbance
- Ecological monitoring was undertaken in the mine rehabilitation areas which includes flora and fauna monitoring.

- Mangoola prepare an Annual Rehabilitation and Closure Plan (ARCP) on a calendar year basis, which provides direction and guidance for the rehabilitation and land management activities at site. The plan details responsibilities for land management and rehabilitation activities, as well as nominated timeframes for completion. The plan also documents key performance indicators and associated deliverables for Mangoola's rehabilitation performance on an annual basis in line with GCAA requirements.
- Conceptual mine closure planning is completed internally.

Provide an overview of any subsidence repair and/or remediation works undertaken. (1500 characters)

Mangoola is an open cut mine and no subsidence repair or remediation is required at the site.

An overview of rehabilitation management and maintenance activities, for example re-seeding, weed and feral animal control and erosion control works. (1500 characters)

Mangoola Coal undertakes an annual rehabilitation monitoring program to assess the progression of rehabilitation and as a method to identify maintenance and corrective actions. The following actions were undertaken as per the recommendations from the annual rehabilitation monitoring program:

- weed control;
- feral animal control;
- erosion control works;
- reseeding/planting of rehabilitation areas that may have failed to meet criteria;
- addition of soil ameliorants to overcome potential constraints as identified by chemical analysis undertaken in response to rehabilitation failure; and
- repair of fences, access tracks and other general related land management activities.

Detail any rehabilitation actions taken as required by any letters, notices or directions issued by government agencies, including the NSW Resources Regulator. (1500 characters)

Not applicable

Detail any rehabilitation areas that have achieved the final land use (as set out in clause 6 of Schedule 8A to the Mining Regulation 2016, in the reporting period. That is, rehabilitation areas where the NSW Resources Regulator has determined in writing that the relevant rehabilitation obligations have been fulfilled following submission of the relevant application by the lease holder. (1500 characters)

No areas were relinquished during the 2022 reporting period.

Key material production milestones. Provide an outline of the key production milestones that underpin the proposed rehabilitation schedule.

***Note:** Entered as a table to Portal. Only the 4th column ("This Report") needs to be transcribed to the portal.*

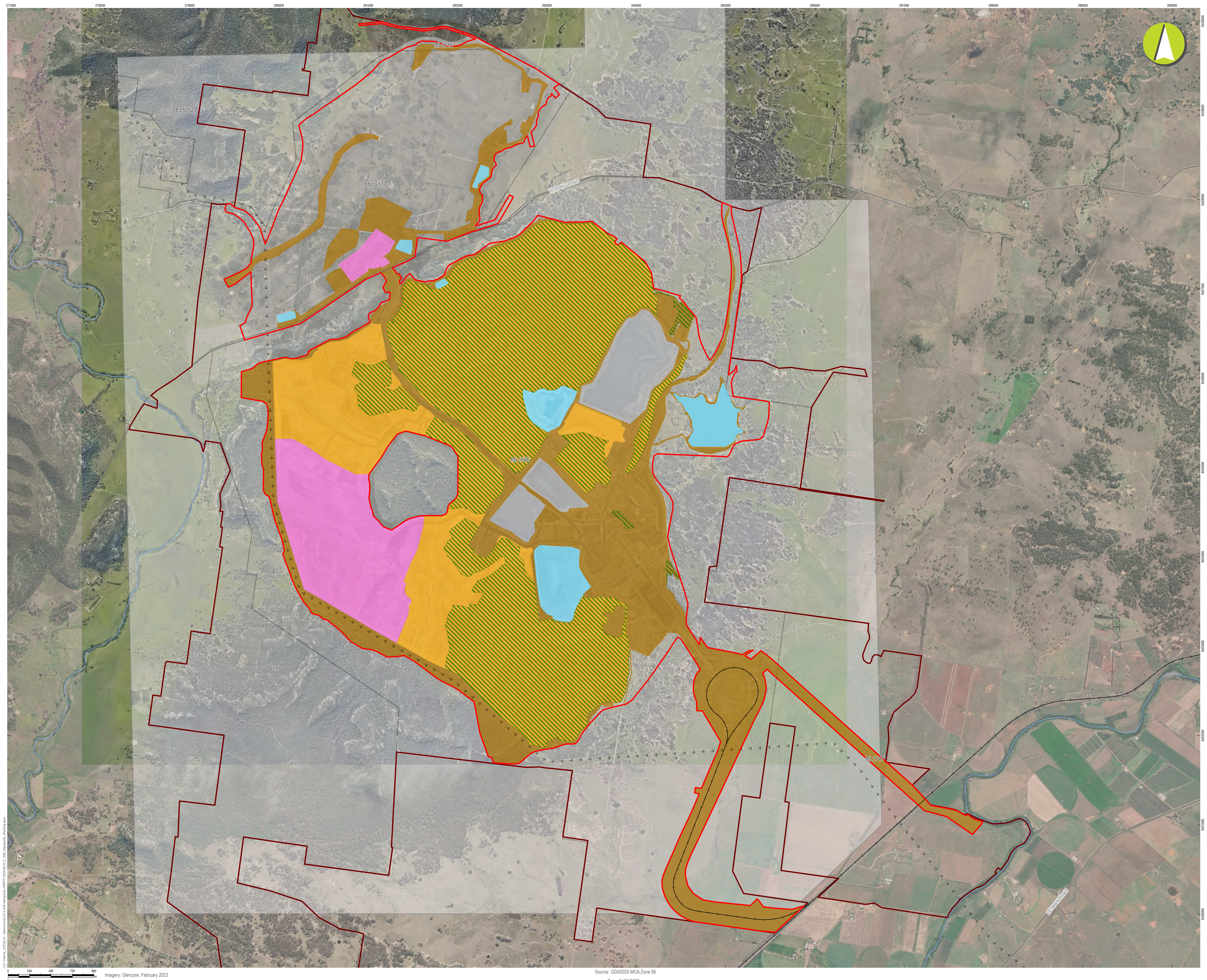
Table 2: Key Production Milestones (1 January 2022 – 31 December 2022)

To be determined after successful linking of portals.

Material	Unit	Year 1 (2022)	This report
Stripped topsoil (if applicable)	m3	Should auto populate in portal based on previous AFP submission	79,013
Rock / Overburden	m3	Should auto populate in portal based on previous AFP submission	29,226,102
Ore	Mt	Should auto populate in portal based on previous AFP submission	7.69
Reject Material (includes coarse rejects, tailings and any other wastes resulting from beneficiation)	Mt	Should auto populate in portal based on previous AFP submission	1.96
Product	Mt	Should auto populate in portal based on previous AFP submission	5.72

DIGITAL (PDF) SUBMISSION OF PLAN 1

PLAN 1A and Plan 1B – Status of Mining and Rehabilitation at Completion of Annual Reporting Period.



LEGEND

- Project Approval Boundary
- Approved Disturbance Boundary
- Road
- Railway
- Watercourse
- Electricity Transmission Line

Rehabilitation Phase

- Ecosystem and Land Use Establishment

Current Authorisations

- Coal - Current Titles

Mining Domain Type,Theme Name

- Domain 1: Infrastructure Area
- Domain 2: Tailings Storage Facility
- Domain 3: Water Management Area
- Domain 4: Overburden Emplacement Area
- Domain 5: Active Mining Area (Open cut void)

Scale: 1:20,000 (0 – 240 – 480 – 720 – 960 m)

Imagery: Glencore, February 2023

Source: GDA2020 MGA Zone 56

Date: 24/03/2023

Sheet Size : A3

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GLENCORE

Glencore Mangoola Mine Complex

Current Status of Mining and Rehabilitation

PLAN 1A

Mine name	Mangoola Mine Complex
Plan name	Mangoola ARR
Year of anticipated relinquishment	
Data theme submission ID No.	TBA
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	24/03/2023

LEGEND

- Project Approval Boundary
- Approved Disturbance Boundary
- Current Landform Contours (5m)
- Road
- Railway
- Watercourse
- Electricity Transmission Line

Current Authorisations

- Coal - Current Titles

Scale: 1:20,000 (0, 240, 480, 720, 960 m)

Imagery: Glencore, February 2023

Source: GDA2020 MGA Zone 56

Date: 24/03/2023

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GLENCORE

Sheet Size : A3

Glencore Mangoola Mine Complex

Current Landform Contours

PLAN 1B

Mine name	Mangoola Mine Complex
Plan name	Mangoola ARRFP Report 2022
Year of anticipated relinquishment	
Data theme submission ID No.	TBA
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	24/03/2023

1.5. Disturbance and Rehabilitation

Provide a summary of the forecast cumulative disturbance and rehabilitation progression during the next three years.

***Note:** Entered as a table to Portal. Cells should auto populate in portal following spatial data submission*

Table 3: Current Disturbance and Rehabilitation Progression

To be determined after successful linking of portals.

	Annual Reporting Period	Year 1	This report
A	Total disturbance footprint – surface disturbance	Should auto populate in portal following spatial data submission	Should auto populate in portal following spatial data submission
B	Total active disturbance (Ha)	Should auto populate in portal following spatial data submission	Should auto populate in portal following spatial data submission
C	Rehabilitation – land preparation (Ha)	Should auto populate in portal following spatial data submission	Should auto populate in portal following spatial data submission
D	Ecosystem and land use establishment (Ha)	Should auto populate in portal following spatial data submission	Should auto populate in portal following spatial data submission
E	Ecosystem and land use development (Ha)	Should auto populate in portal following spatial data submission	Should auto populate in portal following spatial data submission
F	Rehabilitation completion (Ha)	Should auto populate in portal following spatial data submission	Should auto populate in portal following spatial data submission

Table 4: Rehabilitation key performance Indicators (KPIs)

To be determined after successful linking of portals.

	Annual Reporting Period	Year 1	This report
G	Total active disturbance during reporting period (Ha).	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
H	Area of land proposed for active rehabilitation during reporting period (Ha)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
J	Annual rehabilitation to disturbance ratio	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
I	Established rehabilitation (Ha)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
K	% Rehabilitation land to total mine footprint	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission

Table 5: Progressive Achievement of Established Rehabilitation

To be determined after successful linking of portals.

	Annual Reporting Period	Year 1	This report
L	Established rehabilitation for agricultural final land uses (%)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
M	Established rehabilitation for native ecosystem final land uses (%)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
N	Established rehabilitation for other/ non-vegetated final land uses (%)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission

1.5.1. Variation to the Rehabilitation Schedule

Rehabilitation key performance indicators reported in the annual rehabilitation report and forward program are not consistent with the life of mine rehabilitation schedule in the rehabilitation management plan, or the rehabilitation schedule for Year 1 in the most recent forward program, this section must:

Identify the components of the most recent forward program that were not achieved. (1500 characters)

A total of 100 ha of rehabilitation was targeted for the 2022 calendar year. During the 2022 calendar year 100.8 ha of rehabilitation was completed. The reporting period has changed in 2022 to calendar year reporting, and therefore more accurate comparisons between predictions and actuals will be able to be made in future reporting periods. There were no components of the 2022 forward program that were not achieved.

Identify the key factors that have delayed the progressive rehabilitation schedule and the timing for any corrective actions. (1500 characters)

A total of 100 ha of rehabilitation was targeted for the 2022 calendar year. During the 2022 calendar year 100.8 ha of rehabilitation was completed. The reporting period has changed in 2022 to calendar year reporting, and therefore more accurate comparisons between predicted and actuals will be able to be made in future reporting periods. No factors significantly delayed the progressive rehabilitation schedule in 2022.

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. (1500 characters)

Rehabilitation and disturbance at Mangoola will be carried in accordance with the RMP and Forward Programs as far as reasonably practical. Actions will also be completed in accordance with the Life of Mine (LoM) planning process and the processes outlined in GCAA 11.16 Rehabilitation Management.

1.6. Rehabilitation monitoring and research findings

1.6.1. Rehabilitation Monitoring

Provide a summary of the rehabilitation monitoring carried out in the annual reporting period, at established rehabilitation areas and at analogue sites, in accordance with the monitoring program detailed in the rehabilitation management plan.

This summary must include monitoring activities, such as inspections undertaken following the completion of key rehabilitation steps and phases of rehabilitation, in accordance with the rehabilitation quality assurance process in the rehabilitation management plan. (3000 characters)

To provide an opportunity to assess the progression of rehabilitation completed at Mangoola, a rehabilitation monitoring program has been developed. This includes:

- Annual flora and fauna monitoring
- Annual rehabilitation walkover inspection

The ecological monitoring program commenced with baseline surveys in 2007 and surveys and reporting have been undertaken annually since (some components are more frequent). At the monitoring sites both qualitative and quantitative data are collected to provide adequate data to assess progress against relevant performance indicators, rehabilitation objectives and completion criteria.

Rehabilitation monitoring requirements currently include Initial Establishment Monitoring (IEM) and Long Term Monitoring (LTM) for Targeted Native Vegetation Rehabilitation. IEM is applied to sites that are ≤3 years old and LTM is applied to rehabilitation that is a minimum of four years since establishment. The Rehabilitation Monitoring Program for 2022 includes a total of 52 floristic sites, comprising 27 LTM sites, two wetland rehabilitation LTM sites, and 23 IEM sites.

The monitoring parameters of the IEM sites relate to identifying key and dominant species (native and exotic including high threat/priority weeds) to determine germination success and landform stability. IEM results are assessed to determine:

- if there are any emerging risks to rehabilitation, including areas where rehabilitation may be failing and require early intervention
- identify if triggers have been met for preventative or mitigation controls to minimise the impacts of emerging issues in accordance with the TARP
- provide data that may inform continuous improvement of rehabilitation records.

The key aspects of the LTM sites relate to:

- richness and diversity of native and exotic species (including high threat/priority weeds)
- cover and abundance
- the structure and habitat they provide.

The monitoring results will be assessed and utilised in the continual improvement and refinement of revegetation/regeneration techniques. Based on the outcomes of the rehabilitation monitoring program, a care and maintenance program will be implemented so that rehabilitation is sustainable for the long term. The scope of the care and maintenance program will include implementation of, as necessary, weed and feral animal control, re-seeding or planting and erosion and sediment control works. It is envisaged that this program will be continued as required until it can be demonstrated that the rehabilitation has satisfied the completion criteria.

1.6.2. Status of performance against rehabilitation objectives and rehabilitation completion criteria

Provide details about the monitoring program that has been implemented to evaluate how rehabilitation is progressing against the approved, or if not yet approved, the proposed rehabilitation objectives, rehabilitation completion criteria and final landform and rehabilitation plan. (1500 characters)

The objective of the rehabilitation monitoring program is to track the progress of rehabilitation works and document any changes in floristics, structure and habitat condition, specifically in relation to rehabilitation objectives and completion criteria. The monitoring program will continue to be undertaken within rehabilitated and non-mined areas until it can be demonstrated that rehabilitation has satisfied the objectives and completion criteria. Information from this monitoring program will also be used to refine completion criteria as required.

To track changes to biodiversity values at the monitoring sites, the LTM results are compared to their relevant RMP performance indicators and triggers. This assists in identifying where management actions have been successful and where they may require review. IEM sites are not compared to the performance indicators due to their relatively young age. The IEM sites which graduate to LTM sites are compared at 4 years of age and in future monitoring events.

The methodology forms a statistically rigorous sampling process for the collection of all rehabilitation data. For each of the aspects assessed during the annual inspection, performance data is captured as part of the GCAA Rehabilitation Report Card process. An internal report comprising a GIS based site plan and accompanying data tables summarising monitoring outcomes and performance for each success indicator is prepared at the conclusion of each monitoring year.

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

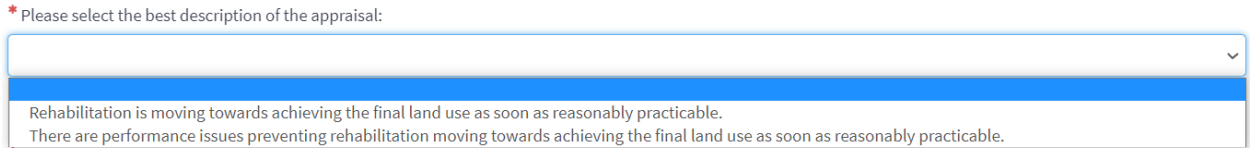
***Note:** Portal has a (Yes/No) check box* Yes

Include an appraisal of whether rehabilitation is moving towards achieving the approved, or if not yet approved, the proposed rehabilitation objectives, rehabilitation completion criteria and final landform and rehabilitation plan. (1500 characters)

In order to track the progress of biodiversity values of the Mangoola Open Cut Rehabilitation, the outcomes of the Annual Walkover Inspection were compared to their relevant indicators and completion criteria as identified in the former 2022 RMP. This assisted in identifying where management actions have been successful and where they may require review. Rehabilitation areas at Mangoola Open Cut that were assessed, were all in the phase of Ecosystem and Land Use Establishment. During the 2022 walkover, no issues were detected, nevertheless it was noted that canopy density was expected to emerge in future walkovers as being too low in a few areas. The criteria combine shrubs with canopy which, given the large numbers of short-lived Acacia, inflates the numbers of stems per hectare. Additionally, a few risks were identified such as minor erosion and small infestations of weeds requiring management. All of these were recommended to be monitored, but were not considered to pose a large threat at this time.

The 2022 Rehabilitation Walkover Inspection concluded that overall, the Mangoola Open Cut rehabilitation works to date remain highly successful and are generally progressing towards the completion criteria listed in the RMP. Based on the data collected and observations made during 2022, the appraisal can be made that rehabilitation is moving towards achieving the rehabilitation objectives, rehabilitation completion criteria and final landform and rehabilitation plan.

Please select the best description of the appraisal:



Include summaries of the findings of the rehabilitation monitoring program, including specialist reports (e.g. ecology, water quality, agronomy). (1500 characters)

The 2022 Rehabilitation Walkover Inspection concluded that overall, the rehabilitation works to date remain highly successful and are generally progressing towards the completion criteria in the RMP. Native diversity across all rehabilitation domains of sufficient age to assess was considered generally high. Most areas exhibited appropriate species for the target vegetation community in all layers.

Adaptive management across the rehabilitation areas was evident, including improvements in plant densities between older and newer areas of rehabilitation, improved ground cover diversity and the implementation of recommendations from previous monitoring events such as thinning of mid layer species and increased installation of habitat structures. The rehabilitation areas contained some mild erosion sites however overall erosion control was considered generally successful. While the structure and diversity of vegetation across the site was considered generally good, improvements can be made across vegetation strata in some rehabilitation areas by increasing the diversity of species.

The 2022 Rehabilitation Monitoring report concluded most rehabilitation sites (LTM and IEM) comprised generally healthy vegetation with new growth, indicating resilience to stochastic events, such as the previous drought conditions. Eleven LTM sites were considered on a positive trajectory toward target values. Most IEM sites were assessed performing well, being on a positive or neutral trajectory.

Include any performance issues and their causes including identification of any knowledge gaps that must be addressed to rectify identified performance issues. If none identified, type "Nil". (1500 characters)

The following general management recommendations were made in relation to the 2022 monitoring sites:

- Ongoing management of weeds and pest species
- Erosion control at a small number of sites
- Supplementary planting at a small number of sites
- Thinning of canopy trees and shrubs at select sites where densities are considered to be impacting the overall vegetation condition
- Alignment with new plant community type (PCT) classification for future monitoring events.

1.6.3. Outcomes of Rehabilitation Research and Trials

Summarise the results and outcomes of any research projects and rehabilitation trials (where relevant) and identify whether research projects and rehabilitation trials are complete, ongoing, or will lead to any follow up trials or research programs

Note: *Information in Table 6 and Table 7 to be transcribed to table in Portal*

Table 6: List of Active Rehabilitation Research and Trials (1 January 2022 – 31 December 2022)

No.	RRT no	Project/ trial name	Objective of Trial Project	Methodology	Expected Date of Completion
1	RRT0001075	Tailings Dam Desiccation Enhancement Using Tubestock Planting	Experiments have been set up to test the dewatering capacity of tailings by vegetation.	TD1 was planted with 6 trial species in 2018 with evaluation of tailings water content and plant growth evaluated.	31 Dec 2031
2	RRT0001077	Flora Species Translocations	To enhance landscape function and plant species diversity/ages. Viability of different translocation methods in achieving conservation outcomes.	Certain species have been identified during ecological pre-clearing surveys that are suitable for translocation in the rehabilitation areas. Excavation with soil matter and transported to pre excavated hole in existing rehabilitation area, where plant is planted and watered for establishment.	31 Dec 2030
3	RRT0001074	Threatened Terrestrial and Epiphytic Orchids	A major study is being undertaken on site relating to the translocation of terrestrial orchid species. Assess the viability of different translocation methods in achieving conservation outcomes.	Translocation plots have been established in offset and rehabilitation areas, with reference sites based in nearby buffer lands. Undertaken since 2010, comprising the salvage and relocation of over 2700 orchid cores. Annual monitoring is undertaken to assess the viability of different translocation methods in achieving conservation outcomes. Another trial undertaken includes divide and grow Cymbidium canaliculatum that have been damaged and collected during tree felling operations.	31 Dec 2030

No.	RRT no	Project/ trial name	Objective of Trial Project	Methodology	Expected Date of Completion
4	RRT0001078	Pomaderris reperta translocation	Conservation & translocation of Pomaderris reperta with the aim to evaluate the effectiveness of propagation and translocation & extend on distribution within the natural range of the species	Two 12m x 12m translocation plots have been established within establishing Mangoola rehabilitation and two identical sized plots located in Mangoola offset land. Ongoing monitoring and research will be conducted to evaluate the effectiveness of the translocation project. Excavation of identified plots and transplanting into trial plots.	31 Dec 2030

Table 7: List of Inactive Rehabilitation Research and Trials (1 January 2022 – 31 December 2022)

No.	RRT no	Project/ trial name	Objective of Trial Project	Methodology	Expected Date of Completion
Nil	Nil	Nil	Nil	Nil	Nil

DECLARATION- Finalise and Submit Part 1 Annual Rehabilitation Report

2. PART 2 – FORWARD PROGRAM

2.1. Three Year Forecast – Surface Disturbance Activities

2.1.1. Project Description

Provide a description of the mining project. The description must be consistent with the development consent for the mine. (1000 characters)

Mangoola Coal Mine (Mangoola) is a truck and shovel, open cut coal mine operated by Mangoola Coal Operations Pty Ltd which is owned by Glencore Coal Pty Ltd (Glencore). Project Approval (PA) 06_0014 was granted on 7 June 2007 and authorised the extraction of up to 13.5 million tonnes per annum (Mtpa) Run of Mine (ROM) coal from within Mining Lease (ML) 1626, as well as operation of a Coal Handing and Preparation Plant (CHPP) and train loading facility. The site also holds ML1747. In April 2021 the NSW Independent Planning Commission (IPC) approved the Mangoola Coal Continued Operations (MCCO) Project (SSD 8642) which allows for continued mining in the Southern Mining Area, as well as a new mining area to the north of Wybong Road referred to as the Northern Extension Area (ML1815 and ML1817).

The 2023-2025 Forward Program dates align with calendar years (Year 1 -2023, Year 2 – 2024 and Year 3 – 2025).

2.1.2. Description of Surface Disturbance Activities

Detail the surface disturbance activities proposed for the next three years. Information in this section must address the activities illustrated in Plan 2.

2.1.2.1. Exploration activities

Identify and describe exploration activities that are proposed or likely to be proposed to be carried out in areas within the mining leases in the next three years. (1500 characters)

Mangoola Coal will continue to undertake exploration activities within the mining leases, assessment leases and exploration licences to increase the accuracy of the site geological model. During 2023 approximately 11 boreholes are to be drilled in AL9 for the MCCO project and 29 bore holes drilled in ML 1817. Just under half of these will be cored with the remainder of the choles open (chip) holes.

Works will include continued structural, coal quality and crop line drilling. Reporting for these drilling programs will be conducted as per licence requirements. Reserve delineation drilling will be conducted as required within the approved disturbance boundary at Mangoola to determine structure, coal quality and geotechnical features.

Mangoola Coal intends to use existing tracks and open paddocks for drill site exploration where practicable and will disturb approximately 2 ha of topsoil per year in front of the planned mining operation pre-strip disturbance. Exploration activities will be conducted on a campaign basis. An ESF4 or equivalent application will be submitted to MEG prior to the commencement of any exploration drilling works outside the Approved Disturbance Boundary (within AL9 and EL5552) where required. Construction, sealing and decommissioning of boreholes will be undertaken in accordance with relevant standards and guidelines published by DRG. Additional drill holes to install groundwater monitoring bores may also be required and appropriate approvals sought.

2.1.2.2. Construction activities

Identify and describe any construction activities scheduled in the next three years. (1500 characters)

Construction activities to be undertaken over the next three year period, as part of the MCCO Project include:

- construction of access points, temporary office and equipment laydown areas
- continued construction of a haul road overpass over Big Flat Creek and Wybong Road to provide access from existing operations to the Northern Extension Area
- construction of a water management system to manage mine water, sediment laden runoff, divert clean water catchment, provide flood protection from Big Flat Creek and provide for reticulation of mine water
- relocation of 11kV transmission lines and communication cables out of the Northern Extension Area disturbance area
- Demolition and removal of redundant houses and infrastructure
- Establishment of minor access tracks and laydown areas, where necessary, associated with construction work areas located within the Approved Disturbance Boundary. Existing access tracks will be utilised where possible however additional access tracks and associated clearing may be required.

2.1.2.3. Mining schedule

Outline the sequence and staging of mining operations over the next three years. This must be consistent with the life of mine rehabilitation schedule described in the rehabilitation management plan and relevant development consent(s).

Describe the method of mining development and sequencing and general mine features. (1500 characters)

Prior to the commencement of mining, pre strip operations will be conducted to remove vegetation and topsoil. Prior to the commencement of any soil disturbance works, appropriate surface water management controls will be implemented as per the Mangoola Water Management Plan.

Mining will be generally carried out utilising hydraulic excavators, haul trucks and dozers following the blasting of competent material. Coal extraction will continue in the existing Southern Mining Area during the Forward Program term. Mining in the Main Pit will progress in a south westerly direction around Anvil Hill. Mining in the South Pit will progress in a north westerly direction around Anvil Hill with the pits eventually merging in future years. Following the construction of required infrastructure, coal extraction will also commence into the Northern Extension Area.

Describe the areas identified for emplacements, the sequencing of emplacements, construction and management. (1500 characters)

Overburden emplacement will continue behind an existing noise wall in Main Pit until such time that the available area is restricted beside Anvil Hill. South Pit mining will continue behind the existing noise and visual wall and the Overburden Emplacement Area (OEA) will continue to follow the progression of each pit. An additional OEA will be developed in the north‐east of the Northern Extension Area.

Dumping at night will occur below the outer dump maximum elevation to minimise potential adverse noise and visual impacts associated with mining operations on neighbouring residences. Blasted overburden material is loaded by hydraulic excavators into dump trucks for transportation to the overburden emplacement areas. Final exterior dump faces are designed at a general slope of 10 degrees or to match in with existing topographic landscape. The dump is slightly undulating for drainage based on a natural landform design. The out of pit OEA's will have a maximum height of 240 m Australian Height Datum (AHD) for the term of this Forward Program and as approved in SSD 8642.

Establishment of the final landform will be in line with the current design standards at Mangoola, including use of natural landform design principles incorporating micro‐relief, as approved in SSD 8642.

2.1.2.4. Infrastructure and Tailings Facilities

Identify processing infrastructure activities and the location of tailings facilities and schedule for emplacement. (1500 characters)

The Mangoola CHPP simultaneously produces a low ash export coal and a high ash thermal coal. The coal is washed in two stages of dense medium cyclones while the de-slimmed fines are treated in spirals. The CHPP is designed to take a wide range of feed types from the four seams at Mangoola, without blending of the raw coal. Coarse rejects are trucked to the pit for disposal using the mine haul trucks and thickener underflow is pumped directly to the tailings dam.

Mangoola currently has 3 tailings dams onsite. Tailings Dam (TD) 1 and 2 are in decommissioning phase whilst TD4 is operational and will be active for the life of the mine. Mangoola has provisioned a surcharge stockpile adjacent to the TD4 tailing dam as a source of capping material for use at final closure. Capping material for TD1 is to be delivered from the current mining waste horizons. Further cone penetration testing (CPT) and shear vane testing (SVT) for TD1 and TD2, including revisiting areas within Zone A and B where testing has already been completed will continue to be undertaken. Tailings strength testing will continue to be routinely monitored in TD2, until tailings strengths develop similar to those in TD1. This will allow construction of the capping layer to commence. Throughout this process any surface water will be kept off TD1 and TD2 as far as practicable to maximise the effect of solar desiccation.

2.1.2.5. Waste Management

Describe waste disposal and materials handling operations over the next three years. This should include a discussion of disposal of putrescible waste, hydrocarbons, and management of contaminated soils.

All waste management at Mangoola is undertaken in accordance with the Mangoola Open Cut Waste Management Plan. All waste management is undertaken by a waste management contractor who is responsible for implementing the Waste Management Plan.

Operational waste managed by the waste management contractor includes; office wastes, domestic wastes such as food scraps and household recyclables, hazardous wastes such as workshop and equipment wastes (oily rags, machinery components, waste oils, lubricants and metals), ablution wastes, special wastes such as tyres and asbestos and exploration drill cuttings, chips and fluids.

Inert waste materials generated by these activities will be recycled where practicable or disposed of at an appropriate facility, with some clean inert wastes to be disposed of at appropriate locations within mining areas. Any excavated material generated during construction will be reused onsite.

Contaminated soil from unplanned spills is contained, cleaned up and is removed from site as required by a licensed contractor to an appropriate waste management facility or transported to the Mangoola bioremediation cell.

2.1.3. Key Production Milestones

This section must provide an outline of the key production milestones that underpin the proposed rehabilitation schedule.

***Note:** Information in **Table 8** to be transcribed to table in Portal*

Table 8: Key Production Milestones (Three Year Forecast)

Material	Unit	Year 1 (2023)	Year 2 (2024)	Year 3 (2025)
Stripped topsoil (if applicable)	m^3	160,956	148,625	75,157
Rock / Overburden	m3	30,291,044	36,561,835	35,986,237
Ore	Mt	9.19	11.74	11.65
Reject Material (includes coarse rejects, tailings and any other wastes resulting from beneficiation)	Mt	2.22	2.79	2.73
Product	Mt	6.98	8.95	8.92

2.2. Three-year Rehabilitation Forecast

This section must outline the key activities required to implement the mining and rehabilitation schedule for the next three years. The information in this section must be consistent with the spatial depiction of progressive rehabilitation shown on Plan 2.

2.2.1. Rehabilitation Planning Schedule

Provide a schedule, with defined milestones, outlining the rehabilitation planning activities (where applicable) that will be carried out over the next three years, to address potential knowledge gaps and to ensure that rehabilitation is undertaken as soon as reasonably practicable. (1500 characters)

Mangoola prepares an Annual Rehabilitation and Closure Plan (ARCP) on a calendar year basis, which provides direction and guidance for the rehabilitation and land management activities at site. The plan details responsibilities for land management and rehabilitation activities, as well as nominated timeframes for completion. The plan also documents key performance indicators and associated deliverables for Mangoola's rehabilitation performance on an annual basis in line with this Forward Program.

Rehabilitation for the site includes the re-establishment of a range of native vegetation communities and provides a suitable degree of diversity within the vegetation of the post mining landscape. Rehabilitation activities at Mangoola include:

- stockpiling and utilisation of materials from clearing operations;
- removal and stockpiling of topsoil for use in rehabilitation;
- management of overburden material including selective placement based on material characterisations;
- landform establishment;
- growth medium preparation;
- vegetation establishment;
- habitat establishment; and
- maintenance and monitoring.

Provide an overview of relevant stakeholder consultation that will be carried out over the next three years. (1500 characters)

Consultation was undertaken with various stakeholders, in the development of the rehabilitation and rehabilitation objectives for Mangoola, during the EIS. Ongoing consultation on rehabilitation activities will be undertaken with the relevant regulatory stakeholders. Continued quarterly and Community consultation through the CCC, Registered Aboriginal Parties, Continued distribution of the Mangoola Coal Community Newsletter.

Provide an overview of rehabilitation studies, risk assessments and/or design work associated with finalising the rehabilitation methodologies relating to establishment of the final landform, surface water management, final void management, and tailings dam decommissioning that will be carried out over the next three years. (1500 characters)

Risk associated with rehabilitation progression have been identified during a rehabilitation risk assessment undertaken for Mangoola. Details of these risks and how they are managed are provided in the RMP. This risk assessment will be revised annually.

Further CPT and SVT for TD1 and TD2, will continue to be routinely monitored, until tailings strengths develop similar to those in TD1. This will allow construction of the capping layer to commence. Throughout this process any surface water will be kept off TD1 and TD2 as far as practicable to maximise the effect of solar desiccation. Learnings from capping of TD1 and TD2 will be integrated into the future planning for capping of TD4.

Rehabilitation trials/studies will continue during the forward program term (refer Section 2.2.5).

2.2.2. Rehabilitation Maintenance and Corrective Actions

Include a detailed description of the rehabilitation maintenance and corrective action measures that will be carried out to address all rehabilitation performance issues and/or knowledge gaps identified in the annual rehabilitation report (Part 1). (1500 characters)

Mangoola Coal undertakes an annual rehabilitation monitoring program to assess the progression of rehabilitation and as a method to identify maintenance and corrective actions. The following actions may need to be taken as per the recommendations from the annual rehabilitation monitoring program:

- weed control;
- feral animal control;
- erosion control works;
- re-seeding/planting of rehabilitation areas that may have failed to meet criteria;
- addition of soil ameliorants to overcome potential constraints as identified by chemical analysis undertaken in response to rehabilitation failure; and
- repair of fences, access tracks and other general related land management activities.

It is envisaged that this monitoring / inspection program will be continued as required until it can be demonstrated that the rehabilitation has satisfied the closure criteria. Specific maintenance and corrective actions to be progressed in the next three years and progress of current actions will be included in future Forward Programs, in line with the Annual Rehabilitation Reports.

2.2.3. Rehabilitation Schedule

Outline the key activities required to implement the mining and rehabilitation schedule for the next three years. The information in this section must be consistent with the spatial depiction of progressive rehabilitation shown on Plan 2. Note: This section must describe how the mining and rehabilitation schedule has been developed to minimise disturbance and progressively rehabilitate as soon as reasonably practicable. (1500 characters)

Two final voids will remain as part of the final landform and will become waterbodies. It is predicted that both final voids (non- backfilled mining areas) will partially fill with water and act as long-term hydraulic sinks.

The reestablishment of Anvil Creek will enable rainfall runoff from the rehabilitated Mangoola site to drain freely back into Big Flat Creek. Work on the re‑established Anvil Creek will continue during the FP term.

All rehabilitation works will be scheduled to occur progressively as soon as practicable after mining disturbance or following decommissioning of infrastructure. This approach will also minimise the disturbed area at any time.

The final landform incorporates:

- The haulage of approximately 50 Mbcm of overburden from the Northern Extension Area to the Southern Mining Area.
- Adequate topsoil is available on site for the completion of rehabilitation.
- Rehandling of approximately 5 Mbcm of overburden into the Northern Extension Area final void for shaping and reduction of the void size.
- Void low walls in both the Northern and Southern Areas will be shaped at the completion of mining.
- Remaining high walls may be selectively blasted and shaped for visual amenity and geotechnical stability.
- TD4 is a LOM tailings storage facility with adequate capping material available at closure.

2.2.4. Subsidence Remediation for Underground Operations

Provide an overview of the nature and scope of any subsidence monitoring and expected remediation works proposed to be conducted over the next three years. (1000 characters)

Mangoola is an open cut mine and no subsidence repair or remediation is required at the site.

2.2.5. Rehabilitation Research and Trials

Provide a detailed description of the rehabilitation research and trials that will be carried out in the three-year forecast period (where applicable). This must include the rehabilitation research and trials identified in the rehabilitation management plan and/or any other rehabilitation research or trials proposed to address knowledge gaps identified in annual rehabilitation reports.

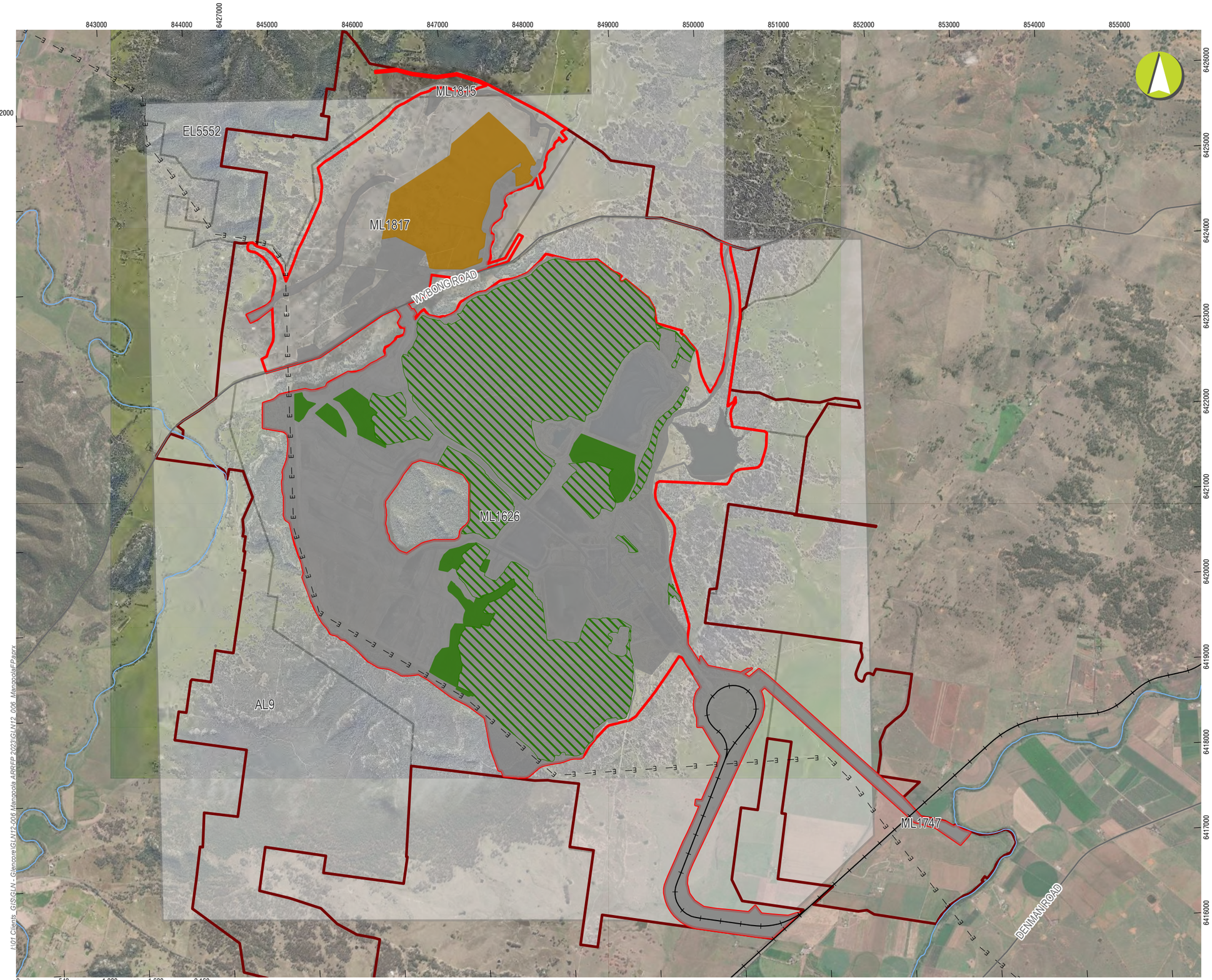
***Note:** Information in **Table 9** and **Table 10** to be transcribed to table in Portal*

Table 9: List of Active Rehabilitation Research and Trials (Three Year Forecast)

No.	RRT no	Project/ trial name	Objective of Trial Project	Methodology	Expected Date of Completion	Completion Date Update	Status	Status Update	On Track	On Track Update
1	RRT0001075	Tailings Dam Desiccation Enhancement Using Tubestock Planting	Experiments have been set up to test the dewatering capacity of tailings by vegetation.	TD1 was planted with 6 trial species in 2018 with evaluation of tailings water content and plant growth evaluated.	31 Dec 2031	31 Dec 2031	Ongoing	Ongoing	Yes	Yes
2	RRT0001077	Flora Species Translocations	To enhance landscape function and plant species diversity/ages. Viability of different translocation methods in achieving conservation outcomes.	Certain species have been identified during ecological pre-clearing surveys that are suitable for translocation in the rehabilitation areas. Excavation with soil matter and transported to pre excavated hole in existing rehabilitation area, where plant is planted and watered for establishment.	31 Dec 2030	31 Dec 2030	Ongoing	Ongoing	Yes	Yes
3	RRT0001074	Threatened Terrestrial and Epiphytic Orchids	A major study is being undertaken on site relating to the translocation of terrestrial orchid species. Assess the viability of different translocation methods in achieving conservation outcomes.	Translocation plots have been established in offset and rehabilitation areas, with reference sites based in nearby buffer lands. Undertaken since 2010, comprising the salvage and relocation of over 2700 orchid cores. Annual monitoring is undertaken to assess the viability of different translocation methods in achieving conservation outcomes. Another trial undertaken includes divide and grow Cymbidium canaliculatum that have been damaged and collected during tree felling operations.	31 Dec 2030	31 Dec 2030	Ongoing	Ongoing	Yes	Yes
4	RRT0001078	Pomaderris reperta translocation	Conservation & translocation of Pomaderris reperta with the aim to evaluate the effectiveness of propagation and translocation & extend on distribution within the natural range of the species	Two 12m x 12m translocation plots have been established within establishing Mangoola rehabilitation and two identical sized plots located in Mangoola offset land. Ongoing monitoring and research will be conducted to evaluate the effectiveness of the translocation project. Excavation of identified plots and transplanting into trial plots.	31 Dec 2030	31 Dec 2030	Ongoing	Ongoing	Yes	Yes

Table 10: List of Inactive Rehabilitation Research and Trials (Three Year Forecast)

No.	RRT no	Project/ trial name	Objective of Trial Project	Methodology	Expected Date of Completion	Status	On Track
Nil	Nil	Nil	Nil	Nil	Nil	Nil	N/A



LEGEND

- Project Approval Boundary
- Approved Disturbance Boundary
- Road
- Railway
- Electricity Transmission Line
- Watercourse

Current Authorisations

- Coal - Current Titles

Forecast Area Type - Year 1 (2023)

- Forecast Land Prepared for Rehabilitation (2023)
- Forecast Disturbance (2023)
- Previous Rehabilitation
- Disturbance

Glencore Mangoola Mine Complex

Mining and Rehabilitation Year 1 - 2023

PLAN 2A

Mine name	Mangoola Coal Mine
Plan name	Mangoola Coal Mine ARRFP
Year of anticipated relinquishment	Mangoola Coal Mine ARRFP
Data theme submission ID No.	TBA
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	29/03/2023

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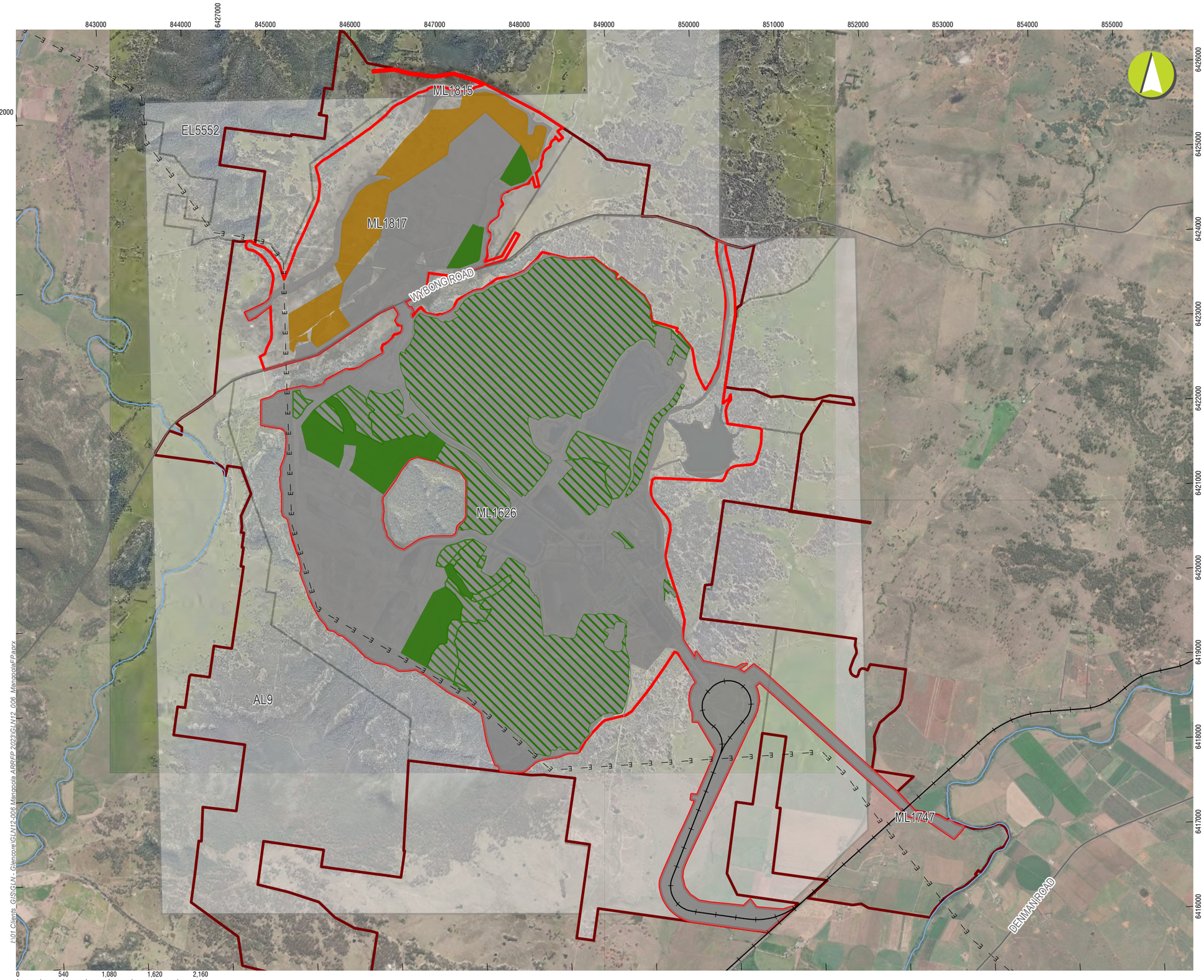

LEGEND

- Project Approval Boundary
- Approved Disturbance Boundary
- Road
- Railway
- Electricity Transmission Line
- Watercourse

Current Authorisations

- Coal - Current Titles

Forecast Area Type - Year 2 (2024)

- Forecast Land Prepared for Rehabilitation (2024)
- Forecast Disturbance (2024)
- Previous Rehabilitation
- Disturbance

Glencore Mangoola Mine Complex

Mining and Rehabilitation Year 2 - 2024

PLAN 2B

Mine name	Mangoola Coal Mine
Plan name	Mangoola Coal Mine ARRFP
Year of anticipated relinquishment	TBA
Data theme submission ID No.	TBA
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	29/03/2023

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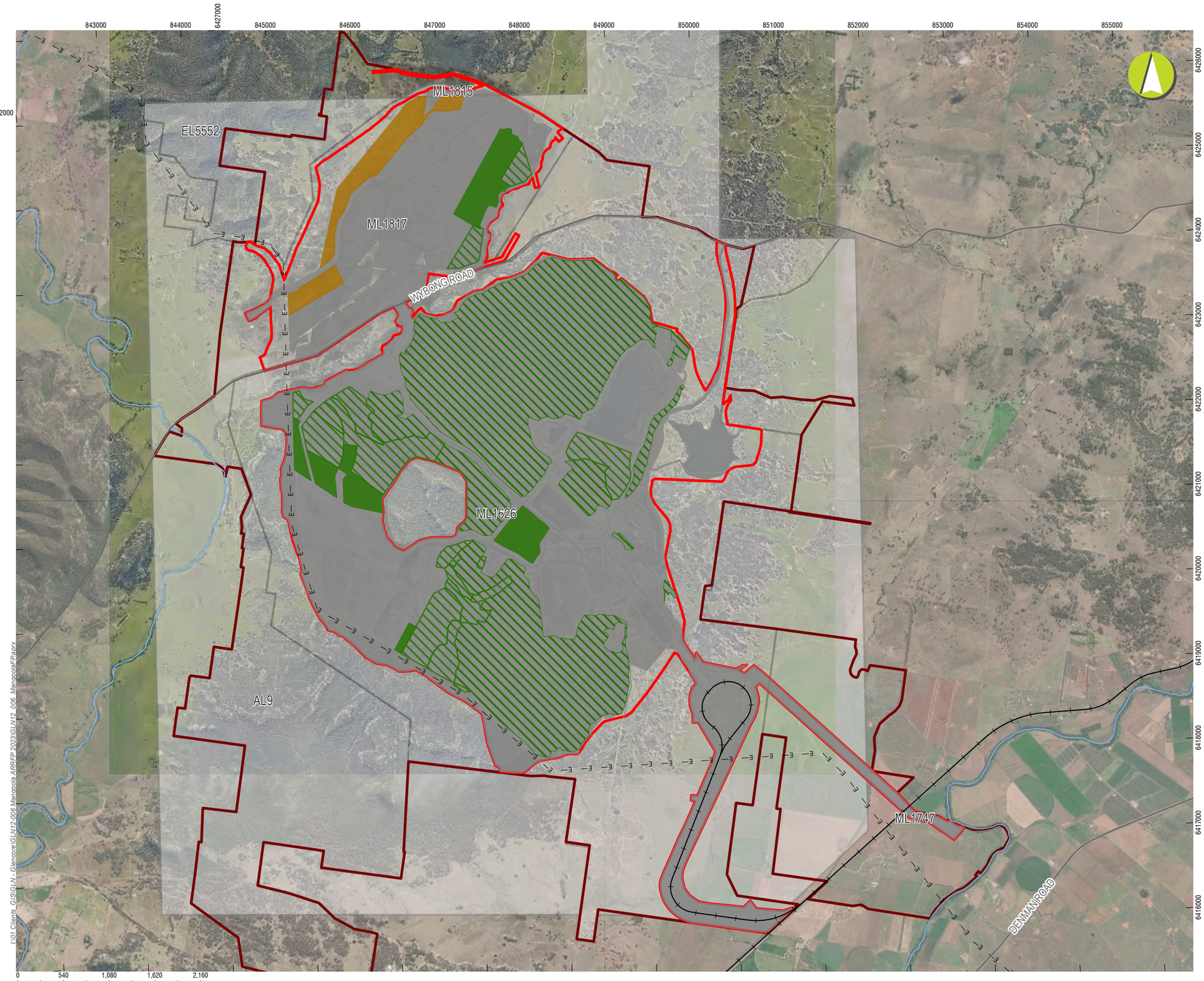

LEGEND

- Project Approval Boundary
- Approved Disturbance Boundary
- Road
- Railway
- Electricity Transmission Line
- Watercourse

Current Authorisations

- Coal - Current Titles

Forecast Area Type - Year 3 (2025)

- Forecast Land Prepared for Rehabilitation (2025)
- Forecast Disturbance (2025)
- Previous Rehabilitation
- Disturbance

Glencore Mangoola Mine Complex

Mining and Rehabilitation Year 3 - 2025

PLAN 2C

Mine name	Mangoola Coal Mine
Plan name	Mangoola Coal Mine ARRFP
Year of anticipated relinquishment	TBA
Data theme submission ID No.	TBA
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	30/03/2023

Source:

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2.3. Progressive Mining and Rehabilitation Statistics

Based on the information presented in Plan 2, this section must provide a summary of the forecast cumulative disturbance and rehabilitation progression during the next three.

All values are generated using the mine rehabilitation portal following submission of spatial data themes used to generate Plan 2.

***Note:** Entered as a table to Portal. Cells should auto populate in portal following spatial data submission*

Table 11: Three-Yearly Forecast Cumulative Disturbance and Rehabilitation Progression

To be determined after successful linking of portals.

Year		Year 1 (2023)	Year 2 (2024)	Year 3 (2025)
A	Total disturbance footprint – surface disturbance (Ha)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
B	Total active disturbance (Ha)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
C	Rehabilitation – land preparation (Ha)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
D	Ecosystem and land use establishment (Ha)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission

This identifies progressive rehabilitation key performance indicators.

All values are generated using the mine rehabilitation portal following submission of spatial data themes used to generate Plan 2.

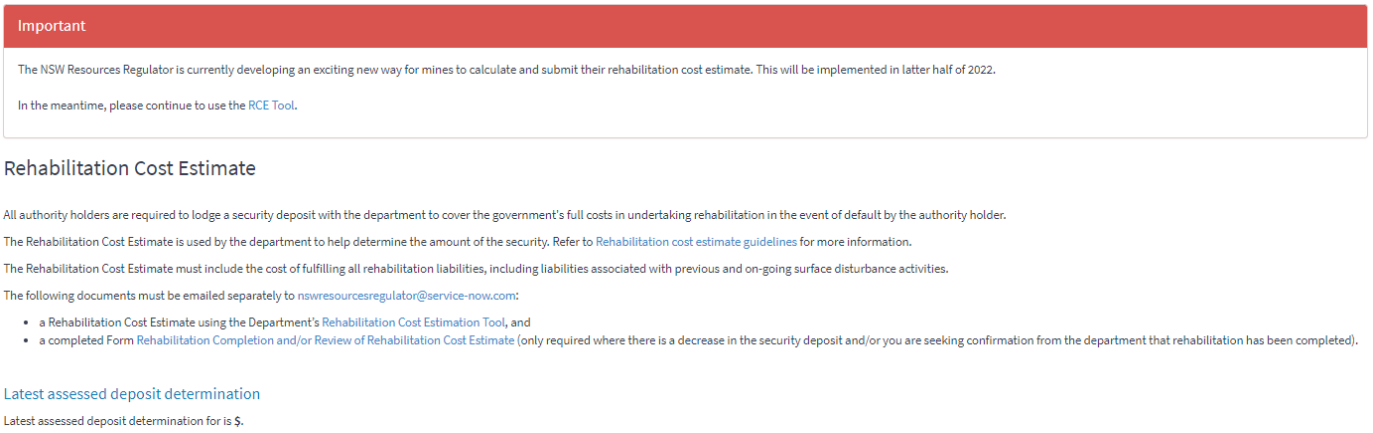
***Note:** Entered as a table to Portal. Cells should auto populate in portal following spatial data submission*

Table 12: Three-Yearly Forecast Cumulative Disturbance and Rehabilitation Progression

To be determined after successful linking of portals.

Year		Year 1 (2023)	Year 2 (2024)	Year 3 (2025)
O	Total new active disturbance area during reporting period (Ha)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
P	Total new area of land proposed for active rehabilitation during the reporting period (Ha)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission
Q	Annual Rehabilitation to disturbance ratio (Ha)	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission	Should auto populate in portal based on previous AFP submission

2.4. Rehabilitation Cost Estimate



Important

The NSW Resources Regulator is currently developing an exciting new way for mines to calculate and submit their rehabilitation cost estimate. This will be implemented in latter half of 2022.

In the meantime, please continue to use the RCE Tool.

Rehabilitation Cost Estimate

All authority holders are required to lodge a security deposit with the department to cover the government's full costs in undertaking rehabilitation in the event of default by the authority holder.

The Rehabilitation Cost Estimate is used by the department to help determine the amount of the security. Refer to Rehabilitation cost estimate guidelines for more information.

The Rehabilitation Cost Estimate must include the cost of fulfilling all rehabilitation liabilities, including liabilities associated with previous and on-going surface disturbance activities.

The following documents must be emailed separately to nswresourcesregulator@service-now.com:

- a Rehabilitation Cost Estimate using the Department's Rehabilitation Cost Estimation Tool, and
- a completed Form Rehabilitation Completion and/or Review of Rehabilitation Cost Estimate (only required where there is a decrease in the security deposit and/or you are seeking confirmation from the department that rehabilitation has been completed).

Latest assessed deposit determination

Latest assessed deposit determination for is $.

DECLARATION- Finalise and Submit Part 1 Annual Rehabilitation Report

RCE ATTACHED