

FWP0001550

# **MOOLARBEN COAL FORWARD PROGRAM**

Wednesday 1 January 2025 to Friday 31 December 2027

## Summary

### DETAIL

|                                          |                                                                                |
|------------------------------------------|--------------------------------------------------------------------------------|
| Mine                                     | Moolarben Coal                                                                 |
| Reference                                | FWP0001550                                                                     |
| Forward program commencement date        | Wednesday 1 January 2025                                                       |
| Forward program end date                 | Friday 31 December 2027                                                        |
| Forward program revision (if applicable) |                                                                                |
| Contact                                  | Damien Ryba                                                                    |
| Mining leases                            | ML 1606 (1992), ML 1715 (1992), ML 1605 (1992), ML 1628 (1992), ML 1691 (1992) |
| Project location                         | Yancoal Moolarben Pty Ltd                                                      |
| Date of submission                       | Thursday 17 April 2025                                                         |

## 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 NSW Resources Regulator Portal.

# Three-year forecast – surface disturbance activities

## Project description

The Moolarben Coal Project Stage 1 was approved on 6 September 2007 (Project Approval [05\_0117]) and has been subject to fifteen modifications. Stage 1 of the Moolarben Coal Complex has commenced and at full development will comprise three open cut mines (OC1, OC2, and OC3), a longwall underground mine (UG4), and mining related infrastructure (including coal processing and transport facilities). Since commencement of coal mining operations in 2010, mining activities have occurred within OC1, OC2, OC3, and UG4. Moolarben Coal Complex (Stage 2) was approved on 30 January 2015 (Project Approval [08\_0135]) and has been subject to five modifications. Moolarben Coal Project Stage 2 commenced in 2015. At full development, there will be one open-cut (OC4), two longwall underground mines (UG1 and UG2) and mining related infrastructure.

## Description of surface disturbance activities

### Exploration activities

Mine exploration activities during the term of the Forward Program will continue to be undertaken within MCO's MLs. Drilling activities are scheduled to occur within and adjacent to the following approved mining areas: ML1691 – Underground 2, Open Cut 3 and adjacent areas; ML1715 - Open Cut 4, Underground 1, Underground 2 and adjacent areas; ML1628 - Underground 1, Underground 4, Open Cut 3 and adjacent areas; ML1605 – Underground 4 and adjacent areas including holes within the subsurface lease area; and ML1606 – Underground 1. Indicative areas for exploration disturbance have been provided in the forecast spatial themes. Prior to any exploration activity commencing, a Ground Disturbance Permit (GDP) will be completed. The GDP identifies environmental, heritage and relevant regulatory obligations and management measures to mitigate and minimise potential impacts. The location of exploration disturbance may change following detailed review as part of the GDP process.

### Construction activities

In addition to approved operational activities of the Moolarben Coal Complex, other approved development activities will be undertaken within the extent of the existing approved Stage 1 of the Moolarben Coal Complex. The construction activities over the next three years will generally consist of the following: Water management and ancillary works: progressive expansion of the existing water management to support current mining operations will generally include the construction of mine water and sediment dams, drainage, diversion works; water treatment facilities including associated ancillary works; UG dewatering bores

including associated ancillary works. In the open cut: water management dams and associated pipelines and infrastructure, auxiliary infrastructure for OC3 including mine infrastructure area and roads; diversion drains and sediment control structures; supporting infrastructure including laydown areas. The Stage 2 construction activities over the next three years will generally consist of the following: water diversion structure/s; internal roads; water management dams and associated pipelines and infrastructure; ancillary works.

## **Mining schedule**

Mining development method and sequencing and general mine features.

Mining operations in OC1, OC2, OC3, OC4, UG1 and UG4 will be carried out 24 hours per day during the Forward Program term. The general sequence of open cut mining is as follows: vegetation clearance ahead of the mine progression in accordance with the Vegetation Clearance Protocol (VCP); topsoil stripping and stockpiling; drilling and blasting of waste rock and coal; removal of waste rock by excavator and haulage to out-of-pit emplacement areas or in-pit behind the advancing open cut; selective mining of coal seams and haulage to the ROM pad; and progressive backfilling of the open pit with mined waste rock, prior to profiling and progressive rehabilitation. The open cut mine sequence has been developed to optimise the efficient mining of coal; minimise haul lengths and permit effective overburden emplacement (both out-of-pit and in pit); and enable the progressive formation of the post-mining landform and reduce the amount of disturbed land at any one time. During the term of this Forward Program, first workings in UG4 will continue to develop longwall panels 401 to 408, commence development of longwall panels 409 to 414, and continue secondary extraction of Longwalls 401 and 408.

Areas identified for emplacements, the sequencing of emplacements, construction, and management.

Waste rock (including overburden and interburden) mined in OC1, OC2, OC3 and OC4 will continue to be placed in-pit behind active mining. Temporary overburden stockpiles will also be strategically placed near other large disturbance areas, such as dams and infrastructure areas, to expedite backfilling and rehabilitation and minimise rehandling of overburden material.

Processing infrastructure activities and the location of tailings facilities and schedule for emplacement.

Open Cut ROM coal for washing is transported from the ROMs via conveyor to the CHPP for processing. ROM coal is transported from the UG ROM to the product stockpile via conveyor. Washed product coal is transported to the product coal stockpile prior to railing. Coarse rejects are co-mingled with dewatered fine rejects and transported by conveyor to the Rejects Bin and trucked back to the open pit for selective placement with mine spoil. All product coal is loaded onto trains via the Train Load-out in the Moolarben rail loop and transported via rail to port.

## Waste disposal and materials handling operations.

Key waste streams (apart from waste rock) that will be generated during the Forward Program term comprise: recyclable and non-recyclable general wastes; sewage and effluent; and other wastes from mining and workshop activities (e.g. waste oils, scrap metal and used tyres). General waste minimisation principles (i.e. reduce, re-use and recycling) will continue to be applied at the Moolarben Coal Complex to minimise the quantity of wastes that require off-site disposal. All general domestic waste (e.g. general solid [putrescibles] and general solid [non-putrescible] waste as defined in Waste Classification Guidelines Part 1: Classifying Waste [EPA, 2014] and general recyclable products will continue to be collected by an appropriately licensed contractor. Discharge from all on-site sewage management systems are licensed by EPL 12932. MCO will maintain a register of regulated waste collected by the licensed waste contractor for disposal.

## Key production milestones

| MATERIAL                                   | UNIT              | YEAR 1     | YEAR 2     | YEAR 3     |
|--------------------------------------------|-------------------|------------|------------|------------|
| <b>Stripped topsoil</b><br>(if applicable) | (m <sup>3</sup> ) | 275,964    | 478,296    | 509,232    |
| <b>Rock/overburden</b>                     | (m <sup>3</sup> ) | 71,917,984 | 65,346,020 | 58,239,433 |
| <b>Ore</b>                                 | (Mt)              | 21,123,827 | 21,596,418 | 21,822,812 |
| <b>Reject material<sup>1</sup></b>         | (Mt)              | 2,847,894  | 2,842,969  | 3,006,667  |
| <b>Product</b>                             | (Mt)              | 18,182,195 | 18,741,980 | 19,171,249 |

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

# Three-year rehabilitation forecast

## Rehabilitation planning schedule

### Rehabilitation planning schedule

The open cut pits behind the active mine area will be progressively backfilled with excavated overburden and progressively rehabilitated to minimise the area of disturbance at any one time. The adjacent out-of-pit overburden emplacements (and associated environmental bunds) will also be progressively constructed and rehabilitated, as soon as practicable following dumping to the final height, to mitigate visual, noise and air quality impacts. During the forecast period the following rehabilitation planning activities will be carried out: Life of Mine planning including rehabilitation scheduling refinements; rehabilitation Landform Establishment and Ecosystem and Land Use Establishment for each calendar year will be generally in accordance with the Forward Program data provided; continued incorporation of landform design principles (such as Geofluv) into the final landform designs; development of an internal Rehabilitation Operations Manual to provide additional guidance to operators in site-specific and best-practice rehabilitation implementation techniques.

### Stakeholder consultation

MCO has conducted comprehensive stakeholder consultation throughout the lifecycle of the mining operation. MCO conducted comprehensive consultation programs during the Moolarben Coal Project Stage 1 and Moolarben Coal Project Stage 2 approval processes under the NSW Environmental Planning and Assessment Act, 1979. These consultation programs included the rehabilitation strategy for the Moolarben Coal Complex. Stakeholder consultation is key in ensuring that rehabilitation outcomes satisfy both the local community's and government requirements. Stakeholder consultation planned during the Forward Program term includes: updates to the RMP - key stakeholders will be given an opportunity to provide comment on the updates to the RMP that will be undertaken in 2025; Community Consultation Committee – regular updates regarding mining operations, exploration, and rehabilitation activities are provided to the CCC. Ongoing consultation with the community and relevant stakeholders occurs via the CCC, Moolarben Coal Complex website, MCO's community hotline and community complaints contact line.

### Rehabilitation studies, risk assessments and/or design work

Rehabilitation Design and Quality Assurance - a detailed Inspection and Test Plan (ITP) process is in place with process flows and inspections to cover: rehabilitation planning during active mining; landform establishment; growth medium development; and ecosystem and land use establishment. The ITP is regularly reviewed and updated to ensure that appropriate rehabilitation outcomes are achieved. The ITP includes steps for internal sign off of the

different rehabilitation phases. A rehabilitation risk assessment review was conducted during February 2025 in accordance with the Mining Act requirements. MCO will continue to incorporate landform design principles (such as Geofluv) in the final landform of OC3 and OC4. GeoFluv aims to design mature-stable catchments — the state to which a catchment naturally would evolve by erosional processes to steady-state stability, under the climatic and physiographic conditions at the site. Detailed designs for the realignment of the both the Murragamba and Eastern Creeks have been developed by Alluvium Consulting. MCO will continue to implement the aspects of these design to enable the reinstatement of Murragamba and Eastern Creeks as part of the final landform design and surface water management in the rehabilitated landform. Studies will be undertaken during the Forward Program term to inform rock mulching requirements on steeper slopes where the rehabilitation ties into the surrounding natural topography.

# Rehabilitation research and trials

| RRT<br>NUMBER | PROJECT/TRIAL NAME | OBJECTIVE OF TRIAL/PROJECT | METHODOLOGY | EXPECTED DATE<br>OF COMPLETION | STATUS |
|---------------|--------------------|----------------------------|-------------|--------------------------------|--------|
|---------------|--------------------|----------------------------|-------------|--------------------------------|--------|

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## Rehabilitation maintenance and corrective actions

Where rehabilitation monitoring results indicate the potential for rehabilitation failure, MCO will undertake a preliminary review of all site monitoring data to determine the extent and causes of the unsatisfactory performance. MCO will review the rehabilitation monitoring results, active mining records (including weather records) and rehabilitation methodology records to identify possible relationships between rehabilitation monitoring results, site conditions and rehabilitation practices. Additional site investigations may be required if the contributing factors, and extent of rehabilitation failure are not clearly understood using the annual rehabilitation monitoring results. Additional site investigations will include: define the areas where rehabilitation results are not satisfactory; identify specific site characteristics (such as topsoil and subsoil geochemical properties) that may be contributing to rehabilitation underperformance; and develop recommendations for site-specific management and mitigation actions or more broad amendments to rehabilitation methodologies. Maintenance: following site investigations, MCO will undertake appropriate management actions to mitigate the identified contributing factors. Mitigation measures may include: weed or feral animal control works to improve juvenile vegetation survival; additional soil amelioration to improve seed germination rates; and implementing additional erosion and sediment controls to minimise erosion.

## Rehabilitation schedule

In accordance with Condition 66, Schedule 3 of Project Approval (05\_0117) and Condition 54, Schedule 3 of Project Approval (08\_0135), areas disturbed by mining at the Moolarben Coal Complex will be progressively rehabilitated following completion of active mining operations. Rehabilitation at the Moolarben Coal Complex has commenced and includes permanent and temporary rehabilitation of spoil emplacement areas, environmental bunds, rail loop and completed construction areas. Ongoing monitoring and maintenance of rehabilitated areas at the Moolarben Coal Complex is undertaken as required. The identified final land use at MCO is a mixture of native vegetation communities (including woodland, native grasslands) and agricultural grazing. The primary rehabilitation goal is to create landforms that are safe, stable, and non-polluting and consistent with naturally occurring landform features. Progressive rehabilitation occurring over the calendar year is provided in Plans 2A – 2C. Rehabilitation will be undertaken as soon as reasonably practicable once final landforms have met final landform design profiles. The ability to rehabilitate is restricted at times due to factors such as in-pit space constraints, rehabilitation resource stockpiling and availability of completed shaped dumps to rehabilitate. Minor exploration site rehabilitation and short term (or temporary) rehabilitation will occur as required within the next three years.

## Completion of rehabilitation

### Subsidence remediation for underground operations

Minor cracks that develop are not expected to require remediation as geomorphologic process will result in natural filling of these cracks over time. Remediation of typical surface cracks will be undertaken where practicable and accessible using conventional earthmoving equipment and will include infilling of surface cracks with soil or other suitable materials; or locally re-grading and re-compacting the surface. Remediation will be undertaken in the event a crack is identified to present a significant risk to safety of people or livestock and/or presents a long-term degradation or erosion risk. If surface crack remediation works are required in remnant vegetation areas, compact mobile equipment will be used, where practicable, to minimise damage to surrounding vegetation. If the remediation work requires clearing of remnant vegetation to an extent that would exceed the benefit of the remediation, the requirement for remediation will be reviewed.

## Progressive mining and rehabilitation statistics

### Three-yearly forecast cumulative disturbance and rehabilitation progression

|    | FORECAST                                                  | UNIT | YEAR 1   | YEAR 2   | YEAR 3   |
|----|-----------------------------------------------------------|------|----------|----------|----------|
| A1 | Total disturbance footprint - surface disturbance         | (ha) | 2,462.56 | 2,553.42 | 2,631.27 |
| B  | Total active disturbance                                  | (ha) | 1,912.12 | 1,947.65 | 1,971.5  |
| P  | Total new area of land proposed for active rehabilitation | (ha) | 45.27    | 100.6    | 154.6    |

### Rehabilitation key performance indicators (KPIs)

|   | FORECAST                                                                       | UNIT | YEAR 1 | YEAR 2 | YEAR 3 |
|---|--------------------------------------------------------------------------------|------|--------|--------|--------|
| O | Total new disturbance area during reporting period                             | (ha) | 162.27 | 90.86  | 77.85  |
| P | Total new area of land proposed for rehabilitation during the reporting period | (ha) | 45.27  | 55.33  | 54     |
| Q | Annual rehabilitation to disturbance ratio                                     |      | 0.28   | 0.61   | 0.69   |

## Attachment 1 – Reporting Definitions

| REPORTING CATEGORY                                         | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> Total disturbance footprint – surface disturbance | <p>All areas within a mining lease that either have at some point in time or continue to pose a rehabilitation liability due to surface disturbance activities.</p> <p>The total disturbance footprint is the sum of the total active disturbance, decommissioning, landform establishment, growth medium development, ecosystem and land use establishment, ecosystem and land use development and rehabilitation completion (see definitions below).</p> <p>Underground mining operations should not include the footprint of underground mining areas/subsidence management areas in the total disturbance footprint.</p>                                                |
| <b>B</b> Total active disturbance                          | <p>Includes on-lease exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste rock emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped) and temporary stabilised areas (e.g. areas sown with temporary cover crops for dust mitigation and temporary rehabilitation).</p>                                                                                                                                                                                              |
| <b>C</b> Rehabilitation – land preparation                 | <p>Includes the sum of all disturbed land within a mining lease that have commenced any, or all, of the following phases of rehabilitation – decommissioning, landform establishment and growth medium development.</p> <p>Refer to the glossary of terms in this document for the definition of these phases of rehabilitation.</p>                                                                                                                                                                                                                                                                                                                                        |
| <b>D</b> Ecosystem and land use establishment              | <p>Includes the area which has been seeded/planted with the target vegetation species for the intended final land use. However, vegetation has not matured to a stage where it can be demonstrated that it will be sustainable for the long term and or require only a maintenance regime consistent with target reference/analogous 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> |

| REPORTING CATEGORY |  | DEFINITION                                                                                                                                                                                                                                                                            |
|--------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| O                  |  | The area of any new active disturbance that will be created during the next three years, as defined under definition A1 (definition A1 Table 5).                                                                                                                                      |
| P                  |  | The sum of any new rehabilitation to be commenced in the next three years. These areas may be in the phases “Rehabilitation - Land Preparation” or the “Ecosystem & Land Use Establishment” (definitions C & D in Table 5).                                                           |
| Q                  |  | The rehabilitation to disturbance ratio (S / R) indicates how many hectares of new rehabilitation are undertaken for each hectare of land disturbed during the three years. A ratio of 1/1 indicates that the area of new rehabilitation and disturbance in that period are the same. |

## 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).                                                                                                                                                                                                                                                                                                 |
| <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.              |

| WORD                                        | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Department</b>                           | The Department of Regional NSW.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <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>                               | <p>An area (or areas) of the land that has been disturbed by mining and has a specific operational use (mining domain) or specific final land use (final land use domain). Land within a domain typically has similar geochemical and/or geophysical characteristics and therefore requires specific rehabilitation activities to achieve the associated final land use.</p>                                                                                                                                                                                                                                                                                                                |
| <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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| WORD                                          | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Final landform and rehabilitation plan</b> | As defined in the Mining Regulation 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <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 <i>Biodiversity Conservation Act 2016</i> and the <i>Fisheries Management Act 1994</i> (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 <i>Mining Act 1992</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| WORD                              | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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 NSW 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 the NSW Resources Regulator to regulate rehabilitation performance of lease holders.</p> |
| <b>Mining area</b>                | As defined in the <i>Mining Act 1992</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <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 <i>Mining Act 1992</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Native vegetation</b>          | Has the same meaning as that term under section 60B of the <i>Local Land Services Act 2013</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <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.                                                                                                                                                                                                                                                       |

| WORD                                      | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Phases of rehabilitation</b>           | <p>The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are:</p> <ul style="list-style-type: none"> <li>■ active mining</li> <li>■ decommissioning</li> <li>■ landform Establishment</li> <li>■ growth medium development</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 NSW Resources Regulator has determined in writing that the relevant rehabilitation obligations have been fulfilled following submission of <i>Form ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate</i> application by the lease holder. |
| <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>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.                                                                                                                                                                                                                                                                                                                                                                                                                            |

| WORD                         | DEFINITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Relevant stakeholders</b> | Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes: <ul style="list-style-type: none"> <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 a mining lease.</li> </ul> |
| <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*.

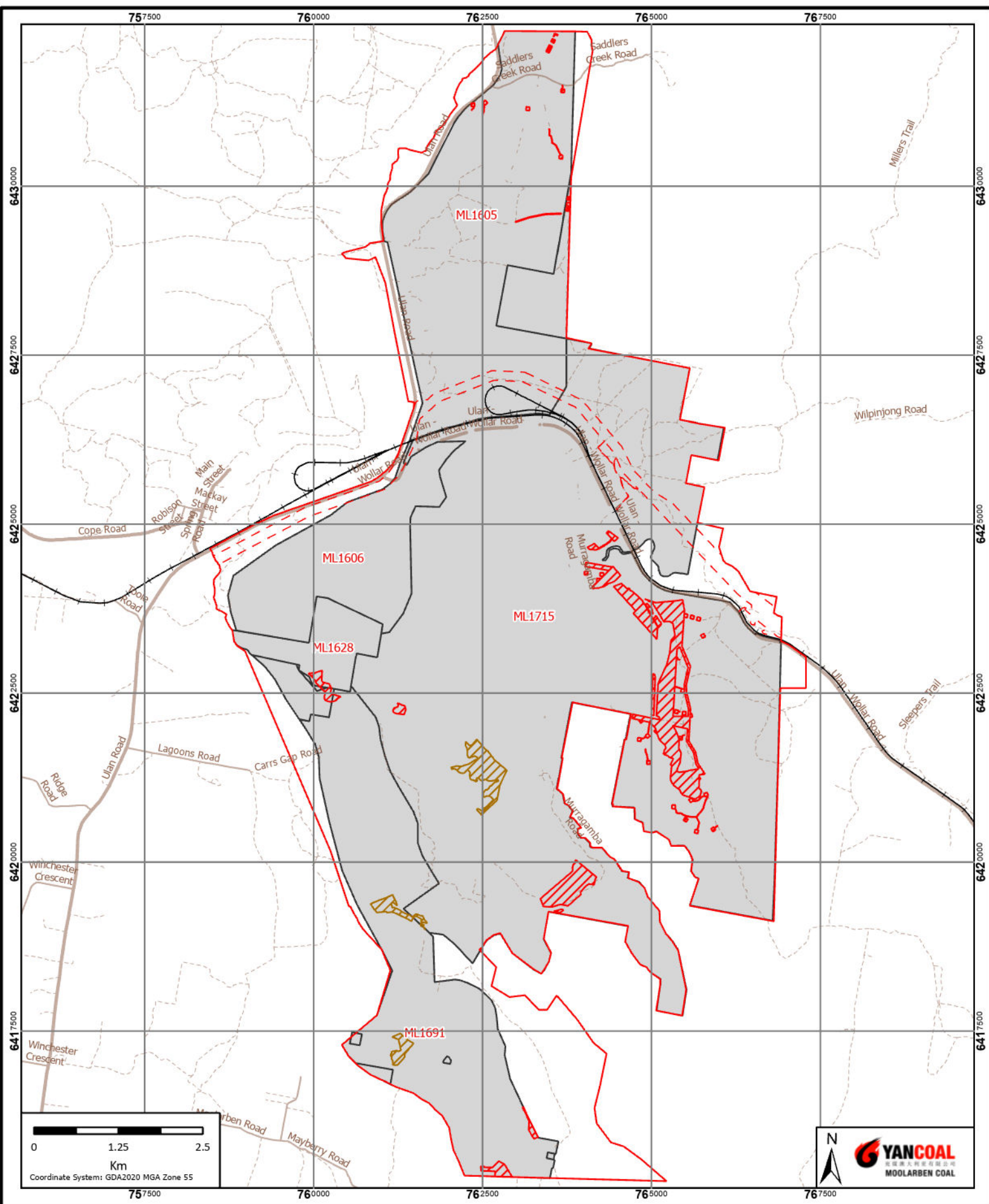
## Attachment 3 – Plans

Plan 2A.pdf

Plan 2B.pdf

Plan 2C.pdf

Forward Program (LARGE MINE) v2.5



**Legend**

- Consolidated Approval Boundary
- EnergyCo Easement
- Mining Lease Boundary
- Railway Line
- Main Road
- Local Road
- Unsealed Road

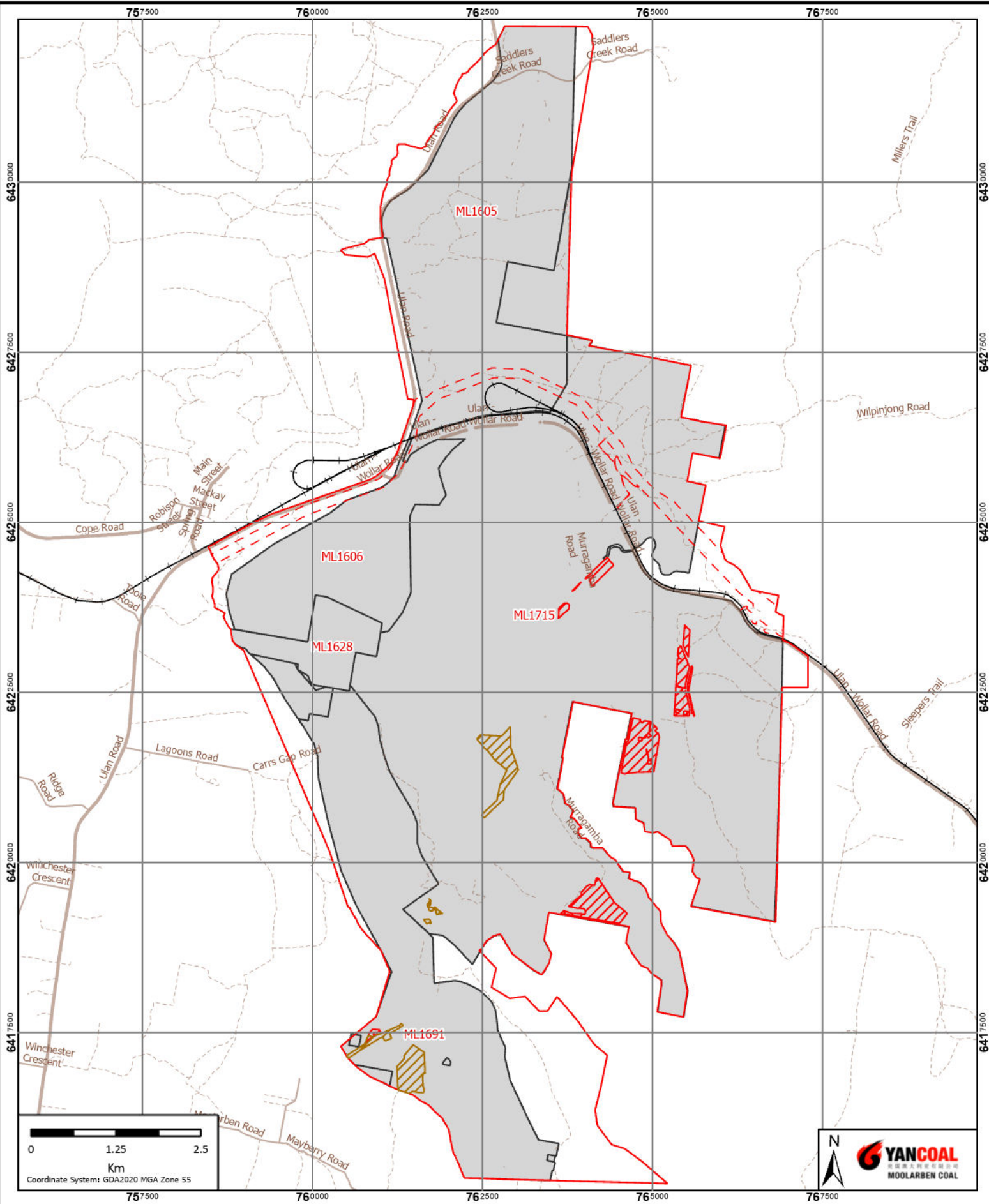
**Forecast Data (Portal Submission ID: 9607)**

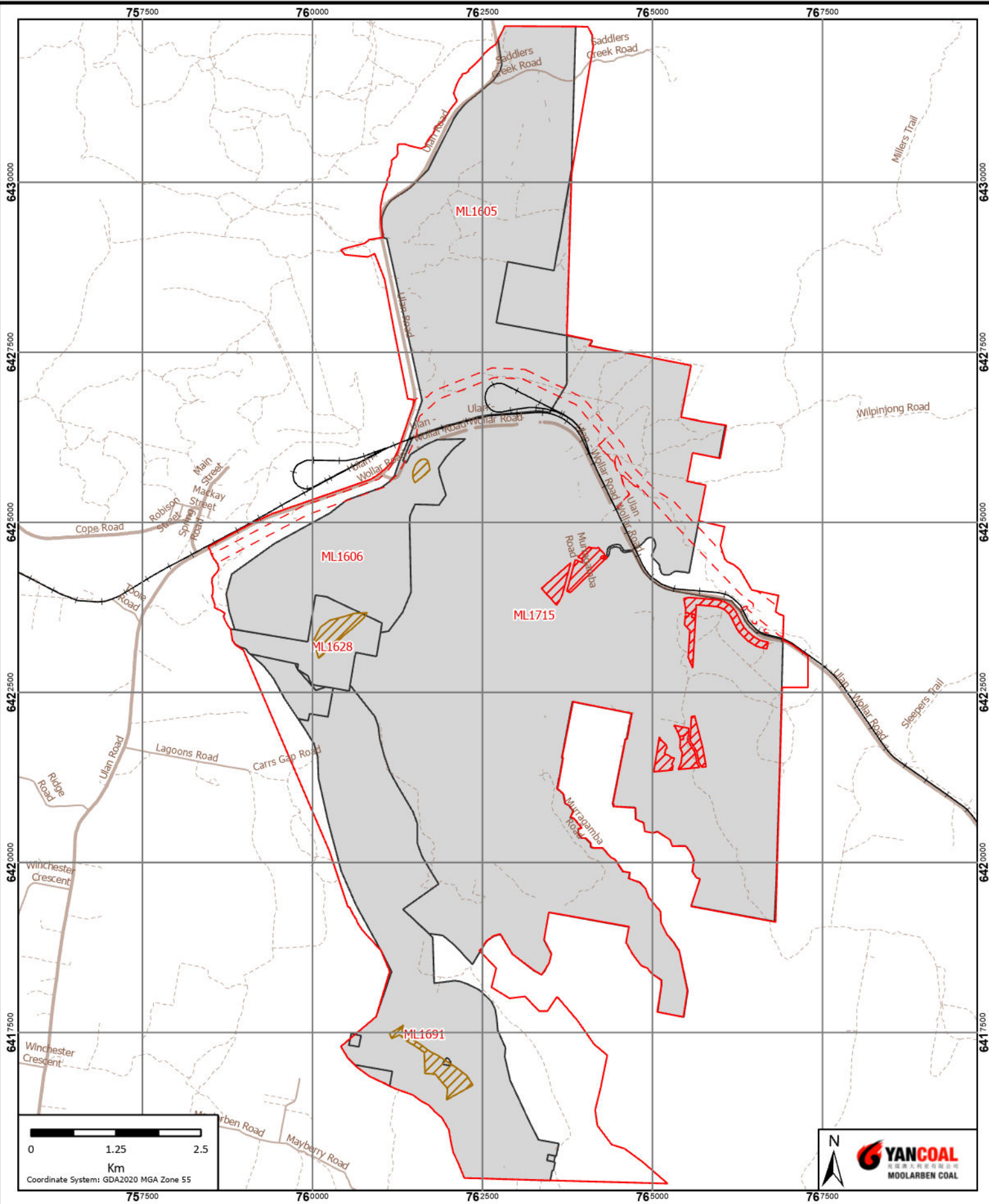
- Forecast Disturbance
- Forecast Land Prepared for Rehabilitation

Plan 2a  
Mining and Rehabilitation - Year 1

YANCOAL  
MOOLARBEN COAL

Date: 27/03/2025  
File: Q:\11.1.24501.1.1.Licences\Leases\B. Anonymous\04.MOBL 2015 Forward Plan\Figures\Foreward Plan Clean 1.jpg





#### Legend

- |                                                                                                                               |                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <span style="border: 2px solid red; display: inline-block; width: 20px; height: 10px;"></span> Consolidated Approval Boundary | Forecast Data (Portal Submission ID: 9609)                                                                                                                                                                             |
| <span style="border: 2px dashed red; display: inline-block; width: 20px; height: 10px;"></span> EnergyCo Easement             | <span style="background: repeating-linear-gradient(45deg, transparent, transparent 2px, red 2px, red 4px); display: inline-block; width: 20px; height: 10px;"></span> Forecast Disturbance                             |
| <span style="background-color: grey; display: inline-block; width: 20px; height: 10px;"></span> Mining Lease Boundary         | <span style="background: repeating-linear-gradient(-45deg, transparent, transparent 2px, yellow 2px, yellow 4px); display: inline-block; width: 20px; height: 10px;"></span> Forecast Land Prepared for Rehabilitation |
| <span style="border-bottom: 2px solid brown; display: inline-block; width: 20px;"></span> Main Road                           |                                                                                                                                                                                                                        |
| <span style="border-bottom: 1px solid brown; display: inline-block; width: 20px;"></span> Local Road                          |                                                                                                                                                                                                                        |
| <span style="border-bottom: 1px dashed brown; display: inline-block; width: 20px;"></span> Unsealed Road                      |                                                                                                                                                                                                                        |
| <span style="border-bottom: 2px solid black; display: inline-block; width: 20px;"></span> Railway Line                        |                                                                                                                                                                                                                        |



## Open Cut and Underground Summary Rehabilitation Cost Estimation

Note: Sections of this page are automatically filled in from the registration page

|                   |                                                                                                      |                                       |            |
|-------------------|------------------------------------------------------------------------------------------------------|---------------------------------------|------------|
| Mine Name:        | Moolarben Coal Operations                                                                            |                                       |            |
| Lease(s):         | ML1605, ML1606, ML1715                                                                               |                                       |            |
| Title Holder:     | Moolarben Coal Mines Pty Ltd, Sojitz Moolarben Resources Pty Ltd, Kores Australia Moolarben Coal Pty |                                       |            |
| Term of RCE:      | Moolarben Coal Operations Pty Ltd                                                                    |                                       |            |
| Current Security: | \$127,715,562                                                                                        | Date of Last Security Deposit Review: | 31/03/2024 |
| Mine Contact:     | Ian Flood                                                                                            |                                       |            |

| Domain                                                       |     | Security Deposit |
|--------------------------------------------------------------|-----|------------------|
| Domain 1: Infrastructure                                     |     | 43,548,760.96    |
| Domain 2: Tailings & Rejects                                 |     |                  |
| Domain 3: Overburden & Waste                                 |     | 20,579,855.92    |
| Domain 4: Active Mine & Voids                                |     | 32,145,897.42    |
| Domain 5: Subsidence & Management                            |     | 11,024,201.15    |
|                                                              |     |                  |
| Subtotal (Domains and Sundry Items)                          |     | \$107,298,715.44 |
| Contingency                                                  | 10% | \$10,729,871.54  |
| Post Closure Environmental Monitoring                        | 10% | \$10,729,871.54  |
| Project Management and Surveying                             | 10% | \$10,729,871.54  |
|                                                              |     |                  |
| Total Security Deposit for the Mining Project (excl. of GST) |     | \$139,488,330.08 |

Note: GST is not included in the above calculation or as part of rehabilitation security deposits required by the Department

- ☒ Alterations have been made to unit prices within this spreadsheet. (Attach a separate sheet providing details of changes).
- ☒ The proposed rehabilitation design is generally consistent with the development consent for the project.

This mine security calculation has been estimated using the best available information at the time.  
It is a true and accurate reflection of the total rehabilitation liability held by this mine.

Brian Wesley  
Company Representatives Name

24/3/2025  
Date

General Manager  
Company Representatives Role / Responsibility

B. Wesley  
Signature



## Open Cut and Underground Summary Rehabilitation Cost Estimation

Note: Sections of this page are automatically filled in from the registration page

|                   |                                   |                                       |            |
|-------------------|-----------------------------------|---------------------------------------|------------|
| Mine Name:        | Moolarben Coal Mine               |                                       |            |
| Lease(s):         | ML1628, ML1691                    |                                       |            |
| Title Holder:     | Moolarben Coal Mines Pty Ltd      |                                       |            |
| Term of RCE:      | Moolarben Coal Operations Pty Ltd |                                       |            |
| Current Security: | \$28,582,473                      | Date of Last Security Deposit Review: | 31/03/2024 |
| Mine Contact:     | Ian Flood                         |                                       |            |

| Domain                                                       |     | Security Deposit |
|--------------------------------------------------------------|-----|------------------|
| Domain 1: Infrastructure                                     |     | 11,302,269.52    |
| Domain 2: Tailings & Rejects                                 |     |                  |
| Domain 3: Overburden & Waste                                 |     | 8,874,872.23     |
| Domain 4: Active Mine & Voids                                |     | 8,406,190.98     |
| Domain 5: Subsidence & Management                            |     | 814,482.15       |
|                                                              |     |                  |
|                                                              |     |                  |
| Subtotal (Domains and Sundry Items)                          |     | \$29,397,814.88  |
| Contingency                                                  | 10% | \$2,939,781.49   |
| Post Closure Environmental Monitoring                        | 10% | \$2,939,781.49   |
| Project Management and Surveying                             | 10% | \$2,939,781.49   |
|                                                              |     |                  |
| Total Security Deposit for the Mining Project (excl. of GST) |     | \$38,217,159.34  |

Note: GST is not included in the above calculation or as part of rehabilitation security deposits required by the Department

- ☒ Alterations have been made to unit prices within this spreadsheet. (Attach a separate sheet providing details of changes).
- ☒ The proposed rehabilitation design is generally consistent with the development consent for the project.

This mine security calculation has been estimated using the best available information at the time.  
It is a true and accurate reflection of the total rehabilitation liability held by this mine.

Brian Wesley  
Company Representatives Name

24/3/2025  
Date

General Manager  
Company Representatives Role / Responsibility

B. Wesley  
Signature