



ABN: 52 000 005 550

## Part 2

# First Forward Program

for

## M(MO)L11

## “Bowral Quarry Extension”

for the period

1 August 2022 to 31 July 2025

*Compiled by:*



**R.W. CORKERY & CO. PTY. LIMITED**

August 2022





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## PART 2 – FORWARD PROGRAM

### 2.1 THREE YEAR FORECAST – SURFACE DISTURBANCE ACTIVITIES

#### 2.1.1 Project Description

The Bowral Quarry Extension (the “Quarry”) is located within and adjacent to an industrial area approximately 1km south-west of Bowral’s town centre. Due to depletion of resources within the adjoining ‘original’ quarry, a development application was lodged for the Bowral Quarry Extension with Development Consent DA267/95 subsequently issued by Wingecarribee Shire Council on 12 October 1995.

Since approval of Development Consent DA267/95, the Bowral Quarry Extension has supplied principally Ashfield Shale together with smaller amounts of clay and sandstone material for brick manufacture. Following changes in mining legislation, M(MO)L11 was granted to The Austral Brick Company Pty Limited (Austral Bricks) on 6 December 2018 for an area smaller than that provided for by the Development Consent. Since grant of M(MO)L11 extraction operations have been limited to the lease grant area.

It is noted that DA267/95 does not specify a project life or end date for extraction operations within the Quarry Site (the Quarry Site) is held by. Notwithstanding, based on remaining reserves within M(MO)L11 and current usage rates completion of operations and lease relinquishment is expected by 2027.

#### 2.1.2 Description of Surface Disturbance Activities

##### 2.1.2.1 Exploration Activities

No exploration is proposed to occur within the Quarry Site during the Forward Program period.

##### 2.1.2.2 Construction Activities

No construction activities are scheduled to occur within the Quarry Site during the Forward Program period.

##### 2.1.2.3 Mining Schedule

Extraction will involve either the use of scrapers or an excavator and haul trucks. The more competent materials will require ripping by bulldozer prior to recovery by the scrapers / excavator, however, no blasting will be undertaken. Recovered raw materials will then be placed into blended or intermediate stockpiles within the Quarry or transported by haul truck or scrapers to the Brick Plant’s raw material stockpile area.

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Given previous site disturbance, no vegetation clearing will be required, and no topsoil will be stripped.

No overburden material is expected to be encountered and therefore no overburden emplacement area is required. Approximately 21 000 loose cubic metres of soil material and clay has also previously been stockpiled in the northern part of the Bowral Quarry Extension area. This material does not form part of the raw material resource and will be retained on site for use in future rehabilitation activities.

Negligible wastes will be generated within the Quarry given all amenities and workshop facilities are located within the Bowral Brick Plant and not within the Quarry. Wastes likely to be produced within the Quarry include the following.

- General wastes produced by the contractor’s employees – e.g. food scraps, drink and food packaging will be collected and placed within the appropriate recycling or general waste skip bins located at the Bowral Brick Plant.
- Wastes such as greases, oils, filters, tyres and batteries could be generated in the event unscheduled maintenance is required to be undertaken on site. These will be removed from site by the earthmoving contractor for appropriate off-site disposal. Scheduled maintenance of mobile equipment will be undertaken off site.

**Table 1** details the material production schedule over the next three years.

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**Table 1**  
**Indicative Material Production Schedule During the Next Three Years**

Material	Unit	Year 1	Year 2	Year 3
Stripped topsoil (if applicable)	bcm	0	0	0
Rock/overburden	bcm	0	0	0
Ore (Shale)	t	15 000	15 000	15 000
Reject Material	bcm	0	0	0
Product*	t	15 000	15 000	15 000

\* No beneficiation is undertaken. Therefore 'ore' equates to product.

## 2.2 THREE YEAR REHABILITATION FORECAST

### 2.2.1 Rehabilitation Planning Schedule

Given the scale of the Quarry and consultation undertaken as part of the preparation of Version 1 of the RMP no further stakeholder consultation is currently planned or considered necessary during the Forward Program period.

As part of the preparation of the *Rehabilitation Management Plan* for the Quarry, the Company prepared a risk assessment to outline specific risks and controls associated with the rehabilitation of the Quarry. As the final void is to be retained, no specific landform establishment works are required during this phase. Additionally, given that the extraction area

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will remain internally draining, no specific water management works are expected to be required. However, assessment of the retained highwalls will be required to ensure that they remain safe and stable. As there are no tailings generated from Quarry operations, no decommissioning activities for tailings dams are required.

Following completion of extraction operations (currently expected by 2025) the following key rehabilitation activities will be undertaken.

- Demobilisation of earthmoving equipment.
- Completion of relinquishment inspection – confirming all equipment has been removed, no visible contamination is present, the boundary fencing and bunding remains in good condition and that there is no erosion or sedimentation external to the retained void. The results of the inspection, including photographs, are to be presented as part of a relinquishment report.
- Completion of a geotechnical inspection and report for the highwalls to confirm that they will remain safe and stable.
- Spreading of growth medium and establishment of a vegetative groundcover with grass and occasional trees.
- The relinquishment of M(MO)L11, together with release of the rehabilitation security bond.

No additional studies, risk assessments or design work are currently planned with regard to the final landform, water management or rehabilitation methodologies during the Forward Program period.

### **2.2.2 Rehabilitation Research and Trials**

No rehabilitation research or trials are planned during the Forward Program period.

### **2.2.3 Rehabilitation Maintenance and Corrective Actions**

As this is the first Forward Program for the Quarry and an Annual Rehabilitation Report has not been prepared, no rehabilitation performance issues, or knowledge gaps identified in an Annual Rehabilitation Report are noted.

### **2.2.4 Rehabilitation Schedule**

During the Forward Program period mining activities will continue be undertaken within the existing disturbance areas and using existing access roads. No new disturbance is planned during the Forward Program period.

Rehabilitation will only be undertaken in areas which are no longer required for operational purposes. As the extent of disturbance at the Quarry is largely confined to operational areas required to support ongoing mining activities, opportunities for progressive rehabilitation prior

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to the completion of mining operations are limited. As such, no specific rehabilitation activities are expected during this Forward Program period.

### 2.2.5 Subsidence Remediation for Underground Operations

As no underground operations are conducted as part of the Quarry’s operations, no subsidence remediation is required.

## 2.3 PLAN 2 – MINING AND REHABILITATION THREE YEAR FORECAST

Plan 2a, Plan 2b, and Plan 2c reflect the mining and rehabilitation three year forecast and are provided as follows.

- Plan 1** Mining and Rehabilitation Three Year Forecast (Year 1)  
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- Plan 2** Mining and Rehabilitation Three Year Forecast (Year 2)  
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- Plan 3** Mining and Rehabilitation Three Year Forecast (Year 3)  
A3/Colour

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## 2.4 PROGRESSIVE MINING AND REHABILITATION STATISTICS

### 2.4.1 Three Yearly Forecast Cumulative Disturbance and Rehabilitation Progression

Table 2 below presents the predicted cumulative disturbance and rehabilitation progression during the next three-year term at the Quarry Site. In summary, there will be no change to the disturbance footprint with rehabilitation anticipated to commence following this Forward Program period.

**Table 2**  
**Predicted Cumulative Disturbance and Rehabilitation Progression during the next Three-Year Term**

	Year 1	Year 2	Year 3
Total disturbance footprint – surface disturbance (ha)	1.8	1.8	1.8
Underground mining area (ha)	0	0	0
Total active disturbance (ha)	1.8	1.8	1.8
Rehabilitation – land preparation (ha)	0	0	0
Ecosystem and land use establishment (ha)	0	0	0

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## 2.4.2 Rehabilitation Key Performance Indicators

No further active disturbance will be undertaken over the next three-year period. Area of land proposed for active rehabilitation will be 1.8 ha in years 1 & 2 – however in year 3, this land is expected to be relinquished. This information is presented in **Table 3**.

**Table 3**  
**Progressive Rehabilitation Key Performance Indicators during the Next Three-Year Term**

	Year 1	Year 2	Year 3
Total new active disturbance area during reporting period (ha)	0	0	0
Area of land proposed for active rehabilitation during reporting period	0	0	0
Annual Rehabilitation to Disturbance Ratio	NA	NA	NA

## 2.5 REHABILITATION COST ESTIMATE

In accordance with the *Form and Way – Annual Rehabilitation Report and Forward Program for Large Mines*, an updated Rehabilitation Cost Estimate for the Quarry prepared based on the “maximum disturbance within a term” method is included below.

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**Notes to WP**

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- **Insert the Rehabilitation Cost Estimate as PDF**

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