austral bricks®

ABN: 52 000 005 550

Part 2

First Forward Program

for

M(MO)L6 "New Berrima Clay/Shale Quarry"

for the period

1 August 2022 to 31 July 2025

Compiled by:

RWCorkery&co

August 2022

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Ref No. 744/36

Submitted: 1 August 2022

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PART 2 FORWARD PROGRAM

2.1 THREE YEAR FORECAST – SURFACE DISTURBANCE ACTIVITIES

2.1.1 Project Description

The New Berrima Clay/Shale Quarry (the Quarry) is located approximately 1.5km east of New Berrima. The Quarry is owned and operated by The Austral Brick Company Pty Limited (Austral Bricks), under Mining (Mineral Owner) Lease 6 (M(MO)L6) and Project Approval (PA) 08_0212. The Quarry is approved to operate until 31 December 2045 under PA 08_0212, however, further modifications to the Project Approval are planned. It is noted that the Quarry includes the area of (M(MO)L6) together with the section of access road located within the "Mandurama" property between M(MO)L6 and Berrima Road.

The principal activities approved at the Quarry comprise the following.

- Construction of visibility barriers to provide visual screening for the Quarry operations.
- Extraction and stockpiling of clay/shale from the extraction area using standard ripping, pushing and loading techniques.
- Transportation of up to 150 000t per year of quarry products via Berrima Road using articulated and rigid trucks not exceeding 19m in length.

2.1.2 Description of Surface Disturbance Activities

2.1.2.1 Exploration Activities

No exploration activities are planned for the next three-year period.

2.1.2.2 Construction Activities

No construction activities are planned for the next three-year period.

2.1.2.3 Mining Schedule

Extraction Sequencing

The southern section will be extracted in four stages, namely Stages 1 to 4. Quarrying operations over the next three-year forecast will occur exclusively within the southwestern section of the extraction area (see **Plans 2A, 2B** and **2C**).

As presented in **Table 1**, 200t of raw material is planned to be extracted in Year 1 for a bulk sample to undertake material testing for transition to the New Berrima raw material source. Operational extraction activities are then expected to commence in Year 3.

Groundcover and topsoil material have previously been stripped and used for temporary rehabilitation of the visibility barriers and other disturbed areas not required for current operations. Remaining topsoil has been stockpiled within the norther part of the extraction area for use in rehabilitation of the southern part of the extraction area (expected to occur between Year 15 and Year 20). Overburden material has been stripped and either utilised in construction of the visibility barriers or temporarily placed within the Overburden Emplacement Area.

Once extraction operations begin, shale will be ripped and then cross ripped across a vertical interval of at least 5m to achieve the required level of blending. The ripped shale will then be pushed up into one or more stockpiles on the floor of the extraction area, typically to a height of approximately 4.5m.

In the event that sandstone is encountered during extraction, the upper surface of the sandstone will be cleaned of shale and the sandstone ripped. Sandstone may be either treated as overburden or utilised as a raw material depending on the raw material ratios required for brick manufacture at that time.

Emplacements

No additional waste rock, topsoil or subsoils are expected to be produced over the next three-year period. All overburden material expected to be produced over the life of the Quarry will be used for landform profiling during progressive rehabilitation activities, and thus there will be no permanent waste rock emplacement as part of the approved final landform.

Table 1 presents the indicative material production schedule forecast for the next three years.

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	t	200	0	50 000
Reject Material	t	0	0	0
Raw Material / Product[1]	t	200	0	50 000
Note 1: No on-site material processing will be undertaken. Therefore, extracted raw material = product.				
Source: The Austral Bricks Company Pty Ltd				

Waste Disposal

The principal non-production wastes types that will be generated on site (i.e. excluding overburden), include:

- general domestic type wastes and consumables;
- sewage and effluent; and
- waste oils and filters.

General waste will be segregated into recyclable and non-recyclable materials and removed from site by a licenced contractor or returned to the Bowral Brick Plant for collection at that site. All on-site bins will be fitted with lids.

All waste water and sewage generated from the on-site ablutions will be collected in a 'portaloo' style system regularly serviced by a licenced contractor. All waste from this system will be removed for off-site treatment.

No routine maintenance of trucks and machinery will be undertaken at the Quarry. Therefore, there will not be a regular source of waste oils or filters, however, in the event of emergency maintenance and repairs, small amounts of waste oils and filters would be stored temporarily in sealed containers in the on-site container and transported off site.

2.2 THREE YEAR REHABILITATION FORECAST

2.2.1 Rehabilitation Planning Schedule

During site establishment visibility barriers were established and temporarily rehabilitated using the topsoil and subsoil extracted from the southwestern section of the extraction area. The top and northern slopes of the central and northern barriers and the southern slope of the southern barrier have been grassed and planted with tubestock of native shrubs and trees to aid with the management of visual amenity. As these areas are considered temporary rehabilitation these remain classified as 'Forecast Disturbance' on **Plans 2A**, **2B** and **2C**.

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.

During the next three-year period, no further rehabilitation planning activities are planned.

2.2.2 Rehabilitation Research and Trials

No rehabilitation research or trials are planned for the next three-year 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.

Temporary rehabilitation activities to date for the visibility barriers has proven to be successful. However, the Company will continue to undertake maintenance activities on these areas, including weed control and slashing to ensure successful development of tubestock.

2.2.4 Rehabilitation Schedule

Quarrying activities will be focused on the retained disturbance area using existing established access roads. No new disturbance is planned over the next three-year period.

All available areas (visibility barriers) have been temporarily stabilised with perennial pasture cover, prior to final landform shaping. No further rehabilitation activities are to be undertaken over the next three-years.

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 areas to be subject to mining and rehabilitation during the next three-year period.

Plan 2A **Mining and Rehabilitation Three Year Forecast (Year 1)**

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Plan dated __ inserted on __

Plan 2B Mining and Rehabilitation Three Year Forecast (Year 2)

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Plan 2C **Mining and Rehabilitation Three Year Forecast (Year 3)**

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2.4 PROGRESSIVE MINING AND REHABILITATION STATISTICS

2.4.1 Three Yearly Forecast Cumulative Disturbance and Rehabilitation Progression

As discussed in Section 2.2.1, all site establishment and disturbance activities have been completed, and no further disturbance is planned over the next three-year period. A total of 16.8ha of surface disturbance, and a total of XXha of temporary stabilisation using perennial cover and tubestock has been completed to date. **Table 2** presents a summary of the predicted cumulative disturbance and rehabilitation progression during the next three-year 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)	16.8	16.8	16.8
Underground mining area (ha)	N/A	N/A	N/A
Total active disturbance (ha)	16.8	16.8	16.8
Rehabilitation – land preparation (ha)	0	0	0
Ecosystem and land use establishment (ha)	xx		

2.4.2 Rehabilitation Key Performance Indicators

As discussed in Section 2.4.2, no further active disturbance or rehabilitation activities will be undertaken over the next three-year period, which 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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