



ABN: 52 000 005 550

Part 2

First Forward Program

for

PLL1293, ML786, ML866 "Marulan Shale Quarry"

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 Marulan Shale Quarry (the Quarry) has been in operation since the 1960's. The Quarry was originally operated by Gulson Pty Limited prior to The Austral Brick Company Pty Limited (Austral Bricks) assuming control of the Quarry in the mid-1990's. The Quarry comprises two historic and one active extraction area, namely the Southern, Western and Eastern Extraction Areas. The Southern and Western Extraction Areas are historic extraction areas and have not been the subject of extraction operations by Austral Bricks. The Eastern Extraction Area is the active extraction area from which white-firing shale is recovered. Extraction operations are undertaken on a campaign basis by earthmoving contractors, under Austral Bricks' supervision.

Both the Southern and Western Extraction Areas have previously been rehabilitated together with a portion of the Eastern Extraction Area. Previous rehabilitation works were undertaken in the early 2000's and included contouring of slopes, timber spreading to minimise runoff and deep ripping of tracks. The rehabilitated areas are progressing to woodland similar to the existing undisturbed woodland. All previously rehabilitated areas remain in the Ecosystem Establishment phase with additional works required within the Southern and Western Extraction Areas.

Development Consent DA2921 issued for the approved operations has no expiry date.

2.1.2 Description of Surface Disturbance Activities

The current disturbance at the Mine consists of access into the extraction area, an infrastructure area (powerline easement), water management area, active mining area (the extraction area), and rehabilitation areas.

2.1.2.1 Exploration Activities

There are currently no exploration activities proposed or likely to be proposed to be carried out within the Mining Leases in the next 3-year period.

2.1.2.2 Construction Activities

There are currently no construction activities scheduled for the next 3-year period.

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2.1.2.3 Mining Schedule

Extraction occurs on a campaign basis as required to meet demand for certain product types. Extraction is undertaken using earthmoving contractors and typically consists of the following activities.

- When required, clearing of vegetation using a bulldozer or similar, with the blade positioned just above the surface. The vegetation will be stockpiled adjacent to the extraction area or will be directly placed onto areas undergoing rehabilitation.
- When required, stripping and stockpiling of soil adjacent to the extraction area. Alternatively, stripped soil may be used immediately for progressive rehabilitation. The soil stockpiles are permitted to revegetate naturally.
- Excavation and stockpiling of white-firing shale using a bulldozer equipped with rippers and/or an excavator.
- Loading and transportation of white-firing shale to Austral Bricks brick and paver plants in daylight hours and in dry weather using an excavator or front-end loader and road-registered trucks.

There are currently no extraction campaigns planned for the next 3-year period although this is subject to change subject to product demand.

Table 1 presents the anticipated material production schedule for the next 3-year period of the Quarry.

Table 1
Material Production Schedule During the Next Three Years

Material	Unit	Year 1	Year 2	Year 3
Stripped topsoil (if applicable)	m ³	0	0	0
Rock/overburden	t	0	0	0
Ore	t	0	0	0
Reject Material	t	0	0	0
Product	t	0	0	0

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 next 3 year period. However, Austral Bricks will continue to consult with the landowner on which the Quarry is located prior to, during and following all extraction campaigns.

No specific rehabilitation activities are currently planned during the next 3 year period and currently no changes to landform establishment or surface water management are deemed necessary. However, it is planned to complete a review of the rehabilitation status of the

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Southern and Western Extraction areas with a view to determining what actions can be feasibly implemented to expedite the progression of the Southern and Western Extraction Areas into Ecosystem and Land Use Development and Relinquishment phases. This review is expected to be completed by end 2023.

2.2.2 Rehabilitation Research and Trials

No specific or formal rehabilitation research, modelling or trials are proposed or are anticipated to be undertaken in the next three-year forecast. The rehabilitation and revegetation activities to be undertaken are standard activities for which the required techniques are well understood by suitably qualified personnel.

2.2.3 Rehabilitation Maintenance and Corrective Actions

As this is the first Forward Program for the Quarry and the Annual Rehabilitation Report is yet to be prepared for the site, no rehabilitation performance issues, or knowledge gaps have been identified to date. As such, no specific rehabilitation maintenance or corrective actions have been identified. Notwithstanding, continued visual monitoring of the existing rehabilitation areas will be undertaken to identify opportunities to expedite the progression of the Southern and Western Extraction Areas into Ecosystem and Land Use Development and Relinquishment phases.

2.2.4 Rehabilitation Schedule

As extraction is ongoing and progressive rehabilitation is focused on the areas that have ceased being extracted, there are no further rehabilitation measures proposed during the next 3-year period.

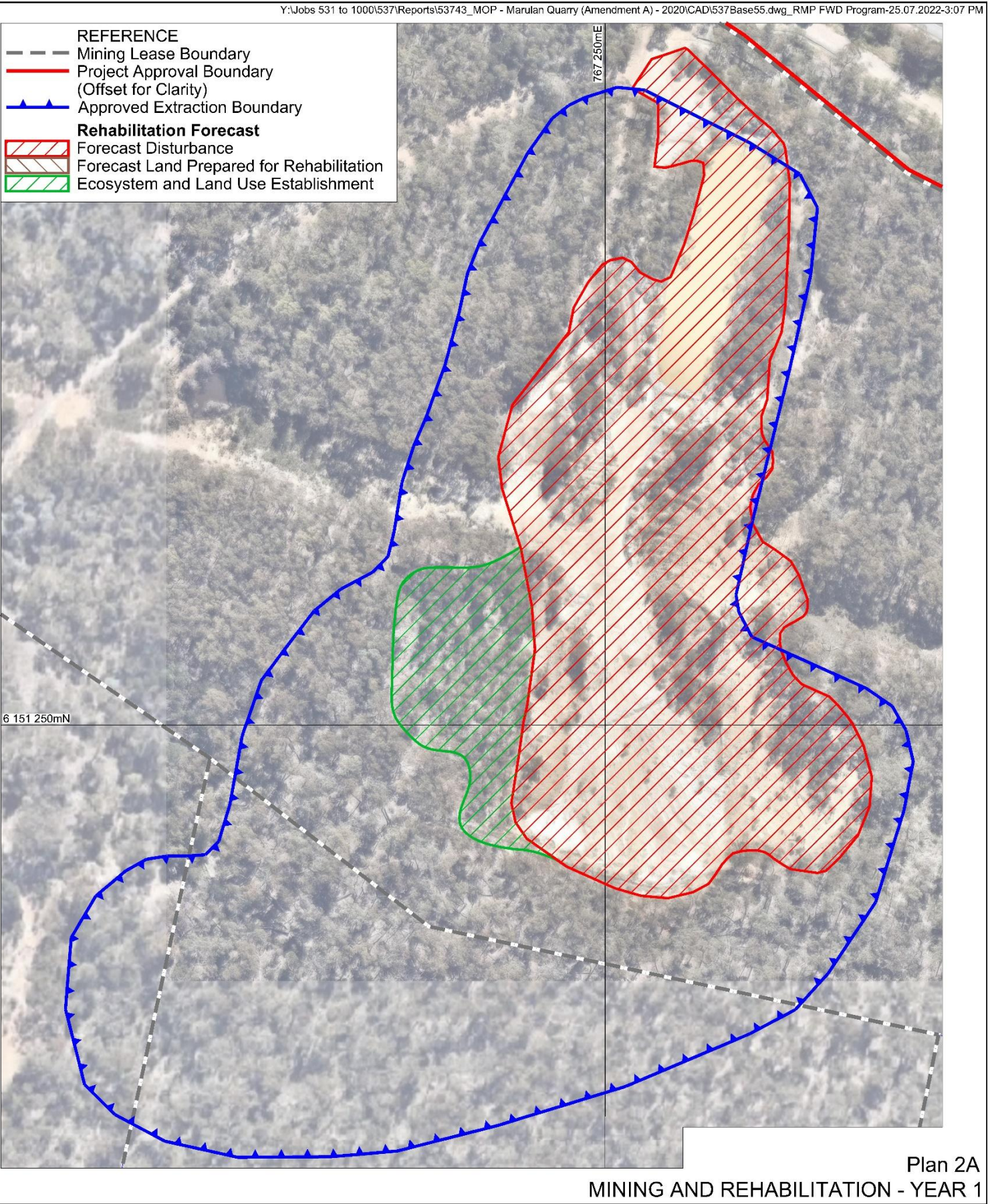
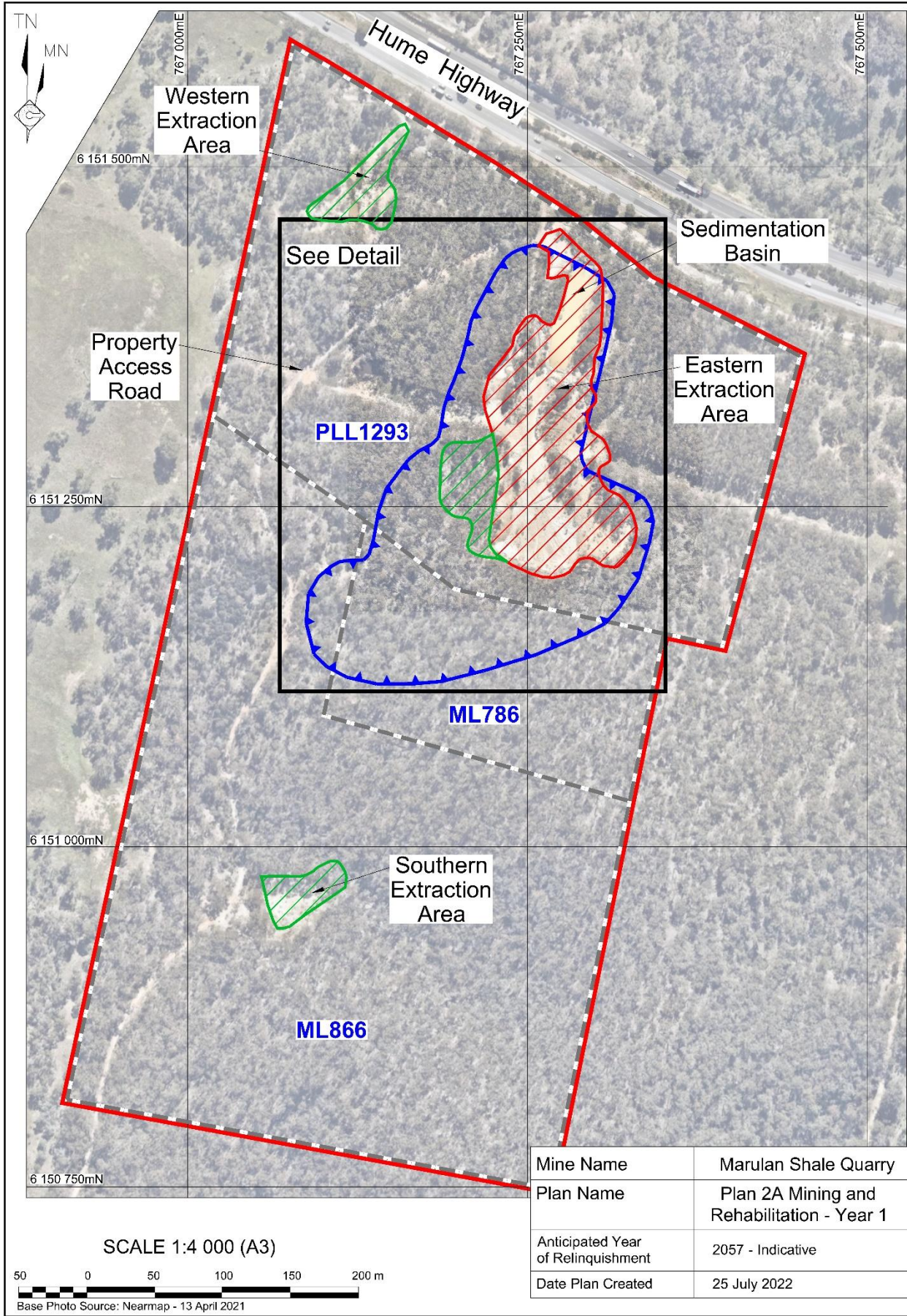
2.2.5 Subsidence Remediation for Underground Operations

The Quarry is not an underground mine and as such there is no risk for subsidence.

2.3 PLAN 2 – MINING AND REHABILITATION THREE YEAR FORECAST

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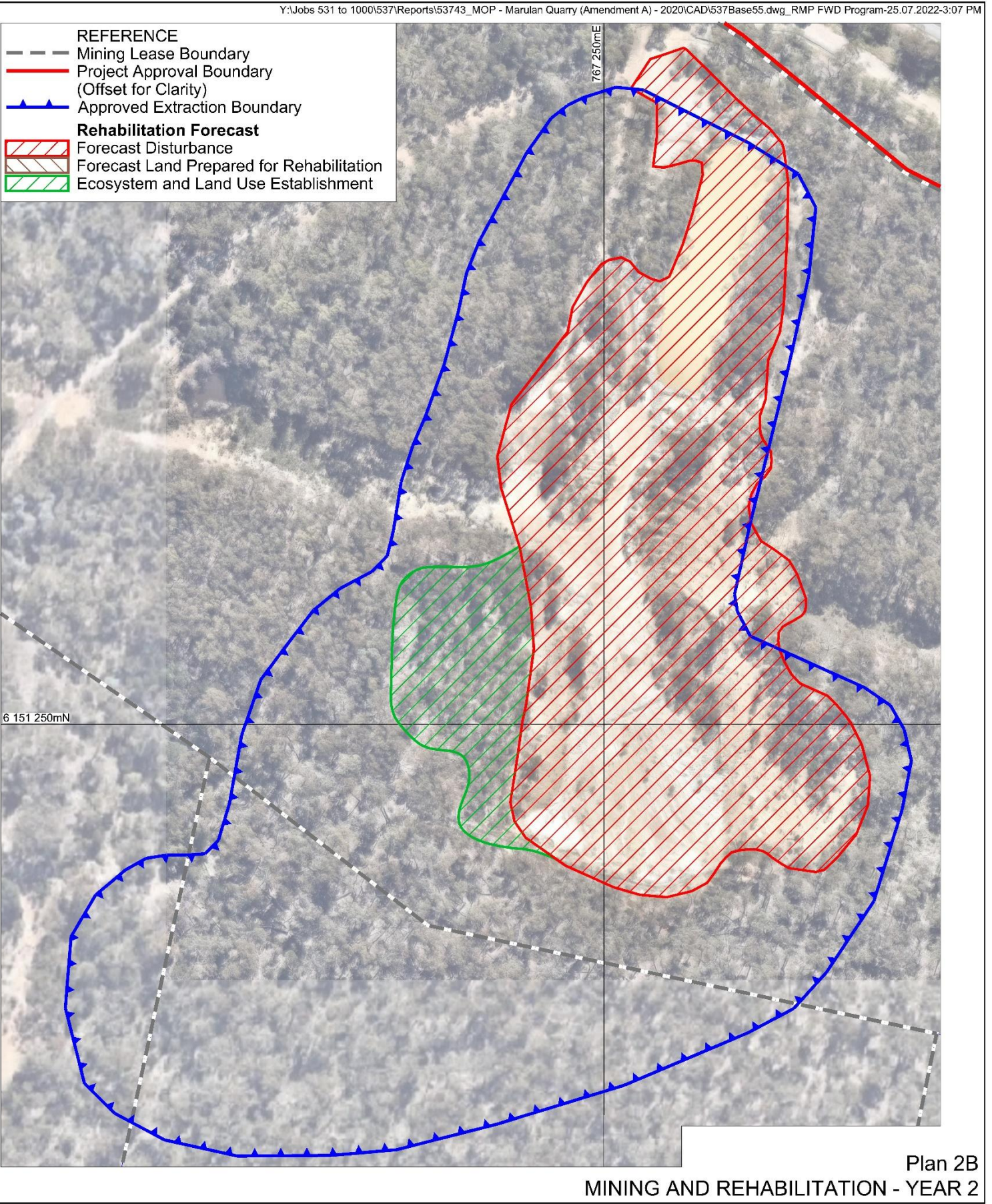
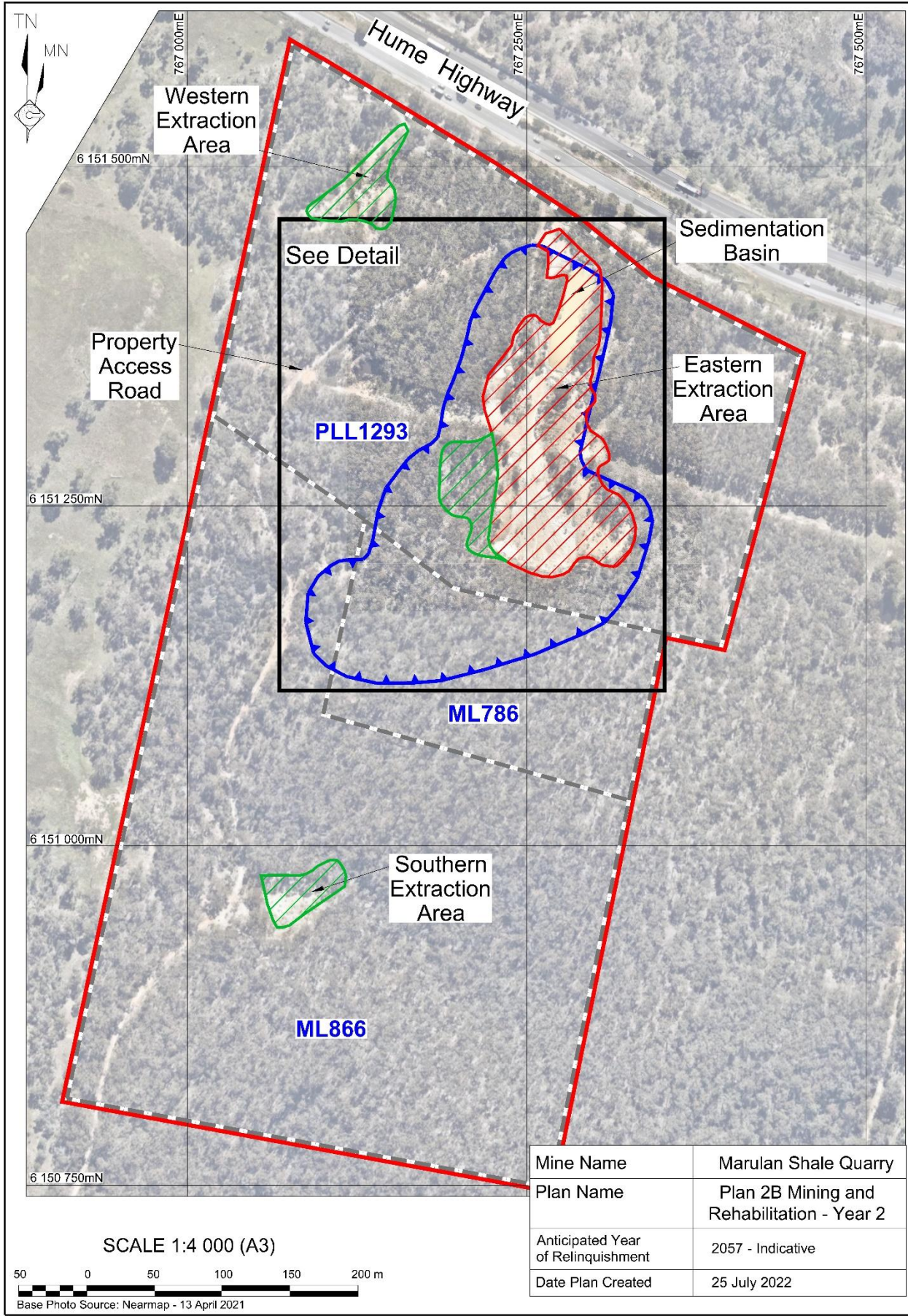
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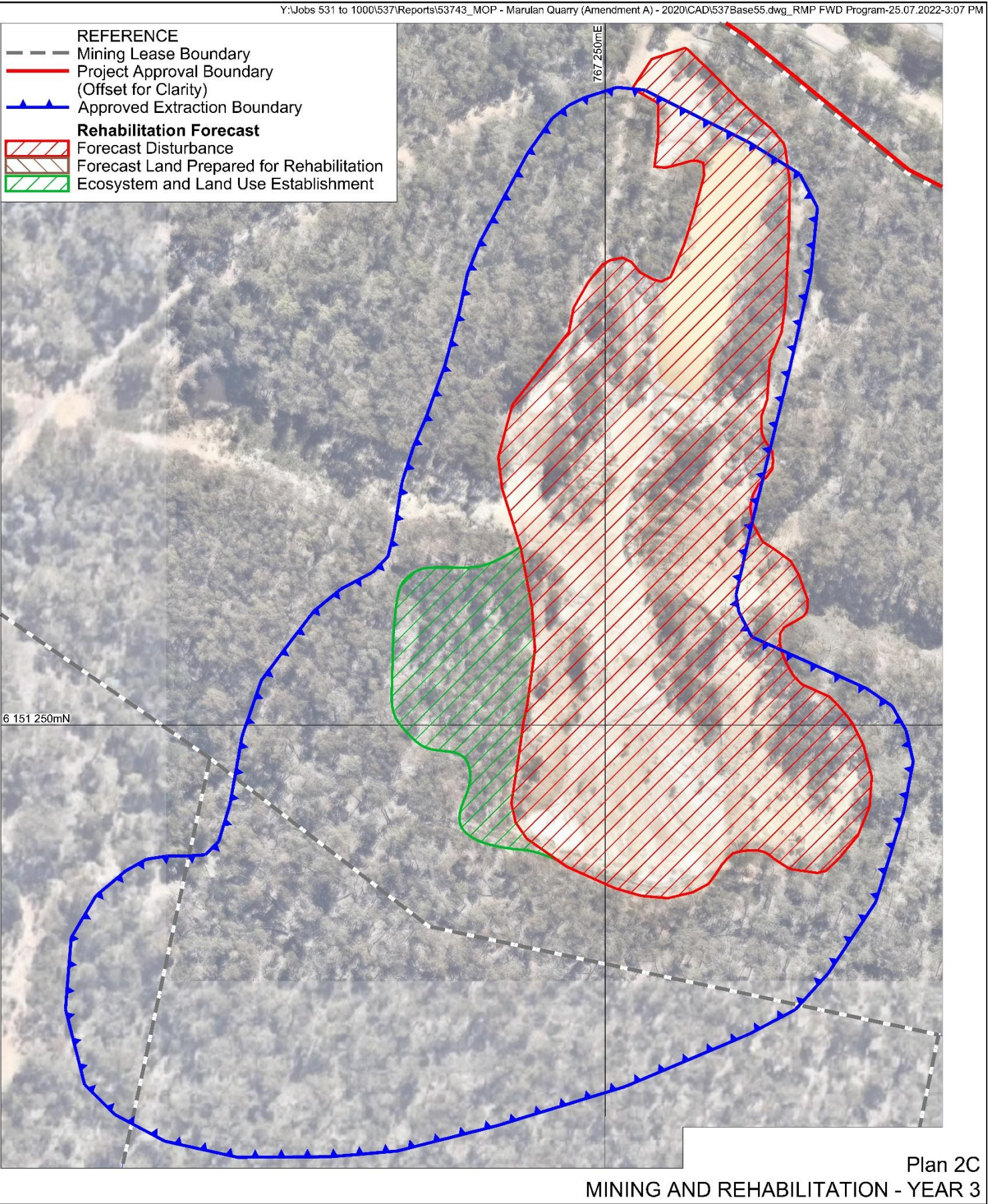
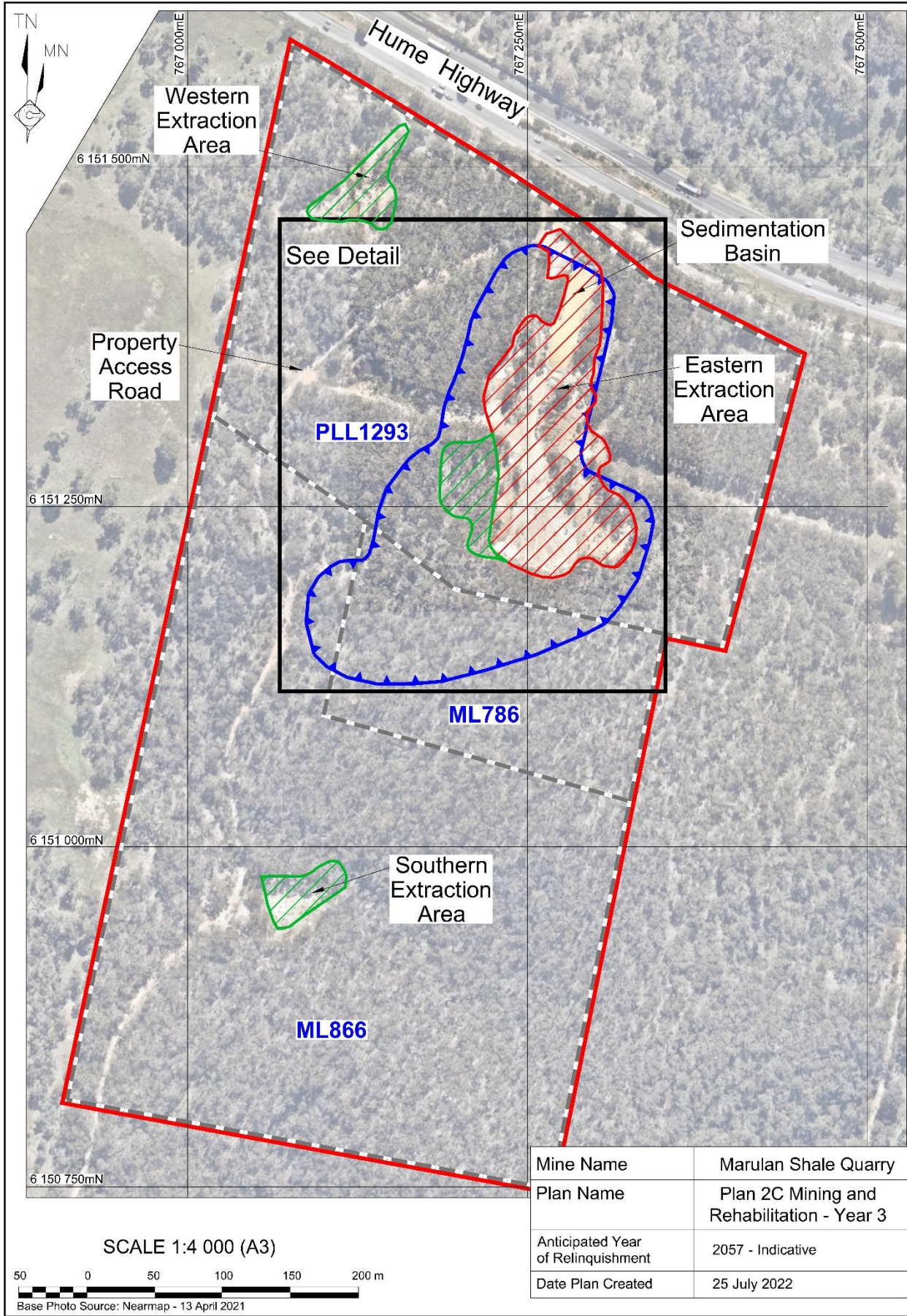


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2.4 PROGRESSIVE MINING AND REHABILITATION STATISTICS

2.4.1 Three Yearly Forecast Cumulative Disturbance and Rehabilitation Progression

Table 2 presents the predicted disturbance and rehabilitation during the next 3-year period. In summary, there is no additional disturbance anticipated to occur during the next 3-year period. The current total disturbance area is approximately 2.4ha.

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)	2.4	2.4	2.4
Underground mining area (ha)	0	0	0
Total active disturbance (ha)	1.7	1.7	1.7
Rehabilitation – land preparation (ha)	0	0	0
Ecosystem and land use establishment (ha)	0.7	0.7	0.7

2.4.2 Rehabilitation Key Performance Indicators

Table 3 presents the progressive rehabilitation key performance indicators based on the proposed mining and rehabilitation schedule of the Quarry.

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 has been undertaken and provided to the Resources Regulator is included below.

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Notes to WP

- **Remove this page of PDF**
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