# Extractive Industries Licence Application and Environmental Management Plan

## LOT 5 FORREST HIGHWAY, MYALUP

REPORT PREPARED BY

LUNDSTROM ENVIRONMENTAL CONSULTANTS PTY LTD

# Lot 5 on Diagram 30278
# Forrest Highway, Myalup
# Shire of Harvey

## Extractive Industries Licence Application and Environmental Management Plan

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Prepared by Lundstrom Environmental Consultants Pty Ltd for Carbone Bros Pty Ltd

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Version Register

| Version No. | Description | Author | Reviewed by | Date |
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Front cover image: *Nearmap Image of extraction area May 2026*

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# 1 INTRODUCTION

The purpose of this report is to provide all the necessary information in support of an extractive industries licence (EIL) renewal application by the Proponent, Carbone Bros Pty Ltd. The Development Approval (DA) and EIL forms are included with this report as Appendix 1.

The report sets out the details of the proposed limestone extraction on the property together with maps. It also provides an environmental assessment of the proposal and environmental management plans.

# 2 PROPERTY DESCRIPTION, OWNERSHIP AND LOCALITY

The property is situated approximately 27 km north of Bunbury (Figure 1). The property description and ownership are summarised in Table 1.

**Table 1. Property Description**

| | |
|---|---|
| **Property Description:** | Lot 5 on Diagram 30278<br>Forrest Highway, Myalup, Shire of Harvey |
| **Volume** | 2130 |
| **Folio** | 201 |
| **Area:** | 107.0239 ha |
| **Ownership** | Peter William Ivankovich |

# 3 DESCRIPTION OF THE SITE AND ITS SURROUNDS

## 3.1 PRESENT LAND USE

The western half of the property comprises of pastures with scattered Tuart trees and has been used for limestone extraction under Extractive Industry Licence since 2006. The eastern half of the property is used for market gardening and it includes associated packing sheds. A light aircraft runway also exists, running north to south.

Land uses surrounding the property are as follows:

- immediately north and south is agricultural,
- immediately east is Forrest Highway, and
- immediately west is Lake Preston.

Figure 2 illustrates the land use of the property and its immediate surrounds.

## 3.2 TOPOGRAPHY, DRAINAGE AND WETLANDS

The original land surface within the EIL area is essentially flat, lying at between 3 and 5 mAHD, with drainage being by infiltration (Figures 2 and 3).

The property lies in the Harvey Diversion - Harvey River Catchment, within the Harvey River Basin and does not fall in a Public Drinking Water Source Area (Landgate 2021).

The site does not fall within a RIWI Surface Water Proclamation Area (Landgate 2021).

Lake Preston is a Conservation Category Wetland and a Ramsar wetland and is located 345m to the west of the EIL area. There are also several Multiple Use Wetlands in the surrounding area including one located 917m to the north of the EIL area (Landgate, 2021).

## 3.3 GEOLOGY AND SOILS

A shallow, sandy topsoil overlies inter-bedded limestone, calcarenite, marl and shell beds of the Tamala Formation. The limestone is approximately 20 to 25 metres thick and unconformably overlies sands, shales and siltstones of the Leederville Formation (Commander 1988). Only the top four metres of limestone will be removed by extraction.

## 3.4 GROUNDWATER LICENCING AND HYDROLOGY

The property lies within a *Rights in Water Irrigation Act 1914* (RIWI) Groundwater Proclamation Area (South West Coastal Groundwater Area; Lake Preston South Sub-Area) overseen by the DWER. There is a Groundwater Licence for the property (number 201311) for 420,000 kL from the Perth - Superficial Swan aquifer.

Groundwater flow in the superficial aquifer at the site is from east to west into Lake Preston along the western boundary, where it is discharged by evaporation. This results in Lake water salinities (total dissolved solids) that vary between 42000 and 90000 milligrams per litre (Commander 1988) with super-saline groundwater below the Lake. Groundwater flowing into the Lake is reasonably fresh, usually below 1500 milligrams per litre.

The closest Department of Water and Environmental Regulation (DWER) monitoring bores E1B and E2B are approximately 3km north of the extraction area (Figure 2). An analysis of average data for these

bores conducted in 2012 for the previous EIL application indicates that groundwater levels at E1B (close to the Lake) vary by 0.8m seasonally with an average end of winter high of 0.1mAHD. Groundwater elevation rises in an easterly direction towards E2B at a gradient of approximately 1:700. Data for these bores is illustrated in hydrographs contained as an appendix to the Water Management Plan previously approved by the Shire attached as Appendix 2.

An evaluation of groundwater in the project area was undertaken as part of an EPBC referral in 2012 determined that the groundwater in the EIL area achieves a high of between 0.5 and 0.8 mAHD during spring. An estimate of 0.8m AHD for the maximum groundwater level under the site was therefore used previously. Data collected from the site since this time indicates the maximum groundwater level may be slightly higher than this estimate as discussed below.

Groundwater water level data has been collected, from two monitoring bores installed at the site since October 2013. Data from the most southern bore (MB1) has not been collected since March 2015. The maximum water level recorded in the bores during that time was 0.93m AHD in MB2 in August 2015. Since 2016 water levels in MB2 have declined and the maximum water level recorded since 2016 is 0.5m AHD. However, a conservative estimate for the maximum groundwater levels under the site would be 1.0 mAHD. Data for the site monitoring bores is illustrated in hydrographs attached as Appendix 3.

## 3.5 FLORA AND FAUNA

The EIL area has been cleared under clearing permit CPS3785/1.

## 3.6 ENVIRONMENTALLY SENSITIVE AREAS

An Environmentally Sensitive Area (ESA) is an area where the vegetation has high conservation value and cannot be cleared. ESAs are declared by the Minister in the Environmental Protection (Environmentally Sensitive Areas) Notice 55 (2005) under section 51B of the *Environmental Protection Act 1986*. There are no Environmentally Sensitive Areas (ESA) as defined by the Clearing Regulations (DWER) within the proposed EIL area. The closest ESA is associated with Lake Preston, approximately 300m to the west of the EIL area (Figure 2).

## 3.7 CURRENT ZONING

The area is zoned as “General Farming” in terms of the Shire of Harvey Town Planning Scheme No. 1, with a narrow “Recreation” strip running along the shoreline of Lake Preston (Shire of Harvey 1996). The area is also classified as a “Rural” zone by the Greater Bunbury Region Scheme (Department of Planning 2016).

## 3.8 BUSHFIRE PRONE AREAS

The western portion of the property, including parts of the EIL area, fall within a bushfire prone area as designated by the Fire and Emergency Services (FES) Commissioner on 28 September 2019 (Government of Western Australia, 2019). However, the threat of bushfire from this operation is considered low and no habitable building, or any other structure, is to be developed.

## 3.9 CLOSEST RESIDENCES

The closest residences to the outer boundaries of the extraction areas are identified in Table 2 and mapped on Figure 2.

The DER (2015) draft Guidance Statement on separation distances under the *Environmental Protection Act 1986* lists the generic buffer for extractive industries grinding and milling works but no blasting as 500-1000m depending on the type of processing. As crushing and screening activities are only undertaken for short periods within the year this operation would be considered a "low scale" operation and the minimum generic buffer would be likely to apply.

There is only one rural residence located within 1 000m of the proposed extraction area and none within 500m as detailed in Table 2 below.

**Table 2. Residential Dwellings within 1km of the Extraction Areas**

| Reference No. on Figure 2 | Lot (Street) No. & Name | Occupants Name | Distance to closest area of pit (metres) |
|---|---|---|---|
| Res 1 | 6816 Old Coast Road | Galati Bros | 800 SE |

Potential impacts on surrounding residents are discussed further in Section 5.7 and 5.8.

# 4 THE DEVELOPMENT PROPOSAL

## 4.1 PREVIOUS EXTRACTION ACTIVITIES

An EIL was issued previously for the 11.28ha extraction area in August 2013. This EIL permitted the mining of 300,000 tonnes of limestone carried out in 3 stages of 3.76ha as shown on Figures 2 and 3.

Extraction is complete in Stage 1 and a northern portion of Stage 2 and these areas are currently undergoing rehabilitation. Extraction is currently being undertaken in the remainder of Stage 2 and Stage 3. Approximately 150,000 tonnes of limestone remains to be excavated, across Stages 2 and 3 over an area of approximately 4.8 ha.

The current EIL has an expiry date of 25th June 2026, hence this new application.

## 4.2 PROPOSED LIMESTONE EXTRACTION AND PROCESSING

It is proposed to continue rehabilitation of Stage 2 and to complete extraction of limestone and rehabilitation in Stage 3.

It is proposed to excavate limestone using a bulldozer and large front-end loader. The depth of the excavation will be approximately of three metres, down to the level of 1.5m AHD.

The approximate annual limestone removal over the 5-year licence period will be 30 000 tonnes, but this will be dependent on demand. A licensed mobile crushing plant will be used as and when necessary.

The following actions will occur:

- Excavation to continue in Stage 3
- Remaining topsoil in Stage 2 to be removed prior to extraction and stockpiled separately along the edges of the extraction area, with topsoil stockpiles being no higher than 2m.
- Raw product stockpiles will be located on the pit floor and kept to a maximum height below the top edge of the pit (i.e. below ~4m AHD) as shown in Figure 2 of the approved Visual Management Plan attached as Appendix 7.
- Crushing/screening of limestone in one campaign over 4 weeks.
- Measures to limit noise and dust from the operations are discussed separately in 5.6 and 5.7 below.
- There will be no blasting.
- The completion of rehabilitation commitments as described in Section 6.

Table 3 below summarises the actions that are to take place on the property over the 5-year licence period (26 June 2026 to 26 June 2031).

**Table 3. Timing of the Stages and Extraction and Processing Activities**

| Stage | Action | 2026 | 2027 | | 2028 | | 2029 | | 2030 | | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Remove topsoil | | | | | | | | | | |
| 2,3 | Rip and blade limestone | | | | | | | | | | |
| 2,3 | Crush, screen and stockpile limestone (4 weeks per year) | | | | | | | | | | |
| 2,3 | Load and truck out stockpiled crushed limestone | | | | | | | | | | |
| 2,3 | Progressively rehabilitate mined areas | | | | | | | | | | |
| 2,3 | Monitoring and remediation of rehabilitated areas | | | | | | | | | | |

Batters of 1:6 slopes will be maintained throughout the operation.

## 4.2 SITE ACCESS AND EGRESS ROADS

Access to the site will be obtained off Myalup Beach Road through the existing Shire approved access road that runs through the existing rehabilitated limestone pits to the south of the site on Lots 145 and 147 and Lot 5 (see Figure 2).

Haul trucks will turn left onto Myalup Beach Road and continue to Forrest Highway.

## 4.3 ESTIMATED TRAFFIC TO BE GENERATED

The following estimates are made:

- Total annual limestone removal: 30 000 tonnes
- Number of working days per month: 24 days
- Vehicle payloads (GAV's): Standard rigid truck (14 tonnes)
  Single Semi-loader (24 tonnes)
  Quad Axle Group (36 tonnes)
- Proportional use: 14 tonners (20%), 24 tonners (40%)
  36 tonners (40%)

The above factors suggest an average of 4 truck movements (2 in and 2 out) per day, but this will be dependent on demand. Operating times will be Monday to Friday 7am to 6pm and Saturday 7am to 12pm.

# 5 POTENTIAL NEGATIVE ENVIRONMENTAL IMPACTS AND PROPOSED MANAGEMENT

Short term negative environmental impacts are to be expected in the process of all mining actions. However, these can largely be mitigated over the medium to long term provided that operating procedures are in accordance with acceptable standards and that rehabilitation measures are implemented as proposed. The following listed potential impacts are used as a check list to ensure that all potential major impacts are addressed.

## 5.1 FLORA AND FAUNA

Since the area is already cleared and this proposal is a continuation of existing extraction, there will be no significant impact on indigenous flora and fauna.

## 5.2 WEEDS

Weed management has been conducted on an annual basis according to the Weed Management Plan (Appendix 5) that was approved by the Shire for the previous EIL application. This plan has been working successfully and will continue to be implemented during future extraction at the site.

## 5.3 ALTERATION OF THE LAND SURFACE

No steep slopes will remain after extraction and this will ensure that the extraction area will blend into the surrounding landscape. The final land surface will be on average 3m below the original ground level, with remaining cut faces will be battered down to a gradient of 1:6. The proposed final land surface has been illustrated in Figure 4.

During the mining phase of the project the base of the excavation will be at least 0.5m above the estimated maximum groundwater level of 1.0mAHD. Final floor levels of the rehabilitated pit will be approximately 2.0m AHD. Therefore, no groundwater will be exposed by the operations.

## 5.4 VISUAL IMPACT

Potential exists for negative visual impacts to be incurred since the site is elevated and on the edge of a plateau. A Visual Management Plan that was submitted as part of 2010 EIL application and was approved by the Shire (Appendix 7). The Plan required tree belts running adjacent to the Stage 3 to mitigate the visual impact of the extraction area. These trees are well established and fit for purpose (Figure 2).

Potential visual impacts will continue to be managed during the extraction though the implementation of the following:

- Product stockpiles will be located on the pit floor and kept to a maximum height below the top edge of the pit (i.e. below ~4m AHD).

# 5.5 WATER

## 5.5.1 Potential Impacts

In all mining operations the potential exists for impacts to be incurred on surrounding water resources, or by storm water erosion of exposed areas. This is dependent on the slopes associated with the site, the nature of the ground materials and the proximity of the site to sensitive receptors such as productive aquifers, wetlands, lakes or rivers.

Management measures to mitigate potential impacts to or from water have been implemented according to the Water Management Plan (Appendix 2) that was approved by the Shire for the previous EIL application. These measures are summarised below. This plan has been working successfully and will continue to be implemented during future extraction at the site.

## 5.5.2 Water Management

### 5.5.2.1 Ground Water Management

The most recent EIL area (25th June 2021) states that a 0.5m buffer must be maintained at all times between the groundwater level and the lowest level of any extraction works. The finished rehabilitated level must be at least one metre above the highest water table level.

Carbone Bros Pty with continue to adhere to these conditions, therefore no groundwater will be exposed by the operations. The proposed final land surface is shown on Figure 4.

Due to the low scale nature of the operations, no groundwater contamination is anticipated. No fuel or lubricant storage will occur on the site. Refuelling will take place using a mobile refuelling vehicle which is equipped with a “snap-on snap-off, fast-fill and auto shut-off” facility. Plant will be refuelled each morning, leaving the vehicles almost empty overnight. No major servicing, which could lead to fuel and oil spills, will take place on the site. Minor spills which may occur occasionally will be neutralised by soil processes.

### 5.5.2.2 Surface Management

The sand and limestone materials that form the site have a hydraulic conductivity of between 15 and 30m/day (Deeney 1989). Since the estimated 1:100-year rainfall intensity is 115mm/day, any water striking the surface of these materials will immediately infiltrate and there will be no surface runoff of any consequence.

If this type of event coincides with the end of winter high groundwater levels, then the proposed final land surface of 1m above the average end of winter water table level will not result in long-term standing water on the surface.

Since the existing pit, as well as the proposed final surface, will be internally draining, no offsite stormwater damage arising from these works will be incurred. Stormwater management will thus be restricted to on-site activities and these will be to cease work during high flood events until water has infiltrated into the ground. There will be no surface flows that arise from this property that will impact any off-site areas.

## 5.6 ACID SULFATE SOILS

Broad scale Acid Sulfate Soil risk (ASS) mapping for the Swan Coastal Plain (DWER-055) shows there is a "high to moderate" or "moderate to low" risk of acid sulfate soils occurring within the extraction area (Landgate, 2021).

However, a low probability of ASS within the EIL areas is likely because the material to be excavated is limestone. There are no remnant swampy sediments within the extraction area where acid sulphate soils might be exposed or activated as a result of the proposed extraction activities. The extraction will remain above the water table at all times. There have been known issues with ASS during previous extraction at the site.

## 5.7 NOISE

The proposed activities on site will create some noise from the operation of a bulldozer and haulage trucks however operational noise will be highest during periods of crushing/screening. Crushing/screening of limestone is scheduled to occur over 4 weeks every 12 months.

As previously mentioned, (Section 3.10) there is just one rural residence located within 1 000m of the proposed extraction area (Figure 2). This resident is located 637m south east of Stage 3.

Although noise impacts are expected to be minimal due to the short duration of crushing/screen and the large distance of the residents from the site, the following measures have been implemented to limit the impact of operational noise on potentially sensitive receptors:

- All machinery and vehicles will be fitted with low frequency reversing alarms (croakers) to reduce noise.
- The crusher will be located behind ~3m high stockpiles to help attenuate noise.

There have been no known complaints about noise since the last EIL was approved indicating these measures have been working successfully to limit the impact of noise. These measures will continue to be implemented during future extraction at the site.

## 5.8 DUST

There is potential for dust to be generated during the initial stages of the proposed operation when conditions are dry and there are strong winds.

Proposed measures to limit the impact of dust are outlined in a Dust Management Plan (Appendix 6) that was approved by the Shire for the previous EIL application. There have been no known complaints about dust since the last EIL was approved, indicating this plan has been working successfully and will continue to be implemented during future extraction at the site.

Proposed measures to limit the impact of dust are listed below:

- A 15kl water cart will be on site during all periods when earth is being moved or crushing is being conducted. If and when dust is caused to occur during these periods, the water cart will be employed to damp down the areas of concern. During crushing a spray bar is employed at all times.
- If the wind is blowing strongly from in the direction of the closest residences on and conditions are dusty, then operations will be stopped until such time as adequate wetting down has occurred.
- A polymer-based spray-on soil stabilizer will be applied to topsoil and overburden stockpiles if they do not stabilize by crusting and grass regrowth.

- Internal roads will be surfaced with limestone.
- Truck loads will always be covered so that no dust is generated in transit.
- A complaints system will be put in place and these will be recorded by the Quarry Manager and acted on promptly.
- A notice will be erected at the front gate and this will provide emergency contact details for the Quarry Manager.

## 5.9 DIEBACK

### 5.9.1 Potential Impacts

No obvious signs of dieback infestation were observed in the remnant native vegetation on the property. These areas should thus be classified as "uninterpretable" and managed as per the guidelines applicable for this classification (Dieback Working Group 2010).

### 5.9.2 Dieback Management

The following management measures will be put in place to minimise future spread of dieback:

- The property will be fenced at all times.
- Access to the property will be via a single entrance gate.
- All machinery, trucks and other vehicles will arrive in a clean condition free of soil and organic matter that may contain dieback fungus.
- Any soil and plant material brought to the site for rehabilitation purposes should be from dieback free sources.
- Employees and contractors working on the site will be informed of the purpose of the above measures and their responsibilities in relation to dieback prevention.

## 5.10 HERITAGE SITES

A search of the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Inquiry System (AHIS) shows no registered sites or other heritage places on within the property or within the EIL area. Lake Preston is a registered heritage place (5614 – Artefacts/Scatter) (DPLH 2021). If during the works, an Aboriginal cultural heritage site is discovered, the Proponent will immediately advise the Department of Aboriginal Affairs and abide by the *Aboriginal Heritage Act 1972*.

# 6 REHABILITATION

As a condition of clearing permit CPS3785/1, Carbone Bros must implement and adhere to an approved Pit Rehabilitation and Maintenance Management Plan (see Appendix 4). This plan will continue to be implemented and adhered during future extraction within the EIL area.

# 7 REFERENCES

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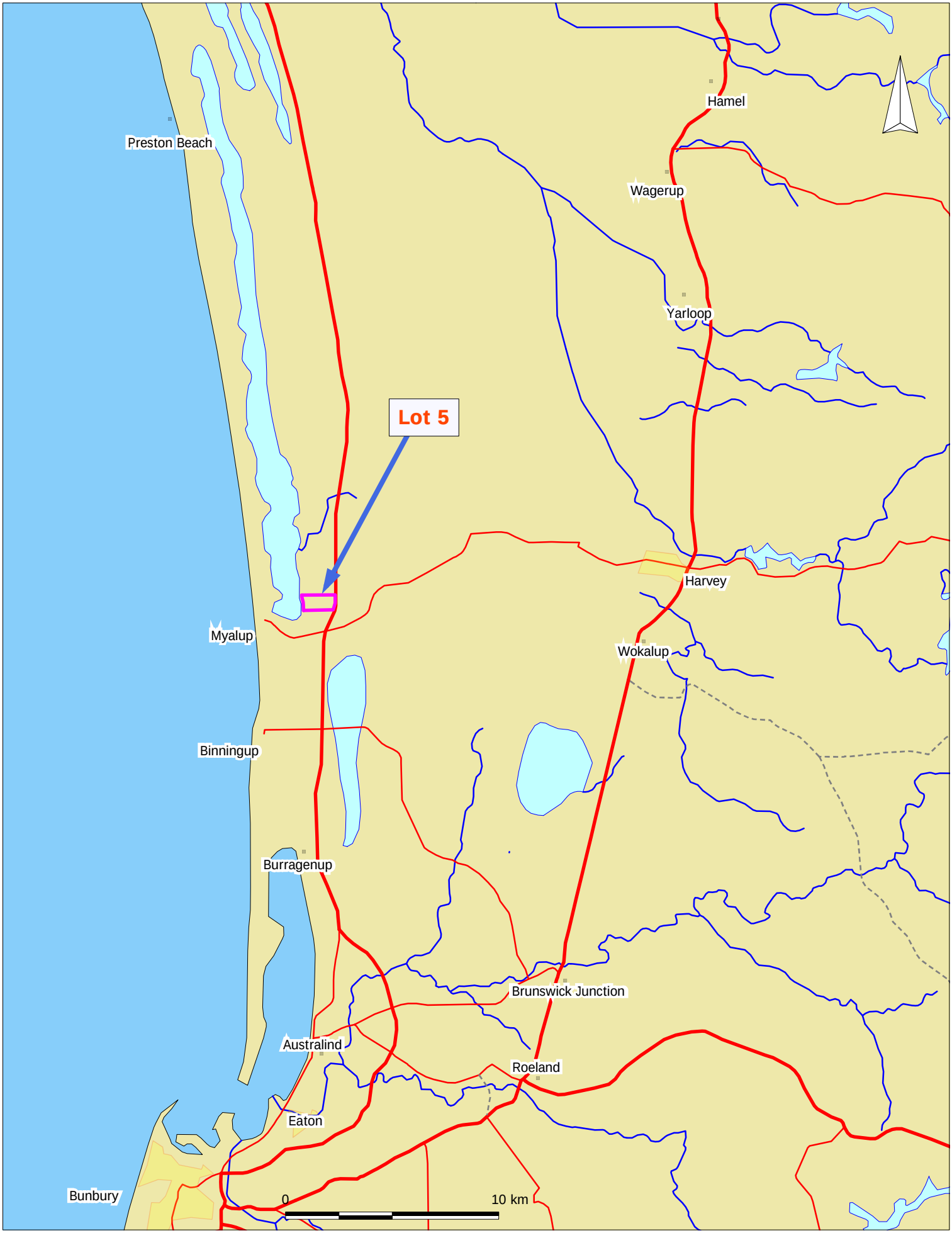
# FIGURES

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Projection: Australia MGA94 (50)

Client: Carbone Bros Pty Ltd
Project: Limestone Extraction
Location: Lot 5 Old Coast Rd Myalup

# Figure 1:

# Locality Plan

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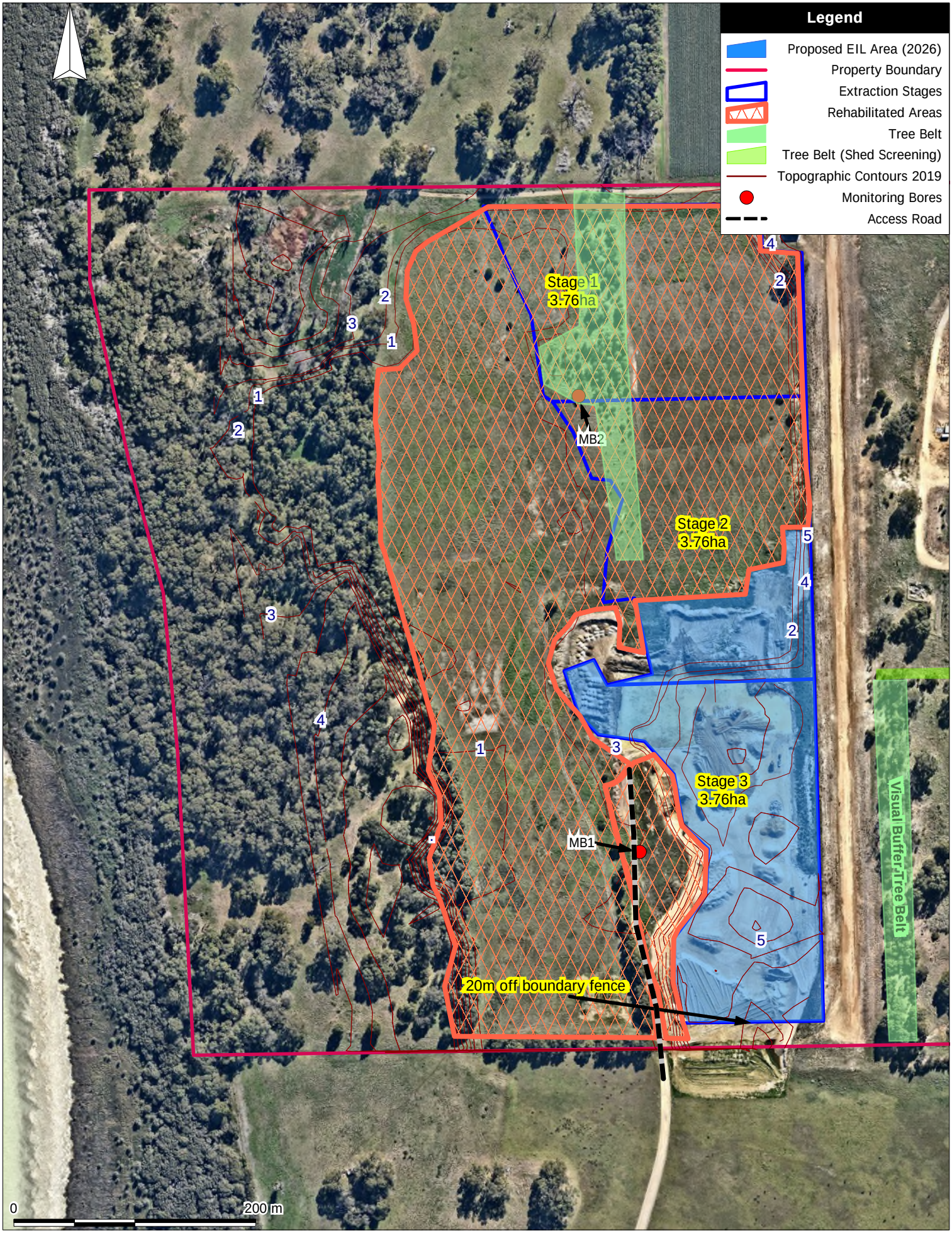
Client: Carbone Bros
Project: Limestone Extraction
Location: Lot 5 Old Coast Rd Myalup

# Figure 2:
## Site and Surrounds

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Client: Carbone Bros
Project: Limestone Extraction
Location: Lot 5 Old Coast Rd Myalup

# Figure 3:
## Proposed Operations

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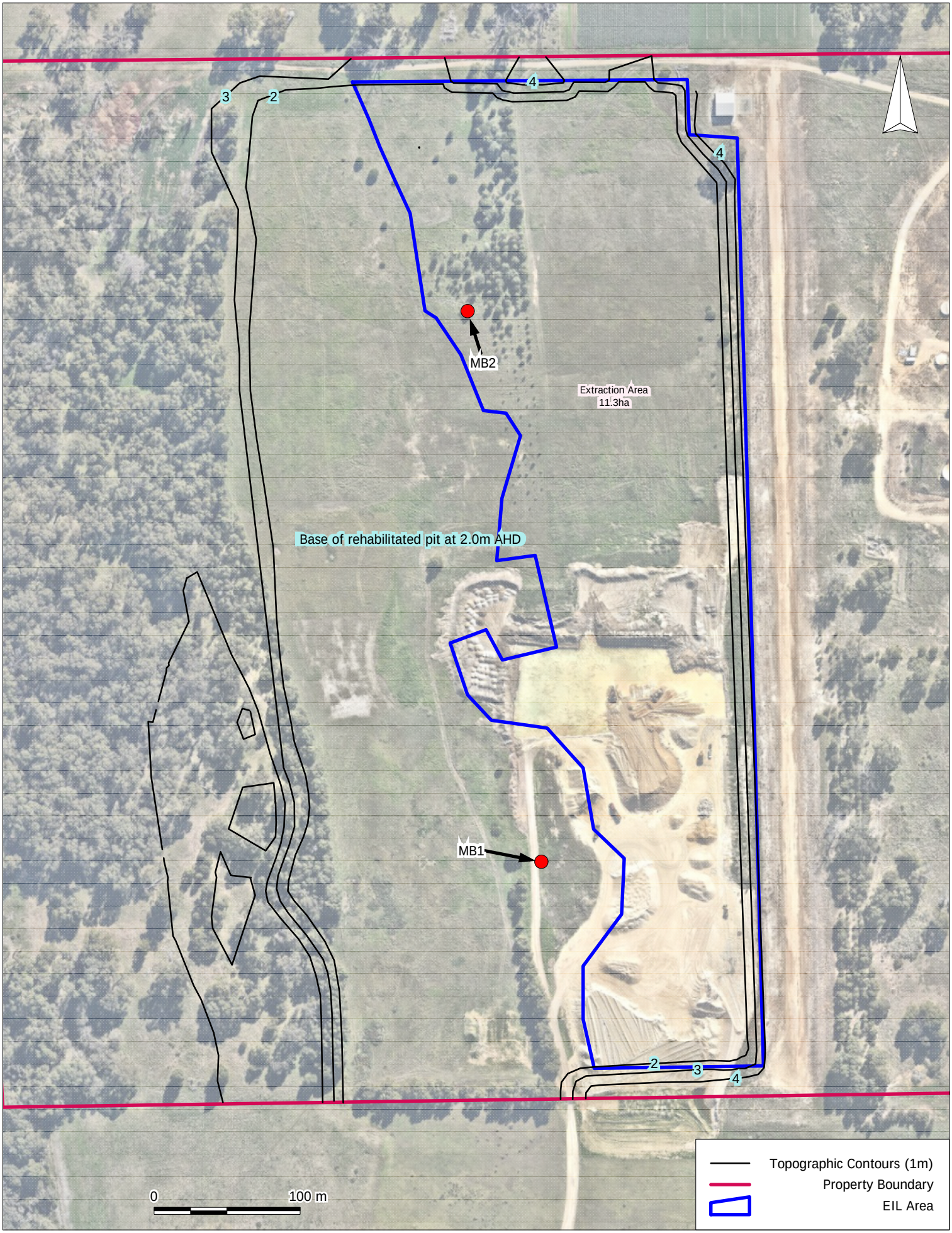


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Datum: GDA94
Projection: Australia MGA94 (50)

Client: Carbone Bros
Project: Limestone Extraction
Location: Lot 5 Old Coast Rd Myalup

# Figure 4:
## Final Land Surface

Z:\Carbone\Forrest Hwy (Old Coast Road) Lot 5_Myalup_SoH_Limestone\EIL\EIL Application\2026 EIL Renewal\Drawings\F4 Final landsurface - rev.map 9/06/2026 Layout