

## Peppertree Quarry Modification 5

# BACKGROUND SCOPING DOCUMENT

Prepared for Boral Quarries – | December 2017





# Peppertree Quarry

## MODIFICATION 5 – ENVIRONMENTAL ASSESSMENT

Prepared for Boral Resources (NSW) Pty Limited  
December 2017

PR25

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# 1 INTRODUCTION

## 1.1 Overview

Boral Resources (NSW) Pty Ltd (Boral) owns and operates the Peppertree Quarry (the Quarry), a hard rock quarry in Marulan South.

Boral is seeking to modify the current Project Approval (PA 06\_0074) under Section 75W of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) to provide for the following (hereafter referred to as the Project):

- develop a new overburden emplacement area;
- amend the Western Overburden Emplacement (WOE);
- remove the Western Earth Bund (yet to be constructed);
- relocate a powerline; and
- construct a new haul road.

This will be Modification 5 to the current Project Approval. The Minister for Planning is the consent authority for the proposed modification.

This background scoping document has been prepared by Element Environment Pty Ltd (Element), on behalf of Boral to describe the key elements of the proposed modification, to seek confirmation from the Department of Planning and Environment (DP&E) on the scope and environmental assessment requirements of the environmental assessment (EA) and to facilitate further design development.

## 1.2 Site description

The Quarry is at Marulan South in the Goulburn Mulwaree Local Government Area (LGA), and is approximately 175 km south-west of Sydney (**Figure 1**). Access is via Marulan South Road, which connects the Quarry and Boral's adjoining Marulan South Limestone Mine (the Limestone Mine) with the Hume Highway approximately 9 km to the northwest (**Figure 2**). Boral's private rail line connects the Quarry and Limestone Mine with the Main Southern Railway approximately 6 km to the north (**Figure 2**).

The Quarry is on approximately 650 ha of Boral owned land, which includes the Quarry site (occupying approximately 70 ha), additional granodiorite resources to the south and surrounding land (**Figures 3 and 4**). The site is zoned RU1 — Primary Production under the Goulburn Mulwaree Local Environmental Plan (LEP) 2009 (**Figure 5**). Mining and extractive industries are permissible in this zone with consent.

## 1.3 The applicant

Boral Resources (NSW) Pty Ltd is a wholly owned subsidiary of Boral Limited and is the applicant for the Project.

As Boral Resources (NSW) Pty Ltd owns the land on which the modifications to the existing project approval are proposed, landowner consent is not required.

FIGURE 1  
Regional context  
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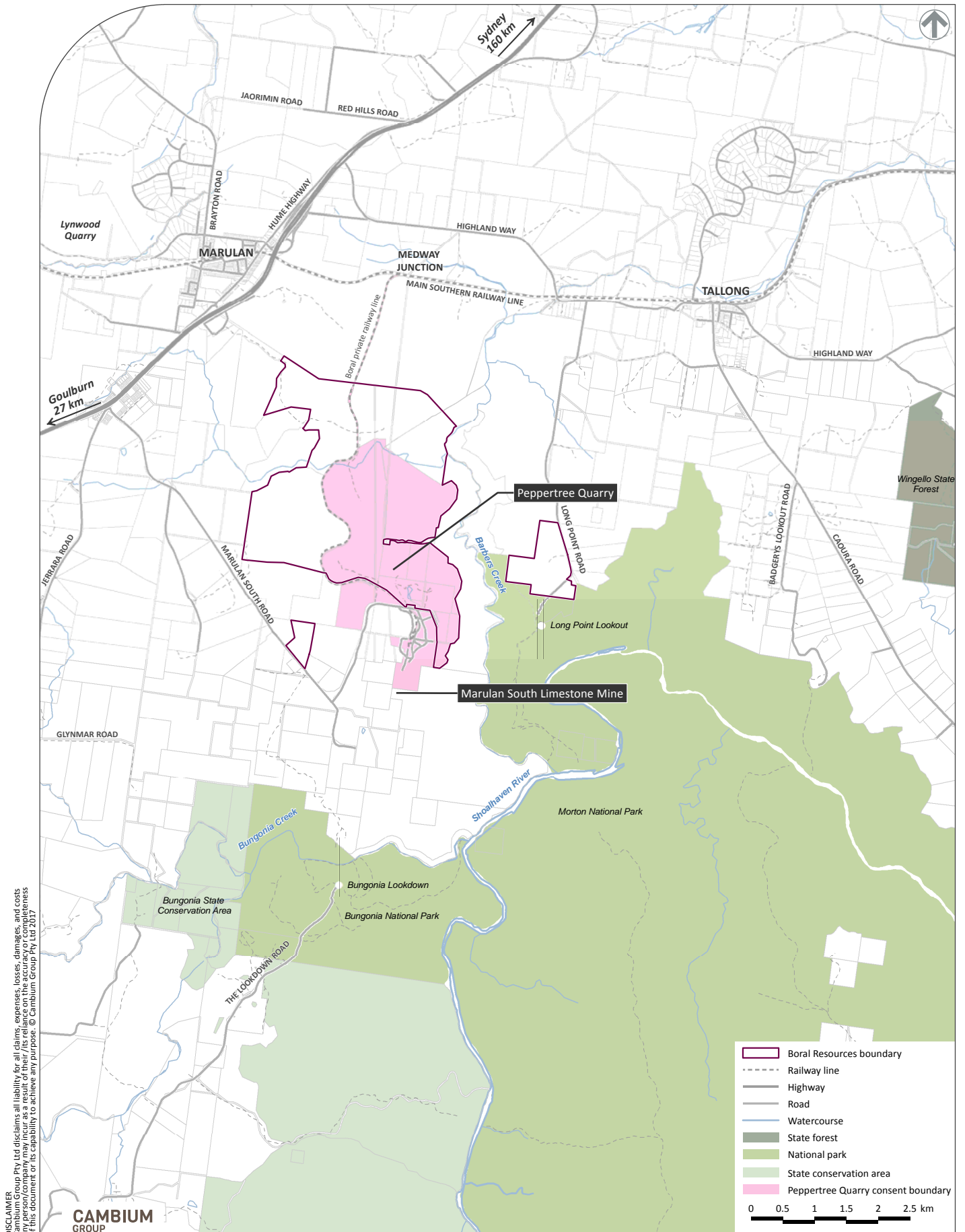




FIGURE 2  
Local context  
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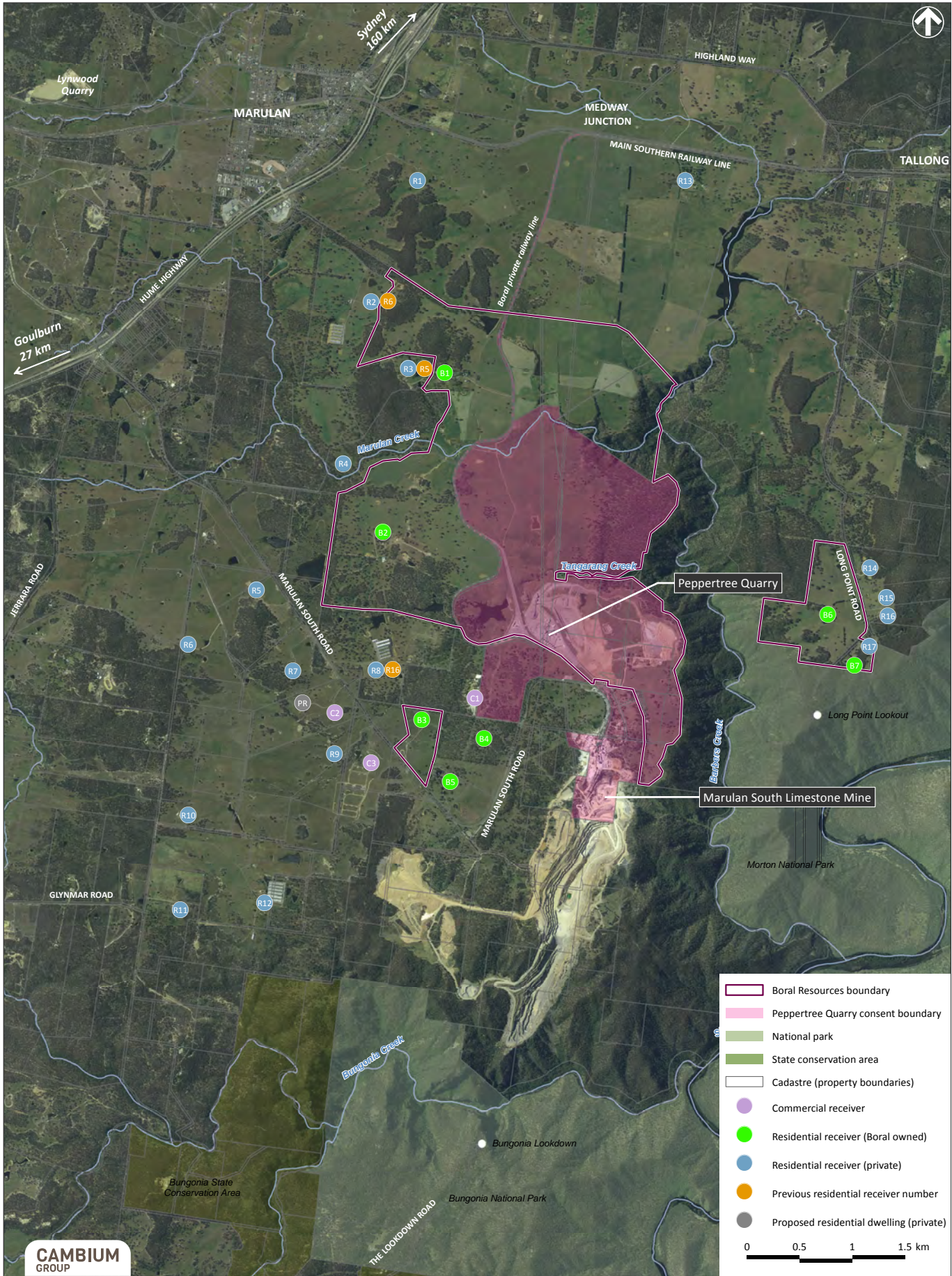




FIGURE 3  
Land ownership  
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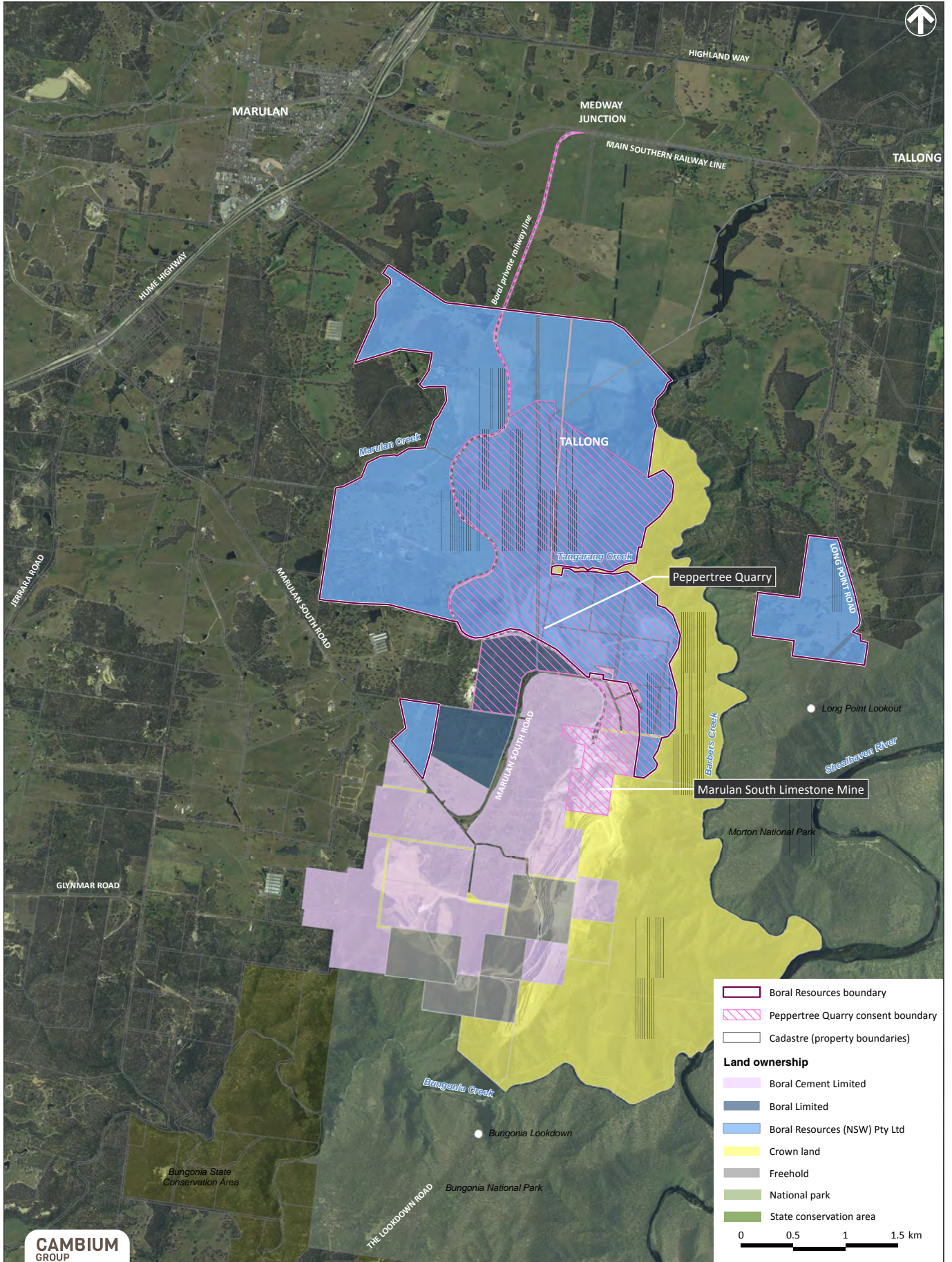




FIGURE 4  
Landuse  
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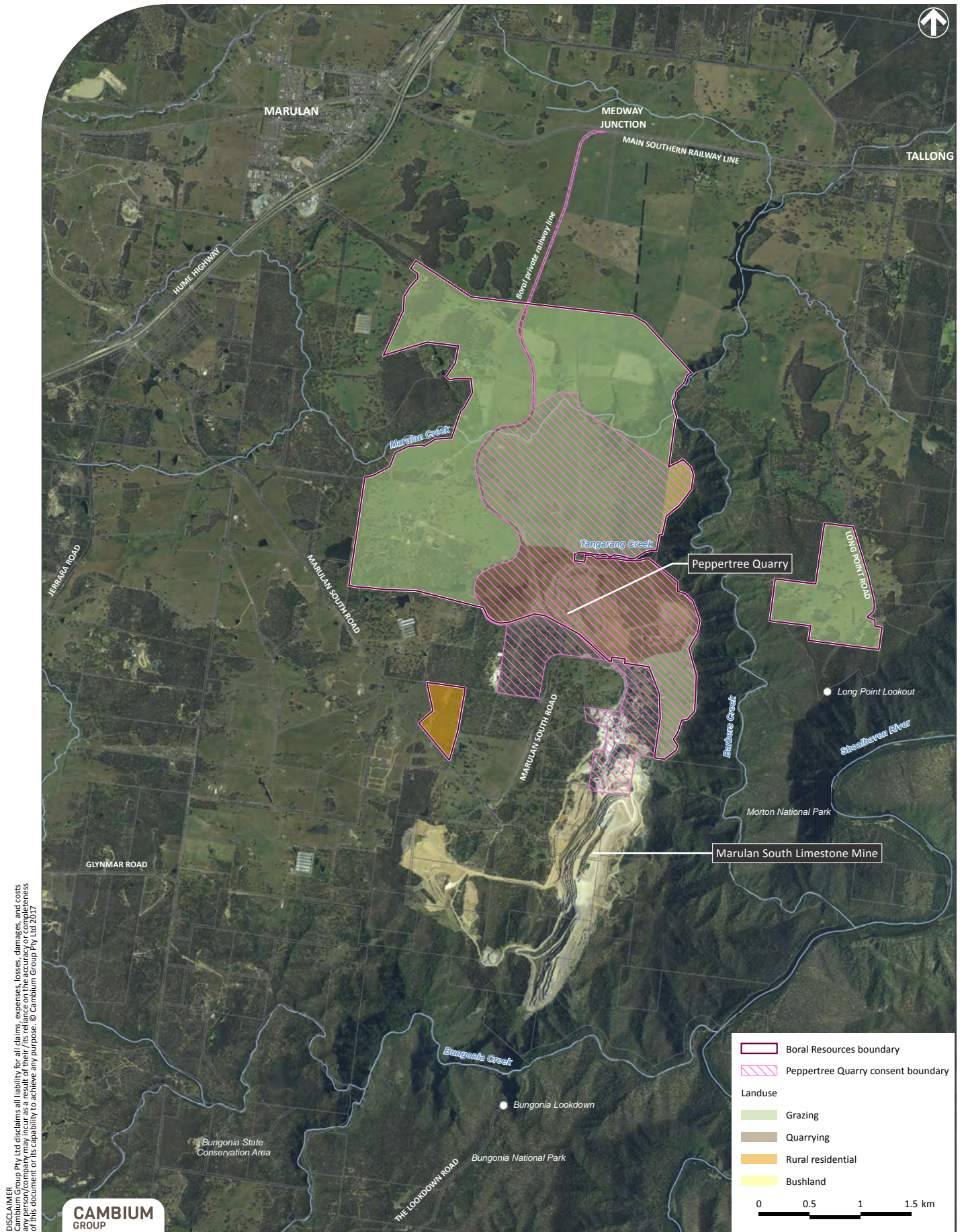
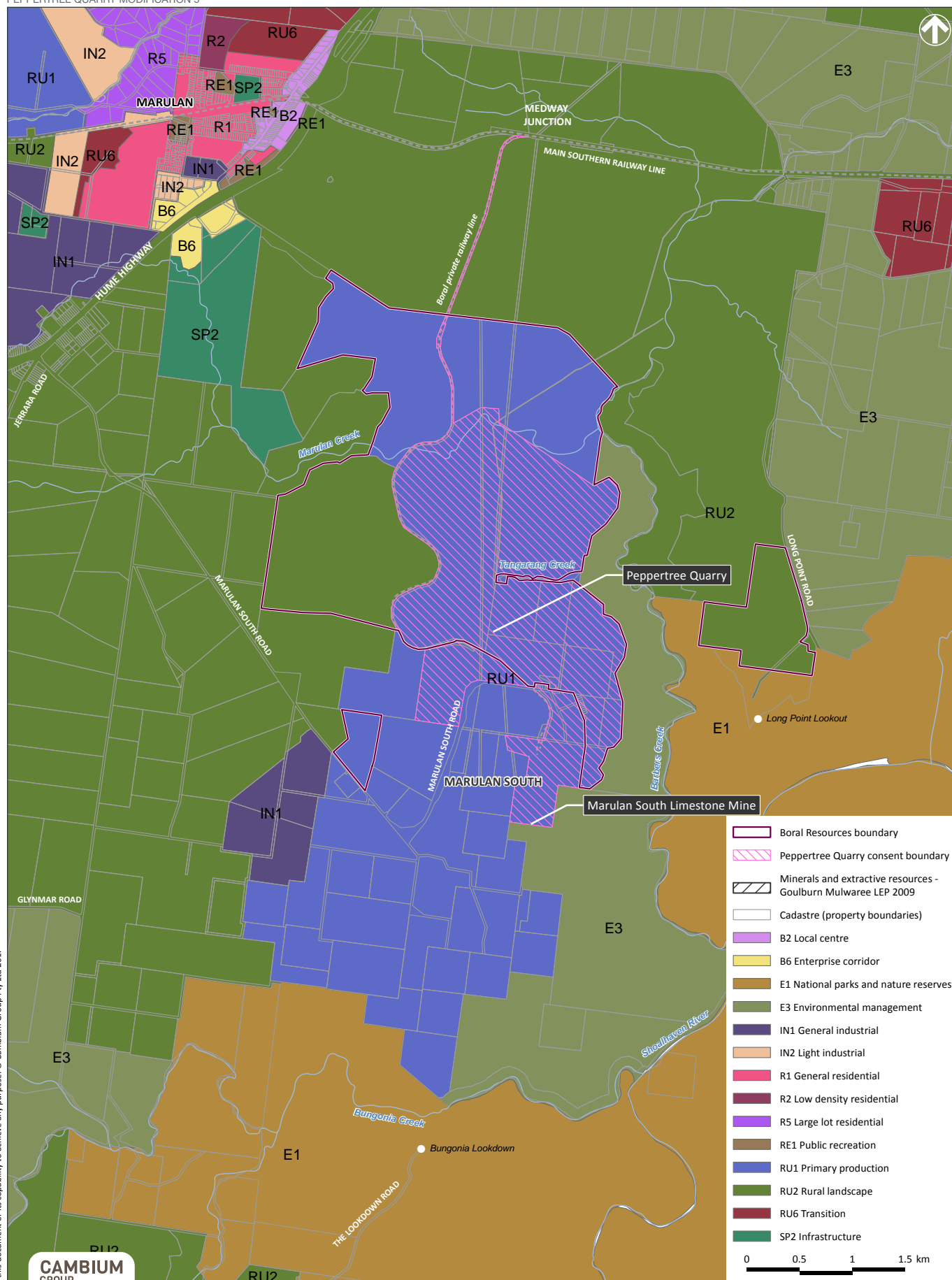




FIGURE 5  
Land zoning  
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## 2 EXISTING OPERATIONS

### 2.1 Planning approval history

Peppertree Quarry obtained planning approval from the Minister for Planning in 2007 under Part 3A of the EP&A Act. Planning approval PA 06\_0074 has since been modified four times as outlined in **Table 1**.

Table 1: Planning approval history

Date of planning approval	DA/MOD number	Details
28 February 2007	PA06_0074	The “Marulan South hard rock quarry and associated infrastructure” project was granted approval by the Minister for Planning under Part 3A of the EP&A Act.
17 March 2009	Modification 1 PA06_0074	Approved under Section 75W of the EP&A Act for the construction of an exploratory test pit to extract a suitable amount of granodiorite to test and model rock behaviour and to assist with the design of plant and equipment for the Quarry.
3 November 2011	Modification 2 PA06_0074	Approved under Section 75W of the EP&A Act for infrastructure and site layout changes including the: <ul style="list-style-type: none"> <li>▪ construction of a new rail loop embankment and overburden emplacement;</li> <li>▪ reduction in the water storage dam size; and</li> <li>▪ relocation of loading facilities, processing plant and stockpiling.</li> </ul>
2 November 2012	Modification 3 PA06_0074	Approved under Section 75W of the EP&A Act for power and rail infrastructure changes including the: <ul style="list-style-type: none"> <li>▪ construction of a HV line approximately 1km in length; and</li> <li>▪ construction of an extension to the existing passing line on Boral's private rail line at Medway Junction.</li> </ul>
24 August 2016	Modification 4 PA06_0074	Approved under Section 75W of the EP&A Act for the: <ul style="list-style-type: none"> <li>▪ construction of a new overburden emplacement area; and</li> <li>▪ extension of in-pit operating hours.</li> </ul>

The consolidated project approval for the Quarry, as modified by the above applications, is attached to this document as **Appendix A**.

### 2.1.1 Environmental protection licence

The NSW *Protection of the Environment Operations Act 1997* (PoEO Act) provides for an integrated system of licensing and contains a core list of activities requiring environmental protection licenses (EPL) from the Environment Protection Authority (EPA). The activities are called 'scheduled activities' and are listed in Schedule 1 of the Act.

Extractive industries are a scheduled activity and the Quarry operates under EPL No. 13088.

## 2.2 Approved project

### 2.2.1 Quarry activities and infrastructure

The approved quarrying activities are for extraction of 105 million tonnes of granodiorite over 30 years at an initial rate of 1-2 million tonnes per annum (Mtpa) and a maximum rate of 3.5 Mtpa. Granodiorite is an intrusive igneous rock suitable for producing construction and building materials. The hard rock aggregates produced at the site are a range of different shapes and sizes for different purposes. Primary production is of concrete and asphalt aggregates (10 mm) and railway ballast (28-50 mm) with capacity to produce larger aggregates (>100 mm) for rock armour and gabion baskets. Fines (generally <5 mm) produced during crushing of product are blended with limestone sand from Boral's adjacent Limestone Mine to produce a marketable manufactured sand.

Infrastructure at the Quarry includes a processing plant, rail loop and loading facilities, two water storage dams, an in-pit mobile crushing plant, overburden emplacement areas, noise and visual bunding, product stockpiles, and staff facilities. The location of infrastructure at the Quarry is shown on **Figure 7**.

Work to establish the quarry commenced in July 2011. Production commenced early in 2014 following a lengthy commissioning and proving phase. The Quarry has approval to operate until the end of 2038.

### 2.2.2 Transport of product

Product from the Quarry is transported entirely by rail except in an emergency where it would be transported by road with the written approval of the Secretary of DP&E. The Quarry has approval to transport up to 3.5 Mtpa of product. At full production the Quarry will operate up to four trains per day which will transport product north to the Sydney market and other customers. In addition, the Limestone Mine currently operates up to six trains per day transporting product north to Berrima and Maldon and east to Port Kembla.

Trains to the Quarry will access Boral's private rail line from the Main Southern Railway at the Medway Junction (**Figure 2**) which currently provides access to the Limestone Mine. The rail line is mostly single track with a 1 km length of triple line track used for shunting and train loading. A rail loop has been constructed at the Quarry for separation of rail movements on the rail line between the two Boral sites. Rail loading facilities were also established on the rail loop adjacent to the Quarry's processing plant.

Loading of product from the Quarry onto trains and train movements occur 24 hours, seven days a week. This enables train trips on the Main Southern Railway to be scheduled away from peak commuter times.



### 2.2.3 Operating hours and workforce

The Quarry operates 24 hours, 7 days a week with in-pit activities restricted to the hours of 5 am to 11 pm. Approved operating hours are outlined in detail in **Table 2**.

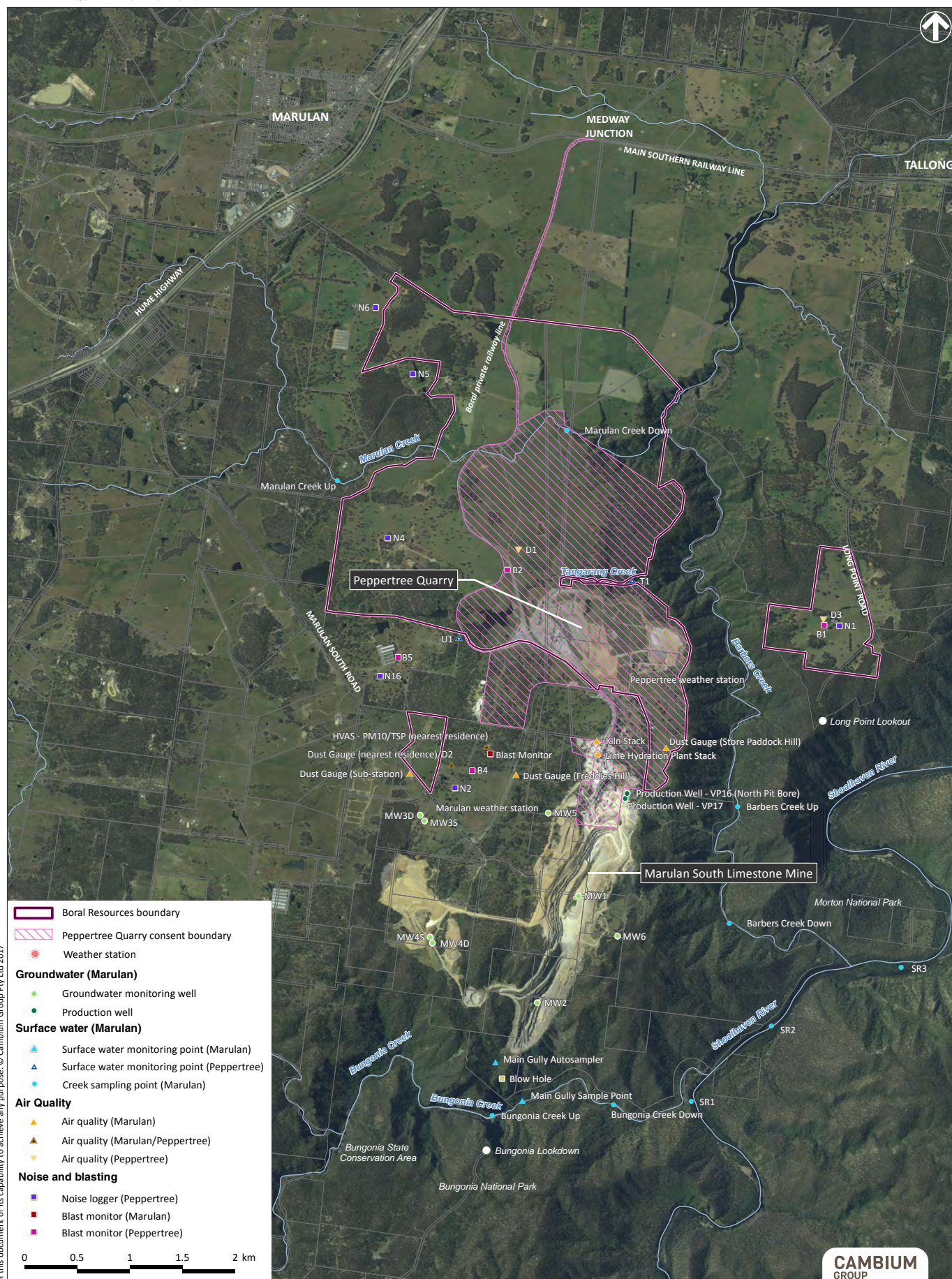
Table 2: Approved operating hours

Activity	Day	Time
Construction works	Monday to Friday	7.00 am to 6.00 pm
	Saturday	8.00 am to 1.00 pm
	Sunday and public holidays	None
Topsoil/overburden removal/emplacement	Any day	7.00 am to 7.00 pm
Blasting	Monday to Saturday	9.00 am to 5.00 pm
	Sunday and public holidays	None
In-pit activities (including drilling, extraction, processing, and transfer of material out of the pit)	Any day	5.00 am to 11.00 pm
Out-of-pit activities (including processing, stockpiling, train loading and distribution, and maintenance)	Any day	24 hours

The Quarry employs 30 full time persons distributed over 2-3 shifts.

FIGURE 6  
Current environmental monitoring locations  
BACKGROUND SCOPING DOCUMENT

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## 3 PROPOSED MODIFICATIONS

### 3.1 Description of modifications

Boral is seeking to modify the current project approval to:

- develop a new overburden emplacement area;
- amend the WOE and Western Earth Bund;
- remove the Western Earth Bund (yet to be constructed);
- relocate a powerline; and
- provide a new haulage route from the southern extent of the pit to the new overburden emplacement.

#### 3.1.1 New South-western Overburden Emplacement

Overburden emplacement at the Quarry is currently approved within noise bunds located along the northern and eastern boundaries of the site, an emplacement area to the east of the approved quarry pit (Eastern Overburden Emplacement), an emplacement area to the south of the approved quarry pit (Southern Overburden Emplacement) and an emplacement area (Western Overburden Emplacement) and noise bund (Western Earth Bund) to the west of the Quarry (refer to **Figure 7**). Remaining overburden is approved to be emplaced in the south pit of the Limestone Mine.

The noise bunds were completed during construction of the Quarry, the Eastern Overburden Emplacement reached capacity in 2017 and the Southern Overburden Emplacement is likely to be completed by late 2018. Part of the Western Overburden Emplacement is planned for a future shared road sales stockpile area for the Quarry and Limestone Mine.

Mine planning for the Limestone Mine has ruled out emplacement of the Quarry's remaining overburden in the south pit. There is substantial limestone remaining in the south pit and extraction of this will continue beyond the Quarry's need for additional overburden emplacement space. Additionally, as much in-pit space as possible needs to be created in the south pit to minimise the need for future out of pit emplacements at the Limestone Mine.

The Limestone Mine, under its forthcoming development application, was seeking to hold 5 million m<sup>3</sup> (approximately 13 Mt) of overburden for the Quarry, however, this is unlikely to be approved until 2019. As the Quarry will run out of overburden emplacement space in 2018, Boral is seeking approval for this approximately 13 Mt overburden emplacement.

The proposed new South-western Overburden Emplacement will be located to the south of the Western Overburden Emplacement, south of Marulan South Road and in the north-western corner of the Limestone Mine (refer to **Figure 7**). This new overburden emplacement area will be needed in late 2018 and will take approximately 4 years to establish.

An existing high voltage powerline that supplies power to the Limestone Mine traverses the proposed location of the new South-western Overburden Emplacement. This section of powerline will need to be relocated along the toe of the emplacement, adjacent to Marulan South Road (refer to **Figure 7**).

As the proposed new South-western Overburden Emplacement is located outside Peppertree Quarry's consent boundary, an amendment to the consent boundary is part of this modification application.

### 3.1.2 Amended Western Overburden Emplacement and Western Earth Bund

#### Western Overburden Emplacement

As outlined in **Section 3.1.1**, part of the Western Overburden Emplacement is planned for a future shared road sales stockpile area for the Quarry and Limestone Mine. Although approval for the shared road sales stockpile area will be sought by the Limestone Mine, under its forthcoming development application, the Quarry needs to seek an amendment to the approved Western Overburden Emplacement to accommodate the future shared road sales stockpile area.

The approved Western Overburden Emplacement comprises:

- a 10 m high elongated section (bund), located to the south of the railway line, extending the length of the processing plant; and
- a 30 m high triangular emplacement, extending south-east from the 20 m high elongated bund.

The Western Overburden Emplacement had a dual purpose of storing overburden and increasing noise attenuation from quarrying operations.

The proposed amendment to the Western Overburden Emplacement would involve replacing the 30 m high triangular section of the emplacement with approximately 2 m of emplaced overburden material, which once completed would serve as a foundation for the shared road sales stockpile area.

#### Western Earth Bund

The approved Western Earth Bund is a 10 m high bund located to the north of the railway line, south of the Quarry's entrance driveway and extending along the south-western edge of the Quarry pit. This has not been constructed yet, and it is proposed to abandon this component of the project. Doing this will not result in increased noise impacts to receivers in the west and south-west as the raised western section of the Western Overburden Emplacement will be retained and the proposed South-western Overburden Emplacement will be constructed between the pit and receivers in the south-west.

### 3.1.3 Powerline

The powerline which supplies electricity to the Limestone Mine passes through the area where the South-western Overburden Emplacement is proposed to be constructed. Therefore, Boral proposes to relocate the powerline along the eastern and southern side of Marulan South Road to the intersection with Cooper Crescent, then divert south into the mine's infrastructure area.

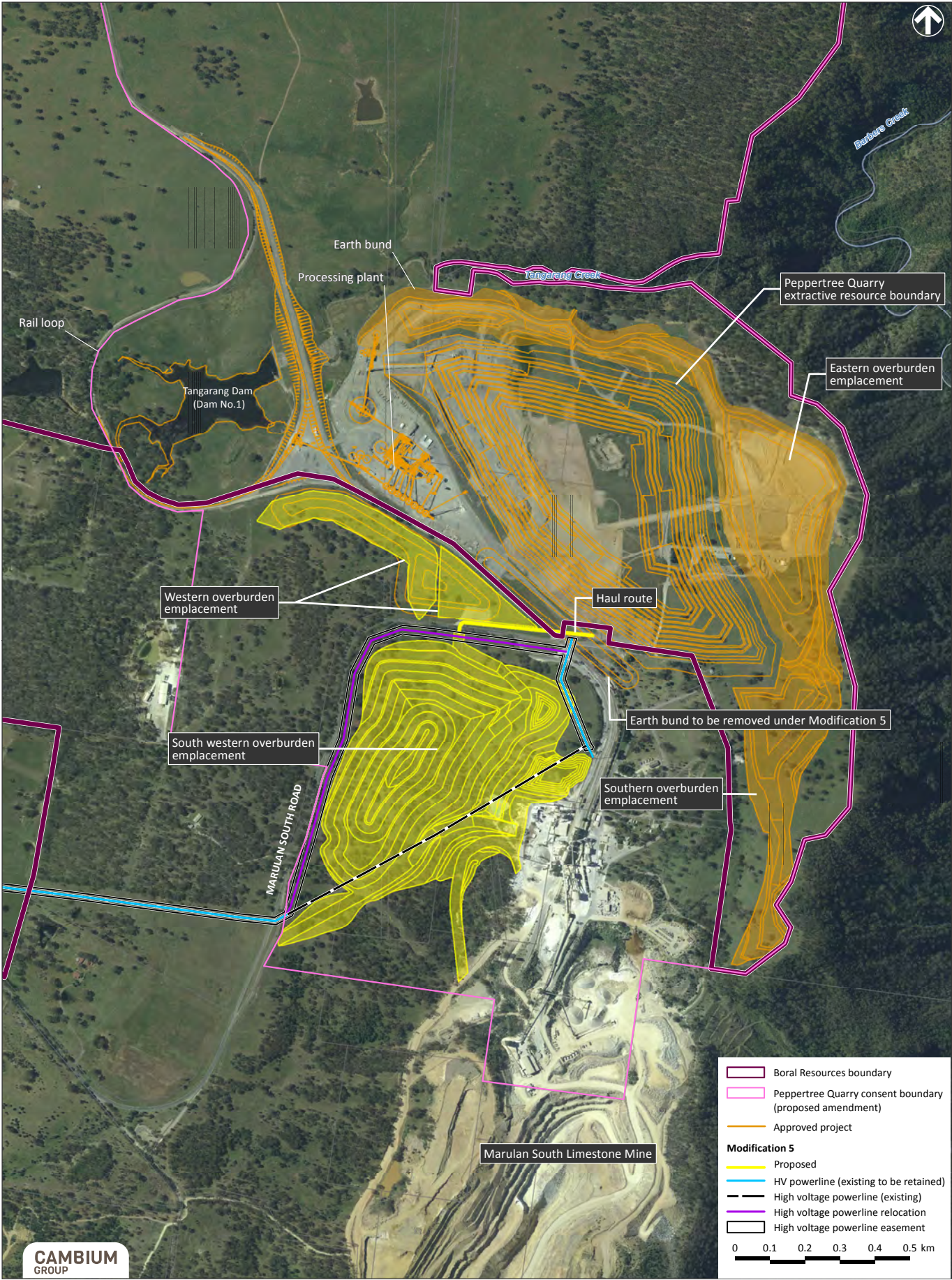
### 3.1.4 Haul road

A short new haul road is proposed to connect the southern extent of the Quarry pit with the northern section of the proposed South-western Overburden Emplacement. The road would head west from the pit and cross the Quarry driveway, then cross Marulan South Road to head south and connect to the emplacement.



FIGURE 7  
The Project  
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## 4 LEGISLATIVE PLANNING CONSIDERATIONS

Boral seeks to modify PA06\_0074, as described in Section 3.1, under Section 75W of the EP&A Act.

The following section identifies the applicable local and regional planning instruments, the relevant State and Commonwealth environment and planning legislation, and discusses the relevant planning approval process applicable to the proposed modification.

### 4.1 EP&A Act

Part 3A was repealed by the NSW *Environmental Planning and Assessment Amendment (Part 3A Repeal) Act 2011* (Part 3A Repeal Act), which commenced on 1 October 2011. Under the Part 3A Repeal Act, projects deemed to be 'transitional Part 3A projects' will continue to be subject to Part 3A of the EP&A Act (as in force immediately before the repeal and as modified by the Part 3A Repeal Act). Transitional Part 3A projects include certain projects that were the subject of an existing approval under Part 3A.

As the Quarry has a project approval that was granted under Part 3A of the EP&A Act, it is a transitional Part 3A project. The provisions of Part 3A (as in force immediately prior to its repeal) continue to be applicable to the proposed modifications.

Based on the scope and scale of the proposed modifications as outlined in **Section 3**, they are not predicted to result in significant environmental consequences beyond the current Project Approval (**Appendix A**) and are proposed to be assessed under Section 75W.

The transitional arrangements in the EP&A Act will be repealed by the Environmental Planning and assessment Bill 2017 once it is assented to legislation and the subordinate regulations are amended. This will move transitional Part 3A projects to the current State significant development and State significant infrastructure pathways, and applications to modify such projects will no longer be made under Section 75W. This modification application has been made within two months of passage of the Bill and is not affected by the above arrangements.

### 4.2 Other legislation and policies

Listed below is other State and Commonwealth environment and planning legislation that will be considered in the environmental assessment process.

#### **Commonwealth legislation:**

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act); and
- *National Greenhouse and Energy Reporting Act 2007*.

#### **New South Wales legislation:**

- *Environmental Planning and Assessment Act 1979* (EP&A Act).

#### **Other key NSW legislation:**

- *Protection of the Environment Operations Act 1997* (POEO Act);
- *Crown Lands Act 1989*;
- *Water Management Act 2000* (WM Act);
- *Water Act 1912*;
- *National Parks and Wildlife Act 1974* (NPW Act);
- *Biodiversity Conservation Act 2017*;
- *Heritage Act 1977*;



- *Roads Act 1993*;
- *Contaminated Lands Management Act 1997*; and
- Environmental Planning and Assessment Regulation 2000 (EP&A Regs).

**State environmental planning policies (SEPP):**

- SEPP No. 44 – Koala Habitat Protection;
- SEPP (Sydney Drinking Water Catchment) 2011;
- SEPP (Mining Petroleum Production and Extractive Industries) 2007;
- SEPP (Infrastructure) 2007; and
- SEPP (Major Development) 2005.

**Local environmental plans:**

- Goulburn Mulwaree Local Environmental Plan 2009.

## 5 PRELIMINARY ENVIRONMENTAL RISK ANALYSIS & ASSESSMENT

Potential risks to the environment from the Project were analysed (**Table 3**) to identify the key environmental factors or impacts requiring assessment. The rankings in Table 3 were allocated based on the likelihood of occurrence and the perceived consequence of impacts if left unmanaged.

For those environmental factors that achieved a high or medium risk rating, further assessment is proposed, generally in the form of specialist technical investigations as detailed in the table. For those environmental factors that achieved a low risk rating, little further assessment will be required as these non-key issues could largely be addressed using appropriate environmental safeguards and management measures.

In most cases, suitable mitigation measures are likely to minimise any potential impacts. Any risk remaining after the implementation of mitigation measures will be further considered in the EA.

Relevant government and community stakeholders will be identified and consulted at the start of the EA process. The stakeholders will be notified of the proposal and given the opportunity to express their support or concerns. The stakeholder feedback will be described in the EA, including how the project or assessment parameters were changed to address the feedback if necessary.

Table 3: Risk rating for environmental factors

Environmental factor	Risk rating	Comments
Noise and vibration	Medium	<p>Construction of the South-western Overburden Emplacement (SWE) will buffer receivers to the west and south west from noise generated in the pit. Notwithstanding, the SWE will be closer to the receivers and overburden emplacement and other activities at the SWE and vehicle movements along the haul road will be new noise sources.</p> <p>A quantitative method will be used to estimate noise levels associated with the activities at the SWE and haul road and whether they will exceed relevant criteria.</p>
Air quality	High	<p>Vehicle movements at the haul road and SWE, and overburden emplacement at the SWE, will result in additional dust emissions from the site.</p> <p>A quantitative method will be used to estimate dust generation associated with the activities at the SWE and haul road and whether they will exceed relevant criteria.</p>
Biodiversity	High	<p>The Project requires the clearing of native vegetation to allow for the proposed new SWE. This activity has the potential to impact on threatened species (flora and fauna) and endangered ecological communities, including a Commonwealth listed community.</p> <p>Biodiversity assessment reports will be prepared in accordance with State and Commonwealth legislation, including a Commonwealth referral under the EPBC Act.</p>



Environmental factor	Risk rating	Comments
<b>Aboriginal heritage</b>	High	<p>The SWE is proposed on land that has not been subject to significant previous surface disturbance and, therefore, has the potential to contain Aboriginal artefacts and other cultural heritage values.</p> <p>The cultural heritage values of the area will be assessed, and an Aboriginal cultural heritage assessment report prepared.</p>
<b>Surface water</b>	High	<p>The SWE area drains westwards, under Marulan South Road and ultimately into Tangarang Creek, while also draining to the south into the Limestone Mine pit. Uncontrolled surface water runoff from this new emplacement has the potential to impact on both the quality and quantity of water discharged to Tangarang Creek and Barbers Creek.</p> <p>Potential surface water impacts will be assessed to enable design of appropriate avoidance and control measures.</p>
<b>Visual</b>	Medium	<p>The SWE is likely to be visible from neighbouring properties including private residences (primarily to the south-west) and the Bungonia Lookdown in the Bungonia National Park to the south. Therefore, the Project has the potential to impact on the visual amenity and views of local receivers.</p> <p>Potential visual impacts will be assessed to enable preparation of appropriate management measures.</p>
<b>Historic heritage</b>	Low	<p>Although the existing Limestone Mine and associated infrastructure has potential historic heritage value, it is unlikely that any items of historic heritage value are in the proposed SWE area.</p>
<b>Traffic and transport</b>	Low	<p>The new haul road to the South-western Overburden Emplacement will cross Marulan South Road. This could impact traffic flows and safety and an appropriate intersection will need to be designed and constructed. A traffic impact assessment report will be prepared, which will include the results of the traffic analysis and provide an intersection design.</p> <p>It is noted that Boral is negotiating with council to de-list the eastern section of the road and transferring it to private ownership. This is unlikely to occur in the timeframe of this modification. However, the public will not be able to access the above intersection if ownership is transferred to Boral.</p>

Environmental factor	Risk rating	Comments
Other environmental factors	Low	<p>Other environmental factors which will be considered in the EA are:</p> <p><b>Contamination</b></p> <p>The SWE site is predominantly vegetated and unlikely to be contaminated.</p> <p><b>Rehabilitation</b></p> <p>The SWE will be landscaped and rehabilitated in accordance with the existing <i>Peppertree Quarry Landscape and Rehabilitation Management Plan</i></p> <p><b>Groundwater</b></p> <p>Construction and operation of the SWE will not involve interaction with groundwater.</p> <p><b>Greenhouse gas</b></p> <p>It is not proposed to increase production at the Quarry and, therefore, the proposal will not be significantly increase GHG generation.</p> <p><b>Socio-economic</b></p> <p>The proposed modifications will not change the type of activities at the Quarry. Therefore, if the medium to high risk impacts can be mitigated, the project is unlikely to result in any socio-economic impacts.</p> <p><b>Hazards</b></p> <p>The proposed modifications are unlikely to require the storage and use of additional hazardous substances at the Quarry.</p> <p><b>Waste</b></p> <p>The proposed modifications are unlikely to generate significant quantities of additional waste.</p>

As described in **Section 3.1.1**, it is proposed that the Northern Overburden Emplacement (NOE), which was to be proposed under the yet to be submitted Limestone Mine SSD application, be incorporated into the Quarry's project approval. This is due to the misalignment of timing of the SSD application and the requirement for overburden emplacement from the Quarry.

The area where the NOE was proposed to be constructed has been surveyed and assessed during the Limestone Mine environmental impact assessment process. These assessments will be analysed for their completeness and appropriateness to the EA and further work will be carried out where assessment gaps are discovered.



Technical assessments which must consider cumulative impacts, for example noise and air quality, will include the results from the assessments of the latest Limestone Mine plan, even though the SSD application has not been submitted yet. This will ensure future cumulative impacts are accounted for.

## 6 CONCLUSION

Boral is seeking to modify the current Project Approval (PA 06\_0074) under Section 75W of the EP&A Act, to provide for development of a new overburden emplacement area as well as other minor modifications at the Quarry.

This document has been prepared by Element Environment, on behalf of Boral to describe the key elements of the proposed modification, with the view to seek confirmation from DP&E on the scope and environmental assessment requirements of the EA.

This document identifies environmental factors that will require further detailed investigations as part of the environmental impact assessment that will be detailed in the EA.

During the environmental scoping process, no environmental factors have been identified that would cause the Project to result in significant and/or unacceptable environmental impacts (assuming the implementation of appropriate environmental controls and management measures).

## 7 REFERENCES

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## 8 ABBREVIATIONS

Abbreviation	Definition
ACHAR	Aboriginal cultural heritage assessment report
AHIMS	Aboriginal Heritage Information Management System
DA	Development application
DECCW	Department of Environment Climate Change and Water (now OEH)
DP&E	Department of Planning and Environment
EEC	Endangered ecological community
EMP	Environmental management plan
EPA	Environment Protection Authority
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	NSW <i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	Commonwealth <i>Environmental Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment protection licence
FBA	Framework for Biodiversity Assessment: NSW Offsets Policy for Major Projects (2014)
ha	Hectare
ICNG	Interim Construction Noise Guideline (DECC 2009)
INP	Industrial Noise Policy
km	Kilometre
LEP	Local environmental plan
LGA	Local government area
m	Metre
MNES	Matters of national environmental significance
Mtpa	Million tonnes per annum
NSW	New South Wales
OEH	Office of Environment and Heritage
PM <sub>2.5</sub>	Particulate matter less than or equal to 2.5 micrometres in aerodynamic diameter
PM <sub>10</sub>	Particulate matter less than or equal to 10 micrometres in aerodynamic diameter
POEO Act	NSW <i>Protection of Environment Operations Act 1997</i>
RMS	NSW Roads and Maritime Services
SEARs	Secretary's environmental assessment requirements
SEPP	State environmental planning policy
SWL	Sound power level
tpa	Tonnes per annum
TSP	Total suspended particulate

# APPENDIX A

EXISTING PROJECT  
APPROVAL 06\_0074



# APPENDIX A



# Project Approval

## Section 75J of the *Environmental Planning & Assessment Act 1979*

I, the Minister for Planning approve the project referred to in schedule 1, subject to the conditions set out in schedules 2 to 5.

The reason for these conditions is to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the on-going environmental management of the project.

Frank Sartor MP  
**Minister for Planning**

Sydney

2007

File No. 9040608

### SCHEDULE 1

<b>Project Application:</b>	06_0074
<b>Proponent:</b>	Boral Resources (NSW) Pty Ltd
<b>Approval Authority:</b>	Minister for Planning
<b>Land:</b>	See Appendix 1
<b>Project:</b>	Marulan South hard rock quarry and associated infrastructure

**Red type represents March 2009 Modification**  
**Blue type represents November 2011 Modification**  
**Green type represents October 2012 Modification**  
**Purple type represents August 2016 Modification**

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## DEFINITIONS

Annual Review	The review required by condition 10 of Schedule 5
BCA	Building Code of Australia
CCC	Community Consultative Committee
Council	Goulburn Mulwaree Council
Department	Department of Planning and Environment
DPI Water	Department of Primary Industries - Water
DRE	Division of Resources and Energy, within the NSW Department of Industry
EA	Environmental Assessment for the project titled <i>Marulan South Quarry Environmental Assessment Report</i> Volumes 1 and 2 dated October 2006 and prepared by ERM, including the submissions report titled <i>Marulan South Quarry Submissions Report</i> dated December 2006
EA (MOD 1)	Modification Application 06_0074 MOD 1 and the accompanying Statement of Environmental Effects entitled <i>Marulan South Quarry Statement of Environmental for a Pre-commencement Exploratory Test Pit</i> dated 13 November 2008, and letter from Boral Resources Pty Ltd to the Department dated 13 February 2009
EA (MOD 2)	Modification Application 06_0074 MOD 2 and the accompanying EA titled <i>Boral Peppertree Quarry Section 75W Modification Report</i> dated June 2011 and prepared by ERM Australia, and the responses to issues raised in submissions, including those titled <i>Peppertree Quarry Submissions Report</i> dated 24 August 2011, <i>Response to OEH Submission</i> dated 12 October 2011, and <i>Response to Armitt Submission</i> dated 25 October 2011
EA (MOD 3)	Modification Application 06_0074 MOD 3 and the accompanying EA titled <i>Peppertree Quarry Modification 3 Environmental Assessment</i> dated August 2012 and prepared by EMGA Mitchell McLennan Pty Limited, and the responses to issues raised in submissions titled <i>Response to Submissions Peppertree Quarry Modification 3</i> dated 3 October 2012
EA (MOD 4)	Modification Application DA 06_0074 MOD 4 and the accompanying Environmental Assessment titled <i>Peppertree Quarry Modification 4 Environmental Assessment</i> dated April 2016 and prepared by Element Environment, including the Response to Submissions report dated July 2016 and prepared by Element Environment
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence under the <i>Protection of the Environment Operations Act 1997</i>
Feasible	Feasible relates to engineering considerations and what is practical to build or carry out
Habitat Management Area	The area identified as such on the figure in Appendix 5
Incident	A set of circumstances that: <ul style="list-style-type: none"> <li>• causes or threatens to cause material harm to the environment; and/or</li> <li>• breaches or exceeds the limits or performance measures/criteria in this approval</li> </ul>
Land	As defined in the EP&A Act, except where the term is used in the noise and air quality conditions in Schedules 3 and 4 of this approval, where it is defined as the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the project
Negligible	Small and unimportant, such as to be not worth considering
Noise Bund	Bunds built for noise and visual mitigation purposes and which do not exceed 10 metres in height
OEH	Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency, the Proponent or another quarrying or mining company
Project	Development to which the Project Approval applies
Proponent	Boral Resources (NSW) Pty Ltd or any other person or persons who rely on this approval to carry out the project that is subject to this approval
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.



Quarry operations	Extraction, processing, stockpiling and transportation of extractive materials carried out on the site and the associated removal of vegetation, topsoil and overburden
Quarry products	Includes all saleable quarry products, but excludes tailings and other wastes
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the project to a good condition, and for the purpose of establishing a safe, stable and non-polluting environment
RL	Reduced level
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
Site	Land to which the Project Approval applies (see Appendix 1)

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## SCHEDULE 2 ADMINISTRATIVE CONDITIONS

### Obligation to Minimise Harm to the Environment

1. The Proponent **must** implement all practicable measures to prevent or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.

### Terms of Approval

2. The Proponent must carry out the project:
  - (a) generally in accordance with the EA, EA (Mod 1), EA (Mod 2), EA (Mod 3) and EA (Mod 4); and
  - (b) in accordance with the Project Layout Plan and the conditions of this approval.

*Note: The Project Layout Plan is included in Appendix 2.*

3. If there is any inconsistency between the documents in condition 2(a), the most recent document shall prevail to the extent of the inconsistency. The conditions of this approval shall prevail over the documents in condition 2(a) to the extent of any inconsistency.
4. The Proponent must comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:
  - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this approval (including any stages of these documents);
  - (b) any reviews, reports or audits commissioned by the Department regarding compliance with this approval; and
  - (c) the implementation of any actions or measures contained in these documents.

### Limits on Approval

5. The Proponent may carry out quarrying operations on the site until 31 December 2038.

*Note: Under this approval, the Proponent is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently this approval will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those additional undertakings have been carried out to a satisfactory standard.*

6. The Proponent must not transport more than 3.5 million tonnes of quarry products from the site in any calendar year.
7. All quarry products must normally be transported from the site by rail. However, with the written approval of the Secretary, the Proponent may transport quarry products by road in an emergency or in other limited and exceptional circumstances.

### Structural Adequacy

8. The Proponent **must** ensure that all new buildings and structures on the site are constructed in accordance with the relevant requirements of the BCA.

*Notes:*

- Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for any building works.
- Part 8 of the EP&A Regulation sets out the detailed requirements for the certification of development.

### Demolition

9. The Proponent **must** ensure that all demolition work on site is carried out in accordance with AS 2601-2001: *The Demolition of Structures*, or its latest version.

### Protection of Public Infrastructure

10. The Proponent **must**:
  - (a) repair, or pay all reasonable costs associated with repairing any public infrastructure that is damaged by the project; and
  - (b) relocate, or pay all reasonable costs associated with relocating any public infrastructure that needs to be relocated as a result of the project.

### Operation of Plant and Equipment

11. The Proponent **must** ensure that all plant and equipment used at the site is:
  - (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient condition.

12.

(deleted)

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## SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

### GENERAL EXTRACTION AND PROCESSING PROVISIONS

#### Identification of Boundaries

1. Prior to the commencement of construction, or as otherwise directed by the **Secretary**, the Proponent **must**:
  - (a) engage an independent registered surveyor to survey the boundaries of the approved limit of extraction;
  - (b) submit a survey plan of these boundaries to the **Secretary**; and
  - (c) ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify those limits

*Note: The limit of extraction is shown conceptually on the plan in Appendix 2.*

- 1A. The proponent **must**:
  - (a) prior to the commencement of construction of the Southern Overburden Emplacement Area, or as otherwise agreed by the **Secretary**, engage an independent registered surveyor to survey the boundary of the emplacement area and submit a survey plan of this boundary to the **Secretary**; and
  - (b) ensure that, during its construction and use, the boundary of the Southern Overburden Emplacement area is clearly marked in a manner that allows operating staff and inspecting officers to clearly identify its location.

*Note: The boundary of the Southern Overburden Emplacement Area is shown on the figure in Appendix 2.*

### NOISE

#### Construction of Bunds

2. In carrying out the construction of the noise bunds, the Proponent **must**:
  - (a) comply with the construction noise criteria in the *Environmental Noise Control Manual 1994* for the first three months of the construction work; and
  - (b) thereafter, comply with the daytime operational noise criteria in condition 4.

#### Construction Noise Management Plan

3. The Proponent **must** prepare and implement a Construction Noise Management Plan for the project to the satisfaction of the **Secretary**. This plan must be submitted to the **Secretary** for approval prior to the commencement of construction, and include:
  - (a) a detailed description of the measures that would be implemented to achieve the construction noise limits in the *Environmental Noise Control Manual 1994* and the operational noise criteria in condition 4;
  - (b) a community notification protocol for the proposed construction activities;
  - (c) a description of the measures that would be implemented where the construction noise limits and/or operational noise limits are unlikely to be achieved or are not being achieved; and
  - (d) details of who would be responsible for monitoring, reviewing and implementing the plan.

#### Operational Noise Impact Assessment Criteria

4. The Proponent must ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 1 at any residence on privately-owned land.

*Table 1: Noise Impact Assessment Criteria dB(A)*

<b>Residential Receiver Location</b>	<b>Day (7:00am to 7:00pm) <i>L<sub>Aeq</sub>(15 minute)</i></b>	<b>Evening (7:00pm to 10:00pm) <i>L<sub>Aeq</sub>(15 minute)</i></b>	<b>Night (10:00pm to 7:00am)</b>	
			<b><i>L<sub>Aeq</sub>(15 minute)</i></b>	<b><i>L<sub>A1</sub>(1 minute)</i></b>
R3 (5)	35	35	35	45
R2 (6)	35	35	35	45
R8 (16)	41	35	35	45

Any other residence on privately-owned land	35	35	35	45
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Notes:

- Residential receiver locations are shown on the plan in Appendix 3.
- Receiver numbers in parentheses are those identified in the approval prior to the notification of Modification 4 in 2016.

Noise generated by the development is to be measured in accordance with the relevant requirements of the Industrial Noise Policy (as may be updated from time-to-time). Appendix 7 sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, the noise criteria in Table 1 do not apply if the Proponent has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Proponent has advised the Department in writing of the terms of this agreement.

### Land Acquisition Criteria

- If the noise generated by the project exceeds the criteria in Table 2, the Proponent must, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 6-8 of Schedule 4.

Table 2: Land Acquisition Criteria

Residential Receiver	Day (7:00am – 7:00pm) <i>L<sub>Aeq</sub>(15 minute)</i>	Evening / Night (7:00pm – 7:00am) <i>L<sub>Aeq</sub>(15 minute)</i>
R3 (5)	40	40
R2 (6)	40	40
R8 (16)	44	44

Notes:

- Residential receiver locations are shown on the plan in Appendix 3.
- Receiver numbers in parentheses are those identified in the approval prior to the notification of Modification 4 in 2016.

- (deleted)
- (deleted)
- (deleted)

### Operating Conditions

- The Proponent must:
  - implement best practice noise management, including all reasonable and feasible noise mitigation measures to minimise the noise generated by the project;
  - investigate ways to minimise the noise generated by the project;
  - operate a comprehensive noise management system that uses a combination of predictive meteorological forecasting and noise monitoring data to guide the day to day planning of quarrying operations and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this approval;
  - minimise noise impacts during adverse weather conditions; and
  - report on these investigations and the implementation and effectiveness of these measures in the Annual Review,
 to the satisfaction of the Secretary.

### Noise Management Plan

- The Proponent must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must be prepared in consultation with EPA and submitted to the Secretary for approval by the end of March 2012, and must:
  - describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval;
  - describe the noise management system;
  - include a noise monitoring program that:
    - supports the noise management system;

- provides information to evaluate the performance of the project;
  - includes a protocol for determining exceedances of relevant conditions of this approval;
  - provides for the use of real-time and/or supplementary attended monitoring measures, if directed by the Secretary;
  - includes regular attended and unattended monitoring at appropriate locations, including at receiver locations R4 and R17; and
  - includes a program to characterise and measure low frequency noise (dB(C)) emissions.
- (d) include a community notification protocol for the proposed construction activities; and
- (e) detail who would be responsible for monitoring, reviewing and implementing the plan.

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

## Hours of Operation

11. The Proponent must comply with the hours of operation in Table 3.

<b>Activity</b>	<b>Day</b>	<b>Time</b>
Construction works	Monday-Friday	7.00am to 6.00pm
	Saturday	8.00am to 1.00pm
	Sunday and public holidays	None
Topsoil/overburden removal/emplacement	Any day	7.00am to 7.00pm
Blasting	Monday-Saturday	9.00am to 5.00pm
	Sunday and public holidays	None
In-pit activities (including drilling, extraction, processing, and transfer of material out of the pit)	Any day	5.00am to 11.00pm
Out-of-pit activities (including processing, stockpiling, train loading and distribution, and maintenance)	Any day	24 hours

Table 3 – Hours of Operation

- 11A. Between the hours of 5:00am to 7:00am and 7:00pm to 11:00pm the:
- (a) in-pit crusher must not operate above RL 555; and
  - (b) mobile plant in the pit, including excavators, front-end loaders and trucks, must not operate above RL 570.

## BLASTING AND VIBRATION

### Airblast Overpressure Criteria

12. The Proponent must ensure that the airblast overpressure level from blasting at the project does not exceed the criteria in Table 4 at any residence on privately-owned land.

<b>Airblast overpressure level (dB(Lin Peak))</b>	<b>Allowable exceedance</b>
115	5% of the total number of blasts over a period of 12 months
120	0%

Table 4: Airblast Overpressure Impact Assessment Criteria

### Ground Vibration Criteria

13. The Proponent must ensure that the ground vibration level from blasting at the project does not exceed the criteria in Table 5 at any residence or sensitive receiver on privately-owned land.

<b>Peak particle velocity (mm/s)</b>	<b>Allowable exceedance</b>
5	5% of the total number of blasts over a period of 12 months
10	0%

Table 5: Ground Vibration Impact Assessment Criteria for Residences on Privately-owned Land



## Operating Conditions

14. The Proponent **must** implement best blasting practice to:
- (a) ensure that no flyrock leaves the site;
  - (b) protect the safety of people, property, and livestock; and
  - (c) minimise the dust and fume emissions from blasting on the site, to the satisfaction of the Secretary.

## Public Notice

15. The Proponent **must**:
- (a) notify the landowner/occupier of any residence within 2 kilometres of the quarry pit who registers an interest in being notified about the blasting schedule on site;
  - (b) operate a blasting hotline, or alternative system agreed to by the Secretary, to enable the public to get up-to-date information on blasting operations at the project; and
  - (c) keep the public informed about this hotline (or any alternative system), to the satisfaction of the Secretary.

## Monitoring

16. The Proponent **must** prepare a Blast Monitoring Program for the project to the satisfaction of the Secretary. This program must:
- (b) be submitted to the Secretary for approval prior to the commencement of construction;
  - (c) be prepared in consultation with the EPA; and
  - (d) monitor the performance of the project against the relevant blasting criteria.

The Proponent must implement the approved monitoring program as approved from time to time by the Secretary.

## AIR QUALITY

### Air Quality Impact Assessment Criteria

17. The Proponent **must** ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not exceed the criteria listed in Tables 6, 7 and 8 at any residence on privately owned land, or on more than 25 percent of any privately owned land.

Table 6: Long term impact assessment criteria for particulate matter

Pollutant	Averaging period	<sup>d</sup> Criterion
Total suspended particulate (TSP) matter	Annual	<sup>a</sup> 90 µg/m <sup>3</sup>
Particulate matter < 10 µm (PM <sub>10</sub> )	Annual	<sup>a</sup> 30 µg/m <sup>3</sup>

Table 7: Short term impact assessment criterion for particulate matter

Pollutant	Averaging period	<sup>d</sup> Criterion
Particulate matter < 10 µm (PM <sub>10</sub> )	24 hour	<sup>a</sup> 50 µg/m <sup>3</sup>

Table 8: Long term impact assessment criteria for deposited dust

Pollutant	Averaging period	Maximum increase <sup>2</sup> in deposited dust level	Maximum total <sup>1</sup> deposited dust level
<sup>c</sup> Deposited dust	Annual	<sup>b</sup> 2 g/m <sup>2</sup> /month	<sup>a</sup> 4 g/m <sup>2</sup> /month

Notes to Tables 6-8

<sup>a</sup> Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to all other sources);

<sup>b</sup> Incremental impact (i.e. incremental increase in concentrations due to the project on its own);

<sup>c</sup> Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and

<sup>d</sup> Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity agreed by the Secretary.

### Land Acquisition Criteria

18. If particulate matter emissions generated by the project exceed the criteria in Tables 9, 10, and 11 at any residence on privately-owned land, or on more than 25 percent of any privately owned land, then upon

written request for acquisition from the landowner, the Proponent must acquire the land in accordance with the procedures in conditions 6-7 of schedule 4.

Table 9: Long term land acquisition criteria for particulate matter

<b>Pollutant</b>	<b>Averaging period</b>	<b><sup>d</sup> Criterion</b>
Total suspended particulate (TSP) matter	Annual	<sup>a</sup> 90 µg/m <sup>3</sup>
Particulate matter < 10 µm (PM <sub>10</sub> )	Annual	<sup>a</sup> 30 µg/m <sup>3</sup>

Table 10: Short term land acquisition criteria for particulate matter

<b>Pollutant</b>	<b>Averaging period</b>	<b><sup>da</sup> Criterion</b>
Particulate matter < 10 µm (PM <sub>10</sub> )	24 hour	<sup>a</sup> 150 µg/m <sup>3</sup>
Particulate matter < 10 µm (PM <sub>10</sub> )	24 hour	<sup>b</sup> 50 µg/m <sup>3</sup>

Table 11: Long term land acquisition criteria for deposited dust

<b>Pollutant</b>	<b>Averaging period</b>	<b>Maximum increase<sup>2</sup> in deposited dust level</b>	<b>Maximum total<sup>1</sup> deposited dust level</b>
<sup>c</sup> Deposited dust	Annual	<sup>b</sup> 2 g/m <sup>2</sup> /month	<sup>a</sup> 4 g/m <sup>2</sup> /month

Notes to Tables 9-11

<sup>a</sup> Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to all other sources);

<sup>b</sup> Incremental impact (i.e. incremental increase in concentrations due to the project on its own);

<sup>c</sup> Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and

<sup>d</sup> Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity agreed by the Secretary.

## Operating Conditions

19. The Proponent must:
- implement best management practice on site, including all reasonable and feasible measures to minimise the off-site odour, fume and dust emissions generated by the project;
  - minimise any visible air pollution generated by the project;
  - minimise the surface disturbance of the site generated by the project; and
  - operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting and air quality monitoring data to guide the day to day planning of quarrying operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this approval;
- to the satisfaction of the Secretary.

## Air Quality Management Plan

20. The Proponent must prepare a detailed Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with EPA and submitted to the Secretary by the end of March 2012;
  - describe the measures that would need to be implemented to ensure compliance with the relevant conditions of this approval;
  - include a program for the implementation of the measures referred to in (b) above; and
  - include an air quality monitoring program that:
    - uses a combination of high volume samplers and dust deposition gauges to evaluate the performance of the project;
    - supports the air quality management system;
    - provides information to evaluate the performance of the project;
    - includes a protocol for determining exceedances of relevant conditions of this approval; and
    - provides for the use of real-time monitoring measures, if directed by the Secretary.

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

## METEOROLOGICAL MONITORING

21. For the life of the project, the Proponent must ensure that there is a meteorological station in the vicinity of the site that:

- (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
- (b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the *NSW Industrial Noise Policy*.

## **SURFACE AND GROUND WATER**

### **Water Supply**

22. Prior to the commencement of construction, the Proponent **must** obtain the necessary approvals for the project under the *Water Act 1912*.

*Note: The Water Management Act 2000 may apply to the project. The Proponent **must** consult with DPI Water on the relevant approvals at the time the application is made.*

### **Discharges**

23. Except as may be expressly provided for by an EPL, the Proponent **must** not discharge any dirty water from the quarry or ancillary operational areas.
- 23A. The Proponent **must** prepare an onsite wastewater report for the proposed effluent management system consistent with the requirements of *WaterNSW – “Developments in Sydney’s Drinking Water Catchment” – Water Quality Information Requirements, 2011*. The effluent management system must be designed and constructed to be in accordance with this onsite wastewater report and its design must be approved by Council prior to construction.

### **Tangarang Creek Environmental Flow**

24. The proponent **must** provide an environmental flow to Tangarang Creek equivalent to 10% of average daily flows. Details of the management of these environmental flows **must** be included in the Site Water Balance for the project (see below).

### **Sediment Dams**

25. The Proponent **must** ensure that:
- (e) critical structures such as “dirty water” dams are designed, constructed and maintained to accommodate a 1 in 100 year ARI 24-hour event; and
  - (f) other dams and water management structures are designed, constructed and maintained to accommodate a 1 in 20 year ARI 24-hour event.

### **Water Management Plan**

26. The Proponent **must** prepare a Water Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be submitted to the Secretary for approval prior to the commencement of construction;
  - (b) be prepared in consultation with the **DPI Water**, **EPA** and **WaterNSW**; and
  - (c) include a:
    - Site Water Balance;
    - Erosion and Sediment Control Plan;
    - Surface Water Monitoring Program;
    - Ground Water Monitoring Program; and
    - Surface and Ground Water Response Plan to address any potential adverse impacts associated with the project.

*The Proponent **must** implement the approved management plan as approved from time to time by the Secretary.*

### **Site Water Balance**

27. The Site Water Balance **must**:
- (a) include details of all water extracted (including make up water), dewatered, transferred, used and/or discharged by the project; and
  - (b) describe measures to minimise water use by the project.

### **Erosion and Sediment Control**

28. The Erosion and Sediment Control Plan **must**:
- (a) be consistent with the requirements of *Managing Urban Stormwater: Soils and Construction, Volume 1, 4<sup>th</sup> Edition, 2004* (Landcom);
  - (b) identify activities that could cause soil erosion and generate sediment;
  - (c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;

- (d) describe the location, function, and capacity of erosion and sediment control structures; and
- (e) describe what measures would be implemented to maintain (and if necessary decommission) the structures over time.

### Surface Water Monitoring

29. The Surface Water Monitoring Program **must** include:
- (a) detailed baseline data on surface water flows and quality in Tangarang Creek and Barbers Creek;
  - (b) surface water impact assessment criteria;
  - (c) a program to monitor surface water flows and quality;
  - (d) a protocol for the investigation of identified exceedances of the surface water impact assessment criteria; and
  - (e) a program to monitor the effectiveness of the Erosion and Sediment Control Plan.

### Ground Water Monitoring Program

30. The Ground Water Monitoring Program **must** include:
- (a) detailed baseline data on ground water levels, flows, and quality, based on statistical analysis;
  - (b) groundwater impact assessment criteria for monitoring bores;
  - (c) a program to monitor regional ground water levels and quality; and
  - (d) a protocol for the investigation of identified exceedances of the ground water impact assessment criteria.
- 30A. In constructing and operating the Southern Overburden Emplacement Area, the Proponent must ensure that:
- (a) the surface water management system is constructed in accordance with the plan shown on the figure in Appendix 4; and
  - (b) the surface water management system includes appropriate scour protection at discharge points to ensure the potential for erosion and transport of sediment to downstream waters is minimised.
- 30B. On completing of the construction of the surface water management system for the Southern Overburden Emplacement Area, the Proponent must commission an audit by a suitably qualified, experienced and independent person, approved by the Secretary, to determine whether the system has been constructed in accordance with this approval. A copy of the audit report and the Proponent's response to its recommendations must be provided to the Secretary and WaterNSW within 12 weeks of its commissioning.

### TRAFFIC AND TRANSPORT

31. The Proponent **must** prepare and implement a construction traffic management plan for the project to the satisfaction of the **RMS** and Council.

### ABORIGINAL HERITAGE

32. The Proponent **must** prepare an Aboriginal Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be submitted to the Secretary for approval prior to the commencement of construction;
  - (b) be prepared in consultation with the **OEH** and relevant Aboriginal communities; and
  - (c) include a:
    - description of the measures that would be implemented for the mapping, and salvage or relocation of the archaeological relics in the Tangarang Creek Dam 1 area;
    - description of the measures that would be implemented if any new Aboriginal objects or relics are discovered during the project; and
    - protocol for the ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site.

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

- 32A If historical archaeological relics are unexpectedly discovered during works, all works must cease and a suitably qualified and experienced historical archaeologist be brought in to assess the find. Depending on the nature of the discovery, additional assessment and recording may be required prior to the recommencement of excavation in the affected area. The Heritage Council (or its Delegate) must be notified of this discovery in writing in accordance with section 146 of the *Heritage Act, 1977*.



## BIODIVERSITY AND REHABILITATION

### Rehabilitation and Habitat Management Area

33. The Proponent must:
- (a) rehabilitate the site in a manner that is generally consistent with the conceptual rehabilitation principles in Chapter 2.8 of the EA; and
  - (b) implement the Habitat Management Area in a manner that is generally consistent with the documents listed in condition 2 of schedule 3 (and shown conceptually in Appendix 3), including the establishment, conservation and maintenance of at least 13.5 hectares of vegetation species characteristic of Box Gum Woodland, to the satisfaction of the Secretary.

### Threatened Species Protection

- 33A. The Proponent must:
- (a) prior to clearing of vegetation and site preparation on the site of the Western Overburden Emplacement and extension, clearly and securely mark out the proposed boundary of the emplacement and extension;
  - (b) avoid disturbance of *Box Gum Woodland* Endangered Ecological Community and other native vegetation adjacent to the site of the Western Overburden Emplacement and extension;
  - (c) only undertake clearing of vegetation on the site of the Western Overburden Emplacement and extension following a recent fauna survey undertaken by a suitably qualified expert who has been approved by the Secretary; and
  - (d) seek to avoid clearing of native vegetation on the site of the Western Overburden Emplacement and extension during the period August to November of any year.

### Biodiversity Offset Strategy

34. The Proponent must:
- (a) implement the Biodiversity Offset Strategy described in EA (Mod 4);
  - (b) within 12 months of the commencement of the construction of the Southern Overburden Emplacement Area, retire a total of 225 ecosystem credits in accordance with the *Framework for Biodiversity Assessment - NSW Biodiversity Offsets Policy for Major Projects*, to offset the removal of 8.1 hectares of White Box Yellow Box Blakely's Red Gum Grassy Woodland; and
  - (c) provide long-term security and funding for the biodiversity offset area identified in the Biodiversity Offset Strategy through a Biobanking Agreement under the *Threatened Species Conservation Act 1995*;
- to the satisfaction of the Secretary.

*Note: The location and approximate area of the biodiversity offset area is shown on the figure in Appendix 6.*

### Biodiversity and Rehabilitation Management Plan

- 34A. The Proponent must prepare a Biodiversity and Rehabilitation Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with OEH and Council;
  - (b) be submitted to the Secretary for approval by 28 February 2017, unless the Secretary agrees otherwise;
  - (c) describe how the implementation of the Biodiversity Offset Strategy would be integrated with the management of the Habitat Management Area, and the overall rehabilitation of the site;
  - (d) provide details of the conceptual final landform and associated land uses for the site;
  - (e) include detailed performance and completion criteria for evaluating the performance of the Biodiversity Offset Strategy, the Habitat Management Area and the rehabilitation of the site, including triggers for any necessary remedial action;
  - (f) describe the short, medium and long term measures that would be implemented to:
    - manage native vegetation on site, including within the Biodiversity Offset Area and the Habitat Management area; and
    - comply with the rehabilitation principles in Chapter 2.8 of the EA;
  - (g) describe in detail the measures that would be implemented over the next 3 years (to be updated for each 3 year period following initial approval of the plan) including the procedures to be implemented for:
    - maximising the salvage of environmental resources within approved disturbance areas, including tree hollows, vegetation and soil resources, for beneficial reuse in the Biodiversity Offset Area, the Habitat Management Area or for rehabilitating other areas of the site;
    - restoring and enhancing the quality of native vegetation and fauna habitat in the Biodiversity Offset Area, the Habitat Management Area and other areas of the site through assisted natural regeneration, targeted vegetation establishment and the introduction of fauna habitat features;

- protecting native vegetation and fauna habitat outside the approved disturbance area;
  - minimising the impacts of the project on native fauna, including the protocol for undertaking pre-clearance surveys;
  - establishing vegetation screening and landscaping the site (including the bunds and overburden emplacement areas) to minimise the visual impacts of the project on surrounding receivers;
  - ensuring minimal environmental consequences for threatened species, populations and habitats;
  - collecting and propagating seed;
  - controlling weeds and feral pests;
  - controlling access; and
  - bushfire management,
- (h) include a program to monitor and report on the effectiveness of these measures;
- (i) describe how the performance of these measures would be monitored over time; and
- (j) set completion criteria for the rehabilitation of the site.

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

### Rehabilitation Bond

35. Within 3 months of the first Independent Environmental Audit the Proponent **must** lodge a rehabilitation bond for the project with the Secretary. The sum of the bond **must** be calculated at \$2.50/m<sup>2</sup> for the total area to be disturbed in each 5 year period, or as otherwise directed by the Secretary.

Notes:

- *If the rehabilitation is completed to the satisfaction of the Secretary, the Secretary will release the rehabilitation bond.*
- *If the rehabilitation is not completed to the satisfaction of the Secretary, the Secretary will call in all or part of the rehabilitation bond, and arrange for the satisfactory completion of the relevant works.*

36. Within 3 months of subsequent audits, the Proponent **must** review, and if necessary revise, the sum of the bond to the satisfaction of the Secretary. This review must consider:
- (a) the effects of inflation;
  - (b) any changes to the total area of disturbance; and
  - (c) the performance of the rehabilitation against the completion criteria of the Biodiversity and Rehabilitation Management Plan.

### VISUAL IMPACT

#### Visual Amenity and Lighting

37. The Proponent **must**:
- (a) *minimise the visual impacts, and particularly the off-site lighting impacts, of the project;*
  - (b) *revegetate overburden emplacements, emplacement extensions and bunds as soon as practicable;*
  - (c) *take all practicable measures to further mitigate off-site lighting impacts from the project; and*
  - (d) *ensure that all external lighting associated with the project complies with Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting, to the satisfaction of the Secretary.*

38. *(Deleted)*

39. *(Deleted)*

### Advertising

40. The Proponent **must** not erect or display any advertising structure(s) or signs on the site without the written approval of the Secretary.

*Note – This does not include business identification, traffic management and safety or environmental signs.*

### WASTE MANAGEMENT

41. The Proponent **must**:
- (a) monitor the amount of waste generated by the project;
  - (b) investigate ways to minimise waste generated by the project;
  - (c) implement reasonable and feasible measures to minimise waste generated by the project; and
  - (d) report on waste management and minimisation in the **Annual Review** to the satisfaction of the Secretary.

42. The Proponent **must** ensure that all waste generated or stored on site is assessed, classified and managed in accordance with the **EPA's** *Environmental Guidelines: Assessment Classification and Management of Liquid and Non-Liquid Wastes*.

## **EMERGENCY AND HAZARDS MANAGEMENT**

### **Dangerous Goods**

43. The Proponent **must** ensure that the storage, handling, and transport of dangerous goods are conducted in accordance with the relevant *Australian Standards*, particularly AS1940 and AS1596, and the *Dangerous Goods Code*.

### **Safety**

44. The Proponent **must** secure the project to ensure public safety to the satisfaction of the Secretary.

### **Bushfire Management**

45. The Proponent **must**:
- (a) ensure that the project is suitably equipped to respond to any fires on-site; and
  - (b) assist the rural fire service and emergency services as much as possible if there is a fire on-site.

## **PRODUCTION DATA**

46. The Proponent **must**:
- (a) provide annual production data to the **DRE** using the standard form for that purpose; and
  - (b) include a copy of this data in the **Annual Review**.

## **QUARRY EXIT STRATEGY**

47. The Proponent **must** prepare and implement a Quarry Exit Strategy for the project to the satisfaction of the Secretary. This strategy must:
- (a) be submitted to the Secretary for approval at least 5 years prior to the cessation of the project;
  - (b) be prepared in consultation with the relevant agencies;
  - (c) define the objectives and criteria for quarry closure;
  - (d) investigate options for the future use of the site, including any final void/s;
  - (e) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the project; and
  - (f) describe how the performance of these measures would be monitored over time.
-

## SCHEDULE 4 ADDITIONAL PROCEDURES

### NOTIFICATION OF LANDOWNERS

1. If the results of monitoring required in Schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria, then the Proponent **must** notify the Secretary and the affected landowners and/or existing or future tenants (including tenants of quarry owned properties) accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the relevant criteria.

### INDEPENDENT REVIEW

2. If a landowner (excluding quarry owned properties) considers that the operations of the quarry are exceeding the impact assessment criteria in Schedule 3, then he/she may ask the Proponent in writing for an independent review of the impacts of the project on his/her land.

If the Secretary is satisfied that an independent review is warranted, **then within 2 months of the Secretary's decision, the Proponent must:**

- (a) commission a suitably qualified, experienced and independent expert, whose appointment has been approved by the Secretary, to:
  - consult with the landowner to determine his/her concerns;
  - conduct monitoring to determine whether the project is complying with the relevant impact assessment criteria in schedule 3; and
  - if the project is not complying with these criteria then:
    - determine if the more than one quarry/mine is responsible for the exceedance, and if so the relative share of each quarry/mine regarding the impact on the land;
    - identify the measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review.

3. If the independent review determines that the quarrying operations are complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary.
4. If the independent review determines that the quarrying operations are not complying with the relevant criteria in Schedule 3, and that the quarry is primarily responsible for this non-compliance, then the Proponent **must:**
  - (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent expert, and conduct further monitoring until the project complies with the relevant criteria; or
  - (b) secure a written agreement with the landowner to allow exceedances of the relevant impact assessment criteria, to the satisfaction of the Secretary.

If the independent review determines that the project is not complying with the relevant acquisition criteria, and that the project is primarily responsible for this non-compliance, then upon receiving a written request from the landowner, the Proponent **must** acquire all or part of the landowner's land in accordance with the procedures in condition 6-7 below.

5. If the independent review determines that the relevant criteria are being exceeded, but that more than one quarry/mine is responsible for this exceedance, then together with the relevant quarry/mine/s, the Proponent **must:**
  - (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent expert, and conduct further monitoring until there is compliance with the relevant criteria; or
  - (b) secure a written agreement with the landowner and other relevant mine/s to allow exceedances of the relevant impact assessment criteria, to the satisfaction of the Secretary.

If the independent review determines that the project is not complying with the relevant acquisition criteria in schedule 3, but that more than one mine is responsible for this non-compliance, then upon receiving a written request from the landowner, the Proponent **must** acquire all or part of the landowner's land on as equitable a basis as possible with the relevant quarries/mine/s, in accordance with the procedures in conditions 6-7 below.

### LAND ACQUISITION

6. Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent **must** make a binding written offer to the landowner based on:



- (a) the current market value of the landowner's interest in the property at the date of this written request, as if the **land** was unaffected by the project the subject of the project application, having regard to the:
  - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and
  - presence of improvements on the **land** and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the 'additional noise mitigation measures' in condition **Error! Reference source not found.** of Schedule 3;
- (b) the reasonable costs associated with:
  - relocating within the Goulburn Mulwaree local government area, or to any other local government area determined by the Secretary; and
  - obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is required; and
- (c) reasonable compensation for any disturbance caused by the land acquisition process.

However, if at the end of this period, the Proponent and landowner cannot agree on the acquisition price of the land, and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Secretary for resolution.

Upon receiving such a request, the Secretary will request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:

- consider submissions from both parties;
- determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above;
- prepare a detailed report setting out the reasons for any determination; and
- provide a copy of the report to both parties.

Within 14 days of receiving the independent valuer's report, the Proponent must make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.

However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Secretary for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Secretary will determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above, the independent valuer's report, the detailed report of the party that disputes the independent valuer's determination and any other relevant submissions.

Within 14 days of this determination, the Proponent must make a binding written offer to the landowner to purchase the land at a price not less than the Secretary's determination.

If the landowner refuses to accept the Proponent's binding written offer under this condition within 6 months of the offer being made, then the Proponent's obligations to acquire the land must cease, unless the Secretary determines otherwise.

7. The Proponent must pay all reasonable costs associated with the land acquisition process described in condition 6 above, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.
8. *(deleted)*

**SCHEDULE 5**  
**ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING**

**ENVIRONMENTAL MANAGEMENT**

**Environmental Management Strategy**

1. If the Secretary requires, the Proponent must prepare an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must:
  - (a) be submitted to the Secretary for approval within 6 months of the Secretary advising the Proponent that the strategy is required;
  - (b) provide the strategic framework for the environmental management of the project;
  - (c) identify the statutory approvals that apply to the project;
  - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;
  - (e) describe the procedures that would be implemented to:
    - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
    - receive, handle, respond to and record complaints;
    - resolve any disputes that may arise during the course of the project;
    - respond to any non-compliance; and
    - respond to emergencies; and
  - (f) include:
    - copies of any strategies, plans and programs approved under the conditions of this approval; and
    - a clear plan depicting all the monitoring to be carried out under the conditions of this approval.

The Proponent must implement any approved Environmental Management Strategy as approved from time to time by the Secretary.

**Management Plan Requirements**

2. The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
  - (a) detailed baseline data;
  - (b) a description of:
    - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
    - any relevant limits or performance measures/criteria; and
    - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;
  - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
  - (d) a program to monitor and report on the:
    - impacts and environmental performance of the project; and
    - effectiveness of any management measures (see (c) above);
  - (e) a contingency plan to manage any unpredicted impacts and their consequences, and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
  - (f) a program to investigate and implement ways to improve the environmental performance of the project over time;
  - (g) a protocol for managing and reporting any:
    - incidents;
    - complaints;
    - non-compliances with statutory requirements; and
    - exceedances of the impact assessment criteria and/or performance criteria;
  - (h) a protocol for periodic review of the plan; and
  - (i) a document control table that includes version numbers, dates when the management plan was prepared and reviewed, names and positions of people who prepared and reviewed the management plan, a description of any revisions made and the date of the Secretary's approval.

*Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*

## Revision of Strategies, Plans & Programs

3. Within 3 months of the submission of an:
  - (a) Annual Review under condition 9 below;
  - (b) incident report under condition 7 below;
  - (c) audit report under condition 10 below; and
  - (d) any modifications to this approval,the Proponent must review the strategies, plans and programs required under this approval, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary.

*Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the project.*

4. Prior to approval of management plans required to be submitted by 30 November 2016, and the approval of the Biodiversity and Rehabilitation Management Plan required to be submitted by 28 February 2017, all management plans, monitoring programs, strategies, programs and protocols approved as at the date of approval of modification 4 to this approval will continue to have full force and effect, and may be revised under the requirements of condition 5 below as if subject to the conditions of this approval that applied prior to the approval of Modification 4, or otherwise with the approval of the Secretary.

## Updating and Staging of Strategies, Plans or Programs

5. To ensure that strategies, plans or programs required under this approval are updated on a regular basis, and that they incorporate any appropriate additional measures to improve the environmental performance of the development, the Proponent may at any time submit revised strategies, plans or programs for the approval of the Secretary. With the agreement of the Secretary, the Proponent may also submit any strategy, plan or program required by this approval on a staged basis.

With the agreement of the Secretary, the Proponent may prepare a revision of or a stage of a strategy, plan or program without undertaking consultation with all parties nominated under the applicable condition in this approval.

### Notes:

- While any strategy, plan or program may be submitted on a staged basis, the Proponent will need to ensure that the operations associated with the development are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged; then the relevant strategy, plan or program must clearly describe the specific stage/s of the development to which the strategy, plan or program applies; the relationship of this stage/s to any future stages; and the trigger for updating the strategy, plan or program.

## Adaptive Management

6. The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity:

- (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not re-occur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.

## Community Consultative Committee

7. The Proponent must operate a Community Consultative Committee (CCC) for the project, to the satisfaction of the Secretary. This CCC must be operated in general accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version)

### Notes:

- The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.
- In accordance with the guideline, the committee should be comprised of an independent chair and appropriate representation from the Proponent, Council and the local community.
- This condition may be fulfilled by the operation of a regional CCC for Boral's mining and quarrying activities in the Marulan area.

## REPORTING

### Incident Reporting

8. The Proponent must immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

### Regular Reporting

9. The Proponent must provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.

### Annual Review

10. By the end of March each year, or other timing as may be agreed by the Secretary, the Proponent must submit a report to the Department reviewing the environmental performance of the project to the satisfaction of the Secretary. This review must:
  - (a) describe the works (including rehabilitation) that were carried out in the previous calendar year, and the works that are proposed to be carried out over the current calendar year;
  - (b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of these results against the:
    - relevant statutory requirements, limits or performance measures/criteria;
    - requirements of any plan or program required under this approval;
    - monitoring results of previous years; and
    - relevant predictions in the documents listed in condition 2(a) of Schedule 2;
  - (c) identify any non-compliance over the past calendar year, and describe what actions were (or are being) taken to ensure compliance;
  - (d) identify any trends in the monitoring data over the life of the project;
  - (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
  - (f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the project.

## INDEPENDENT ENVIRONMENTAL AUDIT

11. Within 3 years of the date of the commencement of construction and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
  - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
  - (b) include consultation with the relevant agencies and the CCC;
  - (c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL or necessary water licence for the project (including any assessment, strategy, plan or program required under these approvals);
  - (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals;
  - (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and
  - (f) be conducted and reported to the satisfaction of the Secretary.

*Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.*

Within 10 weeks of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

## ACCESS TO INFORMATION

12. By 30 November 2016, unless otherwise agreed by the Secretary, the Proponent must:
  - (a) make the following information publicly available on its website:
    - the documents listed in condition 2(a) of Schedule 2;
    - current statutory approvals for the project;
    - all approved strategies, plans or programs required under the conditions of this approval;
    - a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any plans and programs required under the conditions of this approval;



- a complaints register, which is to be updated on a quarterly basis;
  - the Annual Reviews (over the last 5 years);
  - any independent environmental audit, and the Proponent's response to the recommendations in any audit; and
  - any other matter required by the Secretary, and
- (b) keep this information up-to-date,  
to the satisfaction of the Secretary.

# APPENDIX 1: SCHEDULE OF LAND

<i>Lot</i>	<i>DP</i>
23	867667
5	203290
95	750029
24	867667
109	750029
1	371167
1-6	261615
1	557562
143	750029
12	570616
2	557562
21	657523
100	1064794
4	106569
1-9	216767
11	570616
5	111641
22	867667
1	1124189
2	106569

## APPENDIX 2: PROJECT LAYOUT

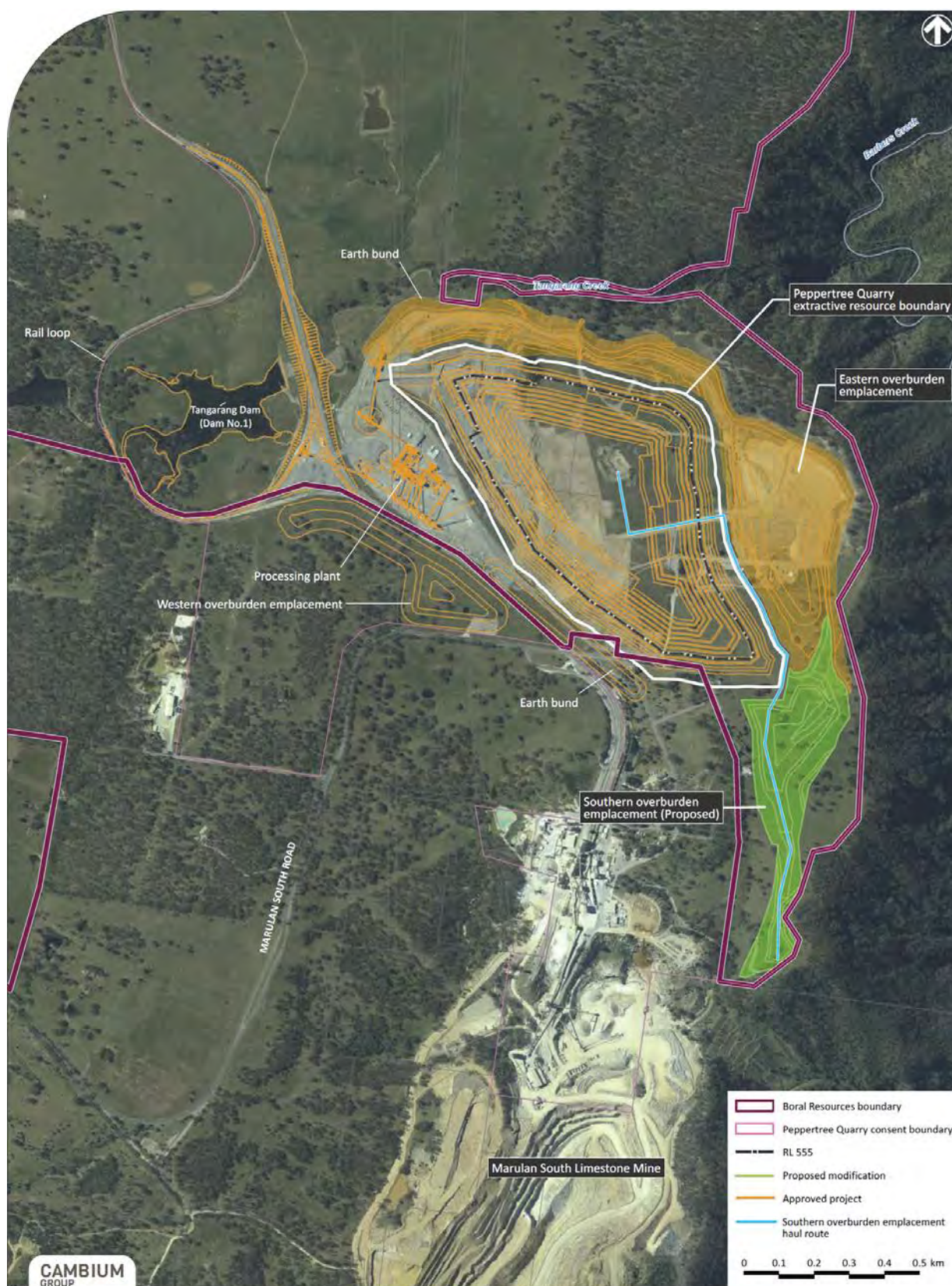


Figure showing the project layout



### APPENDIX 3: NOISE RECEIVER LOCATIONS

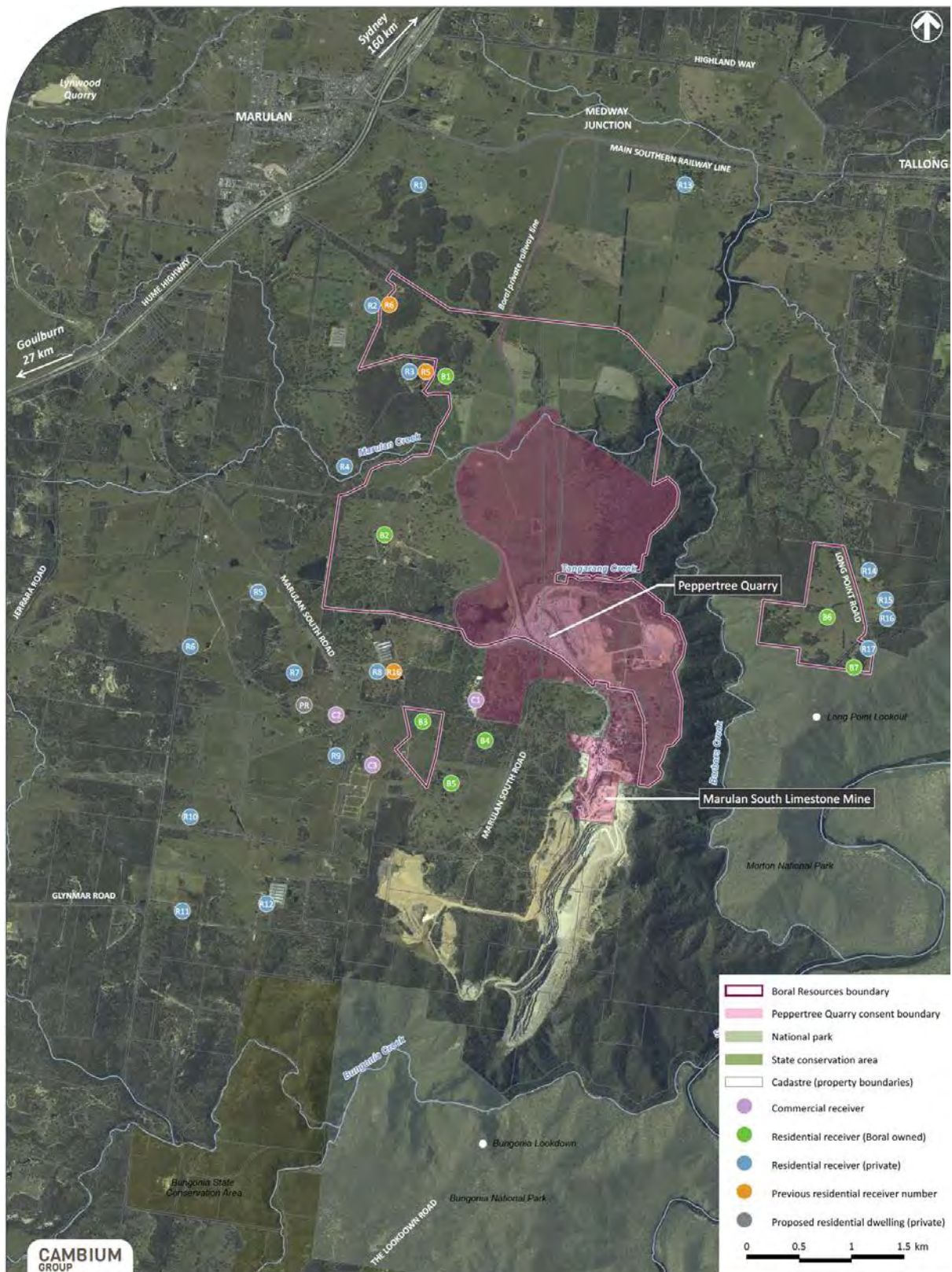


Figure showing the location of the residential receivers



# APPENDIX 4: SURFACE WATER MANAGEMENT SYSTEM FOR THE SOUTHERN OVERBURDEN EMPLACEMENT AREA

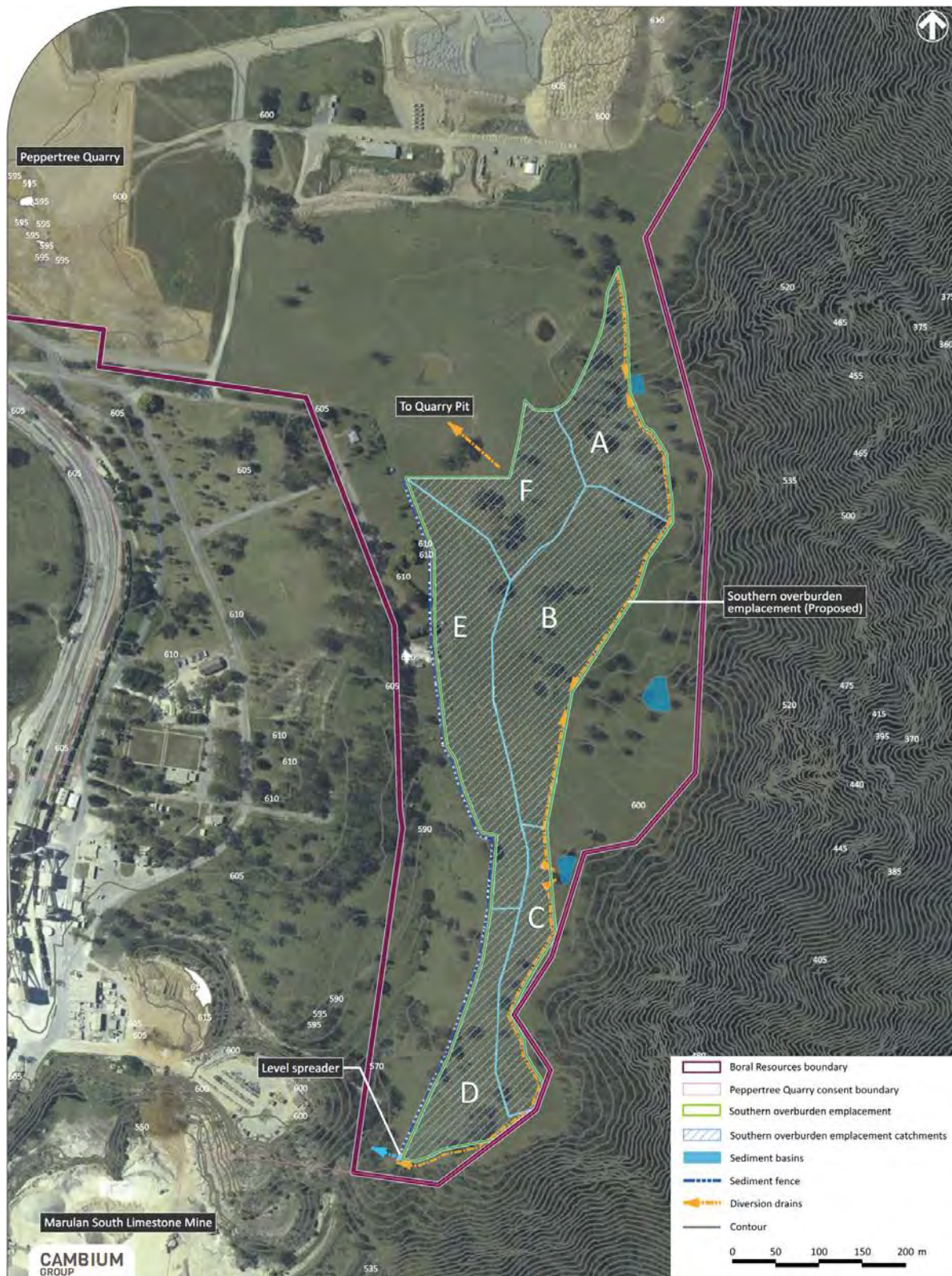


Figure showing the surface water management system for the southern overburden emplacement area



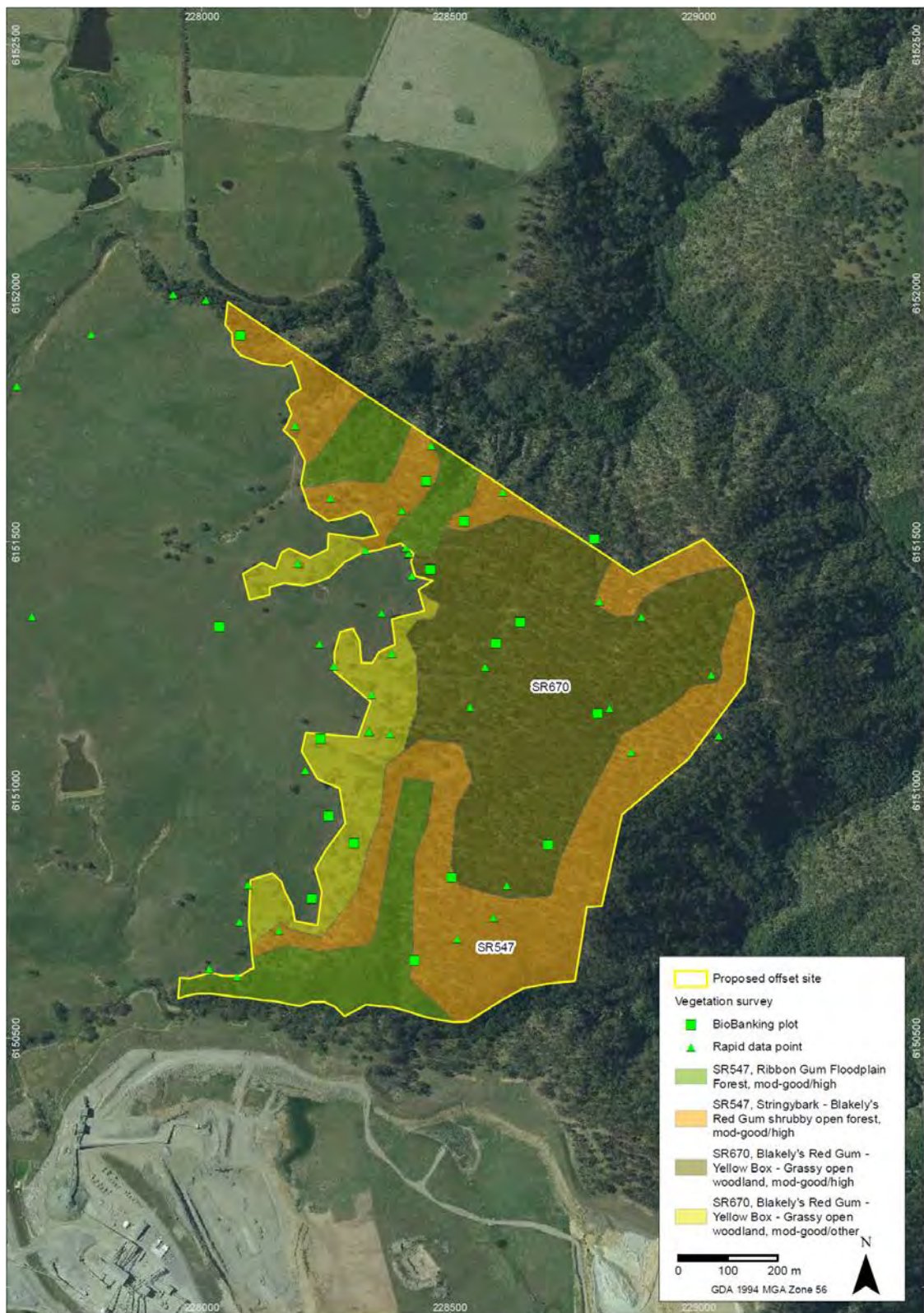
## APPENDIX 5: HABITAT MANAGEMENT AREA



Figure showing the location of the Habitat Enhancement Area



## APPENDIX 6: BIODIVERSITY OFFSET AREA



Proposed offset area – Survey and vegetation mapping

Figure showing the location and approximate area of the biodiversity offset area

## APPENDIX 7: NOISE COMPLIANCE ASSESSMENT

### Applicable Meteorological Conditions

1. The noise criteria in Table 2 are to apply under all meteorological conditions except the following:
  - a) wind speeds greater than 3 m/s at 10 m above ground level; or
  - b) temperature inversion conditions between 1.5°C and 3°C/100 m and wind speed greater than 2 m/s at 10 m above ground level; or
  - c) temperature inversion conditions greater than 3°C/100 m.

### Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions must be that recorded by the meteorological station required under condition xx of Schedule 3.

### Compliance Monitoring

3. Unless the Secretary agrees otherwise, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
  - a) monitoring locations for the collection of representative noise data;
  - b) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment;
  - c) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration; and
  - d) the use of an appropriate modifying factor for low frequency noise to be applied during compliance testing at any individual residence if low frequency noise is present (in accordance with the INP) and before comparison with the specified noise levels in the approval.



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