

# Development Consent

## *Section 4.36 of the Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning and Public Spaces under delegation executed on 26 April 2021, I approve the Development Application referred to in Schedule 1, subject to the conditions specified in Schedule 2.

These conditions are required to:

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

Sydney

2021

### **SCHEDULE 1**

**Application Number:**

SSD 7009

**Applicant:**

Boral Cement Limited

**Consent Authority:**

Minister for Planning and Public Spaces

**Site:**

The land defined in Appendix 1

**Development:**

Marulan South Limestone Mine Continued Operations Project

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## DEFINITIONS

<b>Aboriginal object</b>	Has the same meaning as the definition of the term in section 5 of the NP&W Act
<b>Aboriginal place</b>	Has the same meaning as the definition of the term in section 5 of the NP&W Act
<b>Annual Review</b>	The review required by condition D11
<b>Applicant</b>	Boral Cement Limited, or any person carrying out any development under this consent
<b>Approved disturbance area</b>	The area identified as such on the Development Layout
<b>ARI</b>	Average Recurrence Interval
<b>BCA</b>	Building Code of Australia
<b>BC Act</b>	<i>Biodiversity Conservation Act 2016</i>
<b>BCD</b>	Biodiversity & Conservation Division within the Department
<b>BCT</b>	NSW Biodiversity Conservation Trust
<b>Biodiversity Offset Strategy</b>	The Biodiversity Offset Strategy for the development as described in the document/s listed in condition A2(c) and shown conceptually in Appendix 4
<b>Blast misfire</b>	The failure of one or more holes in a blast pattern to initiate
<b>CCC</b>	Community Consultative Committee required by condition A24
<b>Clay/Shale</b>	Includes both Clay/Shale and White Clay
<b>Conditions of this consent</b>	Conditions contained in Schedule 2
<b>Construction</b>	All physical works to enable mining operations to be carried out, including demolition and removal of buildings or works, and erection of buildings and other infrastructure permitted by this consent
<b>Council</b>	Goulburn Mulwaree Council
<b>Date of commencement</b>	The date notified to the Department by the Applicant under condition A17
<b>Day</b>	The period from 7.00 am to 6.00 pm on Monday to Saturday, and 8.00 am to 6.00 pm on Sundays and Public Holidays
<b>Decommissioning</b>	The deconstruction or demolition and removal of works installed as part of the development
<b>Demolition</b>	The deconstruction and removal of buildings, sheds and other structures on the site
<b>Department</b>	NSW Department of Planning, Industry and Environment
<b>Development</b>	The development described in the documents listed in condition A2(c), as modified by the conditions of this consent
<b>Development Layout</b>	The plans in Appendix 2 of this consent
<b>DPIE Crown Lands</b>	Crown Lands Group within the Department
<b>DPIE Water</b>	Water Group within the Department
<b>CEEC</b>	Critically endangered ecological community, as defined under the EPBC Act
<b>EIS</b>	The Environmental Impact Statement titled <i>Marulan South Limestone Mine Continued Operations State Significant Development Application Environmental Impact Statement</i> , prepared by Element Environment, dated March 2019, submitted with the application for consent for the development, including the Applicant's Response to Submissions and additional information provided by the Applicant dated 6 November 2019, 19 February 2020, 7 May 2020, 6 July 2020, 27 July 2020, 23 March 2021, 22 April 2021, May 2021, 18 June 2021, 6 July 2021 and 23 July 2021
<b>Environment</b>	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings
<b>EPA</b>	NSW Environment Protection Authority

<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979</i>
<b>EP&amp;A Regulation</b>	<i>Environmental Planning and Assessment Regulation 2000</i>
<b>EPBC Act</b>	<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>
<b>EPL</b>	Environment Protection Licence under the POEO Act
<b>Evening</b>	The period from 6 pm to 10 pm
<b>Feasible</b>	Means what is possible and practical in the circumstances
<b>Financial Year</b>	A period of 12 months from 1 July to 30 June
<b>Fisheries NSW</b>	Fisheries Branch of the Primary Industries Group within the Department
<b>Heritage NSW</b>	Heritage Branch of the Department of Premier and Cabinet
<b>Heritage item</b>	<p>An Aboriginal object, an Aboriginal place, or a place, building, work, relic, moveable object, tree or precinct of heritage significance, that is listed under any of the following:</p> <ul style="list-style-type: none"> <li>• the State Heritage Register under the <i>Heritage Act 1977</i>;</li> <li>• a state agency heritage and conservation register under section 170 of the <i>Heritage Act 1977</i>;</li> <li>• a Local Environmental Plan under the EP&amp;A Act;</li> <li>• the World Heritage List;</li> <li>• the National Heritage List or Commonwealth Heritage List under the EPBC Act; or</li> <li>• anything identified as a heritage item under the conditions of this consent</li> </ul>
<b>Incident</b>	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance
<b>Laden trains</b>	Trains transporting mining or quarry products from the site
<b>Laden trucks</b>	Trucks transporting mining or quarry products from the site
<b>Land</b>	Has the same meaning as the definition of the term in section 1.4 the EP&A Act, except for where the term is used in the noise and air quality conditions in PART B of this consent where it is defined to mean 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 consent
<b>Material harm</b>	<p>Is harm to the environment that:</p> <ul style="list-style-type: none"> <li>• involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or</li> <li>• results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)</li> </ul> <p>This definition excludes “harm” that is authorised under either this consent or any other statutory approval</p>
<b>MEG</b>	Mining, Exploration and Geoscience
<b>Mine-Owned Land</b>	Land owned by a mining, petroleum or extractive industry company (or its subsidiary or related party)
<b>Mine closure</b>	Decommissioning and final rehabilitation of the site following the cessation of mining operations
<b>Mine water</b>	Water that accumulates within, or drains from, active mining and infrastructure areas and any other areas where runoff may have come into contact with carbonaceous or saline material
<b>Minimise</b>	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development
<b>Mining operations</b>	The carrying out of mining, including the extraction, processing, stockpiling and transportation of mineral ore and extractive materials on the site and the associated removal, storage and/or emplacement of vegetation, topsoil, overburden, tailings and reject material
<b>Mining products</b>	Includes all saleable mining products produced at the site, but excludes tailings and other wastes and rehabilitation material
<b>Minister</b>	NSW Minister for Planning and Public Spaces, or delegate
<b>Minor</b>	Not very large, important or serious

<b>Mitigation</b>	Activities associated with reducing the impacts of the development
<b>Negligible</b>	Small and unimportant, such as to be not worth considering
<b>Night</b>	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
<b>Noise sensitive areas</b>	Areas where mining operations are being carried out that have potential to lead to increased noise at privately-owned residences, such as elevated areas or areas near the boundary of the site
<b>Non-compliance</b>	An occurrence, set of circumstances or development that is a breach of this consent
<b>‘Non-road’ mobile diesel equipment</b>	Mobile equipment used in mining operations that is fitted with a diesel engine with a capacity >30 litres and that is self-propelled or transportable and primarily designed for off-road use
<b>NP&amp;W Act</b>	<i>National Parks and Wildlife Act 1974</i>
<b>NRAR</b>	NSW Natural Resources Access Regulator
<b>Offset areas</b>	Means the areas shown conceptually in Appendix 4
<b>Peppertree Quarry</b>	Quarrying operations permitted under MP 06_0074 or any subsequent development consent for extractive industry at the Peppertree Quarry granted by the Minister (or delegate) or the Independent Planning Commission of NSW
<b>Planning Secretary</b>	Planning Secretary under the EP&A Act, or nominee
<b>POEO Act</b>	<i>Protection of the Environment Operations Act 1997</i>
<b>Privately-owned land</b>	Land that is not owned by a public agency or a mining, petroleum or extractive industry company (or its subsidiary or related party)
<b>Public infrastructure</b>	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.
<b>Quarry products</b>	Includes all saleable quarry products produced at the Peppertree Quarry, but excludes tailings and other wastes and rehabilitation material
<b>Reasonable</b>	Means applying 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
<b>Registered Aboriginal Parties</b>	As described in the <i>National Parks and Wildlife Regulation 2009</i>
<b>Rehabilitation</b>	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
<b>Residence</b>	Existing or approved dwelling at the date of grant of this consent
<b>Resources Regulator</b>	NSW Resources Regulator
<b>RFS</b>	NSW Rural Fire Service
<b>Site</b>	The land defined in Appendix 1
<b>SOE</b>	Southern Overburden Emplacement as shown in Figure 1 in Appendix 2
<b>TfNSW</b>	Transport for NSW
<b>TSS</b>	Total suspended solids
<b>WOE</b>	Western Overburden Emplacement as shown in Figure 1 in Appendix 2

## SCHEDULE 2

### PART A ADMINISTRATIVE CONDITIONS

#### OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

- A1. In addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.

#### TERMS OF CONSENT

- A2. The development may only be carried out:
- (a) in compliance with the conditions of this consent;
  - (b) in accordance with all written directions of the Planning Secretary;
  - (c) generally in accordance with the EIS; and
  - (d) generally in accordance with the Development Layout in Appendix 2.
- A3. If there is any inconsistency between the above documents, the most recent document must prevail to the extent of the inconsistency. However, the conditions of this consent must prevail to the extent of any inconsistency.
- A4. The Applicant must comply with any requirement/s of the Planning Secretary arising from the Department's assessment of:
- (a) any strategies, plans or correspondence that are submitted in accordance with this consent;
  - (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; and
  - (c) the implementation of any actions or measures contained in these documents.

#### LIMITS OF CONSENT

##### Mining operations

- A5. Mining operations may be carried out on the site, within the approved disturbance area, until 31 August 2051.

##### Notes:

- *Under this consent, the Applicant is required to decommission and rehabilitate the site and carry out other requirements in relation to mining operations. Consequently, this consent will continue to apply in all respects other than to permit the carrying out of mining operations until the rehabilitation of the site and other requirements have been carried out to the required standard.*
- *Mining operations and rehabilitation are also regulated under the Mining Act 1992.*

##### Extraction and Transportation

- A6. A maximum of 4 million tonnes of limestone may be extracted from the site in any financial year.
- A7. A maximum of 200,000 tonnes of clay/shale may be extracted from the site in any financial year.
- A8. A maximum of 4.2 million tonnes of limestone and clay/shale (combined) may be processed on the site in any financial year.
- A9. A maximum of 1 million tonnes of manufactured sand may be transported to Peppertree Quarry in any financial year.
- A10. A maximum of 150,000 tonnes of quarry products may be transported from Peppertree Quarry to the shared road sales stockpiling area<sup>a</sup> in any financial year.
- <sup>a</sup> *The shared road sales stockpiling area is shown in Figure 1 in Appendix 2.*
- A11. A maximum of 720,000 tonnes of limestone, clay/shale and quarry products (combined) may be transported from the site by road in any financial year.
- A12. A maximum of 133 laden trucks may be dispatched from the site<sup>a,b</sup> in any 24-hour period.
- <sup>a</sup> *Excludes any truck movements to or from the Peppertree Quarry authorised under conditions A9 and A10 or for the transportation of overburden as described in the EIS*
- <sup>b</sup> *Excludes any truck movements which may be authorised under separate development consent/s for the Peppertree Quarry*
- A13. A maximum of six laden trains may leave the site in any 24-hour period.

##### Hours of Operation

- A14. The Applicant may undertake mining operations 24 hours a day, 7 days a week.

##### Notes:

- *For limitations on blasting operations see condition B13.*

## Mining Depth

A15. The Applicant must not carry out any extraction or excavation below 335 m AHD.

## Identification of Approved Disturbance Area

A16. Within three months of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must provide to the Department a survey plan of the boundaries of the approved disturbance areas.

## NOTIFICATION OF COMMENCEMENT

A17. The date of commencement of each of the following phases of the development must be notified to the Department in writing, at least two weeks before that date:

- (a) commencement of development under the consent;
- (b) commencement of construction under the consent;
- (c) commencement of mining operations under the consent;
- (d) cessation of mining operations (i.e. mine closure); and
- (e) any period of suspension of mining operations (i.e. care and maintenance).

A18. If the phases of the development are to be further staged, the Department must be notified in writing at least two weeks prior to the commencement of each stage, of the date of commencement and the development to be carried out in that stage.

## SURRENDER OF EXISTING CONSENTS OR APPROVALS

A19. Within 12 months of the date of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must surrender the existing development consents dated 21 February 1972, 16 October 1974, 13 February 1995 and 22 May 1997, April 2008, 20 June 2006 and 1 March 2012 as detailed in Section 3.3.4 of the EIS, and any existing or continuing use rights for the site, in accordance with the EP&A Regulation.

A20. Upon the commencement of development under this consent, and before the surrender of existing development consents required under condition A19, the conditions of this consent prevail to the extent of any inconsistency with the conditions of those consents or approvals.

**Note:** *This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under the former Part 4A of the EP&A Act or Part 6 of the EP&A Act as applies from 1 September 2018. The surrender should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.*

## DIVISION 7.1 CONTRIBUTIONS TO COUNCIL

A21. Under section 7.11 of the EP&A Act, an annual financial contribution must be paid to Council to be put toward the maintenance of Marulan South Road used for haulage of mining and quarry products. The contribution is to be calculated in accordance with the *Goulburn Mulwaree Section 94 Development Contributions Plan 2009* or its latest version (adjusted on a quarterly basis to account for movements in the Australian Bureau of Statistics Consumer Price Index – Building Construction (NSW)).

A22. The contribution must be paid to Council within 12 months of the date notified for the commencement of development under this consent and in the same month each year and be reported in the Annual Review required under condition D11.

A23. With the approval of the Planning Secretary, the contribution required under condition A21 may be waived or reduced in lieu of road upgrading works, or other means, as may be agreed by Council.

## COMMUNITY CONSULTATIVE COMMITTEE

A24. Before the commencement of development under this consent, a Community Consultative Committee (CCC) must be established for the development in accordance with the Department's *Community Consultative Committee Guidelines: State Significant Projects* (2019). The CCC must continue to operate during the life of the development, or other timeframe agreed by the Planning Secretary.

**Notes:**

- *The CCC is an advisory committee only.*
- *In accordance with the Guidelines, the Committee should comprise an independent chair and appropriate representation from the Applicant, Council and the local community.*

A25. With the approval of the Planning Secretary, the Applicant may combine the CCC required by this consent with any similar CCC required by a consent or approval for any adjoining mine or quarry subject to common, shared or related ownership or management.

## EVIDENCE OF CONSULTATION

- A26. Where conditions of this consent require consultation with an identified party, the Applicant must:
- (a) consult with the relevant party prior to submitting the subject document; and
  - (b) provide details of the consultation undertaken, including:
    - (i) the outcome of that consultation, matters resolved and unresolved; and
    - (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

## STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS

- A27. With the approval of the Planning Secretary, the Applicant may:
- (a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
  - (b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined);
  - (c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development); and
  - (d) combine any strategy, plan or program required by this consent with any similar strategy, plan or program required by an adjoining mining consent or approval, in common ownership or management.
- A28. If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.
- A29. If the Planning Secretary agrees, a strategy, plan or program may be staged without addressing particular requirements of the relevant condition of this consent if those requirements are not applicable to the particular stage.

## PROTECTION OF PUBLIC INFRASTRUCTURE

- A30. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure<sup>a</sup> that is damaged by carrying out the development; and
  - (b) relocate, or pay the full costs associated with relocating, any public infrastructure<sup>a</sup> that needs to be relocated as a result of the development.

<sup>a</sup> This condition does not apply to any damage to roads caused as a result of general road usage or otherwise addressed by contributions required by condition A21 or to damage that has been compensated under the Mining Act 1992.

## DEMOLITION

- A31. All demolition must be carried out in accordance with *Australian Standard AS 2601-2001 The Demolition of Structures* (Standards Australia, 2001).

## STRUCTURAL ADEQUACY

- A32. All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the BCA.

### Notes:

- Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

## OPERATION OF PLANT AND EQUIPMENT

- A33. All plant and equipment used on site, or to monitor the performance of the development must be:
- (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient manner.

## COMPLIANCE

- A34. The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.



## APPLICABILITY OF GUIDELINES

- A35. References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of inclusion (or later update) in the condition.
- A36. However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, in respect of ongoing monitoring and management obligations, agree to or require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.

## CROWN LAND

- A37. The Applicant must consult with DPIE – Crown Lands prior to undertaking any development on Crown Land or Crown Roads.

### **Notes:**

- *Under section 265 of the Mining Act 1992, the Applicant is required to enter into a compensation agreement with DPIE – Crown Lands prior to undertaking any mining operations or related activities on Crown land or Crown roads within a mining lease.*
- *Under section 141 of the Mining Act 1992, the Applicant is required to enter into an access arrangement with DPIE – Crown Lands prior to undertaking any prospecting operations on Crown land or Crown roads within an exploration licence.*

## PART B SPECIFIC ENVIRONMENTAL CONDITIONS

### NOISE

#### Noise Criteria

- B1. The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 1 at any residence on privately-owned land.

**Table 1:** Noise criteria dB(A)

Noise Assessment Location <sup>a</sup>	Day <i>L<sub>Aeq</sub></i> (15 min)	Evening <i>L<sub>Aeq</sub></i> (15 min)	Night <i>L<sub>Aeq</sub></i> (15 min)	Night <i>L<sub>AFmax</sub></i>
R9	40	36	36	52
Other privately-owned residences	40	35	35	52

<sup>a</sup>The Noise Assessment Locations referred to in Table 1, are shown in Appendix 3.

- B2. Noise generated by the development must be monitored and measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the *NSW Noise Policy for Industry* (EPA, 2017).
- B3. The noise criteria in Table 1 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

#### Temporary Construction Noise Limits

- B4. With the written agreement of the Planning Secretary, the Applicant may seek temporary construction noise limits above the noise criteria in Table 1, including for construction works outside of standard hours. In order to seek a temporary construction noise limit, the Applicant must develop a Construction Noise Protocol to the satisfaction of the Planning Secretary. This protocol must:
- be prepared in consultation with the EPA and any residents who may be affected by the noise generated by these works;
  - specify the construction works to which the temporary construction noise limits would apply and provide justification for these limits; and
  - address the relevant requirements of the *Interim Construction Noise Guideline* (DECC, 2009).
- B5. The Applicant must continue to operate in accordance with the noise criteria in Table 1 until and unless a Construction Noise Protocol for the specified construction works is approved by the Planning Secretary.
- B6. The Applicant must implement any Construction Noise Protocol approved by the Planning Secretary.

#### Noise Operating Conditions

- B7. The Applicant must:
- take all reasonable steps to minimise noise from construction and operational activities, including low frequency noise and other audible characteristics, as well as road and on-site rail noise associated with the development;
  - implement reasonable and feasible noise attenuation measures on all plant and equipment that will operate in noise sensitive areas;
  - take all reasonable steps to minimise the noise impacts of the development in noise sensitive areas during the evening and night;
  - operate a noise management system to guide the day to day planning of mining operations, and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent;
  - take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions;
  - only use locomotives and rolling stock that are approved to operate on the NSW rail network in accordance with the noise limits in any relevant rolling stock operator's EPL and use reasonable endeavours to ensure that rolling stock is selected to minimise noise;
  - carry out regular attended noise monitoring (at least once a month, unless otherwise agreed by the Planning Secretary) to determine whether the development is complying with the relevant conditions of this consent; and

- (h) regularly assess the noise monitoring data and modify operations on the site to ensure compliance with the relevant conditions of this consent.

### Noise Management Plan

- B8. The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
  - (b) describe the measures to be implemented to ensure:
    - (i) compliance with the noise criteria and operating conditions of this consent;
    - (ii) best practice management is being employed; and
    - (iii) noise impacts of the development are minimised during noise-enhancing meteorological conditions;
  - (c) describe the measures to minimise development related road traffic noise generated on public roads;
  - (d) describe the noise management system in detail; and
  - (e) include a monitoring program that:
    - (i) uses a combination of attended and unattended monitoring to evaluate the performance of the development;
    - (ii) monitors noise at locations representative of the most affected residences;
    - (iii) adequately supports the noise management system;
    - (iv) includes a protocol for distinguishing noise emissions of the development from any neighbouring developments; and
    - (v) includes a protocol for identifying any noise-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of any such event.
- B9. The Noise Management Plan must be approved by the Planning Secretary within 3 months of the date of this consent, unless otherwise agreed by the Planning Secretary.
- B10. The Applicant must implement the Noise Management Plan as approved by the Planning Secretary.

### BLASTING

#### Blasting Criteria

- B11. The Applicant must ensure that blasting on the site does not cause exceedances of the criteria at the locations in Table 2.

**Table 2:** *Blasting criteria*

<b>Location</b>	<b>Airblast overpressure (dB(Lin Peak))</b>	<b>Ground vibration (mm/s)</b>	<b>Allowable exceedance</b>
Residence on privately-owned land <sup>a</sup>	120	10	0%
	115	5	5% of the total number of blasts over a financial year
Commercial receiver <sup>a</sup>	133	25	0%
Electricity Transmission Lines		50	0%
Public Roads		100	0%
All other infrastructure		50 (or a limit determined by the structural design methodology in AS 2187.2 - 2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Planning Secretary)	0%

<sup>a</sup> The locations referred to in Table 2 are shown in Appendix 3.

- B12. The blasting criteria in Table 2 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or infrastructure to exceed the blasting criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

### **Blasting Hours**

- B13. The Applicant must only carry out blasting on the site between 9 am and 5 pm (Monday to Friday inclusive). No blasting is allowed on weekends, public holidays or any other time without the prior written approval of the Planning Secretary.

### **Blasting Frequency**

- B14. The Applicant may carry out a maximum of 1 single blast event<sup>a</sup> per day.
- B15. Condition B14 does not apply to single blast events<sup>a</sup> that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, or to blast misfires or blasts required to ensure the safety of the mine, its workers or the general public.

<sup>a</sup> Within conditions B14 and B15, 'single blast event' means a blast which involves either a single detonation or a number of individual blasts fired in quick succession in a discrete area of the development. Should an additional blast be required after a blast misfire, this additional blast and the blast misfire are counted as a single blast event.

### **Property Inspections**

- B16. If the Applicant receives a written request from the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on the site for a property inspection to establish the baseline condition of any buildings and structures on their land, or to have a previous property inspection updated, then within 2 months of receiving this request the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:
    - (i) establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and
    - (ii) identify measures that should be implemented to minimise the potential blasting impacts of the development on these buildings and structures; and
  - (b) give the landowner a copy of the new or updated property inspection report.
- B17. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Planning Secretary for resolution.

### **Property Investigations**

- B18. If the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on the site or any other landowner where the Planning Secretary is satisfied an investigation is warranted, claims in writing that buildings or structures on their land have been damaged as a result of blasting on the site, then within 2 months of receiving this written claim the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and
  - (b) give the landowner a copy of the property investigation report.
- B19. If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant must repair the damage to the satisfaction of the Planning Secretary.
- B20. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Planning Secretary for resolution.

### **Blast Operating Conditions**

- B21. The Applicant must:
- (a) take all reasonable steps to:
    - (i) ensure the safety of people and livestock from blasting impacts of the development;
    - (ii) protect public and private infrastructure and property in the vicinity of the site from blasting damage associated with the development; and
    - (iii) minimise blast-related dust and fume emissions;
  - (b) ensure that blasting on the site does not damage heritage items<sup>a</sup>, except in accordance with predictions in the document/s listed in condition A2(c), and develop specific measures to protect heritage items from any blasting damage associated with the development;

- (c) operate a comprehensive blast management system that uses a combination of meteorological forecasts and predictive blast modelling to guide the planning of blasts to minimise blasting impacts;
- (d) operate a suitable system to enable interested members of the public to get up-to-date information on the proposed blasting schedule on the site and any associated road closures, including notification via SMS message of the blasting schedule and any variations to that schedule;
- (e) use all reasonable efforts to co-ordinate the timing of blasting at the site with Peppertree Quarry to minimise cumulative blasting impacts; and
- (f) carry out regular blast monitoring to determine whether the development is complying with the relevant conditions of this consent.

<sup>a</sup>The locations of the heritage items referred to in paragraph (b) are shown in Appendix 5.

B22. The Applicant must not undertake blasting on the site within 500 metres of any public road or any land outside the site not owned by the Applicant, unless the Applicant has:

- (a) a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the public road or land, and the Applicant has advised the Department in writing of the terms of this agreement; or
- (b) demonstrated, to the satisfaction of the Planning Secretary, that the blasting can be carried out closer to the public road or land without compromising the safety of people or livestock or damaging the road or other buildings and structures, and updated the Blast Management Plan to include specific mitigation measures to be implemented while blasting is being carried out within 500 metres of the road or land.

### **Blast Management Plan**

B23. The Applicant must prepare a Blast Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) describe the blast management system and the measures that will be implemented to ensure compliance with the blasting criteria and conditions of this consent;
- (c) include a Blast Fume Management Strategy for:
  - (i) minimising blast fume emissions;
  - (ii) rating and recording blast fume events; and
  - (iii) reporting significant blast fume events to the Department and the EPA;
- (d) identify any agreed alternative ground vibration limits for public or private infrastructure in the vicinity of the site (if relevant);
- (e) include a strategy to monitor, mitigate and manage the effects of blasting on heritage items<sup>a</sup>;
- (f) include a monitoring program for evaluating and reporting on compliance with the relevant conditions of this consent;
- (g) include a protocol for identifying any blast-related exceedance, incident or non-compliance and for notifying the Department, the EPA and relevant stakeholders of these events;
- (h) include public notification procedures to enable members of the public, particularly surrounding residents, to get up-to-date information on the proposed blasting schedule; and
- (i) include a protocol for investigating and responding to blast-related complaints.

<sup>a</sup>The locations of the heritage items are shown in Appendix 5.

B24. The Applicant must not undertake any blasting under this consent until the Blast Management Plan is approved by the Planning Secretary.

B25. The Applicant must implement the Blast Management Plan as approved by the Planning Secretary.

### **AIR QUALITY AND GREENHOUSE GAS**

#### **Odour**

B26. The Applicant must ensure that no offensive odours, as defined under the POEO Act, are emitted from the site.

#### **Air Quality Criteria**

B27. The Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria listed in Table 3 at any residence on privately-owned land.

**Table 3:** Air quality criteria

<b>Pollutant</b>	<b>Averaging period</b>	<b>Criterion</b>
Particulate matter < 10 µm (PM <sub>10</sub> )	Annual	<sup>a, c</sup> 25 µg/m <sup>3</sup>
	24 hour	<sup>b</sup> 50 µg/m <sup>3</sup>
Particulate matter < 2.5 µm (PM <sub>2.5</sub> )	Annual	<sup>a, c</sup> 8 µg/m <sup>3</sup>
	24 hour	<sup>b</sup> 25 µg/m <sup>3</sup>
Total suspended particulate (TSP) matter	Annual	<sup>a, c</sup> 90 µg/m <sup>3</sup>

**Notes:**

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

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

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

- B28. The air quality criteria in Table 3 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the air quality criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

**Mine-owned Land**

- B29. Particulate matter emissions generated by the development must not exceed the criteria listed in Table 3 at any occupied residence on mine-owned land (including land owned by another mining or quarry company) unless:
- the tenant and landowner (if the residence is owned by another mining or quarry company) have been notified of any health risks associated with such exceedances in accordance with the notification requirements under PART C of this consent;
  - the tenant of any land owned by the Applicant can terminate their tenancy agreement without penalty at any time, subject to giving 14 days' notice;
  - air quality monitoring is regularly undertaken to inform the tenant and landowner (if the residence is owned by another mining company) of the likely particulate matter emissions at the residence; and
  - data from this monitoring is presented to the tenant and landowner in an appropriate format for a medical practitioner to assist the tenant and landowner in making informed decisions on the health risks associated with occupying the property.

**Air Quality Operating Conditions**

- B30. The Applicant must:
- take all reasonable steps to:
    - minimise odour, fume and particulate matter (including PM<sub>10</sub> and PM<sub>2.5</sub>) emissions of the development, paying particular attention to minimising wheel-generated haul road emissions;
    - improve energy efficiency and reduce greenhouse gas emissions of the development;
    - minimise any visible off-site air pollution generated by the development; and
    - minimise the extent of potential dust generating surfaces exposed on the site at any given point in time;
  - ensure that all 'non-road' mobile diesel equipment used in undertaking the development includes reasonable and feasible diesel emissions reduction technology;
  - operate an air quality management system to guide the day to day planning of mining operations and implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent;
  - minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see Note c to Table 3 above);
  - use all reasonable efforts to co-ordinate air quality management on the site with the air quality management at Peppertree Quarry to minimise cumulative air quality impacts;
  - carry out regular air quality monitoring to determine whether the development is complying with the relevant conditions of this consent; and
  - regularly assess meteorological and air quality monitoring data, and modify operations on the site to ensure compliance with the relevant conditions of this consent.

## Air Quality and Greenhouse Gas Management Plan

- B31. The Applicant must prepare an Air Quality and Greenhouse Gas Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
  - (b) be prepared in consultation with the EPA;
  - (c) describe the measures to be implemented to ensure:
    - (i) compliance with the air quality criteria and operating conditions of this consent;
    - (ii) best practice management is being employed to:
      - minimise the development's air quality impacts;
      - minimise the development's Scope 1 and 2 greenhouse gas emissions; and
      - improve the development's energy efficiency; and
    - (iii) the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;
  - (d) describe the air quality management system in detail; and
  - (e) include an air quality monitoring program, undertaken in accordance with the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (DEC, 2007), that:
    - (i) uses monitors to evaluate the performance of the development against the air quality criteria in this consent and to guide day to day planning of mining operations;
    - (ii) adequately supports the air quality management system; and
    - (iii) includes a protocol for identifying any air quality-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of these events.
- B32. The Air Quality and Greenhouse Gas Management Plan must be approved by the Planning Secretary within 3 months of the date of this consent, unless otherwise agreed by the Planning Secretary.
- B33. The Applicant must implement the Air Quality and Greenhouse Gas Management Plan as approved by the Planning Secretary.

## METEOROLOGICAL MONITORING

- B34. Prior to the commencement of development under this consent, and for the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- (a) complies with the requirements in the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (DEC, 2007); and
  - (b) is capable of measuring meteorological conditions in accordance with the *NSW Noise Policy for Industry* (EPA, 2017),
- unless a suitable alternative is approved by the Planning Secretary following consultation with the EPA.

## WATER

### Water Supply

- B35. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.
- B36. The Applicant must report on water extracted from the site each year (direct and indirect) in the Annual Review, including water taken under each water licence.

**Note:** Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain all necessary water licences for the development, including during rehabilitation and post mine closure.

### Compensatory Water Supply

- B37. The Applicant must provide a compensatory water supply to any landowner of privately-owned land whose rightful water supply is adversely and directly impacted (other than an impact that is minor or negligible) as a result of the development, in consultation with DPIE Water, and to the satisfaction of the Planning Secretary.
- B38. The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent, in quality and volume, to the loss attributable to the development. Equivalent water supply should be provided (at least on an interim basis) as soon as practicable after the loss is identified, unless otherwise agreed with the landowner.

- B39. If the Applicant and the landowner cannot agree on whether the loss of water is attributed to the development or the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.
- B40. If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant must provide compensation, to the satisfaction of the Planning Secretary.

**Notes:**

- The Water Management Plan (see condition B45) is required to include trigger levels for investigating potentially adverse impacts on water supplies.

**Water Discharges**

- B41. The Applicant must ensure that all surface discharges from the site comply with:
- discharge limits (both volume and quality) set for the development in any EPL; or
  - relevant provisions of the POEO Act.

**Groundwater Management**

- B42. Within 12 months of the commencement of development under this consent, or other timeframe as agreed by the Planning Secretary, the Applicant must install a groundwater level and quality monitoring network within and adjacent to the Mt Frome Middle Limestone, or a suitable alternative location, in consultation with DPIE Water and to the satisfaction of the Planning Secretary.

**Water Management Performance Measures**

- B43. The Applicant must ensure that the development complies with the performance measures in Table 4.

**Table 4:** Water management performance measures

<b>Feature</b>	<b>Performance Measure</b>
Water management – General	<ul style="list-style-type: none"> <li>• Maintain separation between clean, dirty (i.e. sediment-laden) and mine water management systems</li> <li>• Minimise the use of clean and potable water on the site</li> <li>• Maximise water recycling, reuse and sharing opportunities</li> <li>• Minimise the use of make-up water from external sources</li> <li>• Design, install, operate and maintain water management systems in a proper and efficient manner</li> <li>• Minimise risks to the receiving environment and downstream water users</li> </ul>
Barbers Creek, Bungonia Creek and Shoalhaven River alluvial aquifers	<ul style="list-style-type: none"> <li>• Negligible impacts to alluvial aquifers as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: <ul style="list-style-type: none"> <li>– negligible change in groundwater levels;</li> <li>– negligible change in groundwater quality; and</li> <li>– negligible impact to other groundwater users</li> </ul> </li> </ul>
Groundwater springs	<ul style="list-style-type: none"> <li>• Negligible impacts to groundwater springs as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: <ul style="list-style-type: none"> <li>– negligible change in groundwater supply; and</li> <li>– negligible change in groundwater quality</li> </ul> </li> </ul>
Aquatic and riparian ecosystems	<ul style="list-style-type: none"> <li>• Negligible environmental consequences beyond those predicted in the document/s listed in condition A2(c)</li> <li>• Negligible decline in baseline channel stability</li> <li>• Develop site-specific in-stream water quality objectives in accordance with the <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i> (ANZECC &amp; ARMCANZ, 2000) and <i>Using the ANZECC Guidelines and Water Quality Objectives in NSW</i> (DEC, 2006)</li> </ul>
Marulan Creek Dam	<ul style="list-style-type: none"> <li>• Negligible impacts on the quality and quantity of downstream flows and geomorphic processes in Marulan Creek and Barbers Creek as a result of the development, beyond those predicted in the document/s listed in condition A2(c)</li> <li>• Design, install and maintain dam infrastructure in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012)</li> </ul>



<b>Feature</b>	<b>Performance Measure</b>
Erosion and sediment control works	<ul style="list-style-type: none"> <li>Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book</i> (Landcom, 2004), <i>Volume 2A: Installation of Services</i> (DECC, 2008), <i>Volume 2C: Unsealed Roads</i> (DECC, 2008), <i>Volume 2D: Main Road Construction</i> (DECC, 2008) and <i>Volume 2E: Mines and Quarries</i> (DECC, 2008)</li> <li>Design, install and maintain any creek crossings in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management</i> (DPI, 2013) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003)</li> <li>Design, install and maintain any new infrastructure within 40 metres of watercourses in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012)</li> </ul>
Clean water diversions and storage infrastructure	<ul style="list-style-type: none"> <li>Design, install and maintain the clean water system to capture and convey the 100 year ARI flood</li> <li>Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site</li> </ul>
Sediment dams	<ul style="list-style-type: none"> <li>Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1</i> (Landcom, 2004) and <i>2E Mines and Quarries</i> (DECC, 2008) and the requirements under the POEO Act</li> </ul>
Chemical and hydrocarbon storage	<ul style="list-style-type: none"> <li>Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standard</li> </ul>
Overburden emplacements	<ul style="list-style-type: none"> <li>Design, install and maintain emplacements to encapsulate and prevent migration of acid forming and potentially acid forming materials, and saline and sodic material</li> <li>Design, install and maintain out-of-pit emplacements to prevent and/or manage long term saline seepage</li> </ul>

B44. The performance measures in Table 4 do not apply to water management structures which were lawfully constructed prior to the commencement of development under this consent.

#### **Water Management Plan**

B45. The Applicant must prepare a Water Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with WaterNSW, DPIE Water, Fisheries NSW and the EPA;
- (c) describe the measures to be implemented to ensure that the Applicant complies with the water management performance measures (see Table 4);
- (d) utilise existing local data and build on existing monitoring programs, where practicable;
- (e) include a:
  - (i) **Site Water Balance** that includes details of:
    - predicted annual inflows to and outflows from the site;
    - sources and security of water supply for the life of the development (including authorised entitlements and licences);
    - water storage capacity;
    - water use and management on the site, including any water transfers or sharing with neighbouring mines;
    - licensed discharge points and limits; and
    - reporting procedures, including the annual preparation of an updated site water balance;
  - (ii) **Erosion and Sediment Control Plan** that:
    - is consistent with the requirements of *Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book* (Landcom, 2004) and *Volume 2E: Mines and Quarries* (DECC, 2008);
    - identifies activities that could cause soil erosion, generate sediment or affect flooding;
    - includes a program to periodically review sheet, rill and gully erosion risks, particularly in relation to emplacement areas;

- includes a program to monitor the geomorphological stability of emplacement areas, in consultation with WaterNSW;
  - describes measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk;
  - describes the location, function, and capacity of erosion and sediment control structures; and
  - describes what measures would be implemented to maintain (and if necessary decommission) the structures over time;
- (iii) **Surface Water Management Plan** that includes:
- detailed baseline data on surface water flows and quality of watercourses and/or water bodies potentially impacted by the development, including:
    - stream and riparian vegetation health;
    - channel stability (geomorphology); and
    - water supply for other surface water users;
  - a detailed description of the surface water management system, including consideration of mitigation measures to manage downstream risks associated with alkalinity, TSS and settling agents;
  - details of the water licensing requirements for all water storages (i.e. exempt, harvestable rights or licenced);
  - detailed plans, design objectives and performance criteria for water management infrastructure, including:
    - water run-off diversions and catch drains;
    - water storages (excluding Marulan Creek Dam) and sediment dams;
    - emplacement areas; and
    - backfilled pits and any final voids for the development;
  - surface water performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts (or trends) associated with the development, for:
    - water supply for other water users;
    - downstream surface water flows and quality, including (but not limited to) specific trigger levels for TSS, metals, alkalinity, bicarbonate alkalinity and settling agents, which are informed by baseline data, having regard to the sensitivity of downstream waters;
    - downstream flooding impacts;
    - stream and riparian vegetation health; and
    - post-mining water pollution from rehabilitated areas of the site;
  - a program to monitor and evaluate:
    - compliance with the relevant performance measures listed in Table 4 and the performance criteria in this plan;
    - controlled and uncontrolled discharges and seepage/leachate from the site;
    - impacts on water supply for other water users;
    - surface water inflows, outflows and storage volumes, to inform the Site Water Balance; and
    - the effectiveness of the surface water management system and the measures in the Erosion and Sediment Control Plan;
  - reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results; and
  - a trigger action response plan to respond to any exceedances of the relevant performance measures or performance criteria, and repair, mitigate and/or offset any adverse surface water impacts of the development;
- (iv) **Marulan Creek Dam Management Plan** that includes:
- detailed plans, design objectives and performance criteria for the dam infrastructure;
  - detailed measures to ensure compliance with the relevant performance measures in Table 4;
  - performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts (or trends) associated with the development with respect to:
    - downstream geomorphic processes;
    - sediment transmission;
    - ecological function; and

- water quality;
- a program to monitor and evaluate compliance with the relevant performance measures in Table 4, including justification for proposed monitoring frequencies and parameters;
- reporting procedures for the results of the monitoring program;
- a remediation and rehabilitation strategy for areas of Marulan Creek both above and below the dam up to the entry to the Barber's Creek gorge, which has been prepared by a suitably qualified and experienced fluvial geomorphologist, having regard to *A Rehabilitation Manual for Australian Streams* (Land and Water Resources Research and Development Corporation, 2000); and
- a trigger action response plan to respond to any exceedances of the relevant performance measures or performance criteria, and repair, mitigate and/or offset any adverse impacts on downstream flows and/or ecological processes;

(v) **Groundwater Management Plan** that includes:

- detailed baseline data of groundwater levels, yield and quality for groundwater resources and groundwater dependent ecosystems potentially impacted by the development, including groundwater supply for other water users;
- a detailed description of the groundwater management system;
- groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts (or trends) associated with the development, on:
  - regional and local aquifers (alluvial and hardrock);
  - groundwater springs; and
  - groundwater supply for other water users such as licensed privately-owned groundwater bores;
- a program to monitor and evaluate:
  - compliance with the relevant performance measures listed in Table 4 and the performance criteria in this plan;
  - water loss/seepage from water storages into the groundwater system, including from any final voids;
  - groundwater inflows, outflows and storage volumes, to inform the Site Water Balance;
  - the hydrogeological setting of any nearby alluvial aquifers and the likelihood of any indirect impacts from the development;
  - impacts on groundwater dependent ecosystems;
  - impacts on groundwater supply for other water users;
  - the effectiveness of the groundwater management system;
- reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results;
- a trigger action response plan to respond to any exceedances of the relevant performance measures and groundwater performance criteria, and repair, mitigate and/or offset any adverse groundwater impacts of the development;
- a program to periodically validate the groundwater model for the development, including an independent review of the model every 3 years (unless otherwise agreed by the Planning Secretary), and comparison of monitoring results with modelled predictions; and

(vi) a protocol to report on the measures, monitoring results and performance criteria identified above, in the Annual Review referred to in condition D11.

B46. The Water Management Plan must be approved by the Planning Secretary within 3 months from the date of this consent, unless otherwise agreed by the Planning Secretary.

B47. The Applicant must implement the Water Management Plan as approved by the Planning Secretary.

B48. The Applicant must commission an independent audit of the long-term geomorphological stability of the WOE and SOE. This audit must:

- (a) be conducted by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be carried out in consultation with WaterNSW;
- (c) be undertaken within three months of the completion of the surface water management systems for the WOE and SOE in Stage 4 of the development, or other timeframe agreed by the Planning Secretary;
- (d) assess whether the surface water management system has been constructed in accordance with the conditions of this consent and is geomorphologically stable;

- (e) recommend appropriate measures or actions to ensure the long-term stability of the WOE and SOE (if required); and
- (f) be conducted and reported to the satisfaction of the Planning Secretary.

B49. Within three months of commissioning the independent audit required under condition B48, or other timeframe agreed by the Planning Secretary, the Applicant must submit a copy of the Audit Report to the Planning Secretary and to WaterNSW, together with its response to any recommendations contained in the audit report and a timetable for the implementation of its recommendations.

B50. The Applicant must implement the recommendations of the Audit Report to the satisfaction of the Planning Secretary.

## BIODIVERSITY

### Biodiversity Credits Required

- B51. Prior to commencing construction under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must retire the biodiversity credits specified in **Table 5**. The retirement of credits must be carried out in consultation with BCD and in accordance with the Biodiversity Offsets Scheme of the BCT Act, to the satisfaction of the BCT.
- B52. The retirement of credits must be carried out in consultation with BCD and in accordance with the Biodiversity Offsets Scheme of the BC Act, to the satisfaction of the BCT.

**Table 5: Biodiversity credit requirements**

Credit Type	Credits Required
Ecosystem Credits	
PCT 1334 Yellow Box – Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands <sup>a, b</sup>	1,038
PCT 778 Coast Grey Box – stringybark dry woodland on slopes of the Shoalhaven Gorges – Southern Sydney Basin	885
PCT 1150 – Silvertop Ash – Blue-leaved Stringybark shrubby open forest on ridges, north east South Eastern Highlands Bioregion	260
PCT 731 Broad-leaved Peppermint – Red Stringybark grassy open forest on undulating hills, South Eastern Highlands Bioregion	325
Species Credits	
<i>Solanum celatum</i>	2
Koala <sup>b</sup>	2,454
Large-eared Pied Bat <sup>b</sup>	3,836

<sup>a</sup> Commensurate with White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC under the EPBC Act

<sup>b</sup> Under clause 6.6A of the Biodiversity Conservation Regulation 2017, variation rules do not apply to the identified species or community and the required credits must be retired on a like-for-like basis

B53. The Applicant must implement the Biodiversity Offset Strategy in consultation with BCD, the BCT and MEG.<sup>a</sup>

<sup>a</sup> Consultation with MEG is only required in respect of land-based biodiversity offsets

### Biodiversity Management Plan

- B54. The Applicant must prepare a Biodiversity Management Plan to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
  - (b) be prepared in consultation with BCD;
  - (c) describe the short, medium, and long-term measures to be undertaken to manage the remnant vegetation and fauna habitat on the site and within the offset areas;
  - (d) describe how biodiversity management would be integrated with similar measures within other management plans, including the Rehabilitation Management Plan referred to in condition B82;

- (e) include detailed performance and completion criteria for evaluating the performance of the Biodiversity Offset Strategy and include triggers for remedial action, where these performance or completion criteria are not met;
- (f) describe how the Biodiversity Offset Strategy will be implemented and secured;
- (g) describe the measures to be implemented within the approved disturbance areas to:
  - (i) minimise the amount of clearing;
  - (ii) minimise impacts on fauna, including undertaking pre-clearance surveys and measures to minimise the risk of vehicle strike;
  - (iii) provide for the salvage, transplanting and/or propagation of any threatened flora found during pre-clearance surveys, in accordance with the *Guidelines for the Translocation of Threatened Plants in Australia* (Vallee et al., 2004); and
  - (iv) maximise the salvage of resources, including tree hollows, vegetation and soil resources, for beneficial reuse, including fauna habitat enhancement;
- (h) describe the measures to be implemented on the site to:
  - (i) minimise impacts to *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC* including potential edge effects within identified buffer zones, and contribute to conservation strategies for this CEEC;
  - (ii) minimise impacts on fauna habitat resources such as hunting and foraging areas, habitat trees, fallen timber and hollow-bearing trees;
  - (iii) enhance the quality of vegetation, vegetation connectivity and wildlife corridors including through the assisted regeneration and/or targeted revegetation of appropriate canopy, sub-canopy, understorey and ground strata;
  - (iv) introduce naturally scarce fauna habitat features such as nest boxes and salvaged tree hollows and promote the use of these introduced habitat features by threatened fauna species;
  - (v) manage any potential conflicts with Aboriginal heritage values;
  - (vi) protect vegetation and fauna habitat outside of the approved disturbance areas;
  - (vii) manage the collection and propagation of seed from the local area;
  - (viii) control weeds, including measures to avoid and mitigate the spread of weeds;
  - (ix) control feral pests and diseases with consideration of actions identified in relevant threat abatement plans;
  - (x) control erosion;
  - (xi) manage any grazing and agriculture;
  - (xii) control access to vegetated or revegetated areas; and
  - (xiii) manage bushfire hazards;
- (i) include a seasonally-based program to monitor and report on the effectiveness of the above measures, progress against the detailed performance indicators and completion criteria, and identify improvements that could be implemented to improve biodiversity outcomes;
- (j) identify the potential risks to the successful implementation of the Biodiversity Management Plan, and include a description of the contingency measures to be implemented to mitigate against these risks; and
- (k) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

B55. The Applicant must not clear any vegetation described in the document/s listed in condition A2(c) until the Biodiversity Management Plan is approved by the Planning Secretary.

B56. The Applicant must implement the Biodiversity Management Plan as approved by the Planning Secretary.

## HERITAGE

### Protection of Aboriginal Heritage

B57. The Applicant must ensure that the development does not cause any direct or indirect impact on any identified heritage items located outside the approved disturbance area, beyond those predicted in the document/s listed in condition A2(c).

**Note:** Identified heritage items are shown in the figures in Appendix 5.

B58. If suspected human remains are discovered on the site, then all work surrounding the area must cease, and the area must be secured. The Applicant must immediately notify NSW Police Force and Heritage NSW, and work must not recommence in the area until authorised by NSW Police Force and Heritage NSW.

B59. The Applicant must ensure that all known Aboriginal objects or Aboriginal places on the site and within the offset areas are properly recorded, and those records are kept up to date, in the Aboriginal Heritage Information Management System (AHIMS) Register.

### **Aboriginal Cultural Heritage Management Plan**

- B60. The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development. The plan must:
- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Planning Secretary;
  - (b) be prepared in consultation with Heritage NSW and Registered Aboriginal Parties;
  - (c) describe the measures to be implemented on the site or within the offset areas to:
    - (i) comply with the heritage-related operating conditions of this consent;
    - (ii) ensure all workers receive suitable Aboriginal cultural heritage training/inductions prior to carrying out any activities which may cause impacts to Aboriginal objects or Aboriginal places, and that suitable records are kept of these inductions;
    - (iii) protect, monitor and manage identified Aboriginal objects and Aboriginal places (including any proposed archaeological investigation of potential subsurface objects, collection and salvage of objects within the approved disturbance area) in accordance with the commitments made in the document/s listed in condition A2(c);
    - (iv) protect Aboriginal objects and Aboriginal places located outside the approved disturbance area from impacts of the development;
    - (v) manage the discovery of suspected human remains and any new Aboriginal objects or Aboriginal places, including provisions for burials, over the life of the development;
    - (vi) maintain and manage reasonable access for relevant Aboriginal stakeholders to Aboriginal objects and Aboriginal places (outside of the approved disturbance area); and
    - (vii) facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site;
  - (d) include a strategy for the care, control and storage of Aboriginal objects salvaged on the site, both during the life of the development and in the long term; and
  - (e) in relation to the women's cultural heritage site along Marulan Creek, include:
    - (i) an assessment of the potential impacts of the Marulan Creek dam and associated flow regime on the site, prepared by an intangible cultural heritage specialist in consultation with the identified knowledge holders; and
    - (ii) assessment of whether mitigation to any negative impacts should occur through periodic cultural flows.
- B61. The Applicant must not disturb any heritage item until the Aboriginal Cultural Heritage Management Plan is approved by the Planning Secretary.
- B62. The Applicant must implement the Aboriginal Cultural Heritage Management Plan approved by the Planning Secretary.

### **Historic Heritage Management Plan**

- B63. The Applicant must prepare a Historic Heritage Management Plan for the development, in respect of all non-Aboriginal cultural heritage items, to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
  - (b) be prepared in consultation with Council and in accordance with the relevant Heritage NSW guidelines;
  - (c) describe how the historic heritage values of the site would be recorded and preserved;
  - (d) identify all heritage items in the vicinity of the site and include a statement of significance for each item;
  - (e) describe the measures to be implemented on the site or within the offset areas to:
    - (i) ensure all workers on the site receive suitable heritage training/inductions prior to carrying out any activities which may cause impacts to historic heritage, and that suitable records are kept of these inductions;
    - (ii) protect heritage items located outside the approved disturbance area from impacts of the development, beyond those predicted in the document/s listed in condition A2(c);
    - (iii) undertake photographic/archival recording of any items of heritage significance predicted to be impacted by the development, prior to disturbance; and
    - (iv) manage any new heritage items discovered during the life of the development; and
  - (f) include a strategy for the care, control and storage of heritage relics salvaged from the site.
- B64. The Applicant must not disturb any heritage item until the Historic Heritage Management Plan is approved by the Planning Secretary.
- B65. The Applicant must implement the Historic Heritage Management Plan as approved by the Planning Secretary.

## VISUAL

### Visual Amenity and Lighting

- B66. The Applicant must:
- (a) take all reasonable steps to minimise the visual and off-site lighting impacts of the development;
  - (b) take all reasonable steps to minimise views of mining operations and associated equipment from privately-owned residences, public roads and the Bungonia Lookdown;
  - (c) ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure;
  - (d) ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal (except where required for emergency safety purposes);
  - (e) ensure that all external lighting associated with the development complies with relevant Australian Standards including the latest version of *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*;
  - (f) ensure that the visual appearance of any new buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape.
- B67. The Applicant must take all reasonable steps to minimise the night lighting impacts associated with road transport along Marulan South Road. This may include, but not be limited to, the construction of earth bunds within the realigned Marulan South Road reserve, in consultation with Council.

## WASTE

- B68. The Applicant must:
- (a) take all reasonable steps to minimise the waste generated by the development;
  - (b) classify all waste in accordance with the *Waste Classification Guidelines* (EPA, 2014);
  - (c) dispose of all waste at appropriately licensed waste facilities;
  - (d) manage on-site sewage treatment and disposal in accordance with the requirements of Council; and
  - (e) monitor and report on the effectiveness of the waste minimisation and management measures in the Annual Review referred to in condition D11.
- B69. Except as expressly permitted in an applicable EPL, specific resource recovery order or exemption under the *Protection of the Environment Operations (Waste) Regulation 2014*, the Applicant must not receive waste at the site for storage, treatment, processing, reprocessing or disposal.
- B70. Prior to commencing development under this consent, the Applicant must prepare a Contaminated Materials Protocol to the satisfaction of the Planning Secretary. This protocol must describe the procedures to be implemented in the event that potentially contaminated material is identified during construction, including:
- (a) procedures for the testing, removal and disposal of potentially contaminated material; and
  - (b) measures to ensure compliance with the requirements of SafeWork NSW and relevant guidelines.
- B71. The Applicant must implement the Contaminated Materials Protocol as approved by the Planning Secretary.

## DANGEROUS GOODS

- B72. The Applicant must ensure that the storage, handling, and transport of:
- (a) dangerous goods is done in accordance with the relevant Australian Standards, particularly *AS1940* and *AS1596*, and the *Dangerous Goods Code*; and
  - (b) explosives are managed in accordance with the requirements of the Resources Regulator.

## BUSHFIRE MANAGEMENT

- B73. The Applicant must:
- (a) ensure that the development:
    - (i) provides for asset protection in accordance with the relevant requirements in the *Planning for Bushfire Protection* (RFS, 2019) guideline; and
    - (ii) ensure that there is suitable equipment to respond to any fires on the site; and
  - (b) assist the RFS and emergency services to the extent practicable if there is a fire in the vicinity of the site.
- B74. Prior to commencing development under this consent, the Applicant must prepare a Bushfire Management Plan for the development, in consultation with RFS. This plan must include a:
- (a) contact person and 24-hour contact phone number;
  - (b) schedule and description of proposed bushfire mitigation works, including:

- (i) location of managed and unmanaged vegetation within the site;
- (ii) location of water supply; and
- (iii) internal access roads;
- (c) plan identifying the location and storage of bulk flammable liquids and materials;
- (d) 'hot works' management plan, including:
  - (i) circumstances when 'hot works' are limited or prohibited; and
  - (ii) safety measures to be implemented when 'hot works' are being conducted; and
- (e) emergency/evacuation plan in accordance with the *Guidelines for the Preparation of Emergency/Evacuation Plans* (RFS) and Australian Standard AS3745 *Planning for Emergencies in Facilities*.

B75. The Applicant must implement the Bushfire Management Plan in consultation with RFS.

## REHABILITATION

### Rehabilitation Objectives

B76. The Applicant must rehabilitate the site in accordance with the conditions imposed on the mining lease(s) associated with the development under the *Mining Act 1992*. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in documents listed in condition A2(c) and shown in Appendix 6, and must comply with the objectives in Table 6.

**Table 6:** Rehabilitation objectives

Feature	Objective
All areas of the site affected by the development	<ul style="list-style-type: none"> <li>Safe, stable and non-polluting</li> <li>Fit for the intended post-mining land use/s</li> <li>Establish the final landform and post-mining land use/s as soon as practicable after cessation of mining operations</li> <li>Minimise post-mining environmental impacts</li> </ul>
Areas proposed for native ecosystem re-establishment	<ul style="list-style-type: none"> <li>Establish/restore self-sustaining native woodland ecosystems</li> <li>Establish local plant community types, with a particular focus on species commensurate with <i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC</i></li> <li>Establish:               <ul style="list-style-type: none"> <li>riparian habitat within any retained water features;</li> <li>habitat, feed and foraging resources for threatened fauna species (including the Koala); and</li> <li>vegetation connectivity and wildlife corridors, as far as is reasonable and feasible</li> </ul> </li> </ul>
Final Landform	<ul style="list-style-type: none"> <li>Stable and sustainable for the intended post-mining land use/s</li> <li>Integrated with surrounding natural landforms and other mine rehabilitated landforms, to the greatest extent practicable</li> <li>Incorporate micro-relief and drainage features that mimic natural topography and mitigate erosion, to the greatest extent practicable</li> <li>Maximise surface water drainage to the natural environment i.e. free draining (excluding final void catchment)</li> <li>Minimise visual impacts, where practicable</li> </ul>
Final void	<ul style="list-style-type: none"> <li>Designed as long term groundwater sink to prevent the release of saline water into the surrounding environment, unless further mine planning and final landform design processes identify a more suitable outcome for the final void (see condition B79)</li> <li>Minimise to the greatest extent practicable:               <ul style="list-style-type: none"> <li>the size and depth;</li> <li>the drainage catchment;</li> <li>any high wall instability risk; and</li> <li>the risk of flood interaction</li> </ul> </li> <li>Maximise potential for beneficial reuse, where practicable</li> </ul>
Surface infrastructure of the development (excluding Marulan Creek Dam)	<ul style="list-style-type: none"> <li>To be decommissioned, removed and rehabilitated, unless the Resources Regulator agrees otherwise</li> </ul>
Water quality	<ul style="list-style-type: none"> <li>Water retained on the site is fit for the intended post-mining land use/s</li> <li>Water discharged from the site is suitable for receiving waters and fit for aquatic ecology and riparian vegetation</li> </ul>



<b>Feature</b>	<b>Objective</b>
Community	<ul style="list-style-type: none"> <li>• Ensure public safety</li> <li>• Minimise adverse socio-economic effects associated with mine closure</li> </ul>

B77. The rehabilitation objectives in Table 6 apply to the entire site, including all landforms which were lawfully constructed prior to the commencement of development under this consent. The Applicant is not required to retrospectively incorporate micro-relief and drainage features that mimic natural topography and mitigate erosion on landforms that have been approved and constructed under the previous consents, however, further erosion control works may be required to these landforms to address long term stability issues (if identified).

### **Progressive Rehabilitation**

B78. The Applicant must rehabilitate<sup>a</sup> the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable steps must be taken to minimise the total area exposed at any time. Interim stabilisation and temporary vegetation strategies must be employed when areas prone to dust generation, soil erosion and weed incursion cannot be permanently rehabilitated.

<sup>a</sup>*This condition does not prevent further disturbance at some later stage of the development of areas that have been rehabilitated.*

### **Rehabilitation Strategy**

B79. The Applicant must prepare a Rehabilitation Strategy for all land disturbed by the development to the satisfaction of the Planning Secretary. This strategy must:

- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with DPIE Water, BCD, Resources Regulator and Council;
- (c) build upon the Rehabilitation Objectives in Table 6, describe the overall rehabilitation outcomes for the site, and address all aspects of rehabilitation including mine closure, final landform (including final voids), post-mining land use/s and water management;
- (d) align with strategic rehabilitation and mine closure objectives and address the principles of the *Strategic Framework for Mine Closure* (ANZMEC and MCA, 2000);
- (e) describe how the rehabilitation measures would be integrated with the measures in the Biodiversity Management Plan referred to in condition B54;
- (f) describe how rehabilitation will be integrated with the mine planning process, including a plan to address premature or temporary mine closure;
- (g) include indicative mine plans and scheduling for life-of-mine rehabilitation showing each rehabilitation domain;
- (h) include details of target vegetation communities and species to be established within the proposed revegetation areas;
- (i) investigate opportunities to refine and improve the final landform and final void outcomes over time;
- (j) include a post-mining land use strategy to investigate and facilitate post-mining beneficial land uses for the site (including the final void), that:
  - (i) align with regional and local strategic land use planning objectives and outcomes;
  - (ii) support a sustainable future for the local community;
  - (iii) utilise existing mining infrastructure, where practicable; and
  - (iv) avoid disturbing self-sustaining native ecosystems, where practicable;
- (k) include a stakeholder engagement plan to guide rehabilitation and mine closure planning processes and outcomes;
- (l) investigate ways to minimise adverse socio-economic effects associated with rehabilitation and mine closure; and
- (m) include a program to periodically review and update this strategy at least every three years.

B80. The Rehabilitation Strategy must be approved by the Planning Secretary within 6 months from the date of this consent, unless otherwise agreed by the Planning Secretary .

B81. The Applicant must implement the Rehabilitation Strategy approved by the Planning Secretary.

### **Rehabilitation Management Plan**

B82. The Applicant must prepare a Rehabilitation Management Plan for the development, in accordance with the conditions imposed on the mining lease(s) associated with the development under the *Mining Act 1992*. This plan must:

- (a) be prepared in consultation with the Department and Council;

- (b) be prepared in accordance with any relevant Resources Regulator Guidelines;
- (c) include detailed performance indicators and completion criteria for each rehabilitation domain, and triggers for remedial actions;
- (d) include an overview of the identified risks to achieving successful rehabilitation;
- (e) describe the measures to be implemented on the site to achieve the Rehabilitation Objectives in Table 6, the requirements of the Rehabilitation Strategy referred to in condition B79 and the criteria in paragraph (c);
- (f) include detailed mine plans and scheduling for progressive rehabilitation to be initiated, undertaken and/or completed over the next three years, or other suitable time period as agreed with the Resources Regulator;
- (g) include a program to monitor, independently audit and report on progress against the criteria in paragraph (c) and the effectiveness of the measures in paragraph (e);
- (h) describe any further studies, work, research or consultation that will be undertaken to expand the site-specific rehabilitation knowledge base, reduce uncertainty and improve rehabilitation outcomes; and
- (i) outline intervention and adaptive management techniques to ensure rehabilitation remains on a trajectory of achieving the Rehabilitation Objectives, Rehabilitation Completion Criteria and the Final Landform in the Rehabilitation Management Plan as soon as reasonably practical.

## TRANSPORT

### Monitoring of Product Transport

B83. The Applicant must:

- (a) keep accurate records<sup>a</sup> of the:
  - (i) amount of mining products and quarry products transported from the site (on a daily basis); and
  - (ii) date and time of each laden train and truck movement generated by the development; and
- (b) publish these records in the Annual Review.

<sup>a</sup> Records must contain sufficient details to demonstrate compliance with conditions A6 to A13 of this consent.

### Transport Operating Conditions

B84. Until such time as the eastern end of Marulan South Road is de-proclaimed, the Applicant must:

- (a) make suitable arrangements to ensure the safety of public road users (including traffic signals, signage or other traffic control measures), to the satisfaction of Council; and
- (b) ensure that any traffic signals on public roads are designed, installed and operated to the satisfaction of TfNSW.

B85. The Applicant must:

- (a) ensure that all laden trucks entering or exiting the site have their loads covered;
- (b) ensure that all laden trucks exiting the site are cleaned of material that may fall from vehicles, before leaving the site;
- (c) take all reasonable steps to minimise traffic safety issues and disruption to local road users; and
- (d) take all reasonable steps to ensure that appropriate signage is displayed on all trucks used to transport quarry products from the development so they can be easily identified by other road users.

### Road Realignment

B86. Unless otherwise agreed by Council, the Applicant must construct the new alignment of Marulan South Road as described in the documents listed in A2 (c), to the following standard:

- (a) 7 m wide sealed carriageway, comprising two 3.5 m wide travel lanes;
- (b) 1.5 m wide shoulders (1 m sealed) on both sides of the road;
- (c) 3 m wide cleared zone; and
- (d) Wide Centre Line Treatment, with retroreflective pavement markers, edge-line markers and guideposts as agreed by Council,

in accordance with relevant Austroads guidelines and to the satisfaction of Council.

#### Notes:

- The upgrade works identified above include all road furniture and safety requirements required to meet relevant road standards, to the satisfaction of the relevant roads authority.
- If there is a dispute between the relevant parties about the implementation of this condition, then any party may refer the matter to the Planning Secretary for resolution.

B87. The Applicant must ensure that public access is maintained along the existing alignment of Marulan South Road until the new alignment (as required under condition B86) is constructed and dedicated to Council.

#### **Road Restrictions**

B88. Unless otherwise agreed by Council, the Applicant must not dispatch more than 75 laden trucks per day or 5 laden trucks per hour from the site, until Marulan South Road is upgraded as described in the documents listed in A2 (c), to the following standard:

- (a) 7 m wide sealed carriageway, comprising two 3.5 m wide travel lanes;
- (b) 1.5 m wide shoulders (1 m sealed) on both sides of the road;
- (c) 3 m wide cleared zone; and
- (d) Wide Centre Line Treatment, with retroreflective pavement markers, edge-line markers and guideposts as agreed by Council,

in accordance with relevant Austroads guidelines and to the satisfaction of Council. The requirements of condition B88 do not apply to the section of road which is to be realigned under condition B86 above.

#### **Notes:**

- *The upgrade works identified above include all road furniture and safety requirements required to meet relevant road standards, to the satisfaction of the relevant roads authorities.*
- *If there is a dispute between the relevant parties about the implementation of this condition, then any party may refer the matter to the Planning Secretary for resolution.*

B89. The design standard required under condition B88 may be varied with the agreement of Council.

#### **Traffic Management Plan**

B90. The Applicant must prepare a Traffic Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in consultation with TfNSW and Council;
- (c) include details of all transport routes and traffic types to be used for development-related traffic;
- (d) describe the measures to be implemented to ensure compliance with conditions B84 and B85 above;
- (e) include details of the measures to be implemented to minimise traffic safety issues and disruption to local road users, including minimising potential for conflict with school buses and stock movements;
- (f) include a Drivers' Code of Conduct that includes procedures to ensure that drivers:
  - (i) adhere to posted speed limits or other required travelling speeds;
  - (ii) adhere to designated transport routes; and
  - (iii) implement safe and quiet driving practices;
- (g) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct; and
- (h) propose measures to minimise the transmission of dust and tracking of material onto the surface of public roads from vehicles exiting the site.

B91. The Traffic Management Plan must be approved by the Planning Secretary within 3 months from the date of this consent, unless otherwise agreed by the Planning Secretary.

B92. The Applicant must implement the Traffic Management Plan as approved by the Planning Secretary.

## **PART C ADDITIONAL PROCEDURES**

### **NOTIFICATION OF LANDOWNERS/TENANTS**

- C1. Within one month of the date of this consent, the Applicant must:
- (a) notify in writing the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on the site that they are entitled to ask the Applicant for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated;
  - (b) notify the tenants of any mine-owned land of their rights under this consent; and
  - (c) send a copy of the fact sheet entitled “*Mine Dust and You*” (NSW Health, 2017) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the document/s listed in condition A2(c) identify that dust emissions generated by the development are likely to be greater than the relevant air quality criteria identified in condition B27 at any time during the life of the development.
- C2. Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the recommended dust and/or noise criteria, the Applicant must:
- (a) advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the fact sheet entitled “*Mine Dust and You*” (NSW Health, 2017); and
  - (b) advise the prospective tenants of the rights they would have under this consent,
- to the satisfaction of the Planning Secretary.

### **NOTIFICATION OF EXCEEDANCES**

- C3. As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise, blasting or air quality criterion in PART B of this consent, the Applicant must provide the details of the exceedance to any affected landowners, tenants and the CCC.
- C4. For any exceedance of any air quality criterion in PART B of this consent, the Applicant must also provide to any affected land owners and/or tenants a copy of the fact sheet entitled “*Mine Dust and You*” (NSW Health, 2017).

### **INDEPENDENT REVIEW**

- C5. If a landowner considers the development to be exceeding any relevant noise, blasting or air quality criterion in PART B of this consent, they may ask the Planning Secretary in writing for an independent review of the impacts of the development on their residence or land.
- C6. If the Planning Secretary is not satisfied that an independent review is warranted, the Planning Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.
- C7. If the Planning Secretary is satisfied that an independent review is warranted, within 3 months, or other timeframe agreed by the Planning Secretary and the landowner, of the Planning Secretary’s decision, the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Planning Secretary, to:
    - (i) consult with the landowner to determine their concerns;
    - (ii) conduct monitoring to determine whether the development is complying with the relevant criterion in PART B of this consent; and
    - (iii) if the development is not complying with the relevant criterion, identify measures that could be implemented to ensure compliance with the relevant criterion; and
  - (b) give the Planning Secretary and landowner a copy of the independent review; and
  - (c) comply with any written requests made by the Planning Secretary to implement any findings of the review.

## **PART D ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING**

### **ENVIRONMENTAL MANAGEMENT**

#### **Environmental Management Strategy**

- D1. The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:
- (a) provide the strategic framework for environmental management of the development;
  - (b) identify the statutory approvals that apply to the development;
  - (c) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
  - (d) set out the procedures to be implemented to:
    - (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;
    - (ii) receive record, handle and respond to complaints;
    - (iii) resolve any disputes that may arise during the course of the development;
    - (iv) respond to any non-compliance and any incident;
    - (v) respond to emergencies; and
  - (e) include:
    - (i) references to any strategies, plans and programs approved under the conditions of this consent; and
    - (ii) a clear plan depicting all the monitoring to be carried out under the conditions of this consent.
- D2. The Environmental Management Strategy must be approved by the Planning Secretary within 3 months from the date of this consent, unless otherwise agreed by the Planning Secretary
- D3. The Applicant must implement the Environmental Management Strategy as approved by the Planning Secretary.

#### **Adaptive Management**

- D4. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and performance measures in this consent. Any exceedance of these criteria or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

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

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
- (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 reasonable remediation measures as directed by the Planning Secretary.

#### **Management Plan Requirements**

- D5. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
- (a) summary of relevant background or baseline data;
  - (b) details of:
    - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
    - (ii) any relevant limits or performance measures and criteria; and
    - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
  - (c) any relevant commitments or recommendations identified in the document/s listed in condition A2(c);
  - (d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
  - (e) a program to monitor and report on the:
    - (i) impacts and environmental performance of the development; and
    - (ii) effectiveness of the management measures set out pursuant to condition D4(c);
  - (f) 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;
  - (g) a program to investigate and implement ways to improve the environmental performance of the development over time;

- (h) a protocol for managing and reporting any:
  - (i) incident, non-compliance or exceedance of any impact assessment criterion or performance criterion);
  - (ii) complaint; or
  - (iii) failure to comply with other statutory requirements;
- (i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and
- (j) a protocol for periodic review of the plan.

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

- D6. The Applicant must ensure that management plans prepared for the development are consistent with the conditions of this consent and any EPL issued for the site.

## **REVISION OF STRATEGIES, PLANS AND PROGRAMS**

- D7. Within three months of:
- (a) the submission of an incident report under condition D9;
  - (b) the submission of an Annual Review under condition D11;
  - (c) the submission of an Independent Environmental Audit under condition D12;
  - (d) the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or
  - (e) notification of a change in development phase under condition A17;

the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.

- D8. If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review.

**Note:** *This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.*

## **REPORTING AND AUDITING**

### **Incident Notification**

- D9. The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.

### **Non-Compliance Notification**

- D10. Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

**Note:** *A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.*

### **Annual Review**

- D11. By the end of July each year after the commencement of development, or other timeframe agreed by the Planning Secretary, a report must be submitted to the Department reviewing the environmental performance of the development, to the satisfaction of the Planning Secretary. This review must:
- (a) describe the development (including any rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;
  - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, including a comparison of these results against the:
    - (i) relevant statutory requirements, limits or performance measures/criteria;
    - (ii) requirements of any plan or program required under this consent;
    - (iii) monitoring results of previous years; and
    - (iv) relevant predictions in the document/s listed in condition A2(c);
  - (c) identify any non-compliance or incident which occurred in the previous financial year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;

- (d) evaluate and report on:
  - (i) the effectiveness of the noise and air quality management systems; and
  - (ii) compliance with the performance measures, criteria and operating conditions of this consent;
- (e) identify any trends in the monitoring data over the life of the development;
- (f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- (g) describe what measures will be implemented over the next financial year to improve the environmental performance of the development.

D12. Copies of the Annual Review must be submitted to Council and made available to the CCC and any interested person upon request.

#### **Independent Environmental Audit**

- D13. Within one year of commencement of development under this consent, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. The audit must:
- (a) be led by a suitably qualified, experienced and independent auditor whose appointment has been endorsed by the Planning Secretary;
  - (b) be conducted by a suitably qualified, experienced and independent team of experts (including any expert in field/s specified by the Planning Secretary) whose appointment has been endorsed by the Planning Secretary;
  - (c) be carried out in consultation with the relevant agencies and the CCC;
  - (d) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and mining leases for the development (including any assessment, strategy, plan or program required under these approvals);
  - (e) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals and this consent;
  - (f) recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under the abovementioned approvals and this consent; and
  - (g) be conducted and reported to the satisfaction of the Planning Secretary.
- D14. Within three months of commencing an Independent Environmental Audit, or other timeframe agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.

#### **Monitoring and Environmental Audits**

- D15. Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit.

For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.

- D16. Noise, blast and/or air quality monitoring under this consent may be undertaken at suitable representative monitoring locations instead of at privately-owned residences or other locations listed in Part B, providing that these representative monitoring locations are set out in the respective management plan/s.

#### **ACCESS TO INFORMATION**

- D17. Before the commencement of development under this consent until the completion of all rehabilitation required under this consent, the Applicant must:
- (a) make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this consent) publicly available on its website:
    - (i) the documents listed in condition A2(c);
    - (ii) all current statutory approvals for the development;
    - (iii) all approved strategies, plans and programs required under the conditions of this consent;
    - (iv) minutes of CCC meetings;

- (v) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
  - (vi) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
  - (vii) a summary of the current phase and progress of the development;
  - (viii) contact details to enquire about the development or to make a complaint;
  - (ix) a complaints register, updated monthly;
  - (x) the Annual Reviews of the development;
  - (xi) audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report; and
  - (xii) any other matter required by the Planning Secretary; and
- (b) keep such information up to date, to the satisfaction of the Planning Secretary.



# APPENDIX 1 SCHEDULE OF LAND

Lot	DP	Tenure	Landowner
1	1124189	Freehold	Boral Cement Limited
2	1124189	Freehold	Boral Cement Limited
12	881240	Freehold	Boral Resources (NSW) Pty Ltd
23	867667	Freehold	Boral Resources (NSW) Pty Ltd
3	203290	Freehold	Boral Resources (NSW) Pty Ltd
4	203290	Freehold	Boral Resources (NSW) Pty Ltd
282	750029	Crown	Crown Land
24	867667	Freehold	Boral Resources (NSW) Pty Ltd
22	867667	Freehold	Boral Limited
1	261615	Freehold	Boral Cement Limited
1	860561	Freehold	Boral Cement Limited
2	860561	Freehold	Boral Cement Limited
1	106569	Freehold	Boral Cement Limited
2	527500	Freehold	Boral Cement Limited
1	527500	Freehold	Boral Cement Limited
2	106569	Freehold	Boral Cement Limited
100	1064794	Freehold	Boral Cement Limited
12	570616	Freehold	Boral Resources (NSW) Pty Ltd
16	111641	Freehold	Boral Cement Limited
14	111641	Freehold	Boral Cement Limited
15	111641	Freehold	Boral Cement Limited
7	111641	Freehold	Boral Cement Limited
6	111641	Freehold	Boral Cement Limited
111	830458	Freehold	Boral Resources (NSW) Pty Ltd
114	830458	Freehold	Boral Limited
112	830458	Freehold	Boral Cement Limited
113	830458	Freehold	Boral Cement Limited
2	1186554	Freehold	Boral Cement Limited
1	617992	Freehold	Boral Cement Limited
9	111645	Freehold	Boral Cement Limited
1	132244	Freehold	Boral Cement Limited
2	132244	Freehold	Boral Cement Limited
3	106569	Freehold	Boral Cement Limited
3	527501	Freehold	Boral Cement Limited
4	106569	Freehold	Boral Cement Limited
21	657523	Freehold	Boral Resources (NSW) Pty Ltd
3	617992	Freehold	Boral Cement Limited
114	750029	Freehold	Boral Cement Limited
82	750029	Freehold	Boral Cement Limited
32	750029	Freehold	Boral Cement Limited
7300	1149129	Crown	Crown Land
165	750029	Freehold	Boral Cement Limited
193	750029	Freehold	Boral Cement Limited
115	750029	Freehold	Boral Cement Limited
131	750029	Freehold	Boral Cement Limited
154	750029	Freehold	Boral Cement Limited
186	750029	Freehold	Boral Cement Limited
179	750029	Freehold	Boral Cement Limited
156	750029	Freehold	Boral Cement Limited
197	750029	Freehold	Boral Cement Limited
83	750029	Freehold	Boral Cement Limited
155	750029	Freehold	Boral Cement Limited
87	750029	Freehold	Boral Cement Limited
1701	610507	Freehold	Boral Cement Limited
1702	610507	Freehold	Boral Cement Limited
98	750029	Crown	Crown Land
187	750029	Freehold	Boral Cement Limited
191	750029	Freehold	Boral Cement Limited
7302	1149129	Crown	Crown Land
7301	1149129	Crown	Crown Land
7303	1149129	Crown	Crown Land

## APPENDIX 2 DEVELOPMENT LAYOUT PLANS

Figure 4.10  
The Project

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION  
ENVIRONMENTAL IMPACT STATEMENT

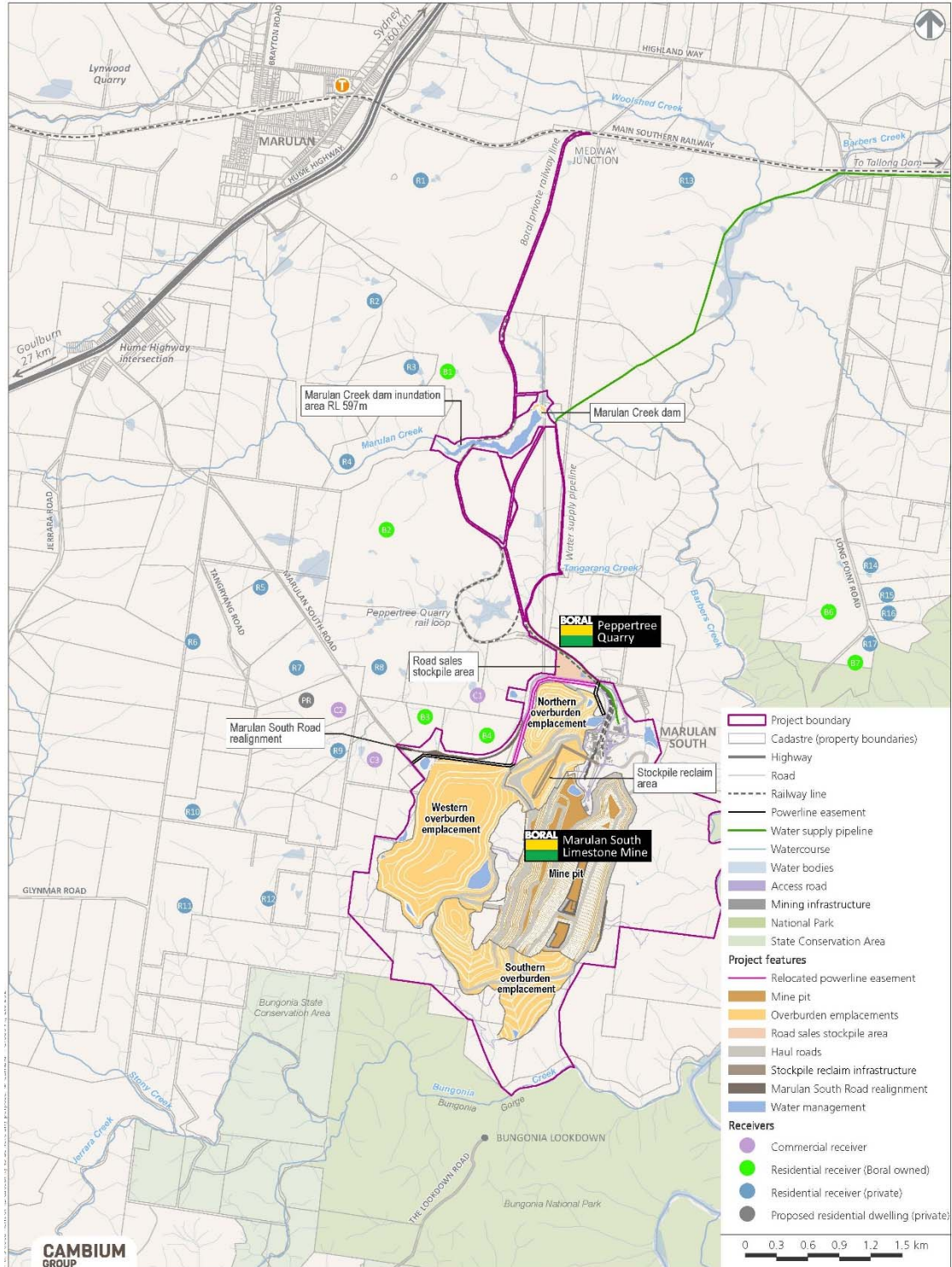


Figure 1: Development Layout Plan

Figure 4.11  
The Project (Marulan Creek Dam)

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION  
SURFACE WATER ASSESSMENT

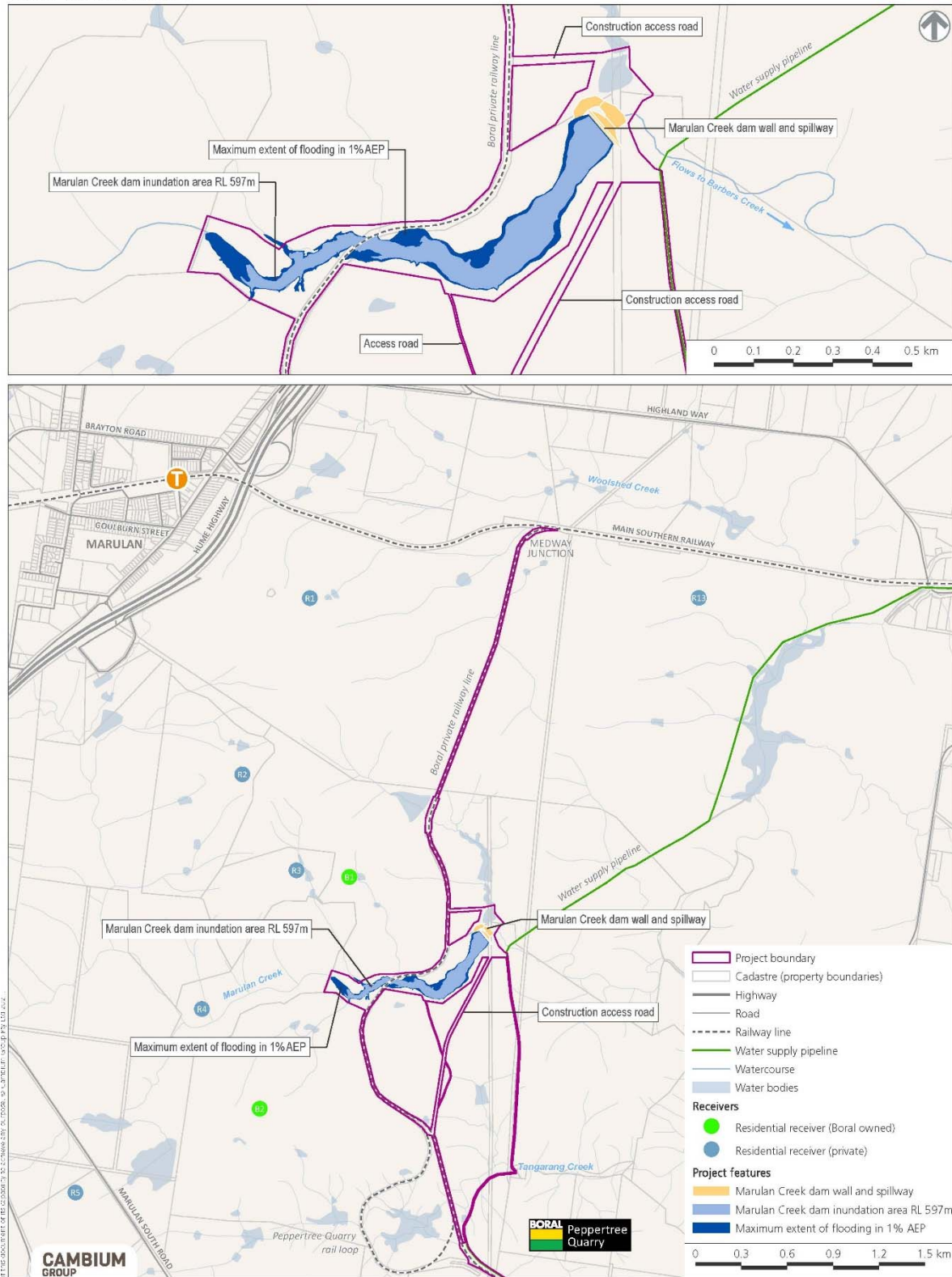
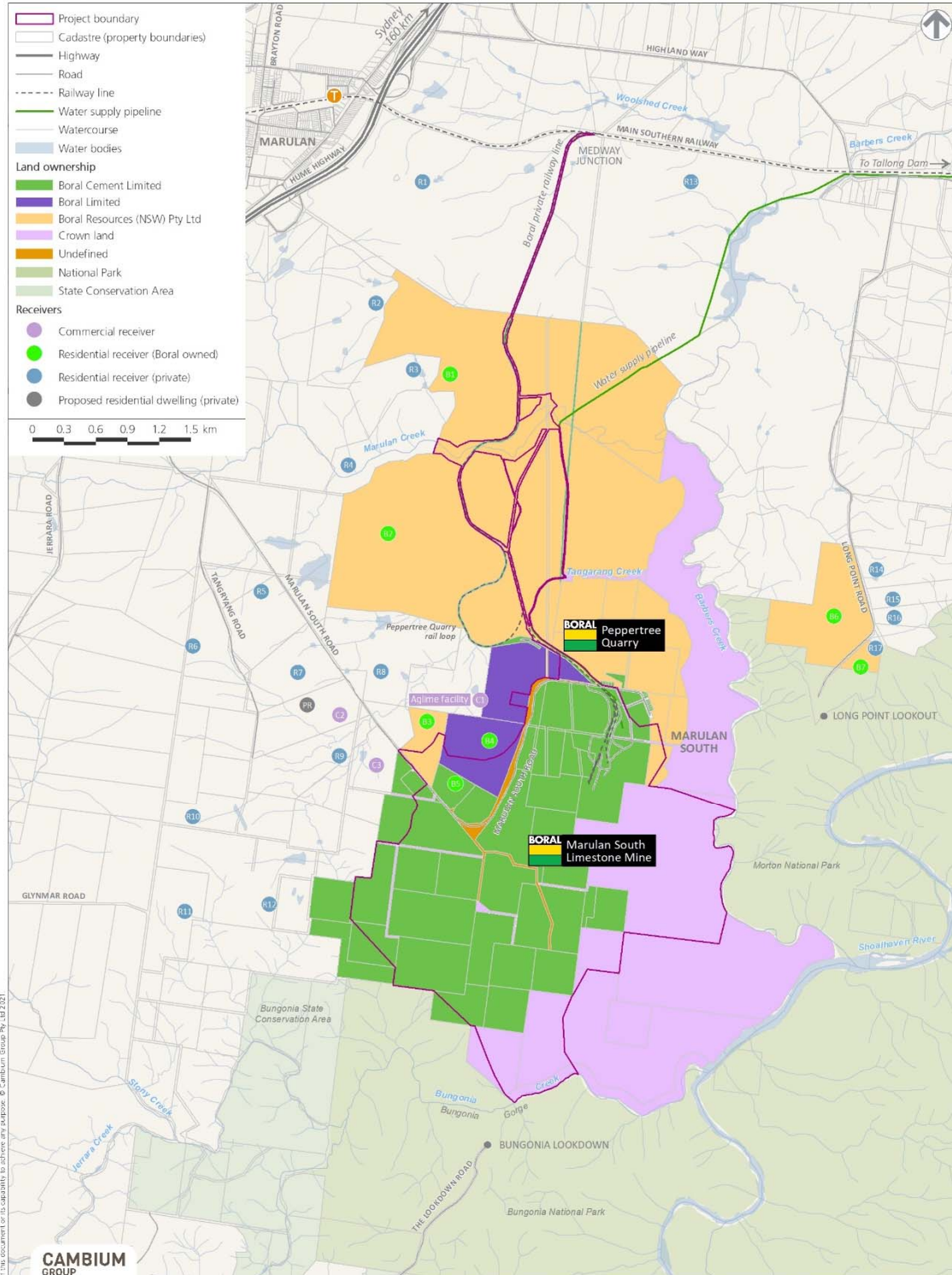


Figure 2: Marulan Creek Dam Layout



element.

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION  
ENVIRONMENTAL IMPACT STATEMENT

NSW Government  
Department of Planning, Industry and Environment

## APPENDIX 4 BIODIVERSITY OFFSET STRATEGY

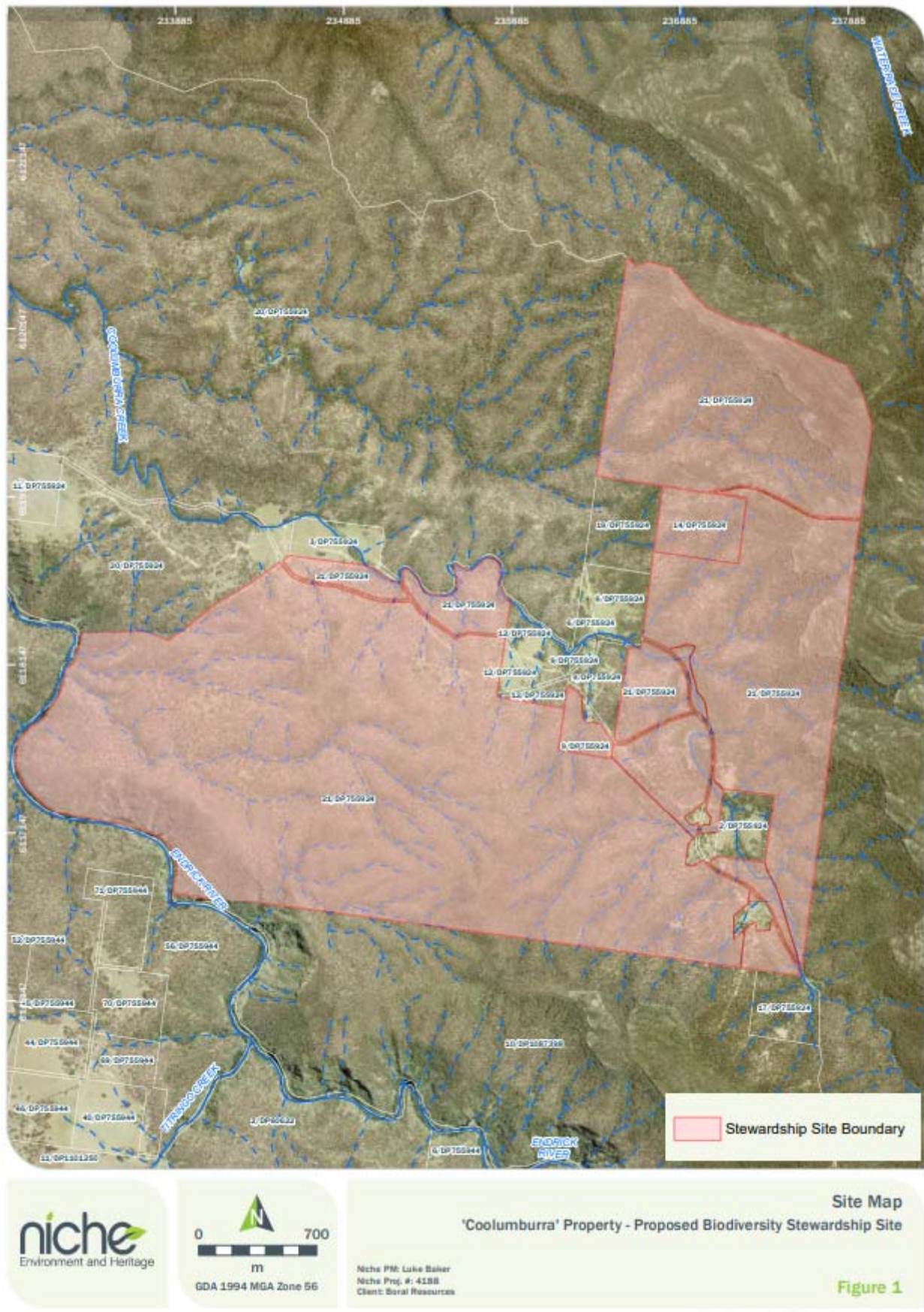
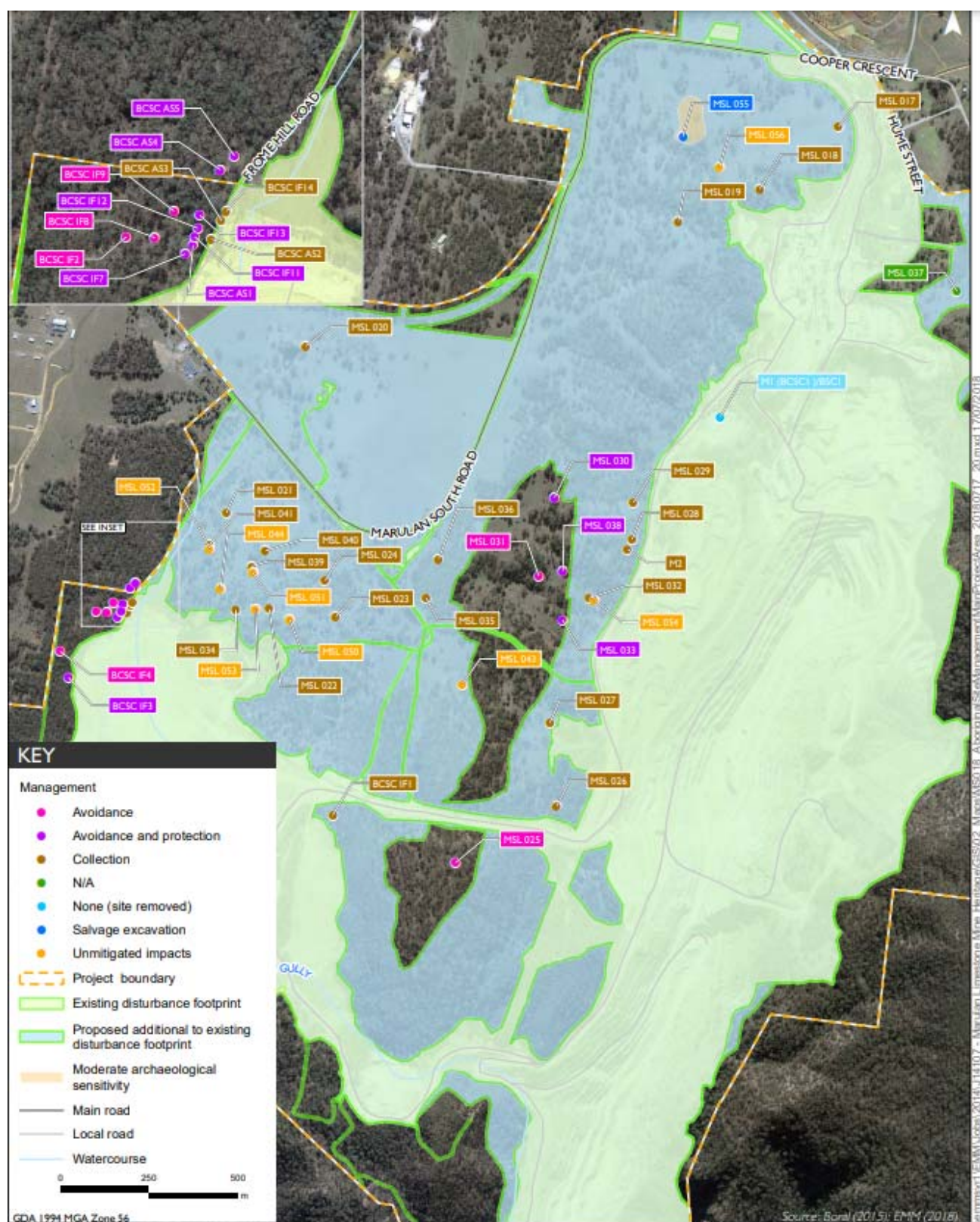


Figure 4: Biodiversity offset area



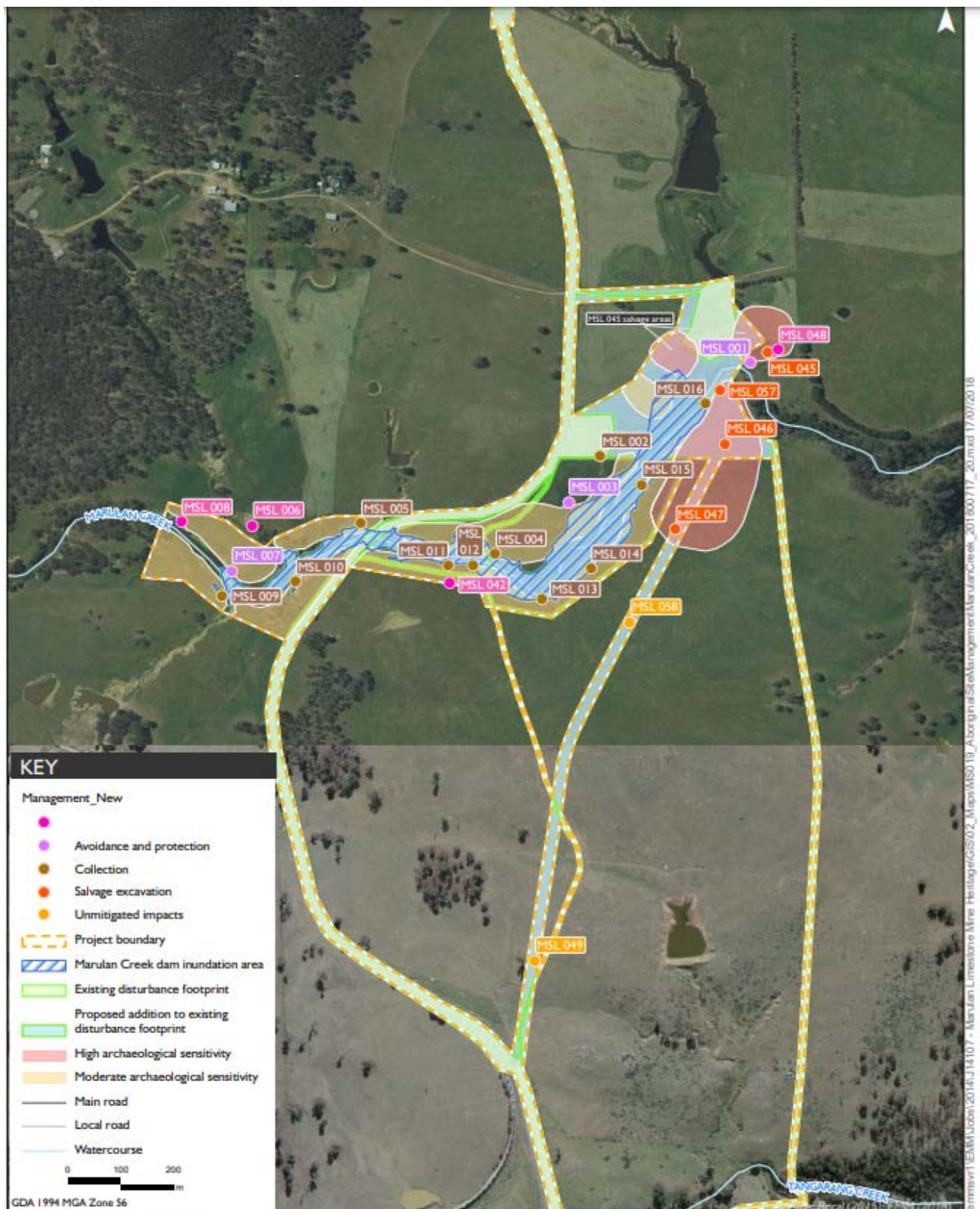
## APPENDIX 5 HERITAGE ITEMS



**Aboriginal site management at main Project site**  
Marulan South Limestone Mine Continued Operations Project  
Aboriginal Cultural Heritage Assessment  
Figure 11.1

**Figure 5: Aboriginal Heritage Sites**

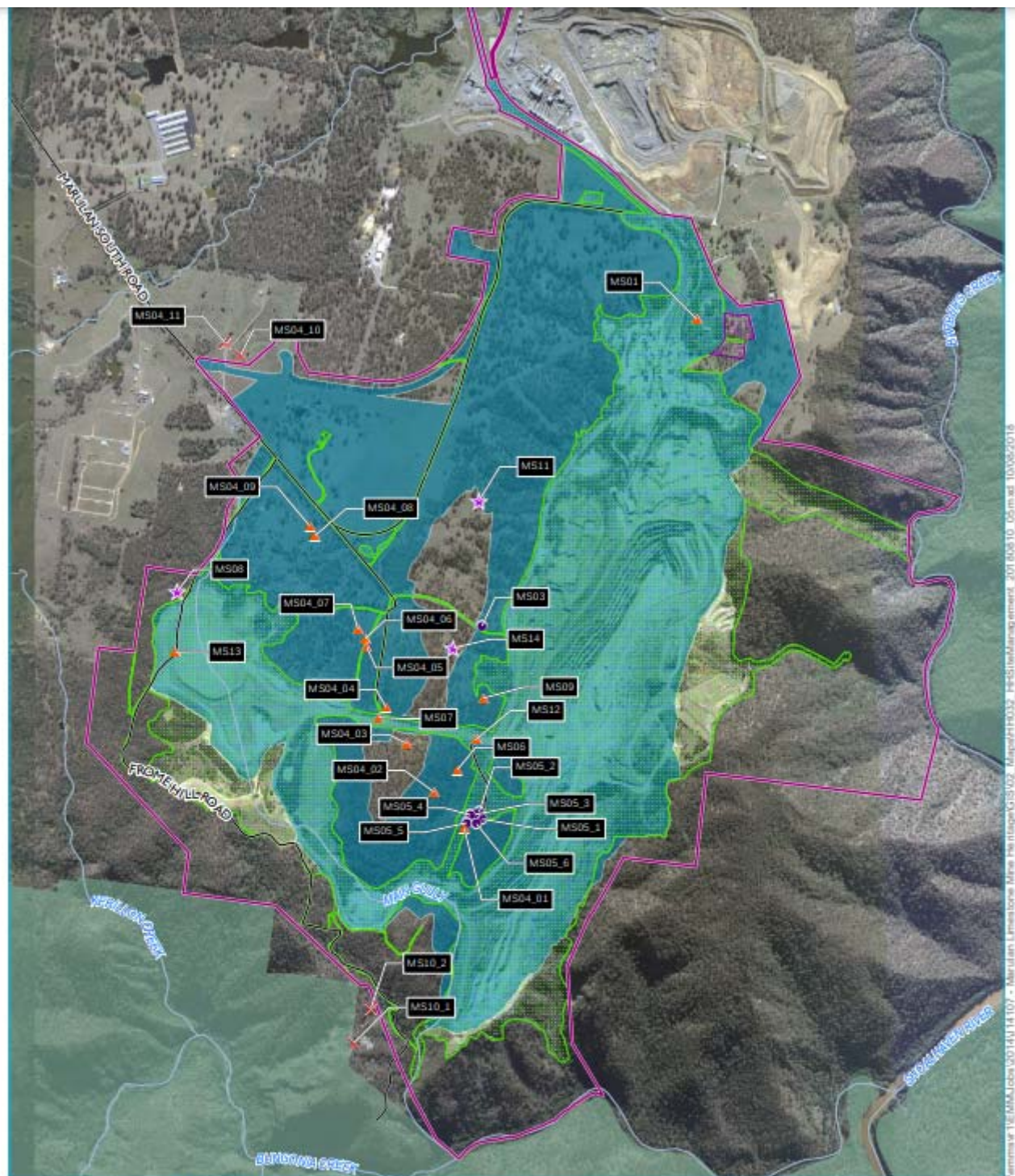




**Aboriginal site management at Marulan Creek**  
 Marulan South Limestone Mine Continued Operations Project  
 Aboriginal Cultural Heritage Assessment  
 Figure 11.2

**Figure 6: Aboriginal Heritage Sites (Marulan Creek Dam)**





Source: EMM (2018); Boral (2018); DFSI (2017); LPMA (2011)

#### KEY

— RoadClipped\_01p\_LPMA\_20150709

— Watercourse

■ Bungonia National Park

Site management measures

▲ Photographic archival recording; topographic survey

★ Photographic archival recording; topographic survey & fence and sign post

● Photographic archival recording; topographic survey; archaeological excavation sample

✗ Not in project site (no management required)

■ Project boundary

■ Project (SSD) disturbance footprint

■ Historical disturbance footprint (pre-SSD)

■ Additional historic area of disturbance (pre-SSD)

Historic heritage  
management measures

Marulan South Continued Operations Project  
Historical heritage assessment and SoHI

Figure 7.1



Figure 7: Historic Heritage Sites



## APPENDIX 6 REHABILITATION PLANS



Figure 4.21  
The Project - Final landform

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION  
ENVIRONMENTAL IMPACT STATEMENT

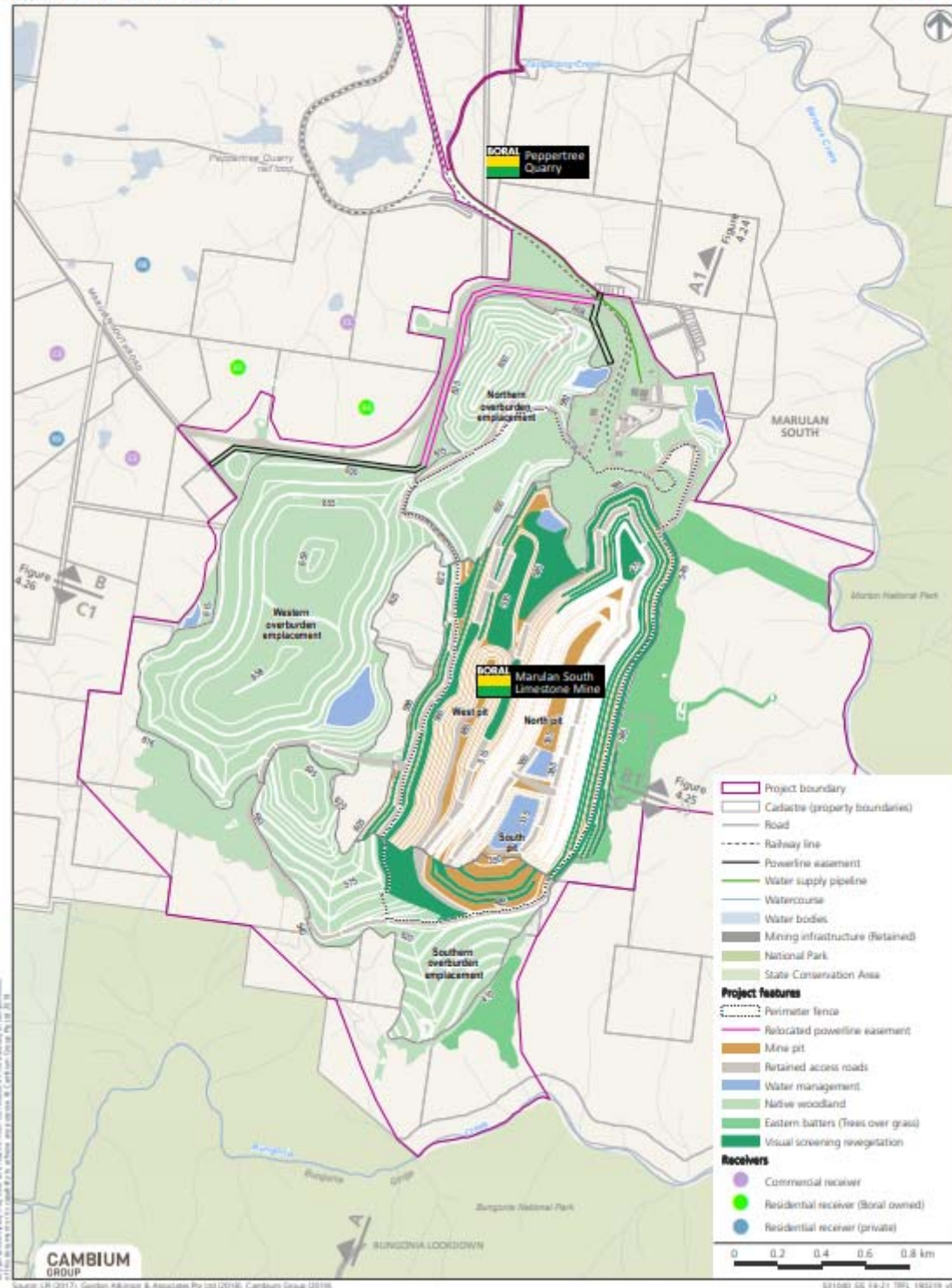


Figure 8: Conceptual Final Landform

Figure 4.23  
The Project - Final landform (Marulan Creek Dam)

MARULAN SOUTH LIMESTONE MINE CONTINUED OPERATIONS - SSD APPLICATION  
ENVIRONMENTAL IMPACT STATEMENT

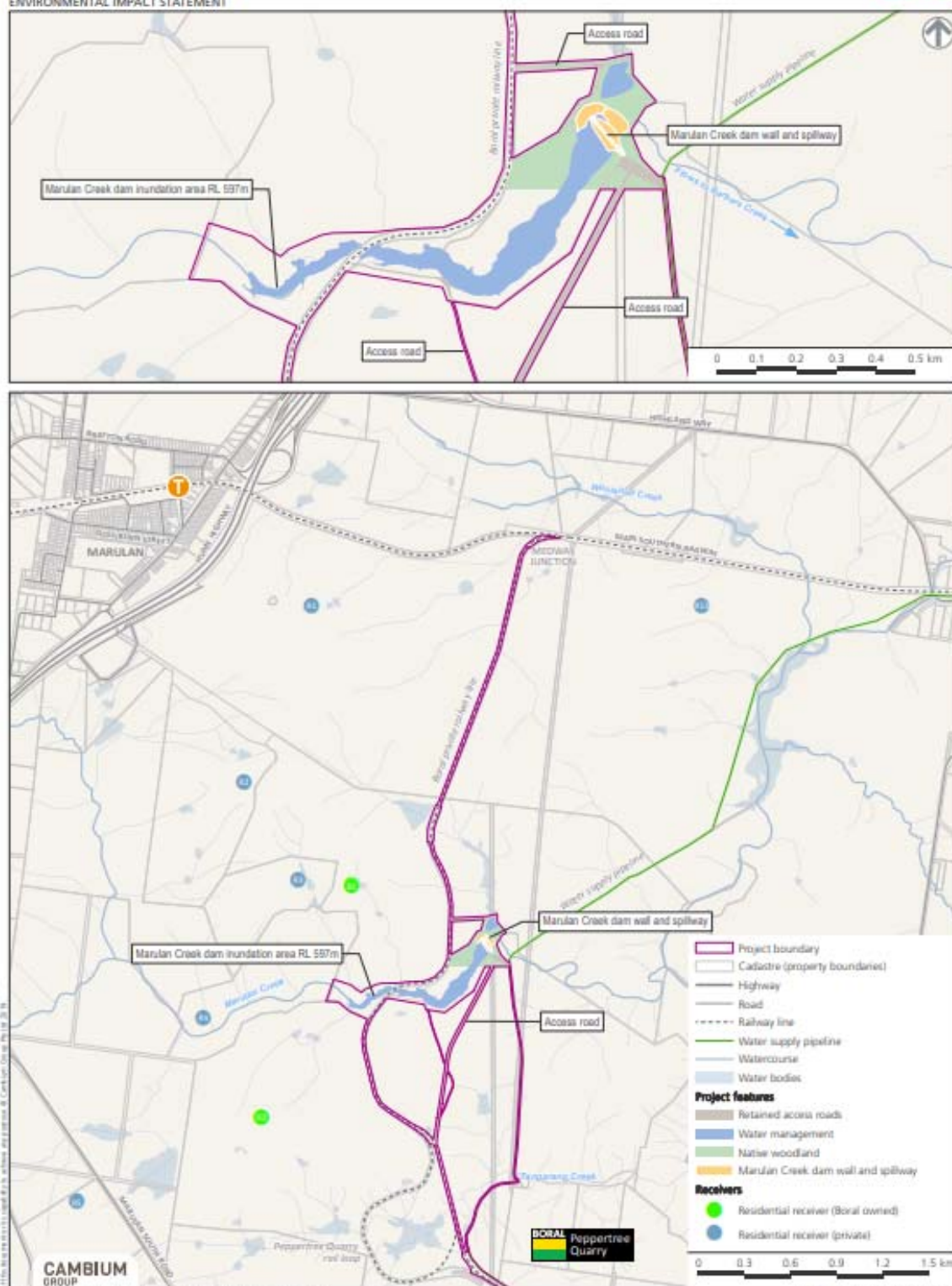


Figure 9: Conceptual Final Landform (Marulan Creek Dam)