Peppertree Quarry

Modification to operating hours and overburden emplacement areas (PA 06_0074 MOD 4)

Environmental Assessment Report

Section 75W of the *Environmental Planning and Assessment Act 1979*

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1. BACKGROUND

Peppertree Quarry (Peppertree) is a hard rock quarry located about 10 kilometres (km) to the southeast of the township of Marulan (see **Figure 1**). Peppertree commenced operations in 2014 and is owned and operated by Boral Resources (NSW) Pty Ltd (Boral).

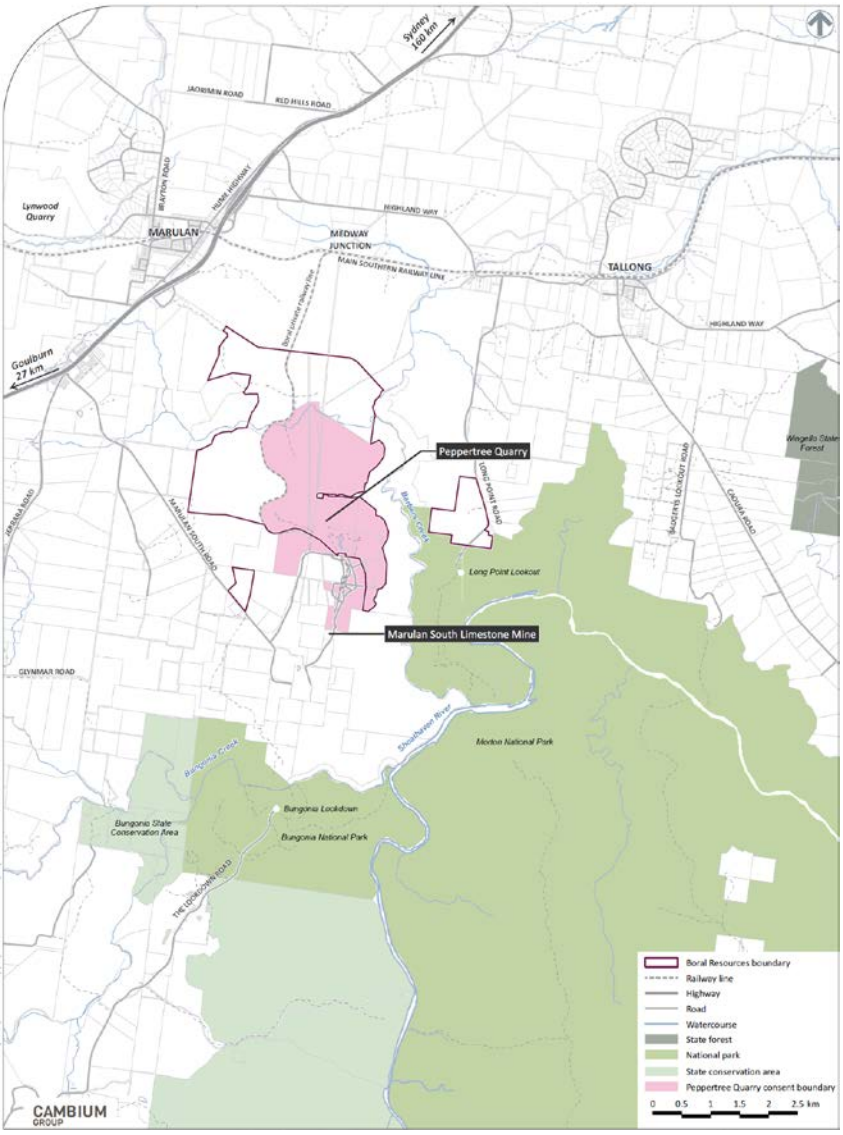

Figure 1: *Location of Peppertree Quarry*

Peppertree operates under a project approval granted in February 2007 by the then Minister for Planning under the former Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The approval allows for the extraction and transportation of up to 3.5 million tonnes per annum (Mtpa) of quarry products (hard rock, aggregate and manufactured sand) from a granodiorite resource of 105 million tonnes. The approval lapses in 2038.

Peppertree's approval has been modified three times:
- Mod 1 in March 2009 (to allow for the construction of an exploratory test pit);
- Mod 2 in November 2011 (to allow for changes to the site's layout, including changes to the rail loop, the emplacement areas and a reduction in the footprint of the main water supply dam); and
- Mod 3 in November 2012 (to allow for the construction of a power line and an extension to the rail passing line).

Quarrying operations at Peppertree involve the stripping of overburden from the quarry pit area (see **Figure 2**) and the extraction of hard rock using drill and blast techniques. Overburden is stripped by dozer, loaded onto trucks and transported to emplacement areas where it is spread and shaped. In the pit, rock is blasted and then crushed by a mobile in-pit primary crusher, before being transported by either truck or conveyor to an out-of-pit screening and stockpiling area. The product material is stored in bins prior to being sent off-site by train. At full production, four trains a day will be despatched from Peppertree along the Main Southern Railway line to Sydney. Road transport of quarry products from Peppertree is only permitted in an emergency and with the approval of the Secretary.

Peppertree is surrounded by the Morton National Park to the east, Boral's Marulan South limestone mine to the south, and rural and rural residential properties to the north and west (see **Figure 2**). Road access to Peppertree is via the Marulan South Road, a public road providing access from the Hume Highway to a small number of private rural properties and commercial enterprises along its 9 km length. Marulan South Road terminates at Peppertree and Boral's nearby Marulan South Limestone Mine. To the northeast of Peppertree, and across the Barbers Creek valley, is Long Point Road, a rural road that terminates in the carpark of the Long Point Lookout (see **Figure 1**). There are several residences along this road that potentially could be impacted by the operations of Peppertree.

Peppertree is zoned RU1 - Primary Production under the *Goulburn Mulwaree Local Environmental Plan 2009*. Extractive industries are permitted with consent in this zone.

2. PROPOSED MODIFICATION

The proposed modification has two components:
- construction of a new overburden emplacement area; and
- extension of in-pit operating hours.

2.1 Proposed Southern Overburden Emplacement Area

Overburden at Peppertree is currently permitted to be emplaced in the:
- noise bunds along the northern and eastern boundaries of the quarry;
- western emplacement area and noise bund to the west of Boral's railway line; and
- eastern emplacement area adjoining the quarry pit (see **Figure 2**).

Boral also intends to emplace about five million cubic metres of overburden from Peppertree within a pit at its limestone mine. However, approval for this needs to be sought as part of a State significant development application that Boral is currently preparing for the limestone mine. This development application has yet to be submitted to the Department.

The noise bunds were completed during the construction of the quarry and the eastern and western emplacement areas are expected to reach capacity by the end of 2016. Therefore, as an interim measure, Boral is proposing to construct an additional emplacement area to the southeast of the quarry pit, as shown on **Figures 2 and 3**. The proposed emplacement area would hold approximately one million cubic metres of overburden and would take approximately 12 months to construct. Overburden would be transported from the pit to the proposed emplacement area by truck. Construction would commence at the southern end of the proposed emplacement area, and then move northward towards the existing eastern overburden emplacement area.

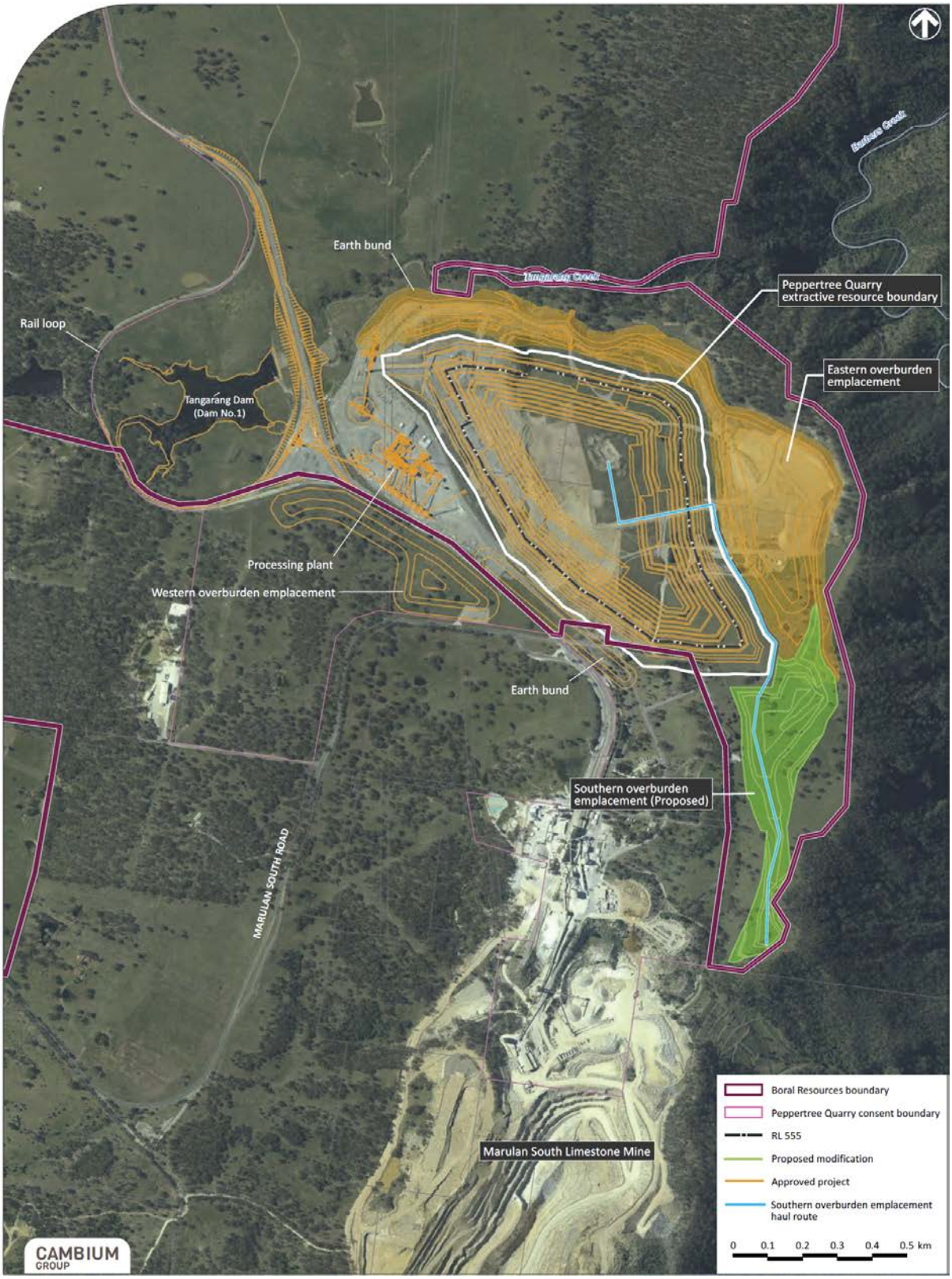

Figure 2: *Approved quarry layout and location of proposed southern overburden emplacement area*

Figure 3: *Graphic showing the location of the existing and proposed emplacement areas*

The proposed emplacement area would be built over Peppertree's granodiorite resource, which exists to both the north and south of the quarry pit. Boral recognises that the proposed emplacement area may need to be relocated in the future to access this resource, but expects that this is unlikely for at least 25 years.

2.2 In-Pit Operating Hours

The second element of the modification is a proposal to extend in-pit operating hours (currently limited to 7am to 7pm) by six hours. The proposal seeks approval to conduct in-pit activities, including transfer of materials from the pit, for 16 hours per day (5am to 11pm) any day of the week. Boral is seeking this extension of hours as it has found that there is significantly more weathered material (overburden) overlying the granodiorite resource than it expected. As a result, the in-pit crusher is unable to produce enough raw feed for the out-of-pit processing plant (which has approval to operate 24 hours a day) to meet the quarry's approved production and transportation rate of 3.5 Mtpa within the currently approved 7am to 7pm in-pit operating hours.

Although Boral has explored alternatives to increasing in-pit operating hours, it has found that the higher scalping ratio encountered during the early development of the quarry (30% rather than the expected 15%), combined with the current high demand for aggregates and sand in the Sydney market, meant that none of these alternatives would enable Peppertree to meet demand for its product.

The proposed modification is described in full in the Environmental Assessment (EA), which is attached as **Appendix A**. The approved quarry layout and the location of the proposed emplacement area is shown on **Figure 2**. Key aspects of the existing and proposed development are compared in **Table 1**.

Table 1: *Key aspects of the existing and proposed development*

Aspect	***Existing***	***Proposed***
Production Rate	3.5 Mtpa	No change
Quarry Life	To 2038	No change
Transportation Rate	3.5 Mtpa (up to four trains per day)	No change
Employees	30 full time employees	No change
Hours of Operation	Construction: Monday – Friday, 7am – 6pm Saturday, 8am – 1pm	No change
	Topsoil/overburden removal/emplacement: Any day, 7am – 7pm	No change
	In-pit activities (drilling, extracting, processing ,transfer of material out of pit): Any day, 7am – 7pm	Any day 5am -11pm
	Out-of-pit activities (processing/loading/delivery/ maintenance): Any day, 24 hours	No change
Blasting Hours	9am – 5pm Monday to Saturday	No change
Quarrying methods	Excavation, drill and blast,	No change
Processing methods	Crushing and screening	No change
Infrastructure and water management system	In-pit crusher, conveyors, processing plant, rail loading facility, administration offices, workshop and water management system	No change to approved infrastructure layout Additional drainage channels and sediment basins required to manage water around the proposed emplacement area

3. STATUTORY CONTEXT

Although Part 3A of the EP&A Act was repealed on 11 October 2011, Peppertree remains a "transitional Part 3A project" under Schedule 6A of the EP&A Act. The proposed modification must therefore be assessed under the former section 75W of the EP&A Act, in accordance with clause 12 of that Schedule.

The Minister is the approval authority for this modification application. However, under the Minister's delegation of 16 February 2015, the Executive Director, Resource Assessments & Compliance may determine the application as:

- no political donations have been declared;
- Goulburn Mulwaree Council does not object to the proposed modification; and
- less than 25 public submissions by way of objection were received.

The Department has considered the nature of the modification and is satisfied that it is within the scope of section 75W of the EP&A Act. Although the modification would result in an increase in the disturbance area at Peppertree and a change to the hours in which in-pit activities could be undertaken, most aspects of the approved operations (including the maximum production rate, transportation arrangements, number of employees, quarrying method and location of key processing infrastructure) would not change. The Department is therefore satisfied that the proposed modification is within the scope of section 75W of the EP&A Act.

4. CONSULTATION

The Department exhibited the modification application and associated EA from 6 April to 6 May 2016:

- on the Department's website;
- at the Department's Information Centre;
- at the offices of Goulburn Mulwaree Council; and
- at the Nature Conservation Council.

The Department advertised the exhibition in the *Goulburn Post* and referred the modification application and EA to relevant State Government authorities and Goulburn Mulwaree Council for comment. The Department also wrote to adjoining landowners to advise them of the exhibition.

The Department received six submissions from Government agencies and five from nearby residents. All submissions received are attached at **Appendix B**.

Agency Submissions
The **Geological Survey of New South Wales**, part of the Division of Resources and Energy of the NSW Department of Industry, advised that Boral has adequately dealt with the issue of potential resource sterilisation, and raised no objection to the proposed modification.

The **Environment Protection Authority (EPA)** advised that it supported additional noise monitoring locations and the monitoring of low frequency noise. The EPA also made recommendations regarding surface water management around the proposed emplacement area to ensure protection of the adjoining natural landscapes.

The **Office of Environment and Heritage (OEH)** raised no objection to the proposed modification subject to the implementation of the proposed biodiversity offset strategy and the registration of the proposed biobanking agreement within 12 months of commencement of construction of the proposed emplacement area.

OEH requested some minor clarifications around the proposed management measures for Aboriginal cultural heritage. Following consideration of the information provided by Boral in its Response to Submissions report, OEH advised it was satisfied.

The **Department of Primary Industries - Water (DPI Water)** noted that no approvals are required for the proposed development under the *Water Management Act 2000*, provided that Boral ensures that the surface water drainage patterns are not significantly altered and there is no impact on groundwater and/or other water users. DPI Water recommended some changes to the site's Water Management Plan, advising that water quality monitoring should be designed to achieve and demonstrate no net impacts on receiving waters and should include sampling of water quality during discharge events.

Similarly, **WaterNSW** noted there have been some incidences of non-compliance with regard to surface water management at Peppertree and made a number of recommendations relating to the design and independent auditing of the water management system for the proposed emplacement area.

Goulburn Mulwaree Council advised that it does not object to the proposed modification. Council advised that it supported on-going implementation of the site's management plans, particularly regarding quarterly noise monitoring, and imposition of conditions relating to rehabilitation and biodiversity. Council also noted that it intends to enter into negotiations with Boral regarding a voluntary planning agreement for the maintenance of Marulan South Road.

The matters raised by Council and the State government agencies are discussed in **Section 5** below.

Community Submissions
Five members of the local community made submissions objecting to the proposed modification, principally on the grounds of:

- increased noise associated with the proposed extended hours of operation for in-pit activities;
- potential for increased dust emissions;
- perceived inequity resulting from quarries around Marulan being expanded to supply the Sydney construction market; and
- loss of property values.

One submission also raised concern about the widening of Marulan Road and the impact of the removal of trees along this road on the rural landscape. These comments appear to relate to Boral's proposal to submit a State significant development application for its Marulan South limestone mine, rather than this modification. The potential impact of the proposed modification on the amenity of nearby residents, particularly through increased noise or dust, is considered in detail in **Section 5**, particularly **Sections 5.1 and 5.4**.

Response to Submissions
Boral provided its Response to Submissions Report (RTS) on 15 July 2016 (see **Appendix C**). The Department forwarded the RTS to Goulburn Mulwaree Council, WaterNSW, the EPA and OEH and made it publicly available on the Department's website.

Comments were received from WaterNSW, the EPA and OEH, with each agency advising that Boral had adequately responded to the issues raised by that agency in their submission.

5. ASSESSMENT

In assessing the merits of the proposed modification, the Department has considered:
- the EA supporting the proposed modification (see **Appendix A**);
- agency and community submissions (see **Appendix B**);
- Boral's RTS (see **Appendix C**);
- provisions of relevant environmental planning instruments, government and guidelines; and
- relevant provisions of the EP&A Act.

The Department considers that the key assessment issues relate to additional noise resulting from the extended in-pit activities and biodiversity impacts. The Department's assessment of these and other issues is addressed below.

5.1 Noise

Introduction
The proposed modification has the potential to increase the quarry's noise impacts as a result of extension of in-pit operating hours and also from construction of the proposed emplacement area. The EA therefore included a Noise Impact Assessment (NIA) undertaken by Wilkinson Murray Pty Ltd.

The NIA assessed the potential impact of the proposed modification on 17 residential receivers (R1 to R17) as shown on **Figure 4**. Also shown on **Figure 4** are receivers owned by Boral (numbers prefixed with a B), a proposed dwelling (identified as PR) and nearby commerical premises (numbers prefixed with C). The commercial premises include Aglime (C1), a company which manufactures lime fertiliser, and calcium stock feed supplements and Foti Fireworks (C3), a fireworks manufacturing facility. Generally, however, Peppertree is located within a quiet, rural area with low background noise levels.

The current project approval identifies only seven sensitive receivers around Peppertree. Since the project was approved in 2007, four of these receivers have been acquired by Boral. The NIA identified additional residential receivers and adopted a new numbering system for the purposes of assessing the noise impacts of the proposed modification and to ensure consistency with the noise assessment currently being prepared for the new development application for the limestone mine.

The current operational noise impact assessment criteria for Peppertree are shown in **Table 2**. As shown, the "Day" noise criteria apply throughout Peppertree's day shift (7am to 7pm). The "Evening" and "Night" criteria apply during the period of Peppertree's night shift (7pm to 7am).

Table 2: *Current Operational Noise Impact Assessment Criteria (dB(A))*

Residential Receiver	***Day Shift***	***Night Shift***		
	Day $L_{Aeq(15\ min)}$	***Evening*** $L_{Aeq(15\ min)}$	***Night***	
			$L_{Aeq(15\ min)}$	$L_{A1(1\ min)}$
B5 (2)	39	35	35	45
R3 (5)	35	35	35	45
R2 (6)	35	35	35	45
R8 (16)	41	35	35	45
Any other noise sensitive location	35	35	35	45

Note: Receiver numbers in brackets are the those used in the current project approval and original project EA.

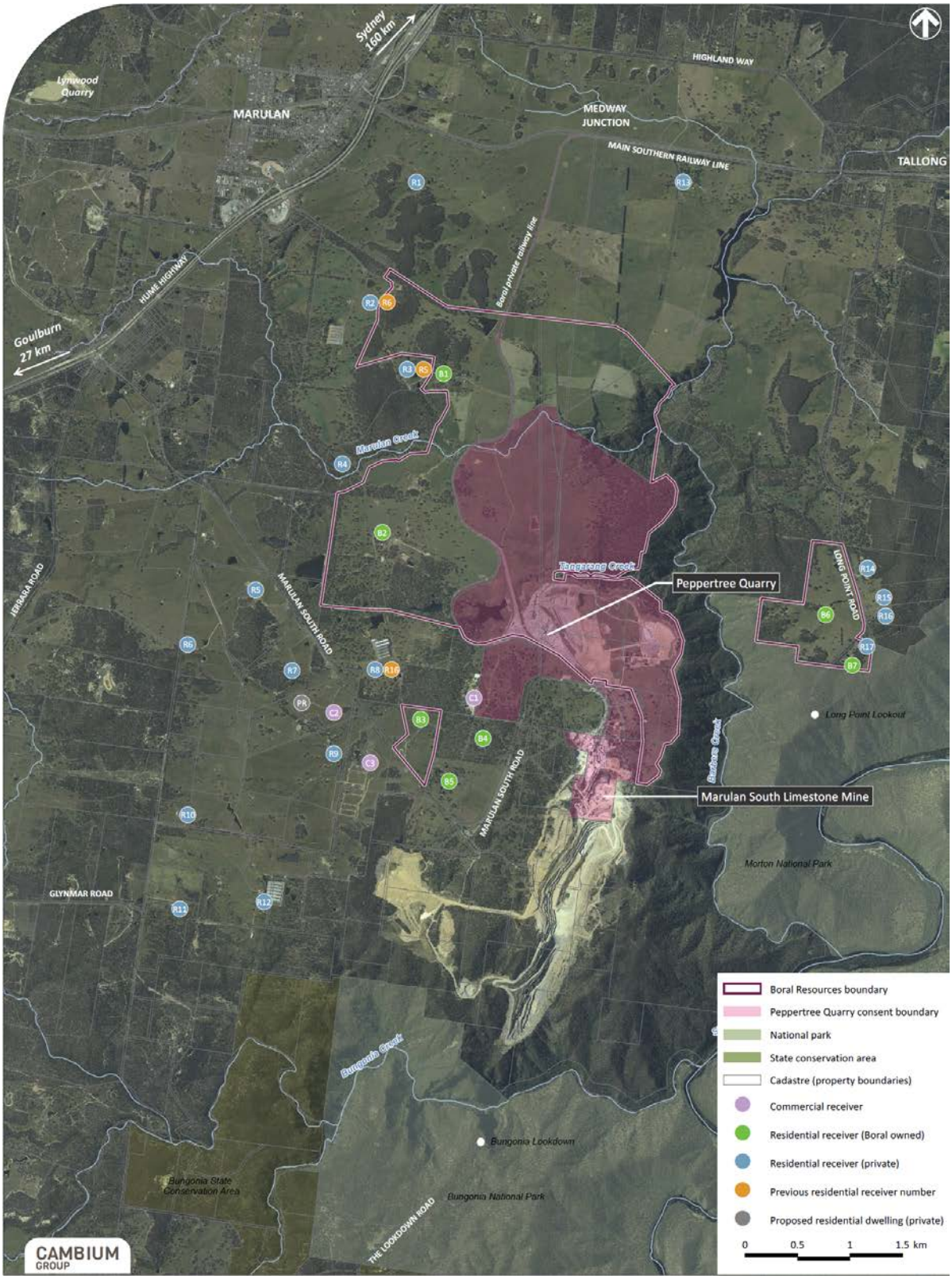

Figure 4: *Location of residential receivers*

Receiver B5 is one of the properties that has been acquired by Boral. Therefore, with the exception of R8, which has an operational noise impact assessment criterion of 41 dB(A) $L_{Aeq(15\ min)}$ for the day shift period (7am to 7pm), the operational noise impact assessment critierion at all residential receivers is currently 35 dB(A) $L_{Aeq(15\ min)}$ across the day, evening and night time periods.

Noise Predictions

The NIA modelled the predicted noise emissions of Peppertree's operations, including the activities associated with the proposed modification, at all residential receivers. The noise model was run under the conservative assumption that all activities at the quarry were occuring simultaneously, during hours as shown in **Table 3**. The noise model predicted impacts during both calm and worst-case meteorological conditions. The noise model was based on the key assumption that the in-pit mobile crusher would not operate above RL 555 during the extended in-pit operating hours.

Table 3: *Noise Modelling Operational Scenario*

Operation	Day Shift 7am-7pm	Night Shift 7pm-7am
In-pit extraction and processing operations	✓	5am-7am & 7pm-11pm
Overburden operations (southern overburden emplacement)	✓	x
Secondary & Tertiary processing	✓	✓
Rail loading & product transportation	✓	✓

The predicted noise levels for the day shift (7am to 7pm) and the night shift (7am to 7pm) at Peppertree as a result of the proposed modifcation are shown in **Table 4** and **Table 5** below.

Table 4: *Noise Predictions – Day Shift (7am to 7pm)*

Sensitive Receiver	Predicted Noise levels, $L_{Aeq,15min}$		Operational Noise Limit $L_{Aeq,15min}$
	Calm	Worst-Case Meteorological Conditions	Day Shift
R1	22	28	35
R2	27	31	35
R3	29	34	35
R4	28	34	35
R5	28	35	35
R6	26	31	35
R7	30	35	35
R8	34	38	41
R9	29	34	35
R10	25	31	35
R11	22	27	35
R12	24	30	35
R13	22	29	35
R14	33	34	35
R15	32	33	35
R16	32	33	35
R17	33	34	35

Table 5: *Noise Predictions – Night Shift (7pm to 7am)*

Sensitive Receiver	Predicted Noise Levels, $L_{Aeq,15min}$		Operational Noise Limit $L_{Aeq,15min}$
	Calm	Worst Case Meteorological Conditions	Night Shift
R1	16	25	35
R2	22	28	35
R3	24	31	35
R4	22	33	35
R5	23	33	35
R6	19	29	35
R7	25	33	35
R8	29	35	35
R9	21	28	35
R10	16	25	35
R11	10	21	35
R12	12	21	35
R13	16	26	35
R14	27	28	35
R15	26	28	35
R16	26	28	35
R17	27	28	35

The predicted noise levels as a result of the proposed modification comply with the noise criteria in the existing project approval at all receivers under both calm and worst-case meteorological conditions, including at R8, the closest residential receiver. At R8, the daytime maximum predicted noise level is 34 dB(A) during calm conditions and 38 dB(A) during worst case meterological conditions (against a criterion of 41 dB(A)). At R8, the nighttime maximum predicted noise level is 29 dB(A) during calm conditions and 35 dB(A) during worst-case meterological conditions (against a criterion of 35 dB(A)).

Cumulative Noise Impacts

Under its current approval, Boral is required to take all reasonable and feasible measures to ensure that noise generated by Peppertree, combined with the noise generated by other industries, does not exceed the following amenity criteria on any privately-owned land:

- 50 dB(A) $L_{Aeq,\ 11\ hour}$ – day;
- 45 dB(A) $L_{Aeq,\ 4\ hour}$ – evening; and
- 40 dB(A) $L_{Aeq,\ 9\ hour}$ – night.

As shown on **Tables 4 and 5**, by itself, it is predicted that Peppertree would comply with the amenity criteria at all residences. When combined with the principal other industrial land use in the area (ie the limestone mine), predicted noise levels are also below the amenity criteria for industrial noise during the daytime, evening and night time periods (see **Table 6**).

Sleep Disturbance Criteria

The NIA reviewed the data from night-time attended noise monitoring to establish whether the proposed modification would comply with the sleep disturbance criteria in the project approval. The NIA found that the maximum $L_{A1,1\ min}$ noise level at any receiver would typically be less than 8 dB(A) above the $L_{Aeq,15min}$ level, leading to a worst-case $L_{A1,1min}$ of 43 dB(A) at any receiver. The proposed modification is therefore predicted to comply with the sleep disturbance criteria of 45 dB(A).

***Table 6** – Cumulative noise from combined operation of Peppertree (as modified) and the limestone mine*

Receiver	Day	Evening	Night
	Amenity Criteria 50 $L_{Aeq,day}$	Amenity Criteria 45 $L_{Aeq,evening}$	Amenity Criteria 40 $L_{Aeq,night}$
R1	26	26	26
R2	29	29	29
R3	33	33	33
R4	32	33	33
R5	33	35	35
R6	30	34	34
R7	34	37	37
R8	36	38	38
R9	35	38	38
R10	32	35	35
R11	29	35	35
R12	32	38	38
R13	29	29	29
R14	34	33	33
R15	34	33	33
R16	34	33	33
R17	33	31	31

Land Acquisition Criteria

The existing project approval contains land acquisition criteria. However, as these are higher than the operational noise impact assessment criteria, it is predicted that they would not be exceeded at any residential receiver.

Low Frequency Noise

The NIA noted that it is possible for low frequency noise associated with Peppertree's operations to be audible at residential receivers. For low frequency noise, the existing *NSW Industrial Noise Policy* recommends that an assessment be conducted of the difference between C-weighted and A-weighted noise levels. If the difference between these two levels is more than 15 dB, then a correction of an additional 5 dB should be applied to account for the additional annoyance.

The NIA assessed the difference between C-weighted and A-weighted noise levels at the nearest residence, R8, and predicted a difference of 15 dB between these two weighted noise levels. While this difference complies with the EPA's recommended difference, it also suggests there may be potential for the 15 dB criterion to be exceeded.

Assessment

The NIA predicts that the proposed modification would be able to comply with existing operational noise assessment criteria at all locations, under both calm and worst-case meteorological conditions. The five submissions received from the members of the community all raised operational noise as a key issue, particularly in objecting to the proposed extension of in-pit hours. The five submissions were received from four residences. Two of these residences are located along Long Point Road to the northwest of Peppertree, one is located on South Marulan Road and one is located on Green Hills Road to the northwest.

The Department notes that, at the closest residential receiver, R8, the NIA predicted the increase in night time operational noise as a result of the proposed modification would be less than 0.5 dB. As changes in noise levels of less than 2 dB are generally not able to be perceived by the human ear and, as the predicted noise level complies with the existing noise criteria in the approval, the Department considers this minor increase to be acceptable.

In its RTS, Boral included information on additional noise monitoring (using a real-time directional unattended noise monitor) undertaken at two residences on Long Point Road in August 2015. The purpose of the additional monitoring was to determine whether Peppertree was complying with the operational noise criteria in its approval and also determine whether Peppertree is, or could be, the source of any elevated and/or low frequency noise. The additional monitoring was undertaken at R17, which is located approximately 1.9 km from Peppertree and 2.6 km from the limestone mine, and a second (more distant) Long Point Road residence, located approximately 3.6 km to the northeast of Peppertree and 5 km from the limestone mine.

Peppertree's operational noise impact assessment criteria for R17 is 35 dB(A) for both the day shift (daytime period) and the night shift (evening and night periods). The monitoring found that, during the daytime periods, the 90th percentile noise levels from the limestone mine ranged between 26 and 38 dB(A) and the noise levels from Peppertree ranged between 21 to 31 dB(A). In the evening periods, a range of 21 to 36 dB(A) was measured from the limestone mine and 14 to 28 dB(A) from Peppertree. For the night periods, a range of 15 to 35 dB(A) was observed from the limestone mine and Peppertree showed levels of 18 to 25 dB(A).

These measurements and also analysis of the data during periods when the C and A-weighted noise level difference was greater than 15 dB, confirmed that low frequency noise was not emanating from Peppertree during the monitoring period. The noise monitoring instead indicated that low frequency noise was emanating from the limestone mine. The RTS report states this will be considered further in the noise impact assessment currently being undertaken for the Marulan South Limestone Mine Continued Operations State Significant Development Application.

The EPA has reviewed the NIA and supports its conclusion that noise monitoring should be undertaken at R17 and R4 (to the northwest of the quarry) to provide a more comprehensive data set for noise emissions. The EPA also considers that low frequency noise should be monitored. The Department has included these requirements in the recommended conditions. Recommended conditions also require that the extended in-pit operating hours only occur when the in-pit crusher is below RL 555.

Conclusion
The proposed modification is considered unlikely to result in any significant change to the operational noise levels at Peppertree, with the NIA predicting no exceedances of the criteria in the project approval at any residential receiver. The Department is satisfied that the proposed modification is unlikely to result in any exceedances of the existing operational noise criteria.

The Department is satisfied that, subject to recommended conditions, noise impacts associated with the proposed modification would be acceptable and Peppertree would be able to be managed to ensure compliance with all applicable noise criteria.

5.2 Biodiversity

Introduction
A Biodiversity Assessment Report (BAR), prepared by Niche Environment and Heritage Pty Ltd (Niche), was included in the EA. The BAR assessed the biodiversity impacts of the proposed modification in accordance with the requirements of the *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects* (the FBA). It also assessed the potential impacts of the proposed modification on Matters of National Environmental Significance (MNES) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The BAR focused on the potential biodiversity impacts associated with the clearing of vegetation for the proposed emplacement area, on the assumption that the proposed increase in in-pit operating hours would have minimal impacts on biodiversity in terms of any additional noise, air quality impacts or light spill. As Peppertree already has approval to conduct its out-of-pit activities 24 hours a day, the Department concurs with this assumption and agrees that any biodiversity impacts associated with the proposed increase of in-pit hours would be negligible.

Vegetation Communities
The proposed emplacement area, including the associated haul road and water management infrastructure, is located on a 13 hectare (ha) parcel of land that has been cleared and used for the grazing of livestock for many years. The vegetation on the site area is a mix of exotic and native

grasses, and includes scattered native trees. The BAR classified 4.8 ha of the vegetation on this site as exotic pasture and 8.1 ha as *White Box -Yellow Box - Blakely's Red Gum Woodland* (Box-Gum Woodland) (see **Figure 5**).

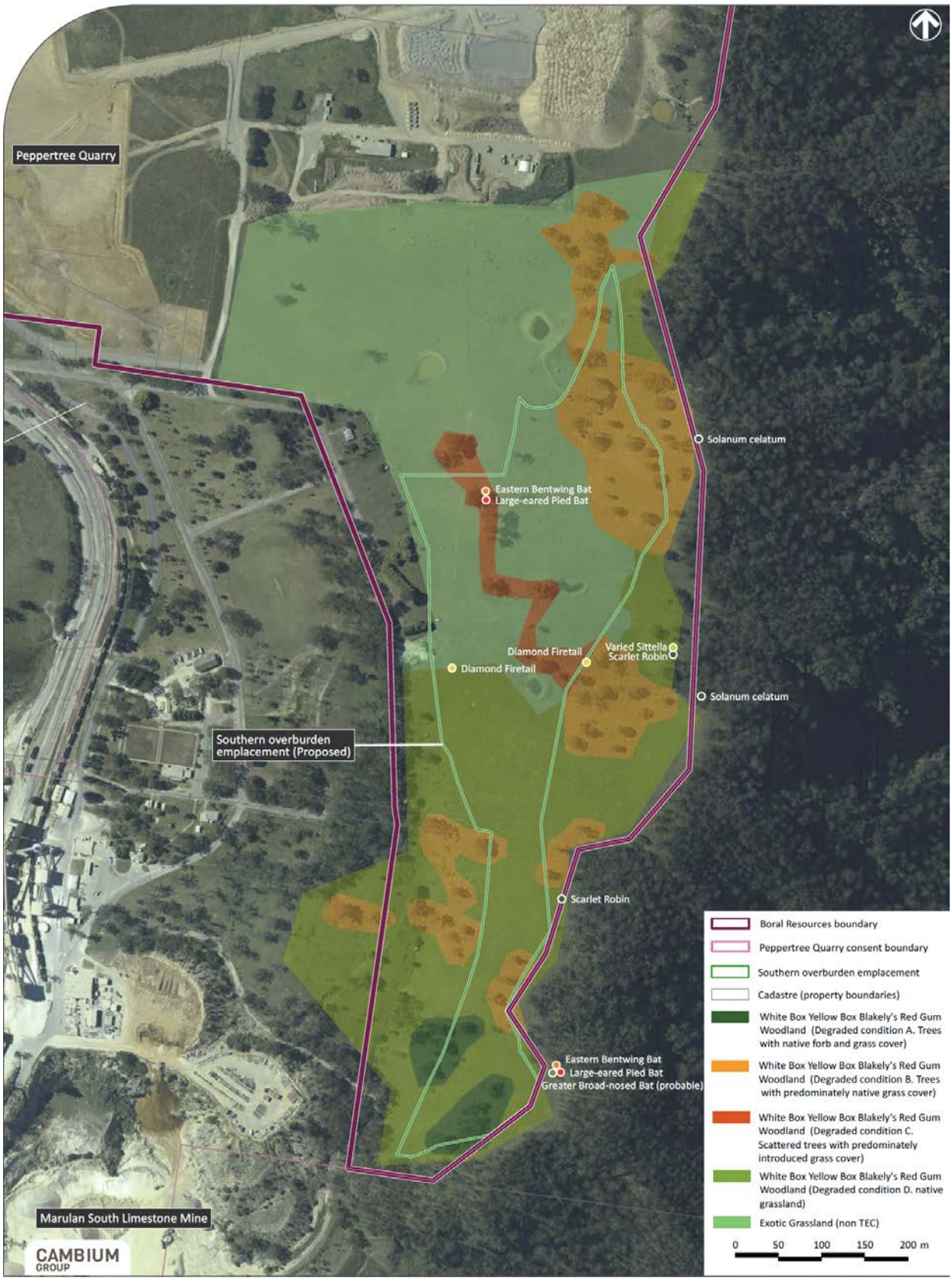

Figure 5: *Location and condition of White Box Yellow Box Blakely's Red Gum Woodland on the site area*

Box-Gum Woodland is a listed Endangered Ecological Community (EEC) under the *Threatened Species Conservation Act 1995* (TSC Act). It is also a listed Critically Endangered Ecological Community (CEEC) under the EPBC Act. In south-eastern NSW, Box-Gum Woodland has been extensively cleared for agricultural purposes due to its occurrence on fertile soils, and it is estimated that only 0.05% of the original extent of Box-Gum Woodland remains in near-to-original condition.

Threatened Flora
During a field survey undertaken in May 2015, no threatened flora species were found on the site area. However, as shown on **Figure 5,** one threatened flora species, *Solanum celatum*, is present just to the east of the site area.

Threatened Fauna
The BAR notes that fifteen threatened fauna species have either been recorded on, or are considered likely to use, the site area. During the recent survey, six avifauna species listed as vulnerable under the TSC Act (Diamond Firetail, Scarlet Robin, Varied Sittella, Eastern Bentwing Bat, Greater Broad-nosed Bat and Large-eared Pied Bat) were recorded on the site (see **Figure 5**). The BAR also identified nine threatened fauna species that have a moderate or higher chance of using the site area (Gang-gang Cockatoo, Speckled Warbler, Rainbow Bee-eater, Black-faced Monarch, Flame Robin, Rufous Fantail, Eastern False Pipistrelle, Koala and Grey-headed Flying-fox).

As shown in **Table 7** below, it is also possible that Koalas could occur in the site area. However, the recent survey found no evidence of Koalas using the site area. Given the lack of connectivity between the scattered trees, Niche considers there is a low likelihood of Koalas using the study area, and that species credits are therefore not required.

Table 7: *Threatened fauna potentially affect by proposed modification*

	Species Common Name	TSC Act Status	EPBC Act Status	Species Credit/Ecosystem Credit
Recorded in Study Area	Diamond Firetail	V	-	Ecosystem
	Scarlet Robin	V	-	Ecosystem
	Varied Sittella	V	-	Ecosystem
	Eastern Bentwing Bat	V	-	Ecosystem and Species
	Greater Broad-nose Bat	V	-	Ecosystem
	Large-eared Pied Bat	V	V	Species
Potential Intermittent use of Study Area	Gang –Gang Cockatoo	V	-	Ecosystem
	Speckled Warbler	V	-	Ecosystem
	Eastern False Pipistrelle	V	-	Ecosystem
	Grey-headed Flying Fox	V	V	Ecosystem and Species
	Rainbow Bee-eater	-	M	N/A
	Rufous Fantail	-	M	N/A
	Cattle Egret	-	M	N/A
	Black-faced Monarch	-	M	NA
Unlikely Occurrence in Study Area	Koala	V	V	Species

Note: V= vulnerable; M= migratory

The Large-eared Pied Bat and Eastern Bentwing Bat are also potentially species credit species under the FBA. However, there is no suitable habitat for these species on the site area. Therefore Niche considers that both species should be ecosystem credit species only and the impact to these species should be included in the assessment of the impact to the Box-Gum woodland.

EPBC Considerations
Threatened fauna listed under the EPBC Act include both vulnerable species (Koala, Large-eared Pied Bat and Grey-headed Flying Fox) and migratory species (Cattle Egret, Rainbow Bee-eater, Rufous Fantail and Black-faced Monarch). The BAR included a MNES Assessment of Significance for each of these species, as required by the EPBC Act. Each assessment concluded that a significant impact on the species was unlikely.

The BAR also included an MNES Assessment of Significance for the Box-Gum Woodland, which concluded that the proposed modification is unlikely to significantly impact this CEEC.

Avoidance, Mitigation and Management

The location of the proposed emplacement area was influenced by a number of factors, including the need to locate the development as far as possible from neighbouring residences, the need to locate the emplacement area close to the quarry pit and the need to avoid clearing land with higher ecological values. In attempting to avoid clearing land with higher biodiversity values, Boral sought to identify land that had already been significantly modified by past agricultural activities, such as the site area. The Department notes that although the site area contains 8.1 ha of Box-Gum Woodland, only 0.7 ha of the vegetation has high resilience, with the remainder having low to moderate resilience, suggesting that natural regeneration of Box-Gum Woodland on this site is unlikely.

There are a number of management plans in place at Peppertree that include actions to limit the impacts of quarrying operations on biodiversity. These plans would be reviewed and updated to include the proposed emplacement area. The Department is satisfied that the site of the proposed emplacement area has been chosen to avoid impacts on biodiversity as far as is reasonable and practicable.

Assessment of Biodiversity Impacts

The principal direct biodiversity impact of the proposed modification is the clearing of 8.1 ha of Box-Gum Woodland, a listed EEC and CEEC. The Department has carefully considered the condition of this vegetation and the extent of its use by threatened fauna. The Department accepts Niche's conclusion that Koalas are unlikely to use this land, given its level of disconnectedness from surrounding native vegetation. The Department notes that the threatened birds and bats that use, or are likely to use, this vegetation are highly mobile and capable of dispersing throughout the landscape, including to adjoining areas of native vegetation and national parks.

In terms of indirect impacts, the proposed modification has the potential to indirectly impact on biodiversity values through:

- noise and dust impacts;
- water quality impacts;
- erosion and sedimentation impacts; and
- weed and edge effects.

Given the sensitive nature of the surrounding environment, agencies have recommended stringent conditions relating to the management of surface water outflows from the proposed embankment. Subject to these conditions and existing management and monitoring requirements, the Department is satisfied that any additional indirect impacts (ie outside the site of the emplacement area itself) would be insignificant.

In reviewing the quarry's existing biodiversity conditions, the Department has imposed additional requirements, including a condition requiring Boral to prepare and implement a Biodiversity and Rehabilitation Management Plan that details how the whole quarry site (including the Biodiversity Offset area and the habitat enhancement area) would be managed to protect biodiversity values.

The Department is satisfied that Boral has taken, or proposes to take, all reasonable and feasible measures to avoid, minimise and manage the biodiversity impacts associated with the proposed modification and it is therefore appropriate that residual biodiversity impacts are offset under the FBA.

Biodiversity Offset Strategy

The BAR found that 225 ecosystem credits are required to offset the impacts of clearing 8.1 ha of Box-Gum Woodland. OEH has reviewed the BAR and advised that the credit calculations are correct.

Boral has identified an offset site which contains approximately 38 ha of Box-Gum Woodland on its landholdings (see **Figure 6**). The site is located about 1.4 km to the north of the proposed emplacement area and would generate 291 Box-Gum Woodland ecosystem credits, thereby meeting 129 percent of the offset liability for the proposed modification. The proposed offset area contains an established community of Box-Gum Woodland in better condition than that on the land proposed to be cleared and is part of an extensive corridor of native vegetation adjoining the Morton National Park.

A recommended condition has been drafted in consultation with OEH to require that 225 ecosystem credits are offset through the establishment of a biobanking site on the land shown in **Figure 6** within 12 months of commencing construction of the proposed emplacement area.

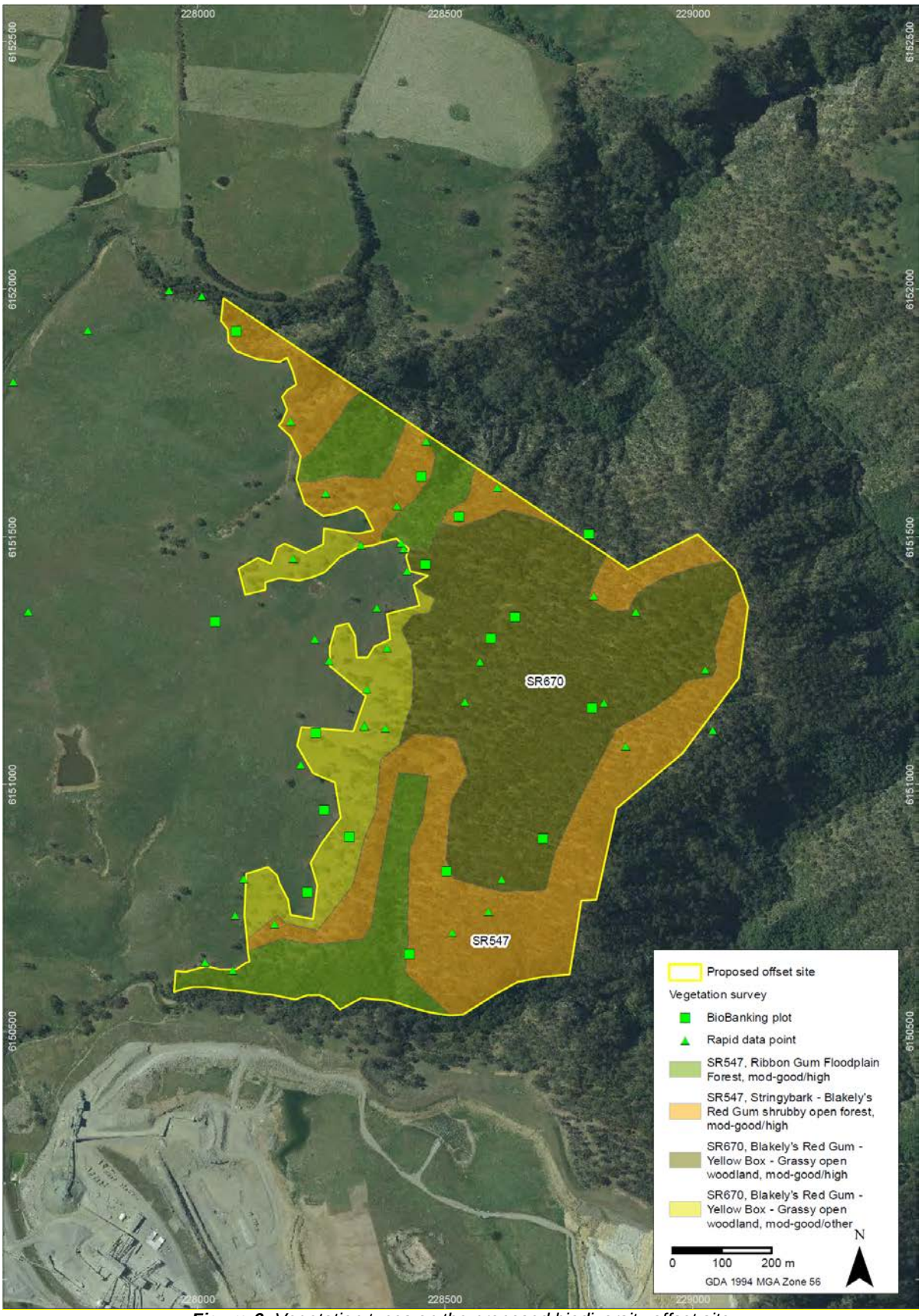

Figure 6: *Vegetation types on the proposed biodiversity offset site*

Conclusion
The Department is satisfied that Boral has designed the proposed emplacement area so as to avoid impacts on biodiversity values as far as is reasonable and feasible and it is therefore appropriate that the residual impacts be offset under the FBA. Boral proposes to offset the clearing of 8.1 ha of Box-Gum Woodland with the establishment of a biodiversity offset area on its land approximately 1.4 km to the north of the quarry pit. OEH has reviewed the draft conditions relating to the biodiversity offset strategy and the requirements for a Biodiversity and Rehabilitation Management Plan and advised it is satisfied with both. The Department and OEH are satisfied that the proposed biodiversity offset strategy meets the requirements of the FBA and would result in the biodiversity impacts of the proposed modification on the Box-Gum Woodland being appropriately offset.

5.3 Surface Water

Peppertree is located within the headwaters of the Shoalhaven River catchment, which is part of the Sydney Drinking Water Catchment. Prior to the quarry's development, its site generally drained to Tangarang Creek, which flows intermittently just north of the quarry pit eastwards to Barbers Creek. Barbers Creek flows east of Peppertree southwards through the Barbers Creek gorge for about 6.5 km until it reaches the Shoalhaven River (**Figure 7**). This confluence is about 30 km upstream of Tallowa Dam, which provides drinking water to Sydney and the Illawarra region. Peppertree is also located within the area of the *Greater Metropolitan Region Unregulated Area Water Sharing Plan*, and has a Water Access Licence to take 145 megalitres/year from the Barbers Creek Management Zone.

Current surface water management system
Surface water at Peppertree is currently managed through a number of sediment basins that capture water from disturbed areas. This water is either used for dust suppression or directed northwards (through pumping or gravity flow) into Tangarang Dam (Dam 1). Tangarang Dam was constructed as a supplementary water supply for the quarry. The dam also supplies an environmental flow (equivalent of at least 10% of the average daily flow) downstream to Tangarang Creek.

Figure 8 shows the layout of the existing water management system at Peppertree. The areas shaded orange drain to the quarry pit from where water is used for dust suppression or else pumped to Tangarang Dam. The areas shaded green drain to a series of small sediment basins on the outer edge of the noise bunds and emplacement areas. These sediment basins drain to either Tangarang Creek or Barbers Creek.

Boral maintains a comprehensive surface water monitoring network within and around Peppertree and the limestone mine. The monitoring network includes:
- monitoring sites on Marulan Creek to the north of Peppertree, which provide data on the water quality of the runoff from open grazing land north of the quarry site;
- monitoring sites on Barbers Creek, both upstream and downstream of the Tangarang Creek confluence, to provide data on any impact from Peppertree on the water quality of the creek; and
- monitoring sites on the Shoalhaven River.

An analysis of data from these sites over the last three years shows that the water quality downstream of Peppertree is significantly better that the water quality upstream.

Proposed Surface Water Management
The proposed emplacement area is located on a north-south ridgeline. Water from the eastern side of this ridge generally drains through a series of small catchments to Barbers Creek. Water from the western side of the ridge generally drains southwards to the north pit of the limestone mine. All drainage lines on either side of the ridgeline are first order streams. Barbers Creek is a fifth order stream.

The EA includes an assessment, undertaken by Advisian Pty Ltd, to assess surface water impacts from the proposed modification on the quantity and quality of downstream surface water. The surface water assessment also considered whether the proposed modification would have a neutral or beneficial effect (NorBE) on water quality, in accordance with the requirements of the *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* (the Drinking Water SEPP).

The surface water management system for the proposed emplacement area follows the same principles as those currently in place for the eastern overburden emplacement (see **Figure 9**).

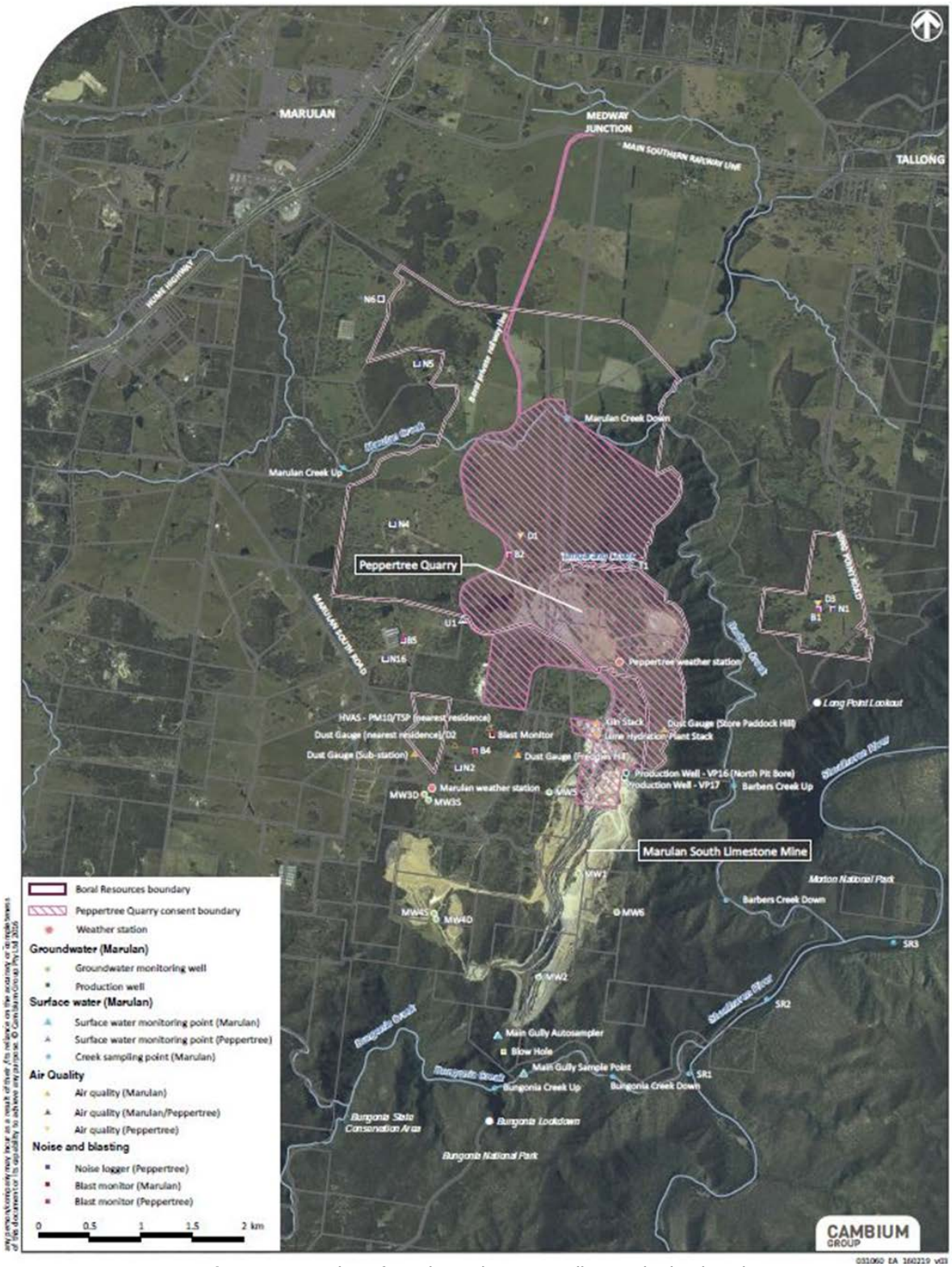

Figure 7: *Location of creeks and water quality monitoring locations*

Catchments A, B and C would drain to three small sediment basins that would overflow to existing drainage lines leading to Barbers Creek. The three sediment basins would be sized to comply with OEH requirements for basins discharging to 'sensitive' receiving environments and would be operated so as to restore the capacity of each basin within 5 days of the end of a storm event either by use of the water for dust suppression or irrigation, or transfer to the quarry pit. Catchments D and E would drain overland to the north pit of the limestone mine and Catchment F would drain to the Peppertree pit. Relevant management plans would be reviewed to include the proposed emplacement area.

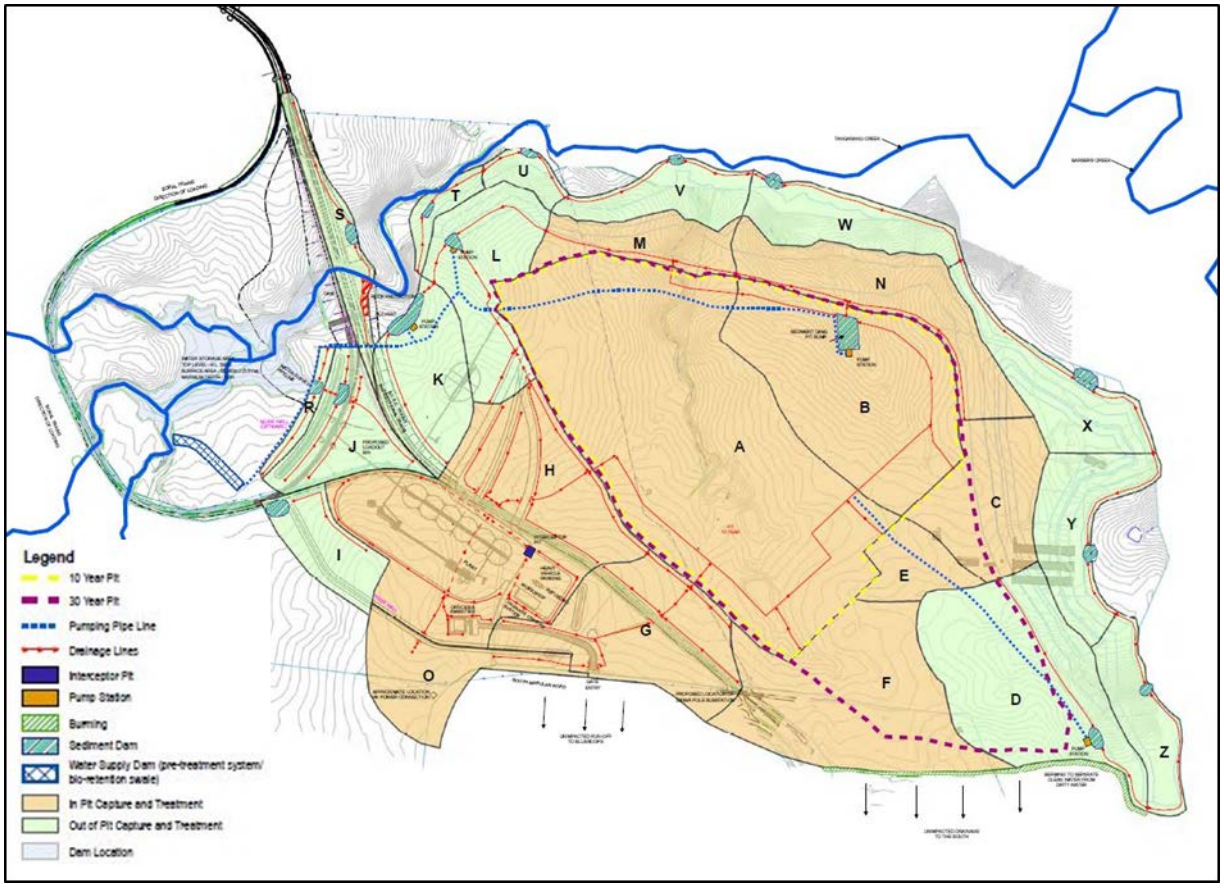

Figure 8: *Surface Water Management System at Peppertree*

Mitigation measures in place at Peppertree would continue to include:

- disturbance of the minimum area of land necessary for the proposed phase of work;
- installation of sediment fencing downslope of any proposed disturbance; and
- construction of diversion channels and sediment basins.

The surface water assessment identified that there could be temporary changes in the flow regime of the three drainage lines leading to Barbers Creek during construction and operation of the emplacement area. However, following rehabilitation, flow regimes are expected to be similar to those at present.

Surface Water Quality

The surface water assessment concludes that Peppertree has had a beneficial effect on downstream water quality primarily due to the reduction of sediment, nitrogen and phosphorous loads leaving the quarry site (due to the reuse of water in the plant and for dust suppression) and treatment of water (through sedimentation) prior to release from the water management system.

However, there have been several minor infringements relating to surface water management at Peppertree. Consequently, WaterNSW (which has a key interest in management of water quality with the drinking water catchment) has recommended that the water management system for the proposed emplacement area be independently audited on completion. The Department has recommended a condition requiring this audit, which was drafted in consultation with WaterNSW.

Conclusion

The Department is satisfied that Boral has designed the proposed modification to avoid impacts on downstream water and that the proposal satisfies the 'neutral or beneficial impact' test under the Drinking Water SEPP. Conditions recommended by WaterNSW have been included in the draft notice of modification requiring that the water management system for the proposed emplacement area is constructed to minimise the potential for any impacts on downstream water quality and that the proposed water management system is independently audited following completion.

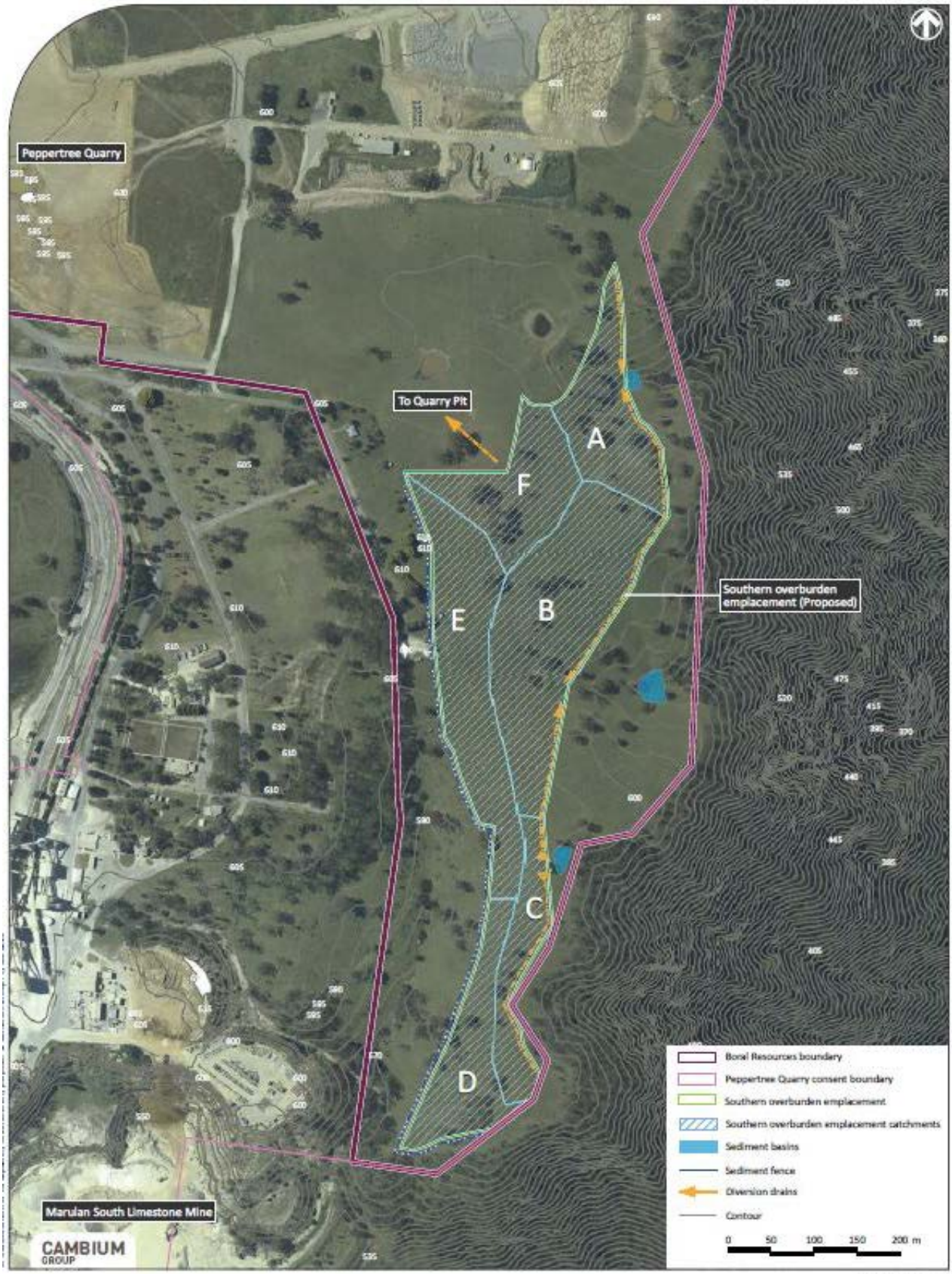

Figure 9: *Catchment locations on the site of the proposed emplacement area*

5.4 Air Quality

The proposed modification has the potential to impact on air quality as a result of the extended in-pit operating hours and also the construction and use of the proposed emplacement area. The EA therefore included an Air Quality Impact Assessment (AQIA), undertaken by Todoroski Air Sciences Pty Ltd, which assessed the potential air quality impacts of these elements of the proposed modification.

The AQIA considered the impacts of dust deposition, TSP (total suspended particles generally less than 50 µm in diameter), PM_{10} (particles with a diameter of less than 10 µm) and $PM_{2.5}$ (particles with a diameter of less than 2.5 µm). The AQIA noted that the great majority of particles generated by quarrying activities at Peppertree are due to mechanical processes such as the crushing of rock and the general disturbance of dusty materials and are therefore generally larger than 2.5 µm.

Boral has operated an air quality monitoring system at Peppertree and the limestone mine since 2011. The system includes two High Volume Air Samplers (HVAS) measuring either TSP or PM_{10} and six dust deposition gauges. The AQIA used the data from this monitoring system and also from Lynwood Quarry (10 km to the northwest) and the EPA's monitors at Bargo (73 km to the northeast) and Wollongong (87 km to the east-northeast) to assist in characterising the background air quality in the area. Both Peppertree and the limestone mine operate automatic weather stations. The data from these stations indicate that the typical wind flow in the area is on an east-west axis with the strongest winds in summer being predominantly from the east and the strongest winds in winter being predominantly from the west.

Existing air quality

Air quality monitoring at Peppertree since 2011 has found that average annual PM_{10} levels have been consistently below the EPA criterion of 30 µg/m³ (12.7 µg/m³ in 2011, 16.2 µg/m³ in 2012, 13.8 µg/m³ in 2013, 17.9 µg/m³ in 2014 and 20.5 µg/m³ in 2015). Monitoring of annual average TSP levels was also consistently below the EPA criterion of 90 µg/m³. However, there were occasional isolated exceedances of the maximum 24-hour average PM_{10} criterion of 50 µg/m³.

Annual average dust deposition levels were generally below the criterion of 4g/m²/month. Higher readings were considered by the AQIA to be a result of the location of dust gauges close to mining and quarrying activities as well as the contamination of samples with bird droppings and/or insects.

Predicted Air Quality

The AQIA modelled the air quality impacts of a single worst-case scenario based on the proposed maximum amount of material being handled at the closest locations to nearby residential receivers. In the model the existing eastern overburden emplacement area is assumed to have been completed and the proposed emplacement area is under construction between the hours of 7am to 7pm. In-pit activities are occurring from 5am to 11pm. All other processing operations at the quarry are occurring in accordance with currently approved 24 hour per day operations. The emissions from the limestone mine were included in the model to assess the potential for cumulative dust effects.

The AQIA assessed the impacts of this scenario on each of 17 residential receivers, both incrementally and cumulatively. The predicted cumulative annual average $PM_{2.5}$, PM_{10}, TSP and dust deposition levels due to the proposed modification and all other sources, including the estimated background levels, are shown in **Table 8**. The predicted emissions remain substantially below all relevant criteria.

The AQIA also included an assessment of potential cumulative 24-hour average PM_{10} impacts, which predicted that there would be no additional days above the 24 average criterion.

There are a number of measures already in place at Peppertree to ensure that the air quality impacts of quarrying and processing operations are minimised. Principal among these is the mobile crusher/ conveyor system which is positioned close to the extraction location, thereby reducing the potential for dust emissions from unnecessary material handling and hauling activity. Boral also has a number of best practice dust mitigation measures into its operations at Peppertree, including

- rehabilitation of exposed areas as quickly as possible;
- watering of haul roads; and
- on-going assessment of meteorological conditions to enable changes to operations if conditions are likely to be conducive to excessive dust generation.

Table 8: *Predicted cumulative air quality impact of the proposed modification on residential receivers*

Receiver ID	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	TSP (µg/m³)	DD (g/m²/month)
	Cumulative impact			
	Annual average			
	Air quality impact criteria			
	8*	30	90	4
R1	3.0	11.3	27.5	2.8
R2	3.0	11.6	27.8	2.8
R3	3.1	11.9	28.3	2.9
R4	3.1	12.2	28.7	2.9
R5	3.2	12.8	29.9	2.9
R6	3.2	12.7	29.7	2.9
R7	3.4	14.0	31.7	2.9
R8	3.6	15.6	34.5	2.9
R9	3.5	14.8	33.0	2.9
R10	3.3	13.1	30.3	2.9
R11	3.2	12.8	29.8	2.9
R12	3.4	14.3	32.1	2.9
R13	3.0	11.2	27.3	2.8
R14	3.1	11.9	28.5	2.9
R15	3.1	12.1	28.8	3.0
R16	3.1	12.1	28.9	3.0
R17	3.2	12.3	29.2	3.0

Conclusion

In summary, the AQIA predicts that the project would be able to continue to operate in compliance with current air quality criteria at all nearby residences. The EPA has reviewed the AQIA and raised no issues regarding the assessment or its findings. Relative to existing operations, the proposed modification is unlikely to result in any significant change to air quality at nearby residences.

The Department is satisfied that the air quality impacts of the proposed modification are acceptable and that Peppertree would be able to comply with all relevant air quality criteria.

5.5 Other Issues

The Department's recommendations with regard to other issues associated with the proposed modification are listed in **Table 9**.

Table 9: *Other issues*

Issue	*Consideration*	*Conclusion and Recommendations*
Visual Impact	• A Visual Impact Assessment (VIA) of the proposed modification was undertaken by Richard Lamb and Associates Pty Ltd (RLA). • The VIA concentrated on the visual impacts of the proposed emplacement area. The VIA noted that visual and lighting impacts of increased in-pit hours would be minimal as the associated activities would occur in the pit, which is below natural ground level and out of sight of any receivers. • With regard to the proposed emplacement area, RLA carried out field assessments to analyse visual impacts from 8 private and 14 public viewing places around Peppertree. • RLA also constructed a digital terrain model to analyse the expected views of the proposed emplacement area from the 17 nearest residential receivers.	• As a result of the local topography, Peppertree is not highly visible from the surrounding privately-owned rural land to the southwest, west and north and subsequently the visual impacts of the proposed modification are highly localised. • With regard to private property, minor views of the top of the proposed emplacement would potentially be visible from two residences, but would represent only a minor change to the current view. As the proposed emplacement is revegetated, its visual impact would be further reduced. • With regard to the surrounding national parks, the view of the proposed emplacement would

	• RLA found that of the 17 residences analysed only two (R10 and R15) would potentially be able to see any part of the proposed emplacement area. • The VIA included a photomontage for R15 (the worst-affected residence) which shows that the changes to its views would be minimal. • There would be significant views of the proposed emplacement area from a short section of South Marulan Road near Peppertree. However, as this section of road is effectively only providing access to Boral-owned land and is infrequently used by members of the public, RLA did not consider the change to views along this stretch of road to be of concern. • With regards to the surrounding national parks, the proposed emplacement area would be partly visible in the distance from informal viewing places near the Long Point Lookout as well as from the Bungonia Lookdown to the south. • From the informal viewing places near Long Point Lookout, the VIA found that the view would not significantly change from what currently exists and notes that the view would only be seen by walkers venturing off the main track. • From the Bungonia Lookdown, the view towards the north is dominated by the limestone mine in the foreground. The change to the view as a result of the proposed emplacement area would be minimal. • The VIA concluded that, overall, the visual impacts of the proposed modification would be minor.	either be insignificant in the context of the visibility of the limestone mine from the Bungonia Lookdown, or only able to be seen in the distance from informal viewing points off the walking track near the Long Point Lookout. • The Department considers that the proposed modification would have a minor or negligible impact on views from surrounding private properties and public viewpoints. • Under existing and future conditions and management plans, Boral is required to progressively revegetate and rehabilitate emplacement areas to minimise their visual impacts. • The Department considers that the minor visual impacts associated with the proposed modification are acceptable.
Aboriginal Heritage	• An Aboriginal and Historic Heritage Impact Assessment (AHHIA) of the proposed modification was undertaken by EMGA Mitchell Mclennan Pty Ltd (EMM). • Peppertree has an Aboriginal Management Committee (AMC), which provides advice on Aboriginal heritage matters. As part of this assessment, an Archaeological Survey was completed by EMM and the AMC in July 2015. • One Aboriginal site was identified during the survey. The site (MQ120) is a culturally modified tree (scarred tree) identified on a ridge landform. • The AHHIA noted that culturally modified trees are rare in the landscape as a result of clearing and the site is of moderate scientific significance. • However, the culturally modified tree is outside the proposed disturbance area and therefore would not be impacted by the proposed modification. • One known Aboriginal site (MQ25) is recorded as being located within the proposed footprint of the proposed emplacement area. However, this site has been previously destroyed through collection. • The landscape of the proposed emplacement area is considered to have areas of low and moderate archaeological sensitivity. • Although it is possible that Aboriginal sites could be damaged through the compaction of topsoil during the emplacement of overburden, the AHHIA concludes that further study of the proposed emplacement area is unlikely to provide additional information beyond that already discovered. • OEH has reviewed the AHHIA and advised it is satisfied with the consultation and methodology used. OEH has recommended a number of changed conditions relating to Aboriginal heritage.	• No known Aboriginal sites would be damaged as a result of the proposed modification. • Should the modification be approved, the Aboriginal Cultural Management Plan would be reviewed in consultation with OEH to include recommendations included in the AHHIA. • The Department considers that the impacts of the proposed modification on Aboriginal heritage would be minor and able to be managed through implementation of a revised management plan.

Socio Economic	• The key issues of concern for the local community with regard to the proposed modification are noise and air quality impacts. • These issues have been considered in detail in this report, and the Department is satisfied that there would be no significant increase in these impacts as a result of the proposal. • The Department is also satisfied that appropriate management measures are or will be put in place to ensure potential impacts are minimised.	• The proposed modification would enable the quarry to continue to contribute to the long-term supply of construction materials to Sydney and regional markets. • The Department is satisfied that this significant socio-economic benefit could be achieved without substantially increasing the environmental impacts of the quarry.
Groundwater	• The proposed modification would not result in any change to the degree or depth of excavation at Peppertree and would therefore not result in any additional impacts on groundwater beyond those already approved. • No excavation is required for the construction of the proposed emplacement area.	• The Department considers the proposed modification would not result in any additional impacts to groundwater.
Traffic and Transport	• Overburden will be transported to the proposed emplacement area via internal haul roads, within currently approved hours (any day, 7am to 7pm). • No changes are proposed to the number or type of vehicles on South Marulan Road.	• There would be no additional traffic or transport related impacts as a result of the proposed modification.
Land, Contamination and Rehabilitation	• Given previous agricultural land use, the potential for contamination of the land to be disturbed as a result of the proposed modification is low. • Boral has undertaken searches of relevant contaminated land registers and advises it is not aware of any potential contaminating activities previously undertaken on the site of the proposed emplacement. • The proposed emplacement would be landscaped and rehabilitated in accordance with the updated Biodiversity and Rehabilitation Management Plan for the quarry.	• Boral is required to review and, if necessary, revise its management plans following any modification of the approval.

6. CONCLUSION

The Department has assessed the proposed modification in accordance with the relevant requirements of the EP&A Act, including the objects of the Act and the principles of ecologically sustainable development.

The Department has carefully considered the impacts associated with the two elements of the proposed modification. Particularly, the Department has assessed the noise impacts of the proposed increase in in-pit operating hours to 5am to 11pm. Following careful consideration of the EA's noise assessment, submissions from community members, the submission from the EPA and additional information provided by Boral in its RTS, the Department is satisfied that the project as modified would be able to be managed so as to comply with relevant noise criteria at all privately-owned residences. Draft conditions have been recommended to require additional noise monitoring as recommended by the EPA, particularly so that any low frequency noise can be identified, and if necessary, mitigated.

Following a careful assessment of potential air quality impacts of the proposed modification, the Department is satisfied that Peppertree would be able to operate in compliance with all relevant air quality criteria.

The proposed modification would result in the clearing of 8.1 ha of Box-Gum Woodland EEC. The Department accepts that the location of the proposed emplacement area was chosen to avoid impacts on biodiversity as far as is reasonable and practicable, and therefore considers it appropriate that the impacts of the proposed modification on biodiversity are offset. Boral's proposed biodiversity offset area generates more than the required number of credits under the FBA and the Department is satisfied that Boral would be able to retire the biodiversity credits generated by the clearing of 8.1 ha of Box-Gum Woodland in accordance with the FBA.

The Department considers the proposed modification would provide economic benefits to NSW by enabling Peppertree to meet its approved extraction and transportation rate of 3.5 Mtpa and supply quarry products to meet increasing demands from the Sydney construction market. The Department has carefully considered the additional impacts on the local community that could potentially result from the proposed modification and is satisfied that these impacts are able to be mitigated and managed so as to comply with all criteria in the project approval. The Department is satisfied that the proposed modification is in the public interest and should be approved, subject to conditions.

7. NOTICE OF MODIFICATION

A Notice of Modification (see **Appendix D**) and Peppertree's project approval as proposed to be amended (see **Appendix E**) have been prepared. Boral has reviewed and accepted the proposed changes to the project approval.

8. RECOMMENDATION

It is RECOMMENDED that the Executive Director, Resource Assessments & Compliance, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report;
- **determines** that the proposed modification is within the scope of section 75W of the EP&A Act;
- **approves** the proposed modification under section 75W of the EP&A Act; and
- **signs** the attached Notice of Modification (**Appendix D**).

Howard Reed

Howard Reed
Director
Resource Assessments

16.8.16

Oliver Holm
Executive Director
Resource Assessments & Compliance

APPENDIX A: ENVIRONMENTAL ASSESSMENT

Refer to the Department's website:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7210

APPENDIX B: SUBMISSIONS

Refer to the Department's website:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7210

APPENDIX C: RESPONSE TO SUBMISSIONS

Refer to the Department's website:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7210

APPENDIX D: NOTICE OF MODIFICATION

APPENDIX E: CONSOLIDATED PROJECT APPROVAL