

# Notice of Modification

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

As delegate of the Minister for Planning, I modify the project approval referred to in Schedule 1, as set out in Schedule 2.

*Howard Reed*

Howard Reed  
Director Resource Assessments

Sydney

*05 May*

2018

### SCHEDULE 1

Project approval 10\_0014 for the Boral Badgerys Creek Quarry and Brick Making Project, granted by the Deputy Director-General, Development Assessment Systems and Performance as delete of the Minister for Planning on 27 September 2011.

### SCHEDULE 2

1. In Schedule 1:
  - (a) delete the words "Boral Bricks Pty Ltd" and replace with "CSR Building Products Limited"; and
  - (b) delete the word "Boral", where second-occurring.
2. Delete all words after Schedule 1 and replace with:

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## DEFINITIONS

Aboriginal object or place	Have the same meaning as the definitions of the terms in section 5 of the NP&W Act
Annual Review	The review required by condition 12 of Schedule 5
BCA	Building Code of Australia
CCC	Community Consultative Committee
Conditions of this approval	Conditions contained in Schedules 2 to 5 (inclusive) of this document
Council	Liverpool City Council
Day	The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
Department	NSW Department of Planning and Environment
Demolition	The deconstruction and removal of buildings, sheds and other structures on the site
DRG	Division of Resources and Geoscience within the Department
Dol Water	Department of Industry – Crown Lands and Water Division
EA	Environmental Assessment titled <i>Boral Badgerys Creek Continued Operation of Quarry and Brick Making Facility</i> (Volumes 1 – 3), prepared by AECOM and dated November 2010, and associated Response to Submissions titled <i>Boral Badgerys Creek Continued Operation of Quarry and Brick Making Facility – Submissions Report</i> , prepared by AECOM and dated June 2011
EA (Mod 1)	Environmental Assessment titled <i>Boral Badgerys Creek Quarry and Brick Making Project, Application Number: 10_0014</i> , prepared by Boral Property Group and dated 5 November 2012
EA (Mod 2)	Environmental Assessment titled <i>Badgerys Creek Brick Making Facility Modification 2 Environmental Assessment</i> prepared by Element Environment and dated November 2017, the associated the Response to Submissions prepared by Element Environment and dated February 2018, and additional information provided by Element Environment dated 8 March 2018
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6 pm to 10 pm
Finished Building Products	Building products prepared or manufactured off site, as described in EA (Mod 2)
Incident	An occurrence or set of circumstances that: <ul style="list-style-type: none"> <li>causes or threatens to cause material harm to the environment; and/or</li> <li>breaches or exceeds the limits or performance measures/criteria in this approval</li> </ul>
Laden trucks	Trucks transporting bricks, quarry products or finished building products to or from the site
Land	Has the same meaning as the definition of the term in section 4 of the EP&A Act, except where the term is used in the noise and air quality conditions in Schedules 3 and 4 of this approval, where it is defined as the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
M	Metres
Material harm	Is unauthorised harm that: <ul style="list-style-type: none"> <li>involves actual or potential harm to the health or safety of human beings or to ecosystems 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>
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the project
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the project prior to or during those impacts occurring
Modification 2	The modifications to the project, as described in EA (Mod 2)
Mod 2 operations	The activities described in Section 3.1 of EA (Mod 2)
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NP&W Act	<i>National Parks and Wildlife Act 1974</i>
OEH	Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or a mining, petroleum or extractive industry company (or its subsidiary)
Project	The development described in the documents listed in condition 3 of Schedule 2
Project layout	The plan in Appendix 3 of this approval

Proponent	CSR Building Products Limited (or its successors) or any person carrying out any project to which this approval applies
Public infrastructure	Linear and other infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.
Quarrying operations	The extraction, processing, stockpiling and transportation of extractive materials carried out on the site and the associated removal and/or emplacement of vegetation, topsoil and overburden
Quarry products	Includes all saleable quarry products, including raw materials, but excludes bricks, tailings, other wastes and rehabilitation material for use on the site
Quarry water	Water that accumulates within active quarrying areas, overburden emplacement areas and infrastructure areas, synonymous with dirty water
Raw materials	Extractive materials used in making brick, tiles, clay pipes or similar
Registered Aboriginal Parties	As described in the <i>National Parks and Wildlife Regulation 2009</i>
Rehabilitation	The restoration of land disturbed by the project to a good condition, to ensure it is safe, stable and non-polluting
Reasonable	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
RMS	NSW Roads and Maritime Services
Secretary	Planning Secretary under the EP&A Act, or nominee
Site	The land defined in Appendix 1
Shutdown period	Period of time when no quarrying or brick making operations are being undertaken on site, as detailed in the EA (Mod 1)
Statement of Commitments	The Proponent's commitments in Appendix 6
Waste	Has the same meaning as defined in the Dictionary to the POEO Act

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## **SCHEDULE 2 ADMINISTRATIVE CONDITIONS**

### **OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT**

1. In addition to meeting the specific performance measures and criteria established under this approval, the Proponent 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 project, and any rehabilitation required under this approval.

### **TERMS OF APPROVAL**

2. The Proponent, in acting on this approval, must carry out the project:
  - (a) in compliance with the conditions of this approval;
  - (b) in accordance with all written directions of the Secretary; and
  - (c) in accordance with the project layout.
3. The Proponent, in acting on this approval, must carry out the project:
  - (a) generally in accordance with the EA;
  - (b) generally in accordance with EA (Mod 1);
  - (c) generally in accordance with EA (Mod 2); and
  - (d) in accordance with the Statement of Commitments.
4. The conditions of this approval and directions of the Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document referenced in condition 3 of this Schedule. In the event of an inconsistency, ambiguity or conflict between any of the documents referenced in condition 3 of this Schedule, the most recent document prevails.

*Note: For the purposes of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of approval or direction of the Secretary, and a document, if it is not possible to comply with both the condition or direction, and the document.*

5. Consistent with the requirements of this approval, the Secretary may make written directions to the Proponent in relation to:
  - (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this approval, including those that are required to be, and have been, approved by the Secretary; and
  - (b) the implementation of any actions or measures contained in any such document referred to in (a) above.

*Note: For the purposes of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of consent or direction of the Secretary, and a document, if it is not possible to comply with both the condition or direction, and the document.*

### **COMPLIANCE**

6. The Proponent 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 approval relevant to activities they carry out in respect of the project.

### **APPLICABILITY OF GUIDELINES**

7. References in the conditions of this approval 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 this approval.

However, consistent with the conditions of this approval and without altering any limits or criteria in this approval, the Secretary may, when issuing directions under this approval in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, standard or policy, or a replacement of them.

### **LIMITS OF APPROVAL**

8. The Proponent may carry out quarrying operations and brick making on the site until 27 September 2031.

*Note: Under this approval, the Proponent is required to decommission and rehabilitate the site and carry out additional requirements. Consequently, this approval will continue to apply in all respects other than to permit the carrying out of quarrying operations, until the rehabilitation of the site and those requirements and undertakings have been carried out to the required standard.*

9. The Proponent may receive, store and dispatch finished building products at the site until 4 May 2021.

10. The Proponent must not:

- (a) extract more than 420,000 tonnes of clay shale from the site in any calendar year;
- (b) produce more than 252,000 tonnes of bricks at the site in any calendar year;
- (c) dispatch more than 275,000 tonnes of raw materials from the site in any calendar year; or
- (d) receive more than 20,000 tonnes of raw materials at the site in any calendar year.

11. The Proponent must not transport bricks or quarry products to or from the site, other than by road.
12. Truck movements at the site (ie either arrival or dispatch), must not exceed:
- (a) 120 per day, Monday to Friday between 6.00 am and 10.00 pm; and
  - (b) 40 per day on Saturday between 6.00 am and 10.00 pm.

*Note: Operating hours for arrival and dispatch of trucks are also controlled under condition 1 of Schedule 3.*

## **STRUCTURAL ADEQUACY**

13. All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the project, must be constructed in accordance with the BCA.

*Notes:*

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

## **DEMOLITION**

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

## **PROTECTION OF PUBLIC INFRASTRUCTURE**

15. Unless the Proponent and the applicable authority agree otherwise the Proponent must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; and
  - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.

*Note: This condition does not apply to damage to roads caused as a result of general road usage or otherwise addressed by contributions required by condition 25 of Schedule 3.*

## **OPERATION OF PLANT AND EQUIPMENT**

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

## **PRODUCTION DATA**

17. The Proponent must:
- (a) provide calendar year annual quarry production data to DRG using the standard form for that purpose; and
  - (b) include a copy of this data in the Annual Review.

## **LIMITS OF EXTRACTION**

### **Identification of Approved Extraction Limits**

18. Within 12 months of the determination of Modification 2, the Proponent must:
- (a) engage a registered surveyor to mark out the boundaries of the approved areas of extraction within the site; and
  - (b) provide the Secretary with a survey plan of such boundaries.

The boundaries of the approved areas of extraction within the site must be clearly marked in a manner that allows them to be easily identified at all times during the carrying out of quarrying operations.

### **Maximum Extraction Depth**

19. The Proponent must not extract any extractive materials or carry out any work in the extraction area below 35 m below the pre-existing natural surface of the ground, other than construction of bores approved by DoI Water or in-pit sumps approved by the Secretary.

## SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS

### NOISE

#### Hours of Operation

- The Proponent must comply with the operating hours set out in Table 1.

*Table 1: Operating hours*

<b>Activity</b>	<b>Permissible Hours</b>
Quarrying operations (excluding removal of overburden, truck arrival, loading and dispatch)	7.00 am to 6.00 pm Monday to Saturday
	At no time on Sundays or public holidays
Removal of overburden (Mod 2 operations only)	7.00 am to 6.00 pm Monday to Saturday
	At no time on Sundays or public holidays
Removal of overburden (following the conclusion of Mod 2 operations) and acoustic bund construction	7.00 am to 6.00 pm Monday to Friday
	8.00 am to 1.00 pm Saturday
	At no time on Sundays or public holidays
Brick making and storage yard activities	24 hours per day, 7 days per week
Truck arrival and dispatch (excluding finished building products)	6.00 am to 10.00 pm Monday to Friday
	6.00 am to 6.00 pm Saturday
	At no time on Sundays or public holidays
Truck arrival and dispatch (finished building products only)	7.00 am to 10.00 pm Monday to Saturday
	At no time on Sundays or public holidays
Maintenance	At any time, provided that these activities are not audible at any privately-owned residence outside of permissible hours for quarrying operations

- The following activities may be carried out outside the hours specified in condition 1 of this Schedule:
  - activities that are inaudible at residences on privately-owned land;
  - the delivery or dispatch of materials as requested by the NSW Police Force or other public authorities for safety reasons; or
  - emergency work to avoid the loss of life, property or to prevent material harm to the environment.

In such circumstances, the Proponent must notify the Department and affected residents prior to undertaking the activities, or as soon as is practical thereafter.

#### Construction Noise

- The Proponent must ensure that noise generated during the construction of acoustic bunds does not exceed the criteria in Table 2.

*Table 2: Construction Noise Criteria dB(A)*

<b>Construction Activity</b>	<b>Location</b>	<b>Day L<sub>Aeq</sub> (15 min)</b>
Bund 3C	Residence 9	55
Bund 4A	Residences 27 and 31	
Bund 4B	Residence 28	
Bund 4A	Residences 26, 28 and 42	60
Bund 4A	Residences 5 and 25	65
Bund 4A	Residence 9	68

<b>Construction Activity</b>	<b>Location</b>	<b>Day L<sub>Aeq</sub> (15 min)</b>
Bunds 3C, 4A and 4B	All other residences	50

The Proponent must ensure that the noise generated by bund construction work is managed in accordance with the requirements outlined in the *Interim Construction Noise Guideline* (DECC, 2009).

*Note:* To identify the locations referred to in Table 2, see the figure and associated table in Appendix 2.

4. The Proponent must prepare an Acoustic Bund Construction Management Plan to the satisfaction of the Secretary. The plan must:
  - (a) be approved by the Secretary prior to commencing quarrying operations in Pits 4 or 5 (see Appendix 3), unless otherwise agreed by the Secretary;
  - (b) include a schedule for the construction of the acoustic bunds described in Section 5.4 of the *Noise Assessment Report Addendum Report* in the EA;
  - (c) include detailed procedures to:
    - keep surrounding residents informed of the proposed timing and duration of bund construction;
    - minimise and mitigate the noise impacts generated by the works; and
    - receive, handle and respond to complaints relating to the works; and
  - (d) include a protocol to notify the Department, in writing:
    - prior to commencing the construction of each acoustic bund; and
    - following the completion of each acoustic bund.

The Proponent must implement the Acoustic Bund Construction Management Plan as approved by the Secretary.

*Note:* The construction schedule for the acoustic bunds may be amended with the written agreement of the Secretary.

#### Operational Noise Criteria

5. The Proponent must ensure that operational noise generated by the project (excluding acoustic bund construction) does not exceed the criteria in Table 3 at any residence on privately-owned land.

Table 3: Operational noise criteria dB(A)

<b>Activity</b>	<b>Location</b>	<b>Day L<sub>Aeq</sub> (15 min)</b>	<b>Evening L<sub>Aeq</sub> (15 min)</b>	<b>Night</b>	
				<b>L<sub>Aeq</sub> (15 min)</b>	<b>L<sub>A1</sub> (1 min)</b>
Quarrying operations	All residential premises	44	NA	NA	NA
Brick making and storage yard activities		44	38	35	45

Noise generated by the project is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the *NSW Industrial Noise Policy*. Appendix 8 sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, the noise criteria in Table 3 do not apply if the Proponent has an agreement with the relevant landowner to exceed the noise criteria, and the Proponent has advised the Department in writing of the terms of this agreement.

*Note:* Should an agreement with a landowner be terminated for any reason, the Proponent must comply with the noise criteria in Table 3.

#### Road Traffic Noise Criteria

6. The Proponent must ensure that the traffic noise generated by the project does not exceed the criteria in Table 4.

Table 4: Road traffic noise criteria dB(A)

<b>Road</b>	<b>Day / Evening L<sub>Aeq</sub> (1 hour)</b>	<b>Night L<sub>Aeq</sub> (1 hour)</b>
Martin Road	55	50

*Note: Traffic noise generated by the project is to be measured in accordance with the relevant procedures in the NSW Road Noise Policy (Department of Environment, Climate Change and Water NSW).*

## Noise Operating Conditions

7. The Proponent must:
- take all reasonable steps to minimise the construction, operational, low frequency and road transportation noise of the project;
  - take all reasonable steps to minimise the noise impacts of the project during meteorological conditions when the noise criteria in this approval do not apply (see Appendix 8);
  - operate a noise management system to guide the day to day planning of quarrying operations and the implementation of noise mitigation measures to ensure compliance with the relevant conditions of this approval;
  - carry out regular noise monitoring in accordance with Appendix 8 to determine whether the project is complying with the relevant conditions of this approval; and
  - modify or stop operations on the site to comply with the relevant conditions of this approval.

*Note: Monitoring under this approval is not required at all residences and the use of representative monitoring locations can be used to demonstrate compliance with criteria, if agreed to by the Secretary.*

## Noise Management Plan

8. The Proponent must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with the EPA;
  - be submitted to the Secretary for approval prior to commencing quarrying operations under Modification 2, unless otherwise agreed by the Secretary;
  - describe the measures to be implemented to ensure:
    - compliance with the noise criteria and operating conditions of this approval;
    - best practice management is being employed; and
    - the noise impacts of the project are minimised during meteorological conditions under which the noise criteria in this approval do not apply (see Appendix 8);
  - describe measures to ensure that all the commitments in the EA in relation to noise are implemented;
  - include a consultation plan detailing:
    - procedures for notifying and consulting nearby residents prior to the commencement of the construction of the noise bunds and during quarrying and brick making operations;
    - details of a telephone complaints line (all hours) and relevant site persons responsible for following up complaints;
    - procedures for handling and monitoring all complaints received; and
    - contingency measures that would be implemented where complaints are received;
  - describe the proposed noise management system; and
  - include a noise monitoring program that:
    - is capable of evaluating the performance of the project;
    - includes a protocol for determining any exceedances of the relevant conditions of this approval; and
    - effectively supports the noise management system.

The Proponent must implement the Noise Management Plan as approved by the Secretary.

## AIR QUALITY

### Air Quality Impact Assessment Criteria

9. The Proponent must ensure that particulate matter emissions generated by the project do not cause exceedances of the criteria in Table 5 at any residence on privately-owned land.

*Table 5: Air quality criteria*

<b>Pollutant</b>	<b>Averaging Period</b>	<b>Criterion</b>	
Particulate matter < 10 µm (PM <sub>10</sub> )	Annual	a,d 30 µg/m <sup>3</sup>	
Particulate matter < 10 µm (PM <sub>10</sub> )	24 hour	b 50 µg/m <sup>3</sup>	
Total suspended particulates (TSP)	Annual	a,d 90 µg/m <sup>3</sup>	
<sup>c</sup> Deposited dust	Annual	b 2 g/m <sup>2</sup> /month	a,d 4 g/m <sup>2</sup> /month

Notes to Table 5:

*a Cumulative impact (ie increase in concentrations due to the project plus background concentrations due to all other sources).*

*b Incremental impact (ie increase in concentrations due to the project alone, with zero allowable exceedances of the criteria over the life of the project).*

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

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

## Operating Conditions

10. The Proponent must:
  - (a) implement best practice management to minimise the dust emissions of the project;
  - (b) implement all air quality management and mitigation measures that were committed to in the EA;
  - (c) implement real-time monitoring of 24-hour average PM<sub>10</sub> and meteorological conditions;
  - (d) regularly assess meteorological and air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this approval;
  - (e) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see note d under Table 5);
  - (f) monitor and report on compliance with the relevant air quality conditions in this approval; and
  - (g) minimise the area of surface disturbance and undertake progressive rehabilitation of the site, to the satisfaction of the Secretary.
11. The Proponent must ensure compliance with stack emission limits and gaseous pollutant load limits included in any EPL applicable to the site.
12. Prior to commencing quarrying operations in Pit 5, the Proponent must undertake an Air Quality Audit to the satisfaction of the Secretary. The audit must:
  - (a) be undertaken in consultation with EPA by suitably qualified and experienced persons whose appointment has been approved by the Secretary;
  - (b) review the effectiveness of existing air quality management and control measures; and
  - (c) describe any additional air quality control measures, including operational controls, required to ensure continuing compliance with air quality criteria during the quarrying activities associated with Pit 5.

## Air Quality Management Plan

13. The Proponent must prepare an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with the EPA;
  - (b) be submitted to the Secretary for approval prior to commencing quarrying operations under Modification 2, unless otherwise agreed by the Secretary;
  - (c) describe the proposed air quality management system;
  - (d) describe the measures to be implemented to ensure:
    - compliance with the air quality criteria and operating conditions of this approval;
    - best practice management is being employed; and
    - the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events;
  - (e) describe measures to ensure that all the commitments in the EA in relation to air quality are implemented;
  - (d) include a program to ensure surface disturbance associated with quarrying operations is minimised;
  - (e) include an air quality monitoring program that:
    - uses a combination of real-time monitors, high volume samplers and dust deposition gauges, to evaluate the performance of the project at potential receivers and on-site;
    - is capable of evaluating the performance of the project and informing day to day operational decisions;
    - includes a protocol for determining any exceedances of the relevant conditions of this approval; and
    - effectively supports the air quality management system; and
  - (f) include a program to:
    - notify affected landowners of the potential health-related impacts associated with dust; and
    - respond effectively to enquiries or complaints.

The Proponent must implement the Air Quality Management Plan as approved by the Secretary.

## **Meteorological Monitoring**

14. For the life of the project, the Proponent must ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* guideline.

*Note: Meteorological monitoring is not required during the shutdown period.*

## **Odour**

15. The Proponent must ensure that no offensive odours, as defined by the POEO Act, are emitted from the site.

## **Greenhouse Gas Emissions**

16. The Proponent must implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site.

## **SOIL AND WATER**

*Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Proponent is required to obtain all necessary approvals and/or water licences for the project.*

### **Water Supply**

17. The Proponent must ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of operations under the approval to match its available water supply, to the satisfaction of the Secretary.

### **Water Discharges**

18. The Proponent must ensure that all quarry water from the site is contained wholly within the site.
19. The Proponent must ensure that all surface water discharges from the site comply with the limits (both volume and quality) set in any EPL applicable to the site.

### **Riparian Buffer Distance**

20. The Proponent must maintain a minimum setback width of 60 metres (measured from the top of bank) between extraction areas and both Badgerys Creek and Badgerys Creek tributary.

*Note: This condition does not prohibit overburden emplacement or rehabilitation works in accordance with the Project Layout Plan.*

### **Alluvial Aquifers**

21. The Proponent must ensure that the project has no impact on alluvial aquifers associated with South Creek, Badgerys Creek or their tributaries.
22. The Proponent must prepare and implement an Alluvial Aquifer Assessment for the project to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with DoI Water by suitably qualified and experienced persons whose appointment has been approved by the Secretary;
  - (b) be submitted to the Secretary for approval within 12 months of commencing quarrying operations under Modification 2; and
  - (c) include:
    - a program to monitor groundwater from boreholes to be constructed in the alluvial sediments adjacent to Badgerys and South Creeks and their tributaries, and in the Bringelly Shale bedrock aquifer;
    - alluvial mapping to delineate the presence and extent of alluvial sediments and alluvial aquifers between Badgerys Creek and the proposed Pit 5 extraction area (see Appendix 3);
    - mitigation and management measures to ensure alluvial sediments and alluvial aquifers are not impacted by the project, including:
      - appropriate buffer setback distances between the alluvial sediments and the Pit 5 extraction area; and
      - any resulting adjustments to the Pit 5 extraction area.

## **Soil and Water Management Plan**

23. The Proponent must prepare a Soil and Water Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s approved by the Secretary;
  - (b) be prepared in consultation with the EPA and DoI Water;
  - (c) be submitted to the Secretary for approval prior to commencing quarrying operations under Modification 2, unless otherwise agreed by the Secretary; and
  - (d) include a:
    - (i) Site Water Balance that includes:
      - details of:
        - sources and security of water supply;
        - water use and management on site;
        - adequacy of water storage facilities to contain all surface water runoff;
        - any off-site water transfers; and
        - reporting procedures; and
      - measures to be implemented to minimise clean water use on site;
    - (ii) Surface Water Management Plan, that includes:
      - a program for obtaining detailed baseline data on surface water flows and quality in water bodies that could potentially be affected by the project;
      - a detailed description of the surface water management system on site including the:
        - clean water diversion system;
        - erosion and sediment controls;
        - dirty water management system; and
        - water storages, including the area, depth and capacity of any in-pit sumps;
      - detailed plans, including design objectives and performance criteria, for:
        - reinstatement of drainage lines on the rehabilitated areas of the site; and
        - control of any potential water pollution from rehabilitated areas of the site;
      - performance criteria for the following, including trigger levels for investigating any potentially adverse impacts on:
        - the water management system;
        - surface water quality in creeks and other water bodies that could potentially be affected by the project (including Badgerys Creek and Badgerys Creek tributary); and
        - the stream health, vegetation health and channel stability of water bodies that could potentially be affected by the project;
      - a program to monitor and report on:
        - any surface water discharges;
        - the effectiveness of the water management system;
        - the quality of water discharged from the site to the environment;
        - surface water flows and quality in local watercourses; and
        - the stream health, riparian vegetation health and channel stability of creeks and other water bodies that could potentially be affected by the project; and
      - a plan to respond to any exceedances of the performance criteria, and mitigate and/or offset any adverse surface water impacts of the project; and
    - (iii) Groundwater Management Plan that includes:
      - measures to ensure that the maximum extraction depth is not exceeded (see condition 19 of Schedule 2);
      - a protocol to obtain appropriate water licence(s) to cover the volume of any unforeseen groundwater inflows into the quarry from the quarry face or floor;
      - groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts; and
      - a monitoring program to manage potential impacts, if any, on any alluvium and associated surface water source near the proposed extraction area that includes:
        - monitoring of groundwater inflows into the quarry from the quarry face or floor, or into any in-pit sumps;
        - monitoring the impacts of the project on baseflows to Badgerys and South Creeks and their tributaries;
        - identification of a methodology for determining exceedances of the assessment criteria;
        - a plan to respond to any exceedances of the performance criteria; and
        - a program to regularly report on monitoring.

The Proponent must implement the Soil and Water Management Plan as approved by the Secretary.

## TRANSPORT

### Road Haulage

24. Prior to commencing Mod 2 operations, the Proponent must:
- (a) erect signage on Elizabeth Drive advising of “trucks turning”;
  - (b) install a wheel wash on the quarry access road to prevent material being deposited in Martins Road; and
  - (c) ensure the access driveway from Martin Road is capable of catering for all heavy vehicles associated with the project in accordance with AS2890.2, to the satisfaction of Council.

#### **Road Upgrade and Maintenance Contribution**

25. The Proponent must:
- (a) repair Martin Road to the satisfaction of Council by 30 June 2013 and in accordance with the agreement dated 9 April 2013 attached as Appendix 7; and
  - (b) prior to commencing Mod 2 operations, enter into a formal agreement with Council for the:
    - upgrade and widening of Martin Road from the site entrance to the entrance of Australian Native Landscapes;
    - widening of Martin Road in the reverse curves; and
    - annual road maintenance contributions to be paid to Council, based on the weight of all laden truck movements to and from the site, for the life of the project, to the satisfaction of the Secretary.

The Proponent must implement the agreement to the satisfaction of the Secretary. If there is any dispute between the Proponent and Council, then either of the parties may refer the matter to the Secretary for resolution.

#### **Monitoring of Product Transport**

26. The Proponent must keep accurate records of:
- (a) all laden truck movements to and from the site (including time of arrival and dispatch);
  - (b) the weight of all bricks and quarry products transported to and from the site; and
  - (c) publish a summary of these records on its website every 6 months.

#### **Operating Conditions**

27. The Proponent must:
- (a) ensure that all trucks carrying quarry products have their loads covered when arriving at or leaving the site;
  - (b) ensure that all laden trucks are cleaned of material that may fall from vehicles, before leaving the site; and
  - (c) use its best endeavours to ensure that appropriate signage is displayed on trucks used to transport products or raw materials to or from the project so they can be easily identified by road users.

#### **Traffic Management Plan**

28. The Proponent must prepare a Traffic Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with RMS and Council;
  - (b) be submitted to the Secretary for approval prior to commencing Mod 2 operations, unless otherwise agreed by the Secretary;
  - (c) describe the processes in place to control the arrival and dispatch of trucks;
  - (d) include a Drivers' Code of Conduct that details the safe and quiet driving practices that must be used by drivers travelling to and from the site;
  - (e) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct; and
  - (f) propose measures to minimise the transmission of dust and tracking of material onto the surface of the public road from vehicles leaving the quarry.

The Proponent must implement the Traffic Management Plan as approved by the Secretary.

#### **ABORIGINAL HERITAGE**

29. The Proponent must ensure that:
- (a) archaeological salvage of site BC-01-09 is undertaken in accordance with Recommendation 1, Section 6.0 of the *Aboriginal Heritage Assessment – Addendum* in the EA; and
  - (b) regeneration works in the area of the archaeological deposit identified adjacent to Badgerys Creek (see Appendix 5) are either avoided, or else undertaken in a manner that will minimise harm to Aboriginal objects, to the satisfaction of the Secretary.

30. The Applicant must prepare an Aboriginal Heritage Management Plan for the project to the satisfaction of the Secretary. The plan must:
- be prepared by suitably qualified and experienced persons;
  - be prepared in consultation with Registered Aboriginal Parties;
  - be submitted to the Secretary for approval within 6 months of the determination of Modification 2, unless otherwise agreed by the Secretary;
  - include a description of the measures that would be implemented to:
    - protect, monitor and manage identified Aboriginal objects and Aboriginal places on the site (including any proposed archaeological investigations and salvage measures), including specific measures to ensure that the archaeological deposit adjacent to Badgerys Creek (see Appendix 5) is not impacted during regeneration operations;
    - manage the discovery of previously unidentified Aboriginal objects or Aboriginal places on the site; and
    - facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site; and
  - include a protocol to be implemented in the event that skeletal remains are discovered during the project.

The Proponent must implement the Aboriginal Heritage Management Plan as approved by the Secretary.

31. If human remains are discovered on the site, then all work in the area surrounding the discovery must cease, and the area must be secured. The Proponent must immediately notify NSW Police Force and OEH, and work must not recommence in the area until authorised by NSW Police Force and OEH.
32. If any potential Aboriginal object or Aboriginal place is identified on the site, or suspected to be on the site:
- all work in the immediate vicinity of the object or place must cease immediately;
  - a 10 m buffer area around the object or place must be cordoned off; and
  - OEH must be contacted immediately.
33. Work in the immediate vicinity may only recommence if:
- the object or place is confirmed by OEH upon consultation with the Registered Aboriginal Parties not to be an Aboriginal object or Aboriginal Place;
  - the Aboriginal Cultural Heritage Management Plan is revised to include the object or place and appropriate measures in respect of it; or
  - the Secretary is satisfied with the measures to be implemented in respect of the object or place and makes a written direction in that regard.

## REHABILITATION

### Rehabilitation Objectives

34. The Proponent must rehabilitate the site to the satisfaction of the Secretary. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA and shown in Appendix 4, and must comply with the objectives in Table 6.

Table 6: Rehabilitation Objectives

Feature	Objective
<i>All areas of the site affected by the project</i>	<ul style="list-style-type: none"> <li>Safe</li> <li>Hydraulically and geotechnically stable</li> <li>Non-polluting</li> <li>Fit for the intended final land use(s)</li> <li>Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and minimising visual impacts when viewed from surrounding land</li> </ul>
<i>Surface infrastructure</i>	<ul style="list-style-type: none"> <li>Decommissioned and removed, unless otherwise agreed by the Secretary</li> </ul>
<i>Quarry benches</i>	<ul style="list-style-type: none"> <li>Landscaped and vegetated using native tree and understorey species</li> </ul>
<i>Acoustic bunds</i>	<ul style="list-style-type: none"> <li>Hydraulically and geotechnically stable</li> <li>Vegetated</li> </ul>
<i>Final void</i>	<ul style="list-style-type: none"> <li>Return Pit 2 to natural ground level and revegetate</li> <li>Minimise the size, depth and slope of the batters of the remaining final voids</li> <li>Minimise the drainage catchment of the final voids</li> </ul>

### Progressive Rehabilitation

35. The Proponent must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.

*Note: It is accepted that parts of the site that are progressively rehabilitated may be subject to future re-disturbance.*

### **Rehabilitation Management Plan**

36. The Proponent must prepare a Rehabilitation Management Plan for the project to the satisfaction of DRG. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
  - (b) be prepared in consultation with the Department, DoI Water, OEH and Council;
  - (c) be submitted to DRG within 12 months of the determination of Modification 2;
  - (d) be prepared in accordance with any relevant DRG Guideline;
  - (e) build upon the Rehabilitation Objectives in Table 6 and the proposed rehabilitation strategy described in the EA and shown in Appendix 4;
  - (f) investigate options for the future use of disturbed areas (including voids) following the completion of quarrying operations;
  - (g) describe and justify the proposed rehabilitation strategy for the site, including post-operations landform and use;
  - (h) describe and justify the proposed rehabilitation strategy for the site in the event that quarrying and brick making operations do not recommence following the shutdown period;
  - (i) describe how the rehabilitation of the site would achieve the objectives identified in Table 6;
  - (j) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and for triggering remedial action (if necessary);
  - (k) describe the measures to be implemented to ensure compliance with the relevant conditions of this approval, and address all aspects of rehabilitation including mine closure, final landform (including final voids) and final land use/s;
  - (l) include procedures for the use of interim stabilisation and temporary vegetation strategies, where reasonable to minimise the area exposed for dust generation;
  - (m) include a program to monitor, independently audit and report on the effectiveness of the measures in paragraph (k) above, and progress against the detailed performance and completion criteria in paragraph (j) above;
  - (n) to the maximum extent practicable, build on and integrate with the other management plans required under this consent; and
  - (o) include detailed scheduling for progressive rehabilitation to be initiated, undertaken and/or completed over the next three years (see condition 35 of this Schedule).

The Proponent must implement the Rehabilitation Management Plan as approved by DRG.

### **VISUAL**

37. The Proponent must implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project to the satisfaction of the Secretary.

### **WASTE**

38. The Proponent must:
- (a) manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Council;
  - (b) minimise the waste generated by the project;
  - (c) ensure that the waste generated by the project is appropriately stored, handled, and disposed of; and
  - (d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.
39. Except as expressly permitted in an EPL and/or the conditions of this approval, the Proponent must not receive waste on the site for storage, treatment, processing, reprocessing or disposal.

### **LIQUID STORAGE**

40. The Proponent must ensure that all tanks and similar storage facilities (other than for water) are protected by appropriate bunding or other containment, in accordance with the relevant Australian Standards.

## **DANGEROUS GOODS**

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

## **FIRE SAFETY**

42. The Proponent must:
  - (a) ensure that the project is suitably equipped to respond to any fires on site; and
  - (b) assist the emergency services to the extent practicable if there is a fire in the vicinity of the site.

## **SCHEDULE 4 ADDITIONAL PROCEDURES**

### **NOTIFICATION OF LANDOWNERS**

1. As soon as practicable, and no longer than 7 days, after obtaining monitoring results showing:
  - (a) an exceedance of any criteria in Schedule 3, the Proponent must notify the affected landowners in writing of the exceedance, and provide regular monitoring results, at least every 3 months, to each affected landowner until the project is again complying with the relevant criteria; and
  - (b) an exceedance of any air quality criteria in Schedule 3, the Proponent must send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and current tenants of the land (including the tenants of land which is not privately-owned).

### **INDEPENDENT REVIEW**

2. If a landowner considers the project to be exceeding the relevant criteria in Schedule 3, they may ask the Secretary in writing for an independent review of the impacts of the project on their land.

If the Secretary is not satisfied that an independent review is warranted, the 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.

If the Secretary is satisfied that an independent review is warranted, within 3 months, or as otherwise agreed by the Secretary and the landowner, of the Secretary's decision, the Proponent must:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
  - consult with the landowner to determine his/her concerns;
  - conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and
  - if the project is not complying with these criteria, then identify measures that could be implemented to ensure compliance with the relevant criteria;
- (b) give the Secretary and landowner a copy of the independent review; and
- (c) comply with any written requests made by the Secretary to implement any findings of the review.

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

### **ENVIRONMENTAL MANAGEMENT**

#### **Environmental Management Strategy**

1. The Proponent must prepare an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must:
  - (a) be submitted to the Secretary for approval within 6 months of the determination of Modification 2, unless otherwise agreed by the Secretary;
  - (b) provide the strategic framework for environmental management of the project;
  - (c) identify the statutory approvals that apply to the project;
  - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;
  - (e) describe the procedures to be implemented to:
    - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
    - receive, record, handle and respond to complaints;
    - resolve any disputes that may arise during the course of the project;
    - respond to any non-compliance; and
    - respond to emergencies; and
  - (f) include:
    - references to any strategies, plans and programs approved under the conditions of this approval; and
    - a clear plan depicting all the monitoring to be carried out under the conditions of this approval.

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

#### **Evidence of Consultation**

2. Where the conditions of this approval require consultation with an identified party, the Proponent must:
  - (a) consult with the relevant party prior to submitting the subject document to the Secretary for approval; and
  - (b) provide details of the consultation undertaken, including:
    - the outcome of that consultation, matters resolved and unresolved; and
    - details of any disagreement remaining between the party consulted and the Proponent and how the Proponent has addressed any unresolved matters.

However, if the Secretary agrees, a strategy, plan or program may be prepared without consultation being undertaken with an identified party required under a condition of this approval.

#### **Management Plan Requirements**

3. The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
  - (a) a summary of relevant background or baseline data;
  - (b) a description of:
    - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
    - any relevant limits or performance measures/criteria; and
    - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
  - (c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
  - (d) a program to monitor and report on the:
    - impacts and environmental performance of the development; and
    - effectiveness of any management measures (see (c) above);
  - (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
  - (f) a program to investigate and implement ways to improve the environmental performance of the project over time;
  - (g) a protocol for managing and reporting any:
    - incidents;
    - complaints; and
    - non-compliances with statutory requirements;

- (h) a protocol for periodic review of the plan; and
- (i) a document control table that includes version numbers, dates when the management plan was prepared and reviewed, names and positions of the person/s who prepared and reviewed the management plan, a description of any revisions made and the date of the Secretary's approval.

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

#### **Application of Existing Strategies, Plans and Programs**

- 4. The Proponent must continue to apply existing management plans, strategies or monitoring programs approved prior to the approval of Modification 2, until the approval of a similar plan, strategy or program following the approval of Modification 2.

#### **Revision of Strategies, Plans & Programs**

- 5. Within 3 months of:
  - (a) the submission of an incident report under condition 10 below;
  - (b) the submission of an Annual Review under condition 12 below;
  - (c) the submission of an Independent Environmental Audit report under condition 14 below; and
  - (d) the approval any modifications to this approval,
 the Proponent must review the suitability of all strategies, plans and programs required under this approval, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 6 weeks of the review the revised document must be submitted for the approval of the Secretary.

*Notes:*

- *The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the project.*
- *In the event of an inconsistency between condition 5(d) above and any condition in Schedule 3 of this approval, the latter prevails.*

#### **Updating and Staging of Strategies, Plans or Programs**

- 6. With the approval of the Secretary, the Proponent may:
  - (a) prepare and submit any strategy, plan or program required by this approval on a staged basis (if a clear description is provided as to the specific stage and scope of the project 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 approval (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and
  - (c) update any strategy, plan or program required by this approval (to ensure the strategies, plans and programs required under this approval are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the project).

#### **Adaptive Management**

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

Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must as soon as becoming aware of any exceedance:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not reoccur;
  - (b) consider all reasonable and feasible options for remediation (where relevant);
  - (c) within 14 days of the exceedance occurring, submit a report to the Secretary describing these remediation options and any preferred remediation measures or other course of action; and
  - (d) implement remediation measures as directed by the Secretary;
- to the satisfaction of the Secretary.

#### **COMMUNITY CONSULTATIVE COMMITTEE**

- 8. The Proponent must establish and operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. The CCC must be established prior to recommencing quarrying operations and be operated in general accordance with the Department's *Community Consultative Committee Guidelines, November 2016* (or later version).

*Notes:*

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.*
- *In accordance with the guidelines, the Committee should comprise an independent chair and appropriate representation from the Proponent, Council and the local community.*
- *The Proponent may, with the approval of the Secretary, combine the function of this CCC with the functions of other CCCs in the area.*

## **REPORTING**

### **Incident Reporting**

9. The Proponent must immediately notify the Secretary (using the contact name, email address and phone number provided by the Department from time to time) and any other relevant agencies of any incident.
10. Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested. This report must include the time and date of the incident, details of the incident, measures implemented to prevent re-occurrence and must identify any non-compliance with this approval.

### **Regular Reporting**

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

### **Annual Review**

12. Prior to recommencing quarrying operations, and annually thereafter, the Proponent must submit a review to the Department reviewing the environmental performance of the project to the satisfaction of the Secretary. This review must:
  - (a) describe the project (including any progressive rehabilitation) that was carried out in the previous calendar year, and the project that is proposed to be carried out over the current calendar year;
  - (b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of these results against the:
    - relevant statutory requirements, limits or performance measures/criteria;
    - requirements of any plan or program required under this approval;
    - monitoring results of previous years; and
    - relevant predictions in the documents listed in condition 3 of Schedule 2;
  - (c) evaluate and report on:
    - the effectiveness of the air quality and noise management systems; and
    - compliance with the performance measures, criteria and operating conditions in this approval.
  - (d) identify any non-compliance over the past calendar year, and describe what actions were (or are being) taken to ensure compliance;
  - (e) identify any trends in the monitoring data over the life of the project;
  - (f) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
  - (g) describe what measures will be implemented over the current calendar year to improve the environmental performance of the project.

The Proponent must ensure that copies of the Annual Review are submitted to Council and are available to the Community Consultative Committee (see condition 8 of Schedule 5) and any interested person upon request.

## **INDEPENDENT ENVIRONMENTAL AUDIT**

13. Within 12 months of recommencing quarrying operations, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent must commission, commence and pay the full cost of an Independent Environmental Audit of the project. This audit must:
  - (a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
  - (b) include consultation with the relevant agencies and the CCC;
  - (c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL or necessary water licences for the project (including any assessment, strategy, plan or program required under these approvals);
  - (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals;
  - (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and

- (f) be conducted and reported to the satisfaction of the Secretary.
14. Within 12 weeks of commencing this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the 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 these recommendations as required. The Proponent must implement these recommendations, to the satisfaction of the Secretary.

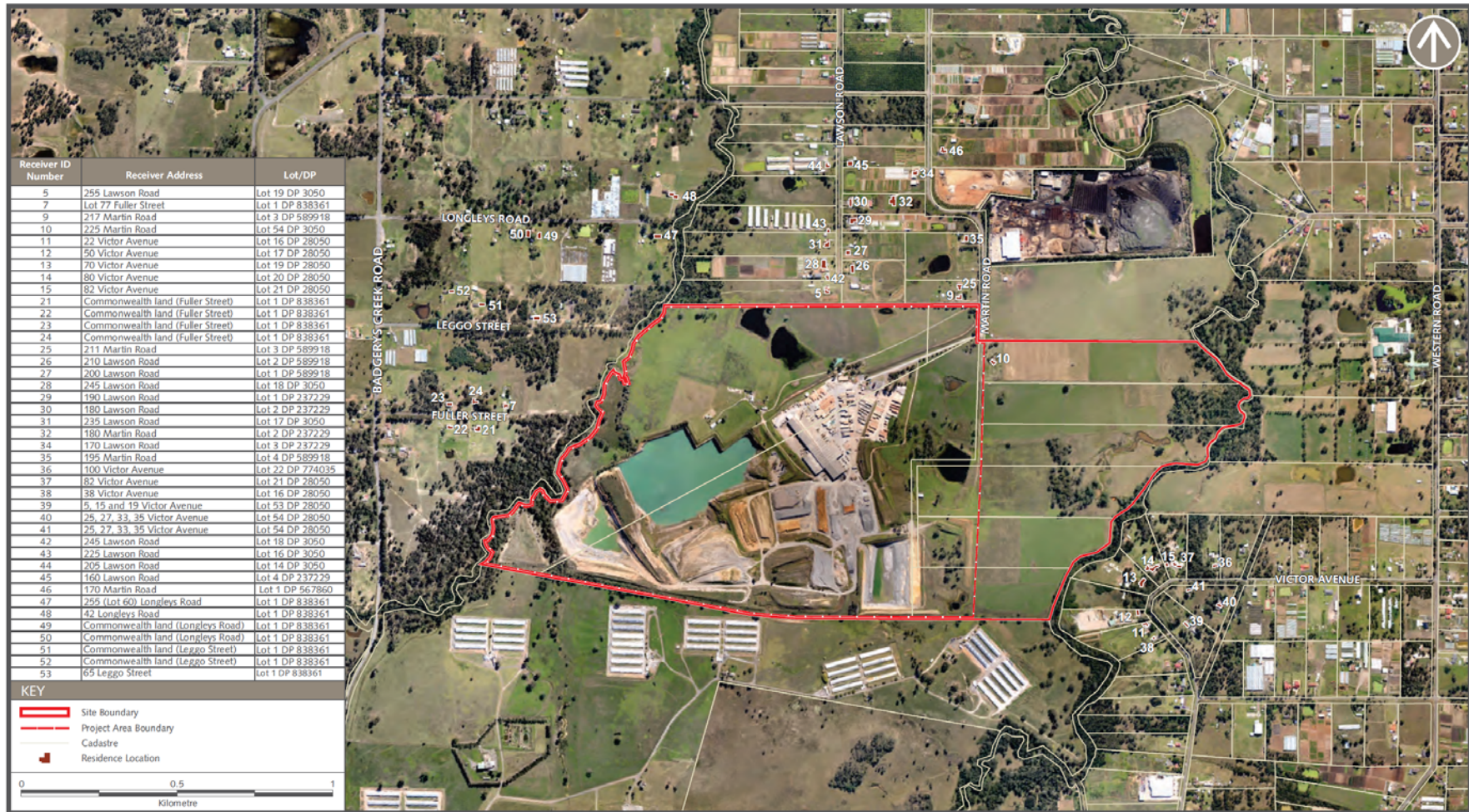
#### **ACCESS TO INFORMATION**

15. Within 3 months of the determination of Modification 2, until the completion of all works, including rehabilitation and remediation the Proponent must:
- (a) make the following information publicly available on its website:
- the documents listed in condition 3 of Schedule 2;
  - current statutory approvals for the project;
  - all approved strategies, plans and programs required under the conditions of this approval;
  - regular reporting on the environmental performance of the development in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval;
  - a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs;
  - summary of the current stage and progress of the project;
  - contact details to enquire about the project or to make a complaint;
  - a complaints register, updated at least monthly;
  - the Annual Reviews of the project;
  - any Independent Environmental Audit as described in condition 13 above, and the Proponent's response to the recommendations in any audit; and
  - any other matter required by the Secretary; and
- (b) keep this information up-to-date, to the satisfaction of the Secretary.

# APPENDIX 1 SCHEDULE OF LAND



## APPENDIX 2 LAND OWNERSHIP SURROUNDING THE PROJECT



**AECOM**

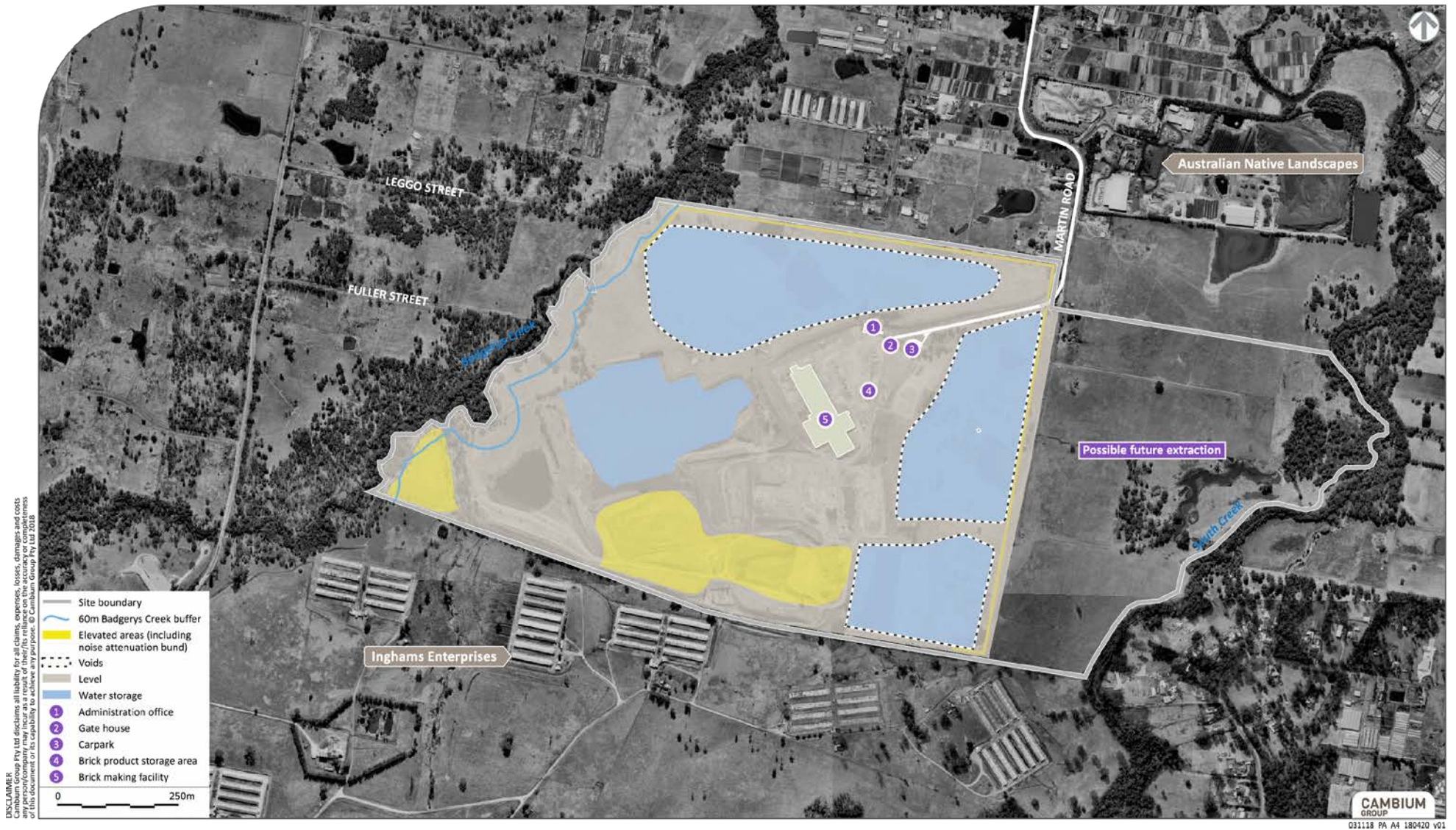
Land Ownership Surrounding the Project  
Environmental Assessment  
Boral Quarry and Brick Making Facility, Badgerys Creek

Appendix 2

## APPENDIX 3 PROJECT LAYOUT PLAN



## APPENDIX 4 REHABILITATION PLAN



## APPENDIX 5 ARCHAEOLOGICAL DEPOSIT AVOIDANCE ZONE



## APPENDIX 6 STATEMENT OF COMMITMENTS

Issue	Commitment
<b>General</b>	
General	1) The Proponent will implement all practicable measures to prevent or minimise harm to the environment that may result from the construction, operation or rehabilitation of the Project.
Air Quality	<p>2) The Proponent will prepare an Air Quality and Green House Gas Management Plan (AQGHGMP) for the project to the satisfaction of the Director-General. The AQGHGMP will outline the purpose, methodology and expected outcomes of the dust monitoring, and will include the following content:</p> <ul style="list-style-type: none"> <li>- Dust fraction to be measured, i.e. TSP, PM<sub>10</sub>, PM<sub>2.5</sub> etc.;</li> <li>- Equipment to be used to measure selected dust fraction;</li> <li>- Frequency of the monitoring, i.e. sample collection schedule;</li> <li>- Duration of the monitoring program;</li> <li>- Location of the monitoring station/s;</li> <li>- Standards/guidelines that are to be followed for location/construction of the monitoring station, equipment calibration, collection of samples and analysis of samples;</li> <li>- Calibration methodology and schedule;</li> <li>- Reporting procedure;</li> <li>- Regulatory guidelines and compliance criteria;</li> <li>- Action levels and contingency measures in the event that pollutant concentrations approach or are likely to exceed the relevant compliance criteria; and</li> <li>- A consultation program that involves nearby agricultural producers and residents, in order to determine if the dust mitigation measures are being effective.</li> </ul> <p>3) The AQGHGMP will detail measures to control dust and emissions from the Project Site including the following measures:</p> <ul style="list-style-type: none"> <li>- Haul roads to be watered at a rate equal to or greater than 2 L/m<sup>2</sup>/hr;</li> <li>- Unloading of trucks containing raw or unusable extracted material to be controlled using water sprays;</li> <li>- Dust from the raw material stockpile to be controlled using water sprays;</li> <li>- Dust from existing stockpiles of unusable material and open pits to be controlled using water sprays with chemical additives (surfactants);</li> <li>- Completed pits to be revegetated as soon as practicable after completion of quarrying activities;</li> <li>- Disturbed soil surfaces to be revegetated in accordance with the RP for the Project Site;</li> <li>- Operational practices to be reviewed to ensure 'best practice' techniques are being employed and that operational equipment is working efficiently;</li> </ul> <p>4) A reactive dust management program will be implemented during quarrying activities. The reactive program will form part of the AQGHGMP. A reactive management program involves the combination of instantaneous dust monitors and an on-site meteorological station. The dust monitors will be located on the boundary of the site between the dust emitting activities and the most affected receptors, and alert the operators when dust levels approach or exceed criteria levels. If the dust levels reach a pre-determined warning or critical concentration and the winds are shown to be blowing from the Site towards the monitor (i.e. the site is likely to be contributing to the elevated dust levels and potentially affecting receptors), pre-arranged actions will be taken to minimise the Site's dust emissions. Once the dust concentrations return below the warning level, the additional mitigation measures can cease and quarrying operations return to normal. The warning or critical concentration levels will be chosen in consultation with OEH and represent levels that provide the Site enough time to implement mitigation measures and/or inform personnel to cease works.</p>

Issue	Commitment
General	
Noise	<ol style="list-style-type: none"> <li>5) The Proponent will implement all practicable measures to undertake the project in a way that minimises the noise generated. The Proponent has made the following commitments in relation to operation noise management:</li> <li>6) The Proponent will conduct quarrying activities at the Project Site only between the following hours: <ul style="list-style-type: none"> <li>• 7.00 am to 6.00 pm Monday to Saturday</li> </ul> </li> <li>7) The Proponent will operate the Brick making facility and conduct activities within the storage yard at the Project Site 24 hours a day, Monday to Sunday.</li> <li>8) Deleted</li> <li>9) The Proponent will apply 5 dB(A) of noise reduction treatment to all dozers and excavators used in the quarrying operations, except for the duration of Mod 2 operations.</li> <li>10) The Proponent will apply 5 dB(A) of attenuation treatment to the front end loader operating as part of the brick works.</li> <li>11) The Proponent will construct an earth bund of a minimum height of 10 m along the northern and part of the western Project site boundaries, and 7m along the eastern Project Site boundary and part of the southern Project Site boundaries as shown in <b>Figure 6</b> and <b>Appendix B</b> of the Noise Assessment Addendum Report. Bund construction is not required for Mod 2 operations.</li> <li>12) The Proponent will remove overburden material using excavators only in pits where the use of a dozer exceeds the noise criteria.</li> <li>13) The Proponent will use smaller dozers during raw material removal stages where the predicted noise levels from larger dozers exceed the noise criteria.</li> <li>14) Construction works associated with the earth bund will be limited to 7am to 6pm Monday to Friday and 8am to 1pm on Saturdays.</li> <li>15) The Proponent will adopt best practicable means of controlling noise during the construction of the noise berm and will include noise mitigation measures in a construction noise and vibration management plan which will form part of the construction management plan to minimise the noise impact at sensitive receivers. This may include the work practices described below as detailed in <b>Section 8</b> of the Noise Assessment Addendum Report:</li> <li>16) The Proponent will apply 5 dB(A) of attenuation treatment to dozers operating as part of the noise berm construction activities.</li> <li>17) All construction activities associated with the construction of the noise berm will be subject to the standard noise and vibration mitigation measures described in <b>Section 8.2</b> of the Noise Assessment Addendum Report.</li> <li>18) Unforeseen noisy activities will be subject to additional mitigation measures depending on the extent of predicted or measured impacts.</li> <li>19) In the case that high impact noise activities, such as those likely to generate noise levels above LAeq 75 dB(A) or activities likely to generate noise with intermittent, impulsive, tonal or low-frequency characteristics are required during the construction of the noise berm, adjacent sensitive receivers will be appropriately notified prior to works commencing and respite periods will be implemented.</li> <li>20) The mitigation measures described in <b>Section 8.5</b> of the Noise Assessment Addendum Report will be implemented in order to minimise the impact of noise exceedances from heavy vehicles (i.e. trucks and dump trucks) moving around the site.</li> <li>21) The Proponent and/or its appointed contractors will select and maintain bulk earthwork machinery as specified in <b>Section 8.6</b> of the Noise Assessment Addendum Report, except where varied by EA (Mod 2).</li> <li>22) Broadband reversing alarms or other non-tonal vehicle movement and warning alarms will be fitted to all machinery on site (quarrying, brick making and storage yard machinery). The potential noise impact associated with reversing alarms will be managed and minimised via a combination of proactive driver/operator training and operational procedures as detailed in <b>Section 8.6</b> of the Noise Assessment Addendum Report.</li> </ol>

Issue	Commitment
General	
	<p>23) The Proponent will implement a noise monitoring programme which would involve attended noise monitoring at a number of nearby identified receiver locations.</p> <p>24) The Proponent will undertake consultation with identified nearby residential receivers (as detailed in <b>Section 8.9</b> of the Noise Assessment Addendum Report) that are predicted to exceed the recommended noise criteria to inform them of the timing and duration of the work.</p> <p>25) The Proponent will maintain a noise complaint register.</p>
Surface Water	<p>26) The Proponent will manage surface water on the Project Site in accordance with the SWMP prepared for the Project Site (ERM, 2002), including Addendum dated April 2010 (AECOM, 2010) and included as <b>Appendix C</b> to the EA.</p> <p>27) If during the operational phase of the quarry or on completion of the quarry operations, the proponent wishes to make use of the water from the pits/dams in the brick making process or for reuse at other premises offsite etc, a licence will be obtained from the NOW.</p>
Groundwater	<p>28) The Proponent will prepare and implement a Groundwater Monitoring Program for the Project Site generally in accordance with the methodology provided in <b>Chapter 11</b> of the EA, subject to consultation with the NOW and the satisfaction of the Director-General of the DP&amp;I. The program will commence within 12 months of the project proposal approval.</p> <p>29) The Proponent will report the results of the Groundwater Monitoring Program to the Director-General of the DP&amp;I and the NOW on an annual basis.</p> <p>30) The Proponent will implement appropriate management measures in relation to groundwater as indicated by the Monitoring Program and agreed with the Director-General.</p> <p>31) A licence to authorise any groundwater monitoring installation, required as part of this project, will be obtained from the NOW prior to any drilling commencing.</p> <p>32) The proponent will implement an alluvial aquifer mapping and assessment program to inform:</p> <ul style="list-style-type: none"> <li>- The definition of the boundaries of the alluvial system;</li> <li>- Adjustment to the extent of proposed pits to avoid impacts to the alluvial aquifer; and</li> <li>- The establishment of further mitigation measures (if required) to minimise potential impacts upon the alluvial aquifer.</li> <li>- This program will commence within 12 months <b>recommencing quarrying operations</b> and the results will be reported to the NOW and the Director-General of the DP&amp;I.</li> </ul>
Rehabilitation	<p>33) The Proponent will carry out rehabilitation works at the Project Site in accordance with the RP prepared for the Project Site and included as <b>Appendix D</b> to the EA.</p> <p>34) The Proponent will prepare a Final Landform Rehabilitation Plan in consultation with the OEH and DP&amp;I two years prior to the completion of all approved quarrying activities.</p>
Traffic and Transport	<p>35) The Proponent will manage traffic movements to and from the Project Site generally in accordance with the following:</p> <ul style="list-style-type: none"> <li>- Personnel operating trucks and vehicles to and from the Project Site would be required to undertake a site-specific health and safety induction, specifying operating hours, avoidance of the AM and PM peak periods and vehicle speed limits on Martin Road.</li> <li>- A heavy vehicle protocol would be developed for the Project Site and distributed to relevant staff and contractors during induction procedures. The protocol would deal with such issues as timing of vehicle movements, idling of vehicles, speed limits and parking.</li> <li>- Unnecessary vehicle movements would be minimised where possible. <ul style="list-style-type: none"> <li>• Deliveries would be scheduled on larger capacity 'Truck and Trailer' vehicles rather than 'Truck Only' vehicles where possible to minimise truck movements.</li> </ul> </li> </ul>

Issue	Commitment
General	
Cultural Heritage	<p>36) The Proponent will adopt the following measures in relation to the management of cultural heritage on the Project Site:</p> <ul style="list-style-type: none"> <li>- Isolated find BC-01-09 would be collected prior to works commencing in Pit 5.</li> <li>- The location of quarry pit 5 and the noise attenuation berm would be modified so as to not encroach within 60m of Badgerys Creek.</li> <li>- Salvaged heritage material would be returned to the location they originated from as per the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> and the procedure outlined in the Aboriginal Heritage Assessment Addendum.</li> <li>- Should relics be uncovered during the course of the approved works, works will cease. In cases where historical items have been uncovered, the NSW DP&amp;I's Heritage Branch will be advised or should indigenous items be uncovered the National Parks and Wildlife Service will be advised;</li> <li>- Workers/contractors will be informed of their obligations under the NPW Act 1974, namely that it is illegal to disturb, damage or destroy a relic without the prior approval of the Director General of the OEH; and</li> <li>- Should human remains be found in, on, or under the land during construction, the responsible party will: <ul style="list-style-type: none"> <li>• Contact the local police;</li> <li>• Not disturb or excavate the remains;</li> <li>• Immediately cease all work at the particular location;</li> <li>• Notify the OEH office as soon as practicable and provide any available details of the remains and their location; and</li> <li>• Not recommence any work at the particular location until authorised in writing by the OEH.</li> </ul> </li> </ul>
Ecology	<p>37) The Proponent will adopt the following measures in relation to the removal of any trees on the Project Site:</p> <ul style="list-style-type: none"> <li>- The canopy of the trees to be visually inspected prior to clearing to assess for the presence of fauna. Where bird species are detected the tree is to be nudged prior to felling to encourage the fauna to vacate the tree prior to felling. Trees to be left in situ until the birds leave the canopy;</li> <li>- Felled trees are to be left in-situ for at least 24 hours to allow fauna species to relocate. Qualified personnel are to be on hand to check for wildlife and relocate them;</li> <li>- Felled wood is to be relocated to the remnant woodland (and not placed in piles) or chipped and used in rehabilitation areas;</li> <li>- Should any wildlife be inadvertently injured during the proposed works, WIRES or an accredited veterinarian will be contacted;</li> <li>- A 60m buffer area will be provided along Badgerys Creek and the Badgerys Creek tributary. Rehabilitation works are to be undertaken in this area in accordance with the RP prepared as part of this EA; and</li> <li>- Five native trees will be planted for each mature native tree that is removed. The plantings will be located adjacent to the riparian vegetation along Badgerys Creek and its tributary.</li> </ul>
Waste	<p>38) The Proponent will manage waste in relation to the Project in accordance with the existing WMP for the Project Site, included as <b>Appendix M</b> to the EA.</p>
Mineral Resources	<p>39) The proponent will provide annual production data to the Mineral Resources Branch of NSW Industry and Investment, as and when requested.</p>
Environmental Management	<p>40) The Proponent will prepare an EMP for the Project Site to provide environmental management practices and procedures to be followed during the operation of the Project. The EMP will include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>- identification of statutory and other obligations that the Proponent is required to fulfil in relation to operation of the Project;</li> <li>- a description of the roles and responsibilities for all key personnel involved in environmental management of the Project;</li> <li>- the environmental policies and principles to be applied to the operation of the Project; and</li> <li>- describe in general terms how the environmental performance of the Project would be monitored and managed.</li> </ul>

## APPENDIX 7 REPAIR WORKS FOR MARTIN ROAD

Build something great™



9 April 2013

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Manager – Civil Construction & Assets  
Liverpool City Council  
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Liverpool NSW 2170

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**Re: Proposed approach to patching of Martin Road from the Australian Native Landscapes site entrance to the entrance to Boral's Badgerys Creek Quarry and Brick Making Facility**

Dear Raj,

As you are aware from previous formal correspondence (letter from Boral date 22 July 2012), Boral announced the mothballing of the Badgerys Creek brick making facility in April 2012.

With the Badgerys Creek brick making facility in a mothballed state, Boral were not in a position to:

- Upgrade and widen Martin Road from the site entrance to the entrance of Australian Native Landscape (ANL); and
- Commit an annual road maintenance contribution to Council, based on the weight of brick products and associated materials transported from and to the site.

In subsequent correspondence with the Department of Planning (email of 6 February 2013), Liverpool City Council (LCC) advised that they "would be amenable to alternative temporary repairs (to a satisfactory trafficable standard to be agreed on site) until (prior to) recommencement of full operations".

LCC and Boral met on site on 15 March 2013 and agreed in principle to both the extent of repairs (see attached figure) that are required as well as the specifications of this repair work.

For ease of reference, the interface between Boral's concrete driveway and the asphalt surface at the end of Martin Road is defined as Chainage 0 (CH0) with increasing chainage references towards Chainage 386, opposite the entrance to ANL.

Boral is committed to the repair of the full width of Martin Road (approximately 7m from shoulder to shoulder) in the following areas:

- CH17 – CH55 (38m x 7m = 266m<sup>2</sup>);
- CH80 – CH130 (50m x 7m = 350m<sup>2</sup>)
- CH242 – CH386 (144m x 7m = 1008m<sup>2</sup>)

Boral Bricks  
ABN 66 082 448 342



Boral will therefore repair a total area of 1624 m<sup>2</sup>.

The approach to the repair works that were agreed with LCC were to mill the areas to be repaired to a depth of 100mm and to fill these areas with 100mm of asphalt (AC28 C450 – AUSPEC 1144 Oct/12).

Once LCC have confirmed that they are in agreement with the above approach discussed on site, Boral will contact LCC to confirm dates for completion of the work and to discuss logistics around road safety requirements.

If you have any further queries, please do not hesitate to contact me.

Yours sincerely

A handwritten signature in black ink, appearing to read "David Bird", written over a circular scribble.

David Bird  
Regional General Manager  
Clay & Concrete Products NSW

## **APPENDIX 8 NOISE COMPLIANCE ASSESSMENT**

### **Applicable Meteorological Conditions**

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

### **Determination of Meteorological Conditions**

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions must be that recorded by the meteorological station required under condition 14 of Schedule 3.

### **Compliance Monitoring**

3. A noise compliance assessment must be undertaken within six months of commencing Mod 2 operations. The assessment must be conducted by a suitably qualified and experienced acoustical practitioner and must assess compliance with the noise criteria in Table 3. A report must be provided to the Secretary and EPA within 1 month of the assessment.
4. Unless the Secretary agrees otherwise, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
  - (a) monitoring locations for the collection of representative noise data;
  - (b) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment;
  - (c) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration; and
  - (d) the use of an appropriate modifying factor for low frequency noise to be applied during compliance testing at any individual residence if low frequency noise is present (in accordance with the *NSW Industrial Noise Policy*) and before comparison with the specified noise levels in the approval.