



# **Boral Cement Berrima**

## **Annual Environmental Management Report Cement Mill 7**

**1 May 2012 to 30 April 2013**



### Conditions of Cement Mill 7 Consent - Compliance Summary

Condition	Compliance
1.1	YES
1.2	YES
1.3	YES
1.4	YES
1.5	YES
1.6	NA
1.7	YES
1.8	YES
2.1	NA
2.2	YES
2.3	YES
2.4	YES
2.5	YES
2.6	YES
2.7	YES
2.8	YES
2.9	YES
2.10	YES
2.11	YES
2.12	NA
2.13	NA
2.14	YES
2.15	NA
2.16	YES
2.17	YES
2.18	YES
2.19	YES

Condition	Compliance
3.1	YES
3.2	YES
3.3	YES
3.4	YES
3.5	YES
4.1	YES
4.2	YES
4.3	YES
5.1	NA
5.2 (Noise)	NA
5.2 (Traffic)	NA
5.2 (Erosion)	NA
5.3	YES
5.4	YES
5.5 (Noise)	YES
5.5 (Air)	YES
5.5 (Water)	YES
5.5 (Transport)	YES
5.6	YES
6.1	YES
6.2	YES
6.3	YES
6.4	YES
6.5	YES
6.6	YES



## Conditions of Consent

### General

### Scope of Development

### 1.1

#### Condition

<sup>1</sup>The Applicant shall carry out the development generally in accordance with:

- a) Development Application No. 85-4-2005-i, lodged with the Department of Infrastructure, Planning and Natural Resources on 15 April 2005;
- b) Statement of Environmental Effects: Proposed Upgrade of Cement Grinding Capacity, Cement Mill 7 Project, dated April 2005 and prepared by Olsen Environmental Consulting Pty Ltd;
- c) Noise Impact Assessment: Boral BCSC Berrima, Cement Mill 7 Project dated 3 April 2005 and prepared by Connell Hatch;
- d) Air Impact Assessment: Air Quality Assessment for SEE, Cement Mill 7 Project, dated 6 April 2005 and prepared by Holmes Air Sciences;
- e) Traffic Report: Berrima Cement Works, Cement Mill 7 Project dated 11 April 2005 and prepared by Masson Wilson Twiney Pty Ltd;
- f) Correspondence with subject 'Cement Mill 7 – Implementation Dates' prepared by Mr Grant Williams, Blue Circle Southern Cement Ltd and dated 6 July 2005; and
- g) the conditions of this consent.

In the event of an inconsistency between a condition of this consent and the documents listed under a) to g) above, the condition of consent shall prevail to the extent of the inconsistency.

#### Compliance with Condition

Yes	No
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As detailed within this AEMR, there were no non-compliances raised against the Conditions of Consent during the reporting period.

#### Management Actions

BCSC has, as of 1 August 2010, been rebranded as Boral Cement Limited. The site of BCSC Cement Works at Berrima was consecutively renamed Boral Cement Berrima.

Boral Cement continues to strive for environmental excellence and is committed to environmental improvements at Berrima. Boral Cement will continue to maintain regular communications with NSW Environmental Protection Authority (EPA) and Department of Planning and Infrastructure (DPI) to proactively identify and address upcoming issues, monitor compliance, and work cooperatively to ensure that EPA and DPI requirements are understood and delivered.

<sup>1</sup> Incorporates an EPA General Term of Approval (A1.1)



## 1.2

### Condition

*The Applicant shall operate the cement works upgrade to meet the following requirements:*

- a) Cement Mill 7 is utilised in place of Cement Mill 5; and*
- b) Cement Mill 5 may be utilised as a secondary, back-up mill when Cement Mill 7 is inoperative.*

*Note: The development application for the cement works upgrade has been assessed and determined as a non-designated development under Part 2, Schedule 3 of the Environmental Planning and Assessment Regulation 2000. That Part requires that the cement works upgrade will not significantly increase the environmental impacts of the cement works as posed prior to the commencement of the cement works upgrade. Condition 1.2 aims to limit the impacts of the cement works, as upgraded in accordance with this consent, to reflect the intent of Part 2, Schedule 3 of the Environmental Planning and Assessment Regulation 2000.*

### Compliance with Condition

Yes	No
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Cement Mill 5 was not operated during the reporting period.

The total production from Cement Mill 7 for the reporting period was 504,389 tonnes.

## Provision of Documents

## 1.3

### Condition

*Where practicable, the Applicant shall provide all documents and reports required to be submitted to the Director-General under this consent in an appropriate electronic format. Provision of documents and reports to other parties, as required under this consent, shall be in a format acceptable to those parties and shall aim to minimise resource consumption.*

*Note: At the date of this consent, an appropriate electronic format for submission to the Director-General is the "portable document format" (pdf) or another format that may be readily converted to pdf.*

### Compliance with Condition

Yes	No
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Where possible all documentation has been provided electronically to minimise resource consumption.



Statutory Requirements	
1.4	
<b>Condition</b> <i>The Applicant shall ensure that all necessary licences, permits and approvals are obtained and kept up-to-date as required throughout the life of the cement works. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approvals.</i>	
<b>Compliance with Condition</b> All required licenses, permits and approvals are maintained on site at Boral Cement Berrima and kept up to date. Environment Protection Licence (EPL) No. 1698 is in place for the site, last modified by the EPA in May 2013. Cement Mill 7 Development Consent was not modified during the reporting period 01/05/12 to 30/04/13.	<div> <div>Yes</div> <div>No</div> </div>

Compliance	
1.5	
<b>Condition</b> <i>The Applicant shall ensure that all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent. The Applicant shall be responsible for the environmental impacts resulting from the actions of all persons on the site, including any visitors.</i>	
<b>Compliance with Condition</b> Boral Cement's site inductions for all employees, contractors and sub-contractors have been reviewed and rewritten in 2011. Environmental compliance training for site employees, where the conditions of this Consent and other regulatory documents for the Site are communicated, is ongoing. In 2012, a specific training package was prepared and communicated in relation to pollution incident response management plan (PIRMP). Enhanced awareness of environmental emergency response procedures will help to minimise environmental damage in case of accidents. Environmental issues and environmental compliance are also reviewed at site meetings and management meetings.	<div> <div>Yes</div> <div>No</div> </div>



## 1.6

### Condition

*Prior to the commencement of each of the events listed from a) to b) below, or within such period as otherwise agreed by the Director-General, the Applicant shall certify in writing, to the satisfaction of the Director-General, that it has complied with all conditions of this consent applicable prior to the commencement of that event.*

*Where an event is to be undertaken in stages, the Applicant may, subject to the agreement of the Director-General, stage the submission of compliance certification consistent with the staging of activities relating to that event. The events referred to in this condition are as follows:*

- a) construction of the cement works upgrade; and*
- b) operation of the cement works upgrade.*

### Compliance with Condition

NA	Yes	No
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Compliance at commencement of operations was demonstrated in the 2007-2008 AEMR. There were no changes to the operation of Cement Mill 7 that would require additional evidence of compliance.

## 1.7

### Condition

*Notwithstanding condition 1.6 of this consent, the Director-General may require an update on compliance with all, or any part, of the conditions of this consent. Any such update shall meet the reasonable requirements of the Director-General and be submitted within such period as the Director-General may agree.*

### Compliance with Condition

Yes	No
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DPI did not request an update during this reporting period.

## 1.8

### Condition

*The Applicant shall meet the requirements of the Director-General in respect of the implementation of any measure necessary to ensure compliance with the conditions of this consent, and general consistency with the SEE and those documents listed under condition 1.1. The Director-General may direct that such a measure be implemented in response to the information contained within any report, plan, correspondence or other document submitted in accordance with the conditions of this consent, within such time as the Director-General may agree.*

### Compliance with Condition

Yes	No
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DPI did not request any action under this Condition during the reporting period.



## Environmental Performance

### Noise Impacts

#### 2.1

##### Condition

*Construction activities associated with the cement works upgrade shall only be carried out:*

- a) between 7:00 am and 6:00 pm, Monday to Friday inclusive, during periods in which the cement works is shut-down, and construction noise is audible at the boundary of the site;*
- b) between 7:00 am and 1:00 pm on Saturdays, during periods in which the cement works is shut-down, and construction noise is audible at the boundary of the site;*
- c) at no time on Sundays or public holidays, during periods when the cement works is shut-down, and construction noise is audible at the boundary of the site;*
- d) at any time during periods in which the cement works is in operation; and*
- e) at any time if construction noise is inaudible at the boundary of the site.*

##### Compliance with Condition

NA

Yes

No

All construction activities were completed prior to this reporting period.

Boral Cement request that DPI remove this condition from the Consent as it refers to the original construction project rather than to ongoing operations.

#### 2.2

##### Condition

*Subject to compliance with the requirements of this consent, the cement works upgrade may be operated 24 hours per day, 7 days per week.*

##### Compliance with Condition

Yes

No

The site, including Cement Mill 7, operates 24 hours a day, 7 days a week.





## 2.3

### Condition

<sup>2</sup>The Applicant shall design, construct, operate and maintain all new and upgraded components forming part of the cement works upgrade to ensure that for each receiver location listed in Table 1 below, the noise level at each receiver location does not exceed the maximum allowable noise contribution limit at the receiver location specified.

**Table 1 – Maximum Allowable Noise Contribution Limit (dB(A))**

Receiver Location	Day <sup>a</sup> L <sub>Aeq</sub> (15 minute)	Evening <sup>b</sup> L <sub>Aeq</sub> (15 minute)	Night <sup>c</sup> L <sub>Aeq</sub> (15 minute)
Adelaide Street, near Taylor Avenue, New Berrima	43	43	40
Argyle Street, near Taylor Avenue, New Berrima	43	43	40
Candowie Farm House	43	43	40

a. Day is defined as the period from 7:00am to 6:00pm Monday to Saturday and 8:00am to 6:00pm on Sundays and public holidays.

b. Evening is defined as the period from 6:00pm to 10:00pm.

c. Night is defined as the period from 10:00pm to 7:00am Monday to Saturday and 10:00pm to 8:00am on Sundays and public holidays.

Note: Noise contributions specified in Table 1 are to be interpreted as contributions from the new and upgraded components forming part of cement works upgrade only and not as noise limits for the site as a whole.

### Compliance with Condition

Yes	No
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Compliance with this Condition was previously confirmed by the Hatch Pty Ltd noise monitoring undertaken in April 2009, August/September 2010, June/July 2011.

The most recent round of noise monitoring was conducted by Hatch Pty Ltd in June/July 2012. The report (Annual Environmental Noise Compliance Assessment 2012, dated 14/11/2012), concludes that "It is the assessment of this study that the plant is in compliance with its licence conditions for noise".

Boral Cement Berrima received 12 Noise complaints during the reporting period. Specific complaints resulting to plant operations were addressed and corrective and preventive actions taken. The complaints typically arose during the prevailing Southerly winds and overcast conditions. The noise monitoring carried out by Hatch in recent years showed that weather conditions significantly contribute to noise transmission across the site boundary. History of noise complaints indicates that the majority of complaints arise during periods of adverse weather including temperature inversion.

Plant cement milling activities have not changed significantly during the reporting period from those in the previous years.

<sup>2</sup> Incorporates EPA General Terms of Approval (L4.1 and L4.2)





## 2.4

**Condition**

<sup>3</sup>The maximum allowable noise contributions identified in condition 2.3 apply under all meteorological conditions, except:

- a) during wind speeds greater than  $3\text{ms}^{-1}$  measured at 10 metres above ground level; or
- b) during temperature inversion conditions of greater than  $3^{\circ}\text{C}/100\text{m}$  and wind speeds of greater than  $2\text{ms}^{-1}$  measured at 10 metres above ground.

**Compliance with Condition**

Yes	No
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Noted.

## 2.5

**Condition**

<sup>4</sup>For the purpose of assessment of noise contributions specified under condition 2.3, noise from the cement works upgrade shall be:

- a) measured at the most affected point on or within the receptor site boundary or at the most affected point within 30m of the dwelling (rural situations), where the dwelling is more than 30m from the property boundary; and
- b) where applicable, subject to the modification factors provided in Section 4 of the New South Wales Industrial Noise Policy (EPA, 2000).

**Compliance with Condition**

Yes	No
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Noise monitoring was conducted in accordance with this condition by Hatch Pty Ltd.

## 2.6

**Condition**

Notwithstanding condition 2.5 of this consent, should direct measurement of noise from the site be impractical, the Applicant may employ an alternative noise assessment method deemed acceptable by the EPA (refer to Section 11 of the New South Wales Industrial Noise Policy (EPA, 2000)). Details of such an alternative noise assessment method shall be submitted to the Director-General prior to the implementation of the assessment method.

**Compliance with Condition**

Yes	No
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No alternative noise assessment method has been required.

<sup>3</sup> Incorporates an EPA General Term of Approval (L4.4)

<sup>4</sup> Incorporates an EPA General Term of Approval (L4.3)



## Air Quality

### 2.7

#### Condition

<sup>5</sup>*The Applicant shall design, construct, operate and maintain the cement works upgrade in a manner that minimises dust emissions from the site. The raw material storage bunker associated with the cement works upgrade shall be maintained in a condition that effectively eliminates wind generated dust emissions. Dust collection systems shall be provided to all potential sources of dust production associated with the cement works upgrade.*

#### Compliance with Condition

Yes	No
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The audit report completed by Somerset Risk Management in May 2008 concluded:

*"Cement Mill 7 has been fitted with Dust Collectors as well as an automated system that detects and notifies dust collector damage or failure. In addition, there appears to be a regular maintenance regime in place, as a preventative approach to managing the operational activities at Cement Mill 7".* This situation has continued.

Raw material storage is regularly wetted-down and handling of materials is restricted in southerly wind conditions to minimise dust impacts on the adjacent residential area.

Two dust-related Pollution Reduction Programmes requested by the EPA were successfully completed and closed in the reporting period. Currently another dust-related Pollution Reduction Programme is being implemented which involves revegetation of eroded site areas.

A total of 18 complaints were received from the community in relation to the deposition of dust on vehicles and properties. All incidents were investigated and appropriate actions were taken. Details are provided in the Kiln 6 AERM 2013, Attachment No.6.

Boral Cement Berrima measures dust deposition rates by means of seven dust deposition gauges located around the perimeter of the site. Samples are collected from each gauge on a monthly basis to assess compliance against the dust deposition guidelines detailed in the *Approved Methods and Guidance for Analysis for the Modelling and Assessment of Air Pollutants in NSW* (DEC, 2005). As there is no emission limit specified in the Licence, the EPA dust deposition guideline criterion of 4g/m<sup>2</sup>/month (expressed as a 12-month rolling average) has been adopted for the Site.

For the reporting period, the annualised average dust deposition data for all 7 current dust gauges have shown values below the EPA guidelines of 4g/m<sup>2</sup>/month. Further details are provided the Kiln 6 AERM 2013, Attachment No.1 and 2.

<sup>5</sup> Incorporates EPA General Terms of Approval (O2.1 and O2.2)



## 2.8

**Condition**

*The Applicant shall take all practicable measures to ensure that all vehicles entering or leaving the site and carrying a load that may generate dust are covered at all times, except during loading and unloading. Any such vehicles shall be covered or enclosed in a manner that will prevent emissions of dust from the vehicle at all times.*

**Compliance with Condition**

Yes	No
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All transport contractors are made aware of this requirement during site inductions.

Section 3 of the *Driver Code of Conduct – Truck and Heavy Vehicles Operators Performing Work for or Associated with Boral Cement* (September 2011) includes requirements for all drivers of heavy vehicles on site to ensure they cover their loads and prevent spillage.

Boral Cement has also instructed, where possible, for on site transportation of materials, that loads should be covered.

## 2.9

**Condition**

*All trafficable areas and vehicle manoeuvring areas associated with the cement works upgrade shall be maintained in a condition that will minimise the generation or emission of wind blown or traffic generated dust from the site at all times.*

**Compliance with Condition**

Yes	No
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All trafficable and vehicle manoeuvring areas associated with Cement Mill 7 are sealed.

Generally around the site, paved roads are swept with a mechanical road sweeper, unpaved roads are regularly watered with recycled water to minimise dust emissions. Speed limits are in place to limit traffic-generated dust.

Sealing of the main haul road from the Blue Shale Quarry was finalised in the first month of this reporting period.

Some unsealed roads have been previously blocked off to prevent their use - these will be revegetated as part of the currently implemented landscaping plan.

Two wheel wash stations are planned to be installed in the next reporting period, one at the exit of a shale pad, the other at the end of Quarry Rd

**Management Actions**

Boral Cement Berrima continues to investigate opportunities to reduce Fugitive Dust throughout the site.



## 2.10

### Condition

<sup>6</sup>The Applicant shall design, construct, operate and maintain the cement works upgrade to ensure that total solid particle emission from the exhaust stack on Cement Mill No.7 (EPA Identification Point 10) does not exceed 20mg/m<sup>3</sup> (100% concentration limit). The concentration limit specified above is based on 101.3 kPa, 273 K, dry reference conditions and shall be determined in accordance with the monitoring requirements described under condition 3.1. To avoid any doubt, this condition does not authorise the discharge or emission of any other pollutants.

### Compliance with Condition

Yes	No
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Annual stack testing of Cement Mill 7 for the 2012-2013 reporting period confirms compliance with the total solid particle (TSP) licence limit of 20 mg/m<sup>3</sup>, with test results of 7.2 mg/m<sup>3</sup> and 10.3 mg/m<sup>3</sup>, averaging 8.8 mg/m<sup>3</sup>.

## Water Quality

## 2.11

### Condition

<sup>7</sup>Except as may be expressly provided by a licence under the Protection of the Environment Operations Act 1997 in relation to the cement works upgrade, section 120 of that Act (pollution of waters) shall be complied with in, and in connection with, the carrying out of the cement works upgrade.

### Compliance with Condition

Yes	No
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5 overflow events occurred during this reporting period. The overflow events were sampled during the discharge by an independent contractor, ALS. The results of the monitoring are provided in the response to Condition 4.3 of the Kiln 6 Upgrade AEMR, and are graphed against overflow event results from previous years in Attachment No 5 of the Kiln 6 Upgrade 2013 AEMR.

<sup>6</sup> Incorporates EPA General Terms of Approval (P1.1, L2.1 and L2.2)

<sup>7</sup> Incorporates an EPA General Term of Approval (L1.1)



## Erosion and Sediment Control

### 2.12

#### Condition

*All construction vehicles exiting the site, having had access to unpaved areas, shall depart via a wheel-wash facility.*

#### Compliance with Condition

NA	Yes	No
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Construction had ceased prior to this reporting period.

Boral Cement request that DPI remove this condition from the Consent as it refers to the original construction project rather than to ongoing operations.

### 2.13

#### Condition

*All erosion and sedimentation controls required as part of this consent shall be maintained for the duration of the construction works, and until such time as all ground disturbed by the construction works, has been stabilised and rehabilitated so that it no longer acts as a source of sediment.*

#### Compliance with Condition

NA	Yes	No
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Construction had ceased prior to this reporting period and the ground had been stabilised and rehabilitated.

Boral Cement request that DPI remove this condition from the Consent as it refers to the original construction project rather than to ongoing operations.

## Drainage and Stormwater

### 2.14

#### Condition

*The Applicant shall ensure that the cement works upgrade does not lead to an increase in the volume or flow rate of stormwater leaving the site over and above pre-development flow conditions.*

#### Compliance with Condition

Yes	No
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Compliance with this Condition was established in the 2007-2008 AEMR.

Boral Cement Berrima is actively harvesting rainwater from within site catchment for operational purposes, further reducing stormwater leaving the site.



## Traffic and Transport

### 2.15

#### Condition

*The Applicant shall establish a bus transport system generally consistent with that identified in section 6.6.7 of the SEE referred to in condition 1.2b to transport construction employees to and from the site during the construction period.*

#### Compliance with Condition

NA	Yes	No
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Construction ceased prior to this reporting period so this condition does not apply.

Boral Cement request that DPI remove this condition from the Consent as it refers to the original construction project rather than to ongoing operations.

### 2.16

#### Condition

*The Applicant shall ensure that vehicles associated with the cement works upgrade do not stand or park on any public road or footpath adjacent to the site. Measures provided by the Applicant shall include sufficient on-site parking for all employees and contractors during construction and operation of the cement works upgrade and management measures to ensure that heavy vehicles entering the site are not permitted to queue on Taylor Avenue at any time.*

#### Compliance with Condition

Yes	No
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Construction activities were completed prior to the commencement of this reporting period.

Sufficient parking is provided on site for all employees and contractors during operation of the upgrade. In addition, there is sufficient distance between the weighbridge and the site entrance on Taylor Avenue to prevent heavy vehicles queuing on Taylor Avenue.

### 2.17

#### Condition

*The Applicant shall install an advance warning signage along Taylor Avenue to advise vehicles approaching the entrance to the site of turning truck traffic in the area. This signage is to be installed prior to the commencement of operations of the cement works upgrade. Details of the design and installation of this signage are to be provided to the satisfaction of the Director-General prior to the commencement of operations at the site upgrade.*

#### Compliance with Condition

Yes	No
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Warning signage has been installed along Taylor Avenue.





## Waste Management

### 2.18

#### Condition

<sup>8</sup>The Applicant shall not cause, permit or allow any waste generated outside Cement Mill 7 to be received at Cement Mill 7 for storage, treatment, processing, reprocessing or disposal, or any waste generated at Cement Mill 7 to be disposed of at Cement Mill 7, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997. This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence under the POEO Act 1997.

#### Compliance with Condition

Yes	No
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No waste generated outside Cement Mill 7 has been received for storage, treatment, processing, reprocessing or disposal, nor has any waste generated at Cement Mill 7 been disposed of at Cement Mill 7.

## Visual Amenity

### 2.19

#### Condition

The Applicant shall ensure that all external lighting associated with the cement works upgrade, and including those lights already erected, is mounted, screened, and directed in such a manner so as not to create a nuisance to surrounding properties or roadways. The lighting shall be the minimum level of illumination necessary and shall comply with AS 4282(INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting.

#### Compliance with Condition

Yes	No
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The lighting of Cement Mill 7 does not impact greatly on the visual amenity of the surrounding properties and roadways. There were no complaints regarding light spill during this reporting period. Boral Cement Berrima requires operational lighting for the safety and wellbeing of staff and contractors on site.

<sup>8</sup> Incorporates an EPA General Term of Approval (L3.1 and L3.2)



## Environmental Monitoring and Auditing

### Air Quality

#### 3.1

##### Condition

<sup>9</sup>During operation of the cement works upgrade, the Applicant shall periodically determine the pollutant concentration for total solid particles ( $\text{mg}/\text{m}^3$ ) at the main exhaust stack for Cement Mill No.7 (EPA Identification Point 10) employing sampling method TM-15. This pollutant concentration shall be determined on an annual basis. The Sampling Method shall be undertaken in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

##### Compliance with Condition

Yes	No
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The annual testing of Cement Mill 7 main exhaust stack for total solid particles ( $\text{mg}/\text{m}^3$ ) for the 2012-2013 reporting period was conducted by ECS Stack Pty Ltd in June 2012, employing sampling method TM-15, and undertaken in accordance with the Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales.

The measured pollutant concentrations as total solid particles ( $\text{mg}/\text{m}^3$ ) were  $7.2 \text{ mg}/\text{m}^3$  and  $10.3 \text{ mg}/\text{m}^3$ , averaging  $8.8 \text{ mg}/\text{m}^3$ , which is below the licence limit of  $20 \text{ mg}/\text{m}^3$ .

#### 3.2

##### Condition

If the results of the monitoring required under condition 3.1 and EPL No. 1698 indicate that the operation of any component of the cement works upgrade, when operating under design loads and normal operating conditions, exceeds the limit imposed under condition 2.10 and EPL No. 1698, the Applicant shall provide details of remedial measures to be implemented to reduce air quality limits to the levels required.

##### Compliance with Condition

Yes	No
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Annual stack testing of Cement Mill 7 for the 2012-2013 reporting period confirms compliance with Condition 2.10 and EPL 1698.

<sup>9</sup> Incorporate EPA General Terms of Approval (M2.1 and M3.1)



Auditing	
3.3	
<b>Condition</b> <i>Details of the remedial measures and a timetable for implementation shall be submitted to the Director-General for Approval within such period as the Director-General may require, and be accompanied by evidence that the EPA is satisfied that the remedial measures are acceptable.</i>	
<b>Compliance with Condition</b> No remedial measures were required.	<div>Yes</div> <div>No</div>

3.4	
<b>Condition</b> <i>Within one year of the commencement of operation of the cement works upgrade, and every three years thereafter or as otherwise required by the Director-General, the Applicant shall commission an independent person or team to undertake an Environmental Audit of the cement works upgrade. The independent person or team shall be approved by the Director-General, prior to the commencement of the Audit. An Environmental Audit Report shall be submitted for comment to the Director-General, the DEC and Council, within three months of the completion of the Audit. The Audit shall:</i> <ul style="list-style-type: none"> <li><i>a) be carried out in accordance with ISO 19011: Guidelines for Quality and/or Environmental Management Systems Auditing;</i></li> <li><i>b) assess compliance with the requirements of this consent, and other licences and approvals that apply to the cement works upgrade;</i></li> <li><i>c) assess the cement works upgrade operations against the predictions made and conclusions drawn in the SEE and other documents listed under conditions 1.1a) to 1.1f), inclusive; and</i></li> <li><i>d) review the effectiveness of the environmental management of the cement works upgrade, including any environmental impact mitigation works.</i></li> </ul> <i>The Director-General may, having considered any submission made by the DEC and/or Council in response to the Environmental Audit Report, require the Applicant to undertake works to address the findings or recommendations presented in the Report. Any such works shall be completed within such time as the Director-General may agree.</i>	
<b>Compliance with Condition</b> Last 3-yearly audit was conducted by an independent auditor (Somerset Risk Management) on 14-16 November 2011. The report was submitted to DPI in December 2011 and subsequently approved by the Department. The next audit is due in the Licence Year 2014-15.	<div>Yes</div> <div>No</div>



3.5	
<b>Condition</b> <i>The Director-General may, having considered any submission made by the Applicant, consent to the incorporation of the environmental auditing requirements listed under condition 3.3 into the Environmental Audit Report required under the conditions of consent for other development at the site.</i>	
<b>Compliance with Condition</b> No action was required in the reporting period.	<div>Yes</div> <div>No</div>

Community Information and Involvement	
4.1	
<b>Condition</b> <i>Subject to confidentiality, the Applicant shall make all documents required under this consent available for public inspection upon request. This shall include provision of all documents at the site for inspection by visitors, and in an appropriate electronic format on the Applicant's internet site, should one exist.</i>	
<b>Compliance with Condition</b> Subject to confidentiality, documentation required under this consent is available for inspection at the site upon request. Where appropriate, documents are progressively being made available in a pdf format on the Boral Cement website.	<div>Yes</div> <div>No</div>

Complaints Procedure	
4.2	
<b>Condition</b> <i>Prior to the commencement of construction for the cement works upgrade, the Applicant shall ensure that the following are available for community complaints for the life of the cement works upgrade (including construction and operation):</i> <ul style="list-style-type: none"> <li>a) a telephone number on which complaints about operations on the site may be registered;</li> <li>b) a postal address to which written complaints may be sent; and</li> <li>c) an email address to which electronic complaints may be transmitted, should the Applicant have email capabilities.</li> </ul> <i>The telephone number, the postal address and the email address shall be displayed on a sign near the entrance to the site, in a position that is clearly visible to the public. These details shall also be provided on the Applicant's internet site, should one exist.</i>	



### Compliance with Condition

Yes	No
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The site complaints procedure is well established. Contact details for Boral Cement Berrima are included on all site entrance signage, and include a telephone number, postal address and email address.

Details are also provided on the Boral Cement Berrima webpage,  
[http://www.boral.com.au/article/berrima\\_cement\\_contacts.asp](http://www.boral.com.au/article/berrima_cement_contacts.asp).

## 4.3

### Condition

*The Applicant shall record details of all complaints received through the means listed under condition 4.2 of this consent in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to:*

- a) the date and time, where relevant, of the complaint;*
- b) the means by which the complaint was made (telephone, mail or email);*
- c) any personal details of the complainant provided, or if no details were provided, a note to that effect;*
- d) the nature of the complaint;*
- e) any action(s) taken by the Applicant in relation to the complaint, including any follow-up contact with the complainant; and*
- f) if no action was taken by the Applicant in relation to the complaint, the reason(s) why no action was taken.*

*The record of a complaint must be kept for at least 4 years after the complaint was made. The Complaints Register shall be made available for inspection by the DEC or the Director-General upon request.*

### Compliance with Condition

Yes	No
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A summary of all complaints (by type) received by Boral Cement Berrima during this reporting period of May 2012 - April 2013 is provided below:

- Dust complaints – 18
- Noise complaints – 12
- Other complaints (stormwater runoff) – 1

The complaints summarised above are addressed in detail in the Kiln 6 Upgrade AEMR 2013 and its attachments as they are not specific to Cement Mill 7. A copy of the complaint register has been provided with the Kiln 6 Upgrade AEMR (Attachment No.6).



Environmental Management						
CEMP						
5.1						
<b>Condition</b>						
<p>The Applicant shall prepare and implement a <b>Construction Environmental Management Plan (CEMP)</b> to outline environmental management practices and procedures to be followed during the construction of the cement works upgrade. The Plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"><li>a) a description of all activities to be undertaken on the site during construction, including an indication of stages of construction, where relevant;</li><li>b) statutory and other obligations that the Applicant is required to fulfil during construction, including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;</li><li>c) specific consideration of measures to address any requirements of the Department and the DEC during construction;</li><li>d) details of how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts;</li><li>e) a description of the roles and responsibilities for all relevant employees involved in construction; and</li><li>f) the Management Plans listed under condition 5.2 of this consent.</li></ul> <p>The CEMP shall be submitted for the approval of the Director-General prior to the commencement of construction of the cement works upgrade. Notwithstanding, where construction work is to be undertaken in stages, the Applicant may, subject to the agreement of the Director-General, stage the submission of the CEMP consistent with the staging of activities relating to that work. Construction of each stage shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the CEMP to the DEC as soon as practicable.</p>						
<b>Compliance with Condition</b>			<table><tr><td>NA</td><td>Yes</td><td>No</td></tr></table>	NA	Yes	No
NA	Yes	No				
All construction activities were completed prior to this reporting period.						
Boral Cement request that DPI remove this condition from the Consent as it refers to the original construction project rather than to ongoing operations.						





## 5.2 (Noise)

### Condition

As part of the CEMP for the cement works upgrade, required under condition 5.1 of this consent, the Applicant shall prepare and implement the following Management Plans:

- a) <sup>10</sup>A **Noise Management Plan** to outline measures to minimise the impacts from the construction of the cement works upgrade on local noise levels. The Plan shall address the requirements of the DEC and shall include, but not necessarily be limited to:
- identification of all major sources of noise that may be emitted as a result of the construction of the cement works upgrade;
  - specification of the noise criteria as it applies to the particular activity;
  - procedures for the monitoring of noise emissions from the cement works upgrade, in accordance with any requirements of the DEC;
  - protocols for the minimisation of noise emissions;
  - description of procedures to be undertaken if any non-compliance is detected.

### Compliance with Condition

NA	Yes	No
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All construction activities were completed prior to this reporting period.

Boral Cement request that DPI remove this condition from the Consent as it refers to the original construction project rather than to ongoing operations.

## 5.2 (Traffic)

### Condition

b) A **Traffic Management Plan** to outline management of traffic conflicts associated with the construction of the cement works upgrade. The Plan shall include, but not necessarily be limited to:

- details of traffic routes used by construction vehicles;
- the number and type of vehicles to be used in the construction of the cement works upgrade, and their movements to, from and within the site per day;
- minimum requirements for vehicle maintenance to address noise and exhaust emissions;
- speed limits to be observed along routes to and from the sites and within the site; and
- behaviour requirements for vehicle drivers to and from the site and within the site.

### Compliance with Condition

NA	Yes	No
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All construction activities were completed prior to this reporting period.

Boral Cement request that DPI remove this condition from the Consent as it refers to the original construction project rather than to ongoing operations.

<sup>10</sup> Incorporates an EPA General Term of Approval (L4.5)



## 5.2 (Erosion and Sediment Control)

### Condition

c) <sup>11</sup>an **Erosion and Sedimentation Management Plan** to detail measures to minimise erosion during construction of the cement works upgrade. The Plan shall address the requirements of the DEC and shall include, but not necessarily be limited to:

- i. details of erosion, sediment and surface water pollution control measures and practices to be implemented during construction of the cement works upgrade; and
- ii. demonstration that erosion and sediment control measures have been prepared in accordance with the requirements for such plans outlined in Landcom's manual titled *Managing Urban Stormwater: Soils and Construction*, Volume 1, 4<sup>th</sup> Edition, March 2004.

### Compliance with Condition

NA	Yes	No
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All construction activities were completed prior to this reporting period.

Boral Cement request that DPI remove this condition from the Consent as it refers to the original construction project rather than to ongoing operations.

## OEMP

### 5.3

### Condition

The Applicant shall prepare and implement an **Operation Environmental Management Plan (OEMP)** to detail an environmental management framework, practices and procedures to be followed during the operation of the cement works upgrade. The plan shall include, but not necessarily be limited to:

- a) identification of all statutory and other obligations that the Applicant is required to fulfil in relation to operation of the cement works upgrade, including all consents, licences, approvals and consultations;
- b) a description of the roles and responsibilities for all relevant employees involved in the operation of the cement works upgrade;
- c) overall environmental policies and principles to be applied to the operation of the cement works upgrade;
- d) standards and performance measures to be applied to the cement works upgrade, and a means by which environmental performance can be periodically reviewed and improved;
- e) management policies to ensure that environmental performance goals are met and to comply with the conditions of this consent;
- f) the Management Plans listed under condition 0 of this consent; and
- g) the environmental monitoring requirements outlined under conditions 3.1 to 3.4 of this consent, inclusive.

The OEMP shall be submitted for the approval of the Director-General no later than one month prior to the commencement of operation of the upgrade, or within such period otherwise agreed by the Director-General. Operation shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the OEMP to the DEC and Council.

<sup>11</sup> incorporates an EPA General Term of Approval (O3.1)

**Compliance with Condition**

Yes	No
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The original compliance with the submission and approval of the OEMP was detailed in the 2007/2008 AEMR.

The OEMP was reviewed in updated in the previous reporting period. It continues to reflect the extent of current operations and environmental management needs associated with these operations. The OMP will be formally reviewed by the end of a 3-year cycle or earlier if site operations significantly change.

**5.4****Condition**

*The Director-General may, having considered any submission made by the Applicant, consent to the incorporation of the requirements listed under condition 5.3 into the AEMR required under the conditions of consent for other development at the site.*

**Compliance with Condition**

Yes	No
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No submissions have been made by Boral Cement.

Boral Cement however requests that the consent conditions for Cement Mill 7 and Kiln 6 be consolidated in a single document and that construction related conditions be removed.

**5.5 (Noise)****Condition**

*As part of the OEMP for the cement works upgrade, required under condition 5.3 of this consent, the Applicant shall prepare and implement the following Management Plans:*

*a) **Noise Management Plan** to outline measures to minimise the impacts from the operation of the cement works upgrade on local noise levels. The Plan shall address the requirements of the DEC and shall include, but not necessarily be limited to:*

- i) identification of all major sources of noise that may be emitted as a result of the operation of the cement works upgrade;*
- ii) specification of the noise criteria as it applies to the particular activity;*
- iii) procedures for the monitoring of noise emissions from the cement works upgrade, in accordance with any requirements of the DEC;*
- iv) protocols for the minimisation of noise emissions;*
- v) description of procedures to be undertaken if any non-compliance is detected.*

**Compliance with Condition**

Yes	No
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The Berrima Works Noise Management Plan was updated in September 2011 and is part of Berrima's Environmental Management Plans. The Plan will be formally reviewed by the end of a 3-year cycle or earlier if site operations significantly change.

The latest round of noise monitoring was conducted in June/July 2012, with the report issued in December 2012. The plant remains in compliance with its noise limits.



### 5.5 (Air )

#### Condition

*b) Air Quality Management Plan to outline measures to minimise and manage any impacts from the operation of the cement works upgrade on local air quality. The Plan shall address the requirements of the DEC, and shall include, but not necessarily be limited to:*

- i. identification of all major sources of particulate air pollutants that may be emitted as result of the operation of the cement works upgrade, including identification of the major components and quantities of these emissions;*
- ii. monitoring of particulate emissions from the cement works upgrade, in accordance with any requirements of the DEC;*
- iii. procedures for the minimisation of particulate emissions from the cement works upgrade, and the reduction of these emissions over time, where appropriate;*
- iv. protocols for regular maintenance of process equipment to minimise the potential for dust emissions;*
- v. description of procedures to be undertaken if any non-compliance is detected.*

#### Compliance with Condition

Yes	No
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The Air Quality Management Plan was last updated in September 2011 and is part of Berrima's Environmental Management Plans. The Plan will be formally reviewed by the end of a 3-year cycle or earlier if site operations significantly change.

Annual stack testing was conducted as per EPL 1698 in June 2012 and reported to the EPA in the Annual Return 2013. All monitoring results were within their respective emission limits.

### 5.5 (Water)

#### Condition

*c) Water Supply Strategy with an aim to investigate and pursue options for the use of alternative sources of water, such as stormwater reuse or treated effluent from sewage treatment plants, in order to reduce the dependency on extracting water from the Wingecarribee River.*

*Note: Options for the use of alternative water sources may be the subject of a separate approvals process.*

#### Compliance with Condition

Yes	No
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A Water Supply Strategy has previously been provided. The current Water Management Plan was last reviewed and updated in September 2011 and is part of Berrima's Environmental Management Plans. The Plan will be formally reviewed by the end of a 3-year cycle or earlier if site operations change.

Boral Cement Berrima continues to actively manage and increase the harvesting, storage and use of rainwater falling on the site (within the allowable limits). This has included:

- Reworking the quarry so that it has the capacity to operate as a water storage pond.
- Improved water management procedures to minimise water discharged from the site by drawing-down Lake Quality and Lake Breed and storing their water elsewhere on site, thereby providing greater volume for capture during rainfall events (minimising overflow losses); and



- Investigations into improving the ways by which water can be moved around the site to facilitate improved storage options.

These measures provide greater storage volume in Lake Quality and Lake Breed, which increases the volume of stormwater captured and retained on site during wet periods, and both decreases the volume/frequency of off-site discharges or stormwater, and the volume of water extracted from the Wingecarribee River. The capacity for storing harvested water on site while maintaining full operations is currently approximately 150 ML. Current operations require up to 0.8 ML of water use per day.

## Management Actions

Boral Cement Berrima will continue to investigate additional ways to increase on-site harvesting and storage of stormwater.

## 5.5 (Transport)

### Condition

*d) Transport Management Plan to outline management of traffic conflicts associated with the operation of the cement works upgrade. The Code shall include, but not necessarily be limited to:*

- i) details of any restriction to traffic routes;*
- ii) minimum requirements for vehicle maintenance to address noise and exhaust emissions;*
- iii) speed limits to be observed along routes to and from the sites and within the site; and*
- iv) behaviour requirements for vehicle drivers to and from the site and within the site.*

### Compliance with Condition

Yes	No
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A *Transport Code of Conduct* (including *Driver Code of Conduct*) was prepared by BCSC prior to the Kiln 6 construction works (July 2003). The Transport Code of Conduct addressed the management of traffic during the site operations, and specifically the requirements of the Development Consent conditions. It addressed both heavy and passenger vehicles. All employees and contractors were made aware that responsible driving is a condition of employment at the Berrima site.

The *Driver Code of Conduct for Passenger Vehicles and Utility Operators* and *Driver Code of Conduct for Truck and Heavy Vehicle Operators* were last updated in September 2011 and are part of Berrima's Environmental Management Plans. The Plan will be formally reviewed by the end of a 3-year cycle or earlier if site operations change.

Driver codes outline the driving behaviour expected of all employees and contractors. Driver Code of Conduct is included in induction training. Refresher training is provided and regular audits are conducted.

Drivers are continually evaluated for compliance against these codes during workplace observations. In case truck drivers associated with Boral Cement Berrima are found to be in breach of our Code of Conduct, incident reports would be prepared.





## 5.6

**Condition**

*Within three years of the commencement of operation of the cement works upgrade, and at least every three years thereafter, the Applicant shall undertake a formal review of the Operation Environmental Management Plan (OEMP) required under condition 5.3 of this consent. The review shall ensure that the OEMP is up-to-date and all changes to procedures and practices since the previous review have been fully incorporated into the OEMP. The Applicant shall notify the Director-General, Council and the DEC of the completion of each review, and shall supply a copy of the updated OEMP to those parties on request. The Applicant shall also make any revised OEMP available for public inspection on request.*

**Compliance with Condition**

Yes	No
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Boral Cement Berrima completed a full review of the site Operational EMP and the associated specific EMPs (Water, Air, Noise, Waste, Dust and Traffic Management Plans) in the previous reporting period. The Plans will be formally reviewed by the end of a 3-year cycle or earlier if site operations significantly change.

The documents are available for public inspection on request.

**Environmental Reporting****Incident Reporting**

## 6.1

**Condition**

*The Applicant shall notify the DEC and the Director-General of any incident with actual or potential significant off-site impacts on people or the biophysical environment as soon as practicable after the occurrence of the incident. The Applicant shall provide written details of the incident to the EPA and the Director-General within seven days of the date on which the incident occurred.*

**Compliance with Condition**

Yes	No
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During this reporting period there were no environmental incidents associated with Cement Kiln 7 that resulted in actual or potential off-site environmental impacts.

Furthermore, no site-wide environmental incidents with actual or potential significant off-site impacts on people or the biophysical environment occurred during the reporting period.





## 6.2

### Condition

*The Applicant shall meet the requirements of the Director-General to address the cause or impact of any incident, as it relates to this consent, reported in accordance with condition 6.1, within such period as the Director-General may agree.*

*Note: Condition 6.2 of this consent does not limit or preclude the DEC from requiring any action to address the cause or impact of any incident, in the context of the EPA's statutory role in relation to the cement works upgrade.*

### Compliance with Condition

Yes	No
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The Director General has not required Boral Cement Berrima to address any environmental incident during this reporting period.

## Annual Performance Reporting

## 6.3

### Condition

*The Applicant shall, throughout the life of the cement works upgrade, prepare and submit for the approval of the Director-General, an Annual Environmental Management Report (AEMR). The AEMR shall review the performance of the cement works upgrade against the Operation Environmental Management Plan (refer to condition 5.3 of this consent), the conditions of this consent and other licences and approvals relating to the cement works upgrade. The AEMR shall include, but not necessarily be limited to:*

- a) details of compliance with the conditions of this consent;*
- b) a copy of the Complaints Register (refer to condition 4.3 of this consent) for the preceding twelve month period (exclusive of personal details), and details of how these complaints were addressed and resolved;*
- c) a comparison of the environmental impacts and performance of the cement works upgrade against the environmental impacts and performance predicted in the SEE and the additional information listed under condition 1.1;*
- d) results of all environmental monitoring required under this consent and other approvals, including interpretations and discussion by a suitably qualified person;*
- e) a list of all occasions in the preceding twelve-month period when environmental performance goals for the cement works upgrade have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident;*
- f) identification of trends in monitoring data over the life of the cement works upgrade to date;*
- g) a list of variations obtained to approvals applicable to the cement works upgrade and to the site during the preceding twelve-month period; and*
- h) environmental management targets and strategies for the following twelve-month period, taking into account identified trends in monitoring results.*

**Compliance with Condition**

Yes	No
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- a) Addressed throughout this AEMR.
- b) Please refer to the Kiln 6 Upgrade AEMR.
- c) A comparison of the impacts predicted in the SEE versus actual impacts was provided in the Cement Mill 7 compliance audit report by Somerset Risk Management (May 2008) – a copy of which was provided with the amended AEMR for 2007-08 in December 2008. There have been no changes to the project since the audit was finalised.
- d) Please refer to the Kiln 6 Upgrade AEMR 2013.
- e) The site, including Cement Mill 7, achieved its environmental performance goals.
- f) Please refer to the Kiln 6 Upgrade AEMR 2013.
- g) Cement Mill 7 Development Consent was not modified during the reporting period 01/05/12 to 30/04/13.
- h) The primary environmental management targets & strategies for the following reporting period are:
  - To continue to work towards maintaining full compliance with the Consent;
  - To further minimise the fugitive dust emissions generated from raw material and clinker stockpiles, unsealed areas and process leaks/upsets;
  - To further reduce noise emissions by implementing noise attenuators and other measures where technically and economically feasible.
  - To continue implementing processes and procedures to track operational and environmental trends.

**Management Actions**

Boral Cement Berrima will strive to implement the environmental management objectives and strategies detailed above.

**6.4****Condition**

*The Applicant shall submit a copy of the AEMR to the Director-General, the DEC and Council every year, with the first AEMR to be submitted within twelve months of commencement of operation of the cement works upgrade; and the second and subsequent AEMRs to be submitted concurrently with the DEC's Annual Return.*

**Compliance with Condition**

Yes	No
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The Annual Return for the EPL 1698 for the period of 1 May 2012 to 30 April 2013 was due by 30 June 2013 and was submitted to EPA on 13 June 2013.

This AEMR relates to the annual reporting period from 1 May 2012 to 30 April 2013 and is being submitted before its 30 June 2013 deadline, concurrently with the EPA Return.



## 6.5

### Condition

*The Director-General may require the Applicant to address certain matters in relation to the environmental performance of the cement works upgrade, in response to review of the Annual Environmental Report and any comments received from the DEC and/or Council. Any action required to be undertaken shall be completed within such period as the Director-General may agree.*

*Note: The AEMR does not aim to satisfy any requirement of the DEC with regard to any Annual Return required under any licence issued for the cement works upgrade under the Protection of the Environment Operations Act 1997.*

### Compliance with Condition

**Yes** **No**

No requests were received during this reporting period.

## 6.6

### Condition

The Director-General may, having considered any submission made by the Applicant, consent to the incorporation of the requirements listed under condition 6.3 into the AEMR required under the conditions of consent for other development at the site.

### Compliance with Condition

**Yes** **No**

No submission has been made.

**End of Conditions**