

# Independent Environmental Audit

## Boral Berrima Cement Plant

Kiln 6 - DA No. 401-11-2002-I MOD 15

Cement Mill 7- DA No. 85-4-2005-i



**June 2024**

Prepared By:  
*International Environmental Consultants Pty Limited*  
"Longmead"  
700 Wombeyan Caves Road  
High Range NSW 2575

---

---

# Table of Contents

---

<b>1.</b>	<b>Introduction</b>	<b>1</b>
1.1	Executive Summary	1
1.2	Introduction	2
1.3	Background	3
1.4	Audit Objectives	4
1.5	Audit Scope	4
1.6	Audit Criteria	5
1.7	Authority Liaison	6
1.7.1	Environment Protection Authority	6
1.7.2	Department of Planning, Industry and Housing	7
1.8	Endorsement of Auditor and Audit Team	7
1.9	Audit Period	7
<b>2.</b>	<b>Audit Methodology</b>	<b>8</b>
2.1	Audit Plan	8
2.2	Document Review	8
2.3	Site Interviews and Inspections	9
2.3.1	Site Interviews	9
2.3.2	Data Collection and Verification	9
2.3.3	Site Inspections	9
2.4	Closing Meeting	10
2.5	Compliance Status Description	10
<b>3.</b>	<b>Audit Findings</b>	<b>12</b>
3.1	Documentation Used in the Audit	12
3.1.1	Environmental Management Plans	12
3.1.2	Environmental Studies and Assessments	12
3.1.3	Environmental Monitoring and Records	13
3.1.4	Environmental Reports	14
3.2	Compliance Performance	14
3.3	Notices, Penalties and Prosecutions	14
3.4	Previous Audit Recommendations	15
3.5	Monitoring Data Review	16
3.5.1	Continuous Emission Monitoring	16
3.5.2	Continuous Process Monitoring	18
3.5.3	Ambient Monitoring Review – Dust	19
3.5.4	Ambient Monitoring Review – Noise	19
3.6	Site Inspection and On-Site Environmental Management	20
3.6.1	Kiln 6 and Cement Mill Area	20
3.6.2	Bulk Materials Storage Area	20
3.6.3	NSF Storage Facility	20
3.6.4	Hardstand, Carparks and Internal Roadways	21
3.6.5	Pollution Control Ponds	21

---

3.6.6	Shale Quarry	21
3.6.7	Landscaping	21
3.6.8	Night time Visual Inspection	22
3.7	Community Liaison	22
3.8	Record Keeping	23
3.9	Environmental Management Plan Review	23
3.9.1	Operations Environmental Management Plan	23
3.9.2	Water Management Plan	23
3.9.3	Waste Management Plan	23
3.9.4	Air Quality Management Plan	24
3.9.5	Dust Management Plan	24
3.9.6	Noise Management Plan	24
3.9.7	Traffic Management Plan	24
3.9.8	Quality Assurance and Control Procedures Solid Waste Derived Fuel (SWDF)	25
3.10	Actual Vs Predicted Impacts	25
3.10.1	Dust Monitoring Results vs Predicted	25
3.10.2	Noise Monitoring Results vs Predicted	28
3.11	Improvement Opportunities	28
3.12	Key Strengths	28

---

<b>4.</b>	<b>Audit Conclusions and Recommendations</b>	<b>29</b>
4.1	Audit Conclusions	29
4.2	Audit Recommendations	29

## Appendices

- Appendix A1** – Audit Compliance Table Kiln 6 Consent
- Appendix A2** – Audit Compliance Table Cement Mill 7 Consent
- Appendix A3** – Compliance Table Statement of Environmental Effects (Mill 7 and Kiln 6)
- Appendix A4** – Audit Compliance Table EPL 1698
- Appendix B** – Audit Photographs
- Appendix C** – Documents Sighted and Reviewed
- Appendix D** – Consultation
- Appendix E** - Audit Certification

# Document Control

DOCUMENT DETAILS	Name:	Independent Environmental Audit Berrima Cement Plant
	Author:	Robert Byrnes
	Development Consent:	Cement Mill 7- DA No. 85-4-2005-i Kiln 6 - DA No. 401-11-2002-i MOD15
	Environmental Protection License	1698
	Revision No.:	3
	Document Status	Final

REVISION DETAILS	Revision No.	Date	Details of Revision	Reviewed By	Approved By
	1	1/5/24	Draft for internal IEC review	KL	RB
	2	2/5/24	Client Review	Boral	
	3	30/6/24	Final	RB	RB

CIRCULATION DETAILS	Name	Department/Organisation
	Robert Byrnes	IEC Lead Auditor
	Keira Leahy	IEC
	Sharon Makin	Boral representative

# 1. Introduction

---

## 1.1 Executive Summary

This Independent Environmental Audit has been prepared in response to Condition 4.5 of DA401-11-2002i and Condition 3.3 of DA85-4-2005i both of which relate to the Boral Cement Plant at Berrima NSW. Although the Berrima Cement Plant has been operating since 1929 its planning platform under the NSW Environmental Planning and Assessment Act 1979 consists of two Ministerial approvals. These were granted in 2003 for the upgrading of Kiln 6 (DA401-11-2002i) and in 2005 for the construction of Cement Mill 7 (DA85-4-2005i). Together, these consents cover all aspects of the operation of the cement plant and have been assessed together.

The Kiln 6 consent has been modified 15 times, primarily in relation to the use of alternative fuels and changes to the pollution control system operating at the kiln, while the Cement Mill 7 consent primarily covered construction related conditions which have been the subject of previous audits and verification. The progressive modifications to the Kiln 6 consent have seen this consent become the main driver for ongoing environmental management at the cement plant, while the Cement Mill 7 consent has become outdated.

The Berrima Cement Plant holds Environmental Protection License (EPL) 1698. The EPL covers the main monitoring points and specific load based licensing conditions in relation to air emissions. It also provides operating conditions in relation to kiln temperature and fuels.

Non compliances were found against three conditions of the consent, namely:

- Condition 1.6 which generally refers to the obligation to meet the requirements of other licenses such as issued by the EPA.
- Condition 3.7 which refers to operating the cement works in a manner that minimises dust emissions.
- Condition 3.10, which specifically refers to emission limits on air quality discharges.

These non-compliances represented non-compliances with Environment Protection Licence 1698 and were reported to the EPA. A total of six non-compliances were raised against EPL 1698 between November 2021 and November 2023. This is a similar number compared to the previous audit period.

This audit included a detailed review of all stack emission data and ambient air quality data between November 2020 and November 2023 and it is confirmed that Boral has reported all exceedances.

This audit makes specific recommendations which seek to improve the compliance status of the cement works. Boral has in place validation and corrective action procedures which should result in improved environmental performance over time. This audit found that the cement plant management are well aware of their obligations, the specific requirements of the consent and EPL, and the need for continuous improvement in environmental performance.

---

---

## 1.2 Introduction

This Independent Environmental Audit of the Berrima Cement Works was undertaken by Mr Robert Byrnes (Lead Auditor Exemplar Global CN 458984) of International Environmental Consultants Pty Limited (IEC) in accordance with the NSW Department of Planning, Housing and Infrastructure (DPHI) Independent Audit Post Approval Requirements May 2020 and the auditing standard AS/NZS ISO 19011:2018. The consent requires that an external independent audit be undertaken every three years of operation with the first audit being completed in 2014. This audit therefore represents the fourth consent audit since commencement of operations as defined by both development consents.

The Berrima Cement Works is subject to additional annual audits in relation to the use of Non-standard Fuels (NSF) as required by Condition 4.6. The first was conducted in 2019 with subsequent audits conducted each year. For years outside the three yearly audit period specified in Condition 4.5, the NSF Audit is prepared as a separate document. For years which align with the Triennial Audit required by Condition 4.5, the audit requirement for NSF is contained within the Triennial Audit. Therefore, this audit has included matters relating to the use and management of NSF for the Triennial audit period ending November 2023.

In addition, there are annual audits conducted for each supplier of NSF. These audits are always conducted separately to the annual and triennial audits as they involve specific quality assurance and management protocols based on Appendix 1 of DA401-11-2002-I MOD15 which have been developed for each supplier.

The audit regime over the past 10 years coupled with Boral's internal quality control and assurance program has enabled the cement plant to maintain robust compliance verification systems. This was evident from the results of this audit which did not identify any non-compliances that were not already known by cement plant management. The compliance issues identified in this audit largely related to equipment failure rather than management actions.

The post approval audit process is designed to achieve two overall outcomes. The first is to ensure that all pre-conditions relating to a consent are achieved in the early stages of a development. These usually involve matters relating to construction impacts, provision of pollution controls and the preparation or updating of various environmental management plans. The second outcome is to ensure that ongoing operation of the development meets the performance criteria established in the consent. This second component tends to be the key consideration for subsequent audits during the life of the project.

The main documents and evidence used in this audit is listed in full as Appendix B and summarised below:

- Environmental monitoring data including stack emissions and ambient data for the reporting period.
- Internal Boral QA/QC documentation.
- Additional Proof of Performance testing reports.
- Stack emission data for the period 2021 to 2023.
- Environment Protection License returns for the period 2021 to 2023.
- Annual Environmental Management Review (AEMR) for 2021, 2022 and 2023 reporting years including specialist consultant reports on noise emissions.
- The Operational Environmental Management Plan and component plans.

- 
- 
- ❑ Detailed site inspection and interviews with key cement plant personnel.

Over the past three years, the cement plant has implemented a number of additional environmental controls and initiatives which have been reviewed as part of this audit. These include:

- ❑ Upgraded internal monitoring equipment and procedures as part of the NSF usage.
- ❑ Installed a new Chloride Bypass system which will allow for a more efficient and effective fuelling process for the kiln, increasing the ability to consume SWDF materials and reduce coal consumption (Modification 13).
- ❑ Improved environmental monitoring program including real time dust monitoring and a more effective noise monitoring location.
- ❑ Use of a dedicated water cart to water internal roads and hardstand areas.
- ❑ Continued to reduce area of disturbance to reduce overall dust generation.
- ❑ received approval for the construction of Tyre Chip Storage infrastructure and its use (Modification 15)
  
- ❑ Received approval for an increase in SWDF usage and to construct a road to bypass the main access road to the site which will reduce noise disturbance from trucking activities on the township of New Berrima.

The last point above relates to MOD14 which was not triggered at the time of this audit, however when implemented will result in a reduction in truck movements through New Berrima.

### 1.3 Background

The Berrima Cement Plant was originally constructed between 1926 and 1928 with first production commencing in 1929. No formal planning consent was required at the time nor was it required for several plant upgrades and reconstructions that occurred during the 1950s to 1970s. The introduction of the NSW Environmental Planning and Assessment Act in 1979 saw the requirement to obtain planning approvals for any new or upgraded plant on site. This occurred in 2002 with an application to upgrade Kiln 6 (DA401-11-2002-i) and later in 2005 with the construction of a new cement mill, referred to as Cement Mill 7 (DA85-4-2005i). These two consents cover the entire operation of the cement plant.

As at November 2023, there have been 15 separate modifications to the Kiln 6 consent while the Cement Mill 7 consent as remained as originally approved. The modifications have allowed for various minor changes to the operation and to align the requirements of the Environment Protection Licence over time.

Since the last Independent Environmental Audit in 2020, the cement plant has continued the use of alternative fuels derived from waste, referred to as Non-Standard Fuels (NSF). The use of NSF was approved by MOD9, while on 25<sup>th</sup> October 2019, MOD11 was approved by the DPIE which permits HiCal 50 to be used during start up and shut down. HiCal 50 is a high calorific value carbon anode material with similar properties to coal. HiCal 50 can only be fed into the kiln via the coal mill and is used as a blend with other coal material.

---

---

With MOD13 approved in May 2021, Wood Waste was separated into wood derived from solid waste and woodchips derived solely from timber waste. Woodchips is now separately classified as a Standard Fuel rather than a solid waste derived fuel (SWDF) and therefore is not subject to Condition 4.6. MOD13 also included the incorporation of a chlorine bypass system which was a precursor to seeking approval to increase the use of SWDF.

MOD 14 was approved in November 2023, which allowed an increase in SWDF and included the construction of a new access road into the cement works directly off the Old Hume Highway. This consent was not triggered at the time of this audit.

MOD 15 was approved in March 2023. This modification allowed for the construction and operation of a new storage facility and associated feed infrastructure for tyre chips.

#### **1.4 Audit Objectives**

This audit represents the fourth triennial audit of the Berrima Cement Plant operation. The first two independent audits dealt in detail all preconditions required to be satisfied prior to commencement of construction and the satisfactory preparation of the original environmental management plans covering the operation. The objectives for this audit are the same as the 2020 audit which was extended to include a more detailed assessment of environmental performance and adequacy of pollution controls and management systems in operation at the cement plant.

Some additional preconditions relate to the various modifications and these have also been included in this audit, however there has been more emphasis placed on the environmental performance of the cement works which is the intent of the additional conditions placed on the consent, particularly with regards to the use of non-standard fuels.

The two consents and EPL provide specific performance criteria to be met by the development. In order to verify that these are being met, an environmental monitoring program has been implemented on site. This program includes data gathered on noise, dust, surface water discharges and stack emissions. A key objective of this audit is to determine if the monitoring program is adequately robust to verify that the assessment criteria provided in the approval instruments are being met.

Environmental management systems include procedures that have been adopted on site to manage the environmental impacts of the project to acceptable levels in line with the assessment criteria. Determination of the efficacy of these procedures have also been included as an objective of this audit.

An overall objective of this audit is to satisfy the requirements of Conditions 4.5 and 4.6 of the DA 401-11-2002-i-MOD15 and Condition 3.3 of DA 401-11-2002-i. Both conditions are similar and their requirements have been incorporated into the scope of work for this audit.

#### **1.5 Audit Scope**

Boral Cement commissioned IEC to complete the Triennial Environmental Audit of the Cement Plant as required by conditions of both consents. The audit was carried out in accordance with



---

the Independent Audit Post Approval Requirements May 2020 and the auditing standard AS/NZS ISO 19011:2018. The scope of this audit includes consideration of:

- DA No. 85-4-2005-i (CM7);
- DA No. 401-11-2002-i (K6) (MOD 15);
- Environmental assessment documents prepared in support of the planning amendments and specifically the predictions made in these assessments which the then Department of Planning relied on in approving the amendments;
- Environmental Protection License (EPL) 1698 as at November 2024;
- Monitoring data and internal compliance reporting in three years of stack emission data;
- the performance of the operation based on analysis of monitoring data and site inspection;
- Incidents or community complaints;
- Environmental management plans prepared under the consents.

The following report provides an assessment of compliance against both current instruments, the implementation of the required management plans and assessment of environmental performance of the operation. A detailed checklist against the conditions of the development consent is attached as Appendix A. The checklist follows the requirements of the Independent Audit Post Approval Requirements 2020 published by the then Department of Planning, Industry and Environment (DPIE). The following sections detail the status of the current operation, environmental management provisions and performance and compliance.

## 1.6 Audit Criteria

The compliance descriptors described in Section 2.4, are based on the Independent Audit Post Approval Requirements 2020 guidelines. These specify that each condition of consent be assessed as being either in compliance or not in compliance. A not triggered category can be listed if the condition has yet to be triggered by the development.

In order to determine compliance, physical evidence must be sighted by the auditor. This can be in hard copy or digital format or visually on site during the inspection. The assessment in these circumstances is usually a yes or no criteria, that is, has a particular circumstance or item been done or achieved.

Where conditions specify criteria, such as stack emissions, temperature or ground level concentrations, the audit was supplied with original monitoring data for analysis. This was supplied in Excel format. Volume restrictions were determined through monthly delivery data, while fuel quality criteria were determined through testing results from both the suppliers and Boral results.

Where conditions relate to environmental performance, requirements to meet best management practice or specific improvements, the evidence was gathered on site through both physical evidence and visually during the site inspection.

The main document consent is DA No. 401-11-2002-i MOD15 which provides the current environmental performance criteria and specific conditions relating to the current operation. Each modification was supported by environmental assessment documentation, usually a Statement of Environmental Effects. Condition 1.2 of the main consent lists these environmental assessment documents which the consent authority relied on in determining each modification application.

---

Condition 1.2 states that the development is to be carried out generally in accordance with the assessment documents which supported each modification application.

At the time of this audit, the operation of Kiln 6 had been carried out in accordance with the requirements of Conditions 1.2 a) to s) based the results of previous audits. These conditions relate to the earlier modifications. As MOD13 to MOD 15 varied the construction requirements and environmental performance criteria, re-assessment of compliance with earlier environmental assessment documentation is no longer valid. These conditions are set as being compliant. However, a separate list of compliance criteria has been set up in Appendix A3 which lists the commitments made in the SEE for MOD13, MOD14 and MOD15.

It is also noted that only MOD13 and MOD15 have commenced. Although MOD14 had not commenced at the time of this audit, a set of compliance commitments has been provided to assist Boral in meeting its commitments. This list was discussed with Boral representatives during the interview process.

DA No. 85-4-2005-i (CM7) covered the Cement Mill 7 construction activities as well as specific conditions relating to its early operation. These conditions have been previously audited and found to be compliant. This includes the commitments made in the supporting SEE at the time. The assessment and performance criteria contained in this consent however have been updated in DA No. 401-11-2002-i MOD15 which is now the main consent used to establish performance and compliance.

EPL 1698 also lists several conditions and performance criteria which require evaluation and compliance assessment. These are listed in Appendix A4. Also relevant to the audit criteria are any additional requirements from regulatory authorities. These are described in the following section.

## **1.7 Authority Liaison**

Evidence of consultation undertaken as part of this audit is provided in Appendix D. Consultation emails were sent to the Department of Planning, EPA and Wingecarribee Shire Council and the following responses were received. Copies of all correspondence received is provided as Appendix D.

### **1.7.1 Environment Protection Authority**

Following initial verbal discussions with the EPA Wollongong, the EPA confirmed that they would like the audit to provide particular focus on the following aspects:

- Air quality impacts, particularly management and monitoring of emissions and dust generation.
- Adequacy of current dust controls, including reliability, performance and whether there is room for any improvements. Note that recently the electrostatic precipitators had a failure relating to a high voltage cable, which led to a shutdown of the kiln until the issue was resolved.
- Adequacy of and compliance with site surface water controls and discharges.

---

---

The EPA also advised that it is currently in discussions with Boral around updating the ambient dust monitoring network to incorporate real-time monitors to help inform an operational response to elevated dust levels (in the form of a Trigger Action Response Plan).

### **1.7.2 Department of Planning, Industry and Housing**

The DPHI advised that both the EPA and Wingecarribee Shire Council be consulted as part of the audit and that the audit specifically looks at the issue of air quality. Wingecarribee Shire Council was approached for comment however no response was received.

### **1.8 Endorsement of Auditor and Audit Team**

Robert Byrnes of International Environmental Consultants Pty Ltd was approved by DPIE to undertake the independent audit. Correspondence from DPIE is attached in Appendix D. Mr Byrnes holds a Bachelor of Science and post graduate qualifications in environmental science and has 39 years experience in environmental assessment and management of mining and extractive industries and holds Exemplar Global Certificate Number C-458984 Lead Auditor Environmental Management Systems.

### **1.9 Audit Period**

The audit period covers the date of November 2020 to November 2023.

## 2. Audit Methodology

---

The audit process involved the interview of site personnel, a review of documentation and samples of records provided by site management and a site inspection of the operations to determine the level of compliance of the operations and assess the status of the sites operational performance. The audit process and methodology are described in more detail in the sections below.

### 2.1 Audit Plan

In accordance with section 6.3 of ISO 19011:2018, an Audit Plan was prepared for the cement plant audit. The plan included the formulation of the audit objectives and scope described in Chapter 1 as well as communication protocols with the auditee, details of information requirements, logistics, meetings and site interviews and detailed site inspection. This formed part of the overall audit methodology, which is described in more detail in the following sections.

The Audit Plan was discussed with Boral personnel and agreement was reached on the method of data review, particularly the 1 hour stack emission data over a three year period which represented several very large data files.

### 2.2 Document Review

Documents, information, and data available for this audit included:

- Environmental studies and assessments undertaken in support of the various consent modifications.
- Environmental management plans prepared in response to the approval.
- Operational Environmental Management Plan.
- Monitoring data and reporting.
- Boral's internal company documents such as plans and procedures.
- Advice from government agencies obtained through email and/or telephone discussions.
- Production records.
- Site inspection and interviews with Greg Johnson (Environmental Sustainability Manager) and Gabriel Paicu (Plant Manager).

A list of documents used, reviewed or sighted as part of the audit is discussed in Section 3.1 while a full list is provided as Appendix C. Specific environmental management plans are listed in Section 3.1.1. These were separately reviewed and used to assess effectiveness of environmental management systems on site.

One hour stack emission and monthly dust monitoring data was provided in Excel format while real time monitoring of the process was viewed in the control room at the cement plant.

---

---

## 2.3 Site Interviews and Inspections

### 2.3.1 Site Interviews

Interviews with key cement plant management were held on 1<sup>st</sup> March and 9<sup>th</sup> April 2024 which followed several remote meetings held in relation to information and data requirements. Greg Johnson (Environmental Sustainability Manager), Sharon Makin (Environmental Business Partner) and Gabriel Paicu (Technical Manager) were present for the interviews. During the interviews, the conditions of the consent were discussed and examined at length. Where necessary, evidence was requested to verify compliance. A detailed site inspection was conducted on 1<sup>st</sup> May 2024 which covered all aspects of the cement plant operation from raw material supply, stockpiling, milling, firing, grinding and dispatch.

All information requested was provided prior to the interviews which enabled the data to be analysed and interview questions to be set. The full list of information made available for the audit is provided in Appendix C.

### 2.3.2 Data Collection and Verification

Where possible, documents and data were collected and reviewed prior to the on site audit inspections. Several documents were provided during the site visit.

All information obtained during the audit process was verified by the auditor where possible. For example, statements made by site personnel were verified by viewing documentation and/or site inspections where possible. Photographs were taken of key points around the site which are provided as Appendix B.

AS/NZS ISO 19011 Guidelines for Auditing Management Systems, provides a protocol for verification of environmental data. The environmental monitoring data was verified by the following methods:

- Cross checking a random set of 24 result summaries provided in the online reporting against raw data provided in Excel format.
- Review of the 4 quarterly stack emission testing against data provided to the EPA in the EPL return.
- Checking the annual noise survey results for 2021, 2022 and 2023 results against the requirements of the EPL and development consent.
- Re-graphing raw stack emission data for 2020-23 and compare with Proof of Performance Trial results and EPL limits.
- Review of dust deposition results using raw Excel files and comparing the results with AEMR reports and EPL returns for the reporting years 2020, 2021 and 2023.

No samples or measurements were taken for third party verification.

### 2.3.3 Site Inspections

A site inspection was undertaken on the 1<sup>st</sup> May 2024 which focused on the operation and management of the following areas:

- Kiln 6 and Mill 7 and surrounds
- Shale quarry;
- Storage and Stockpiling Facilities;
- SWDF storage shed;
- Rehabilitation areas;
- Water management system including Lake Quality, Lake Breed and main drainage lines; and
- Fuel and oil containment facilities, workshop and storage areas.

Photographs were taken at all key locations which are provided in Appendix B.

## 2.4 Closing Meeting

The closing meeting was held onsite at Berrima cement Plant Office on 1st May 2024. The objectives of this meeting were to discuss any outstanding matters, present preliminary findings and outline the process for finalising the audit report.

## 2.5 Compliance Status Description

The reporting of results from the compliance audit was determined based on the definitions presented below in Table 2. The results of the compliance audit are presented in Appendix A.

**Table 2- Compliance assessment criteria**

<b>Status</b>	<b>Description</b>
Compliant	The auditor has collected sufficient verifiable evidence to demonstrate that all elements of the requirement have been complied with within the scope of the audit.
Non-compliant	The auditor has determined that one or more specific elements of the conditions or requirements have not been complied with within the scope of the audit.
Not triggered	A requirement has an activation or timing trigger that has not been met at the time when the audit is undertaken, therefore an assessment of compliance is not relevant.

The current DPIE guidelines do not allow for separate categories of non-compliance. However, AS/NZS ISO 19011 provides for grading of nonconformities and non-compliances. The purpose of grading is to reflect the severity of environmental risk associated with the non-compliance. This audit presents the findings in accordance with the three categories provided in the DPIE guidelines but also provides an additional comment when considered appropriate, on severity using the following grading:

- The non-compliance has or could result in an exceedance of assessment criteria or environmental harm.
- The non-compliance has not and would be unlikely to result in an exceedance of assessment criteria or environmental harm.
- The non-compliance is administrative in nature and has not and could not in itself result in an exceedance of assessment criteria or environmental harm.

---

---

These descriptors however have not been used in the compliance table but rather in commentary components of this audit document. In addition to the above descriptions of non-compliance, the audit has included observations and comments on the adequacy of environmental controls and procedures.

Conditions that previous audits have noted as being non-compliant have largely been left as previously assessed unless subsequent rectification can be demonstrated to fully satisfy the condition. Where a previous audit has assessed a condition as being non-compliant because a specified action was not achieved within a specified timeframe, the compliance status will continue to be noted as non-compliant despite the required action being subsequently undertaken. However, where a previous non-compliance has been rectified so as the condition is now fully compliant, the compliance status will be updated as being fully compliant.

## 3. Audit Findings

---

The outcomes of the audit are discussed in the following sections. These include the site inspection, review of the monitoring program, management plans and controls. The audit results in relation to the conditions of the consent are provided in detail in Tables A1 and A2 of Appendix A while compliance with the Environmental Protection Licence is provided in Table A4.

### 3.1 Documentation Used in the Audit

The documents used in this audit have been separated into assessment and approval related, environmental management plans and other data sources and reports. A complete list of documents reviewed as part of this Audit is provided as Appendix C.

#### 3.1.1 Environmental Management Plans

The following Environmental Management Plans updated for the Alternative Fuels Project have been reviewed as part of this audit:

- Operational Environmental Management Plan V6 (April 2020)
- Air Quality Management Plan V6 (April 2020)
- Dust Management Plan V3 (April 2020)
- Noise Management Plan V9 (April 2020)
- Stakeholder Engagement and Community Plan (April 2020)
- Traffic Management Plan (April 2020)
- Waste Management Plan V6 (April 2020)
- Water Management Plan V5 (April 2020)
- Construction Environment Plan (CEMP) MOD13 (March 2022)
- Pollution Incident Response Management Plan V12 (June 2023)
- SWDF Stakeholder Engagement Plan

The Operational Environmental Management Plan (OEMP) is the main document which describes the environmental management system operating at the cement works. This provides the strategic framework for environmental management and how the cement plant achieves the required standards and assessment criteria. All component environmental management plans are linked through the OEMP.

#### 3.1.2 Environmental Studies and Assessments

There have been several environmental impact assessments undertaken since the two consents were first granted. Although the assessments that were used in support of the original consents are important, subsequent assessments used to gain approval to modify the consents have provided more up to date assessment criteria, management initiatives and commitments which have been incorporated into the consents.

The relevant assessments are those linked to Modifications 13, 14 and 15. These are:

- Statement of Environmental Effects (SEE) supporting the Chloride Bypass System dated March 2021, Modification 13.



- 
- 
- ❑ SEE for Modification 14, dated November 2021 covering the increase in SWDF, construction of new access road and delivery facilities to allow for 24 hour deliveries of SWDF.
  - ❑ State Significant Development Modification 15 dated October 2022 covering the construction and operation of new storage and feed infrastructure for tyre chips.

The above assessments provided data and impact predictions relied on by DPIE and other agencies in the approval process. The documents also provided various commitments in relation to pollution controls and management requirements. These matters form part of this audit and have been listed in Appendix A3.

Earlier assessments and their respective commitments in relation to the cement plant have been previously assessed and found to have a high level of compliance. It is considered not necessary to reassess these documents as they are now superseded.

### 3.1.3 Environmental Monitoring and Records

Environmental monitoring data collected as required by the various environmental management plans as well as under the EPL are published by Boral on their web page:

<https://www.boral.com.au/our-commitment/environmental-reporting>. The management plans are listed on a separate web site: <https://www.boral.com.au/locations/boral-cement-works-berrima>

The monitoring and verification program detailed in the Kiln 6 consent is comprehensive but also complex. Boral operate what is referred to as a Continuous Emission Monitoring System (CEMS) which covers a number of analytes within the gas stream of Kiln 6. The main analytes are oxides of Nitrogen (NO<sub>x</sub>), Hydrogen Chloride (HCL), Sulphur Dioxide (SO<sub>2</sub>), Volatile Hydrocarbons (VOC), and particulate matter. Carbon Monoxide (CO), Carbon Dioxide (CO<sub>2</sub>) and Oxygen (O<sub>2</sub>) are also measured to determine the completeness of combustion and is a measure of the kiln performance. This data can then be compared with other operating parameters such as temperature within each component of the process, feed rate and quality.

As part of the compliance work, Boral has engaged Ektimo Pty Ltd to undertake regular monitoring of the stack emissions and it is their reports which are used to detail the compliance status against the EPL conditions. This program was referred to as the Proof of Performance testing and initially undertaken quarterly during the initial introduction of NSF to the kiln. The program was then scaled back once compliance was demonstrated. Following the approval to increase the volume of NSF, the Proof of Performance testing was reintroduced and forms part of this audit.

Ambient monitoring consists of both dust and noise. Deposited dust is monitored using seven gauges which are located around the site and sampled on a monthly basis. A High Volume Air Sampler (HVAS) is located to the south-east of the site which measures Total Suspended Particles and PM10 on a six-day cycle. Samples are also analysed for metal content. Boral also operate a weather station which records temperature, wind speed and direction. In 2021, Boral installed a real-time dust monitor in the Stores Yard near the Isotainer loading area. This is the same location that has become the central noise monitoring location used to determine compliance.

. The data is used as a management tool to alert the site to potential fugitive dust events that could impact the New Berrima village residents.

Boral also engages noise consultants to determine noise compliance. This is undertaken on an annual basis and consultant's reports are contained in the AEMR each year. The use of specialist consultants to determine the compliance status of the operation is supported and provides a high degree of confidence.

### 3.1.4 Environmental Reports

The following additional environmental reports were reviewed as part of this audit. The key reports are the AEMRs which are provided in the Boral Berrima Cement web page.

- Annual Environmental Management Review (AEMR) 2020, 2021, and 2022.
- Annual Noise Assessments, from 2020 to 2023.
- Stack Emission Testing from 2020 to 2023.
- Proof of Performance testing to increase from 40% to 50% SWDF feed rate.
- Solid Waste Derived Fuel Supplier QA/QC Audit 2020, 2021, 2022 and 2023.

### 3.2 Compliance Performance

A detailed breakdown of the audit findings is provided in the tables attached in Appendix A which is summarised in the following table.

**Table 3.1 – Compliance Status Summary**

Instrument	Condition	Year of Non-Compliance	Details
DA401-11-2002i	1.6	2021	Non-conformance due to pollution control equipment malfunctions
DA401-11-2002i	3.7	2022 and 2023	Failure to minimise dust on five occasions in 2022 and 2023 as noted below.
DA401-11-2002i	3.10	2022 and 2023	Elevated dust in the stack emissions occurred in 2022 and 2023 due to tripping of the Electrostatic Precipitator.
EPL1698	O2.1	2023	Dust released from back filter
	O2.1	2023	Dust emission following works to unblock the cyclone
	O2.1	2022	Fugitive dust released through open door hatch
	M2.2	2021	HVAS failure to run on 2 occasions
	L3.1 and 3.2	2023	Elevated dust due to ESP tripping
	L3.1 and 3.2	2022	Elevated dust due to ESP tripping

There was a lower level of non-compliance during the audit period. This is largely a result of improvements made in the management of SWDF within the plant. Additional improvements have been made with the Electrostatic Precipitator reducing the issue with tripping.

### 3.3 Notices, Penalties and Prosecutions

There were no penalty infringement notices issued by the EPA during the reporting period. However, the EPA had raised concerns in relation to the results of the stack emission testing in August 2021. This was in relation to the proposal to increase SWDF feed rate from 40% to 50% fuel load. In particular, the EPA was concerned that the emissions concentration result for Cadmium and Thallium was at near emission limits at lower feed rates. The EPA advised that given the uncertainty in the relationship between percentage SWDF use, and emissions

---

---

concentrations (particularly dioxins and metals), that it would be necessary to undertake additional emissions stack tests to establish a reliable data set. This resulted in three Proof of Performance tests being performed at the higher rate.

As noted in Section 1.7, the EPA remain concerned in relation to dust management and associated stack emissions. This will be an ongoing issue of compliance testing and process of continuous improvement. Other issues of non-compliance are listed below:

- ❑ On 18<sup>th</sup> November 2023 a dust incident occurred during startup. The incident arose from a valve being isolated causing the bag house not to purge with excess dust being released through a damper. This incident was subject to regulatory action.
- ❑ An excessive dust emission occurred on the 17<sup>th</sup> of April 2023 following works to unblock the cyclone. Three resident complaints were received, and the incident was self-reported to the EPA and DPHI.
- ❑ August 2023, issues arose with the Electrostatic Precipitator (ESP) resulting in short periods of dust exceedance from the stack. This followed an earlier problem with the ESPs in July 2023 and in November 2022.
- ❑ Between 21<sup>st</sup> and 23<sup>rd</sup> February 2022 an door near the dust collector was open and not able to be closed due to the build up of dust. This resulted in visible dust being released from the kiln when a collector fan failed. The incident was reported to the EPA and DPHI as a failure to maintain plant and equipment non-compliance. However, it was first reported to the EPA by a resident to the EPA Pollution Line.
- ❑ PM10 monitor (Point 18) failed to run in February 2022 resulting in only 59 samples taken in the reporting year compared to the required 61 Samples.
- ❑ Over the 24 hour period during the 14 November 2022 the average 24 hour particulate emission from Kiln 6 (Point 2) was 54.5mg/Nm<sup>3</sup> against the licence 50mg/Nm<sup>3</sup>. This was caused by a storm creating a power dip and tripping ESP. The EPA was notified.

Regulatory action for the November 2023 incident falls outside this audit period but the incident itself has been included in this audit.

### **3.4 Previous Audit Recommendations**

The 2020 Audit provided the following recommendations:

- ❑ Consideration should be given to either amalgamating the two current consents as they both have elements that overlap or updating the Cement Mill 7 consent to align with DA 401-11-2002-i-MOD12.
- ❑ The noise assessment criteria contained in the Cement Mill 7 Consent DA No. 85-4-2005-i needs to be updated to align with the EPL and DA 401-11-2002-i-MOD12.
- ❑ Bank erosion on the main batter slopes of the shale quarry should be corrected and the drainage system on the banks re-established.
- ❑ Seek approval from Wingecarribee Shire Council to reinstate the truck warning signage on Taylor Road.

---

---

It is understood that Boral decided that there was no material benefit in the amalgamation of the two existing planning approvals and has continued with the modification of any new developments only associated with DA401-11-2002. The issue of noise criteria contained in the earlier consent DA not being aligned with the EPL or later consent is still considered problematic. Boral commenced the process of aligning the noise criteria between the two consents but this has not yet been achieved.

The bank erosion along the main batter slopes of the shale quarry have been corrected and additional rehabilitation and drainage works have been completed. Since the previous audit, a clean water drainage channel was constructed along the southern boundary of the quarry which will reduce the flow of water over the batters which in turn will reduce the potential for erosion to occur in the future.

Boral has made a request to Wingecarribee Shire Council to reinstate the truck warning signage on Taylor Avenue. This request satisfies the previous audit findings.

### **3.5 Monitoring Data Review**

The monitoring program at the cement plant consists of continuous process and emissions monitoring at both the Kiln and cement mill, and ambient noise and dust monitoring. The process and emission monitoring program are complex and was designed and installed by a specialist contractor (Ektimo Pty Ltd). The ambient monitoring program has been in operation for many years but has gradually been improved to better understand the impacts the cement plant has on surrounding areas.

Since the last audit, a real-time dust monitoring station has been installed which provides a further alert system to the cement plant in the event of high dust readings. These are discussed in the following sections.

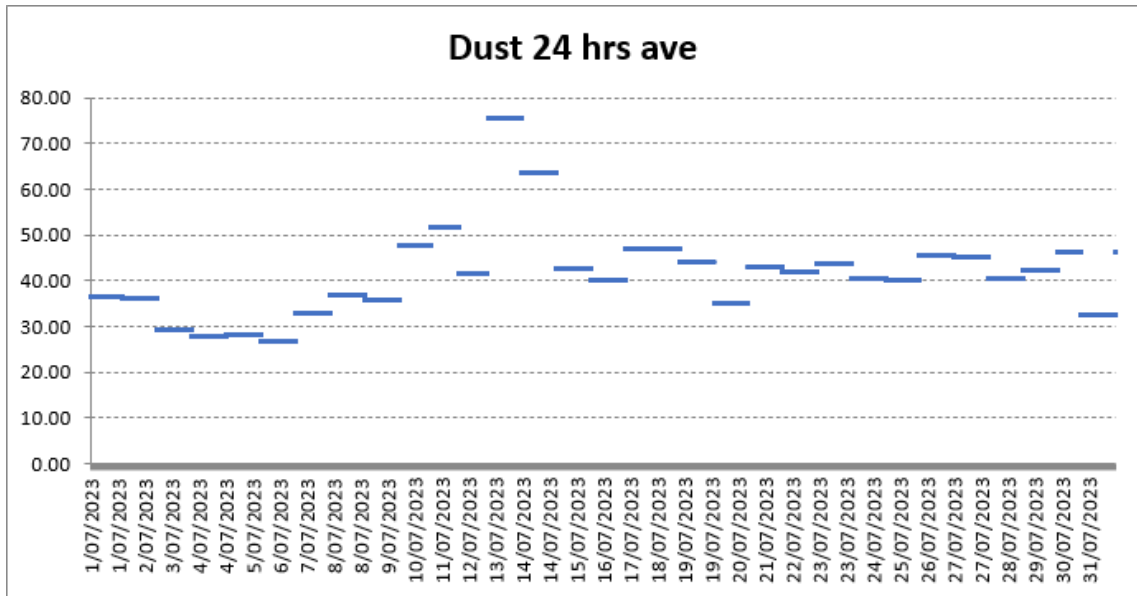
#### **3.5.1 Continuous Emission Monitoring**

The Continuous Emission Monitoring System (CEMS) provides real-time data on specified analytes in the Kiln 6 stack gas stream. The Environment Protection Licence provides limits in terms of grams per cubic metre over various averaging periods. Some limits are then converted to 24 hour periods. To determine these levels, laser-based probe analysers with optical system sensors have been installed in the kiln stack which detect continuous concentrations of each specified analyte. The data is then sent to the plant control room and recorded.

For this audit, daily and monthly average data was provided for a three year period. The stack emission data consisted of:

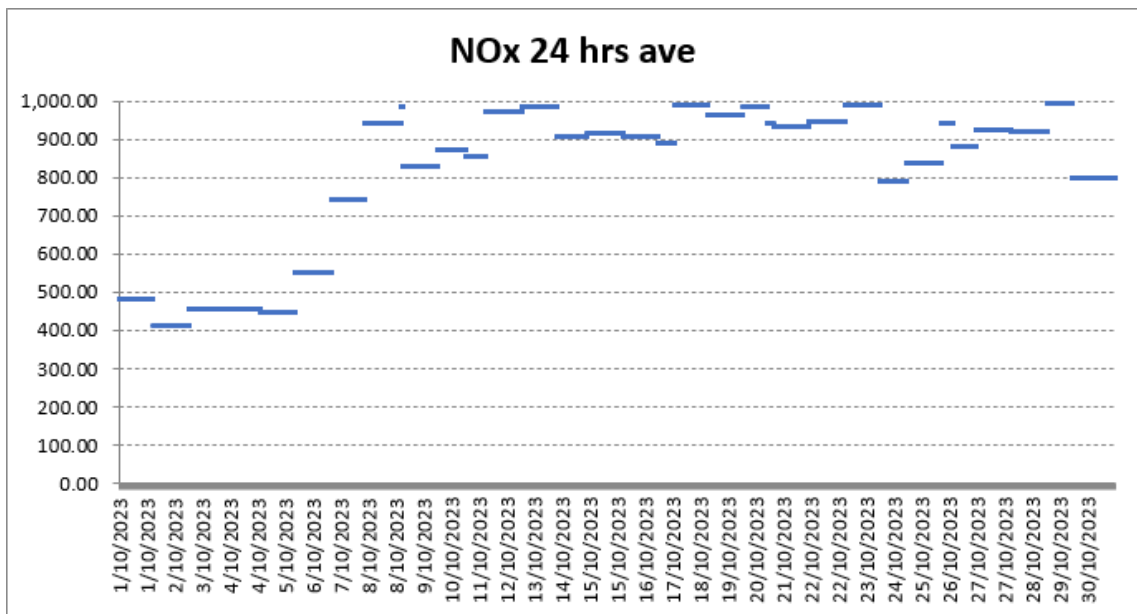
- 24 hour dust emissions;
- 1 hour and 24 hour NO<sub>x</sub> emissions;
- 1 hour HCl emissions;
- 1 hour SO<sub>2</sub> Emissions; and
- 1 hour VOC emissions

The data was provided as monthly raw data with graphs. This data was reviewed and any trends or exceedances examined. This data was then used as part of the interview process.



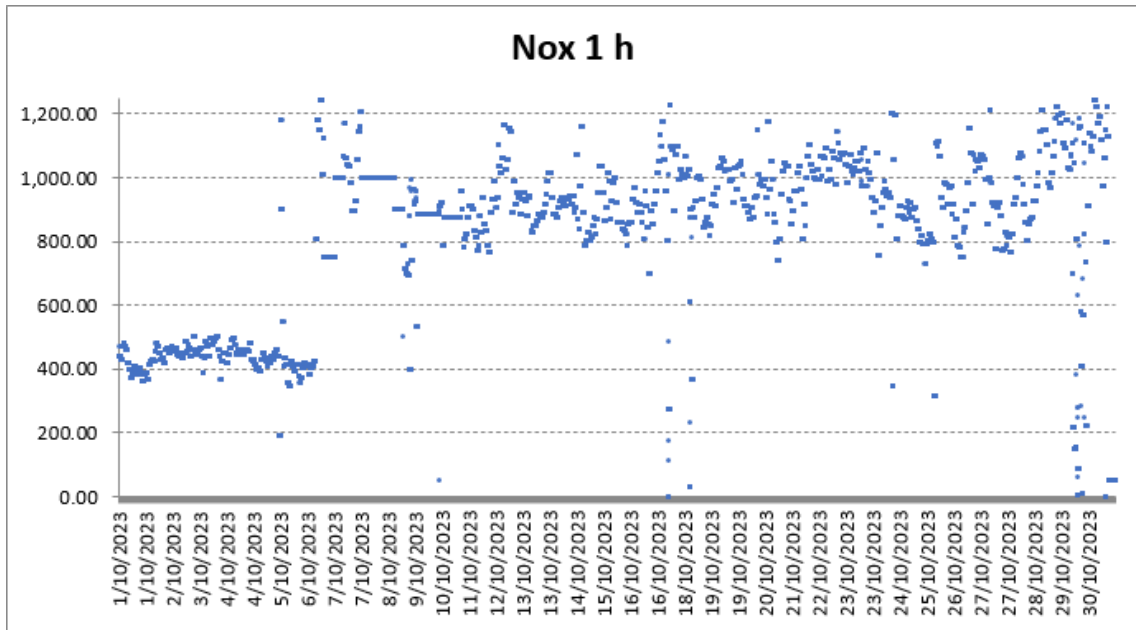
**Graph 1 – Selected Period of Dust Stack Emissions**

Dust levels were above the concentration limit of 50 mg/m<sup>3</sup> in July 2023 on two occasions. The highest 24 hour average was on the 13/7 at 75.46 mg/m<sup>3</sup>, and the average was exceeded again on the 14/7 with a concentration of 63.68 mg/m<sup>3</sup>. Other than the two exceedances, the concentrations remained below 50 mg/m<sup>3</sup>. These were caused by the Electrostatic Precipitator (ESP) tripping and were reported to the EPA. The fault was found to be a failure in the high voltage supply. Work on the electrical supply to the ESP improved its reliability however this audit recommends that Boral investigates contemporary and reliable alternative controls.



**Graph 2 – Selected Period of NOx 24 hour Stack Emissions**

The average 24 hr NOx concentration limit of 1000 mg/m<sup>3</sup> was not exceeded over the 3 year period. The highest 24h averages were recorded in October 2023 at 994.57 mg/m<sup>3</sup> which was very close to the limit specified on the Licence.



**Graph 3 – Selected Period of NOx 1 hour Stack Emissions**

Similarly, the NOx 1 hour concentration of 1250mg/m<sup>3</sup> was not exceeded during the three year audit period however the levels came very close in October 2023 with concentrations up to 1,244.24 mg/m<sup>3</sup>. The apparent variability of the results is concerning given that normally the concentration is running at between 300 to 400 mg/m<sup>3</sup>, but with short periods of significant fluctuations when the concentrations can triple. The Cement plant has investigated this issue and advised that it is likely a result of periods when the monitoring equipment is being maintained and then recalibrated. This is an issue that should be further investigated.

All other parameters remained well within the required licence limits and no trends or unusual results were evident from the raw data set.

### 3.5.2 Continuous Process Monitoring

This includes monitoring of process data within the kiln and mill such as temperature, exhaust gas rate and composition, feed rate of standard raw materials and non-standard fuels. This system provides “lockouts” for the non-standard fuels if certain operating parameters are not met such as kiln temperature. The EPL lists temperature limits on stack gas, abatement system, preheater exit, and combustion temperature. These limits include both upper and lower levels which are designed to ensure maximum operating efficiency of the kiln which in turn minimises adverse emission levels of nominated compounds. The data is recorded in the main control room and records are kept of triggers that result in changes being made to the operation.

The continuous monitoring system was upgraded with the introduction of non-standard fuels (NSF). This was necessary to provide the required data as specified on the revised EPL. The lockout system mentioned above stops the input of NSF if the kiln temperature drops below 850°C. Stack temperature is important in the removal of particulates and some gaseous emissions but also provides information on the performance of the conditioning tower.

The process monitoring system was expanded as a result of the Chloride Bypass system (MOD13). Chlorides, alkalis and sulphur are components of raw materials and fuels however they volatilise within the kiln and preheater and continue to build up. In the process of heating up raw materials, these components change from solid to gas form. Those components in gas form become part of the main gas stream process and change into liquid form in the range of 750-

---

---

900°C. In the liquid form they condense on the raw materials making the material sticky which can create build ups and blocking ducts within the preheater section. Blockages of ducts becomes a significant operational issue. This Chloride Bypass system involves the extraction of a component of the kiln gas which is then cooled to precipitate chlorides, alkalis and sulphur on the dust particles which then are collected within the dust collection system. The cleaned gas component is then returned to the main stack.

For this audit, the operation of the Chloride Bypass system was viewed in the control room along with real time temperature data and feed rate.

### **3.5.3 Ambient Monitoring Review – Dust**

The main tool to determine the impacts of the cement plant on the local community is through monitoring of ambient dust at several locations. This data can then be used to assess the environmental performance of the cement plant operation and verify the impact predictions made in the environmental assessment documentation which forms the basis of the planning consent and environment protection licence.

The site operates one High Volume Air Sampler (HVAS) and seven dust deposition gauges. The HVAS collects a large volume of air over a 24 hour period every 6 days and determines Total Suspended Particulates measured as micrograms of dust per cubic metre of air. The HVAS also uses filtration to determine the component of ultra fine dust particles, referred to as PM<sub>10</sub> or 10 micron component. The collected dust samples are also subject to metal analysis which allows the sample to be characterised and its source to be estimated. The deposition gauges measure the coarser dust particles which readily fall out of suspension and are collected in static gauges. This component is measured as grams per square metre measured over a month.

As noted in Table 3.1, during the 2021 and 2022 reporting period, Boral reported a non-compliance for the failure of the HVAS to run on 2 occasions, while on one occasion, a glass dust collection bottle (DG3) was found broken resulting in no sampling occurring. As the HVAS is required to run every 6 days throughout the year, even a minor programming error or power outage could cause a sample to be missed. On this occasion the HVAS failed during a storm event.

A real-time dust monitoring unit is located on the northern side of the plant in the direction of the New Berrima village. This unit is only used to alert the cement plant control room that a potential issue may have arisen. The benefits of using real time monitoring is that problems with dust generation on site is detected immediately rather than after the results of laboratory analysis of the current gauges is at hand. This can occur many days after a dust incident has occurred. The real-time monitor includes an alert system to the control room that elevated dust has been detected prior to the dust leaving the site. This provides the opportunity to investigate the cause of the dust and if necessary, make changes to the operation, direct the water cart to problem areas or determine if there is a fault with the dust controls requiring shutdown. This system was inspected as part of this audit.

### **3.5.4 Ambient Monitoring Review – Noise**

Boral employs a specialist noise consultant to assess noise levels and to determine compliance. Although this is not necessary specified in the consent, by using a registered noise consultant provides a greater level of confidence in the assessment of compliance. The noise consultant's reports are contained in each Annual Review.

---

---

The noise assessment includes measuring the noise levels at multiple points around the cement plant as well as ambient levels at receiver locations. Given the high levels of background noise not attributable to the cement plant activities, the noise consultant is required to calculate the contribution of the cement plant activities to the receiver locations using standard modelling techniques.

Both consents list noise limits and other noise related conditions which are slightly different. Boral has negotiated with the EPA to change the EPL to allow for a single nominated monitoring site inside but close to the plant boundary where noise emissions from sources other than the Cement Plant are not significant. This site, referred to as "Store Yard Close" (referred to as Site 20 in the Noise Assessments) and has a specific assessment criteria of 58dB(A) LA<sub>90</sub> 15 minute.

The annual noise monitoring program includes a period of approximately 2 weeks of continuous noise monitoring at Site 20. The results from the noise consultant indicates compliance with the development consent noise criteria.

It is worthy to note that although there is now a single site wide noise limit, the noise consultant also monitors six residential receptors within the village of New Berrima over the day, evening and night time periods. The results over the 2021 to 2023 period demonstrate compliance.

### **3.6 Site Inspection and On-Site Environmental Management**

The site inspection covered all aspects of the cement plant operation and a photographic record is provided in Appendix B.

#### **3.6.1 Kiln 6 and Cement Mill Area**

The site inspection did not identify any hazards or issues of concern in relation to the main process plant on site. There were no visible evidence of dust emissions and the stack discharge appeared clear. The inspection included the control room and continuous monitoring system.

#### **3.6.2 Bulk Materials Storage Area**

The bulk material storage area is largely open with a separate pollution control dam and tree planting to screen the site and to create windbreaks. The inspection occurred on a relatively still day with little wind. There were no visible signs of dust leaving the site however this area would be a source of fugitive dust during higher wind events. It is understood the dedicated water cart frequents this area regularly and activities are curtailed during high wind days. It was noted that some stockpiles were tarped.

#### **3.6.3 NSF Storage Facility**

Non-standard fuels consist of primarily wood waste which is can generate high levels of dust. The storage facility is fully enclosed and there was no evidence of dust leaving the shed. The material is delivered by fully enclosed truck which reverses into the shed. The material is shaken into the receival bunker which is then "grabbed" by an overhead crane which can either reclaim the material into the main storage bunker or into the conveyor hopper. There were no signs of NSF spillage outside of the shed including the feed conveyor area and truck receival area. The roadways leading to the shed were also clear with no evidence of spillage.



---

---

### **3.6.4 Hardstand, Carparks and Internal Roadways**

All hardstand areas were inspected and found to be generally clear of debris and build up of dust. The cement plant by its very nature, has the potential to generate fine cement dust which needs to be controlled by regular cleaning. This is usually done by high pressure water using a dedicated water cart which also waters the roadways for dust suppression. The operation of the water cart was sighted on site. All runoff water is contained in a large on site pollution control pond, referred to as Lake Breed.

### **3.6.5 Pollution Control Ponds**

There are two main pollution control ponds on site, Lake Breed and Lake Quality. Lake Breed is located on the main cement plant site while Lake Quality is located on Boral owned land on the eastern side of Moss Vale Road. The spillway of Lake Quality represents the licensed discharge point for the cement plant. Both ponds were inspected and the water quality appeared excellent. There was no evidence of sedimentation or discoloration.

### **3.6.6 Shale Quarry**

The Blue Shale quarry is located on the south-western side of the cement plant site. The quarry provides one of the main raw materials in the production of clinker. Clay is extracted on an as needed basis which is then blended with limestone and iron ore to produce the feed meal to the kiln.

The Shale Quarry operates under the Kiln 6 Consent (DA 401-11-2002) and subsequent modifications and is also covered by Environment Protection Licence 1698 which includes the scheduled activity "land-based extractive industry". The Shale Quarry is also covered by ML1723 and several Mining Purposes Leases. It operates in accordance with a Rehabilitation Management Plan and three year Forward Program. The Mining Lease and associated Mining Purposes Leases are not covered by this audit.

The shale is extracted by a series of shallow benches by dozer ripping then pushing up into piles which are then loaded onto trucks for transport to the storage shed. The storage shed was inspected as part of this audit which also housed yellow clay sourced from the Marulan Limestone Mine.

Additional drainage works were conducted over the past three years which improved the separation of clean water from entering the void. This has reduced the potential for batter erosion during intense storm events. The remaining quarry surrounds were stable and functioning correctly and rehabilitation work appeared satisfactory.

This area is also used to store plasterboard which is a component of the raw meal to the cement works. The stockpile of plasterboard appears to have not varied over the last three years and in its current form represents a potential dust source. This audit recommends that the size of the plasterboard stockpile be reduced over the next three years.

### **3.6.7 Landscaping**

Boral has previously completed a comprehensive landscaping and rehabilitation program designed to reduce the area of disturbed ground that could generate fugitive dust as well as provide wind breaks to reduce the erosive velocity of localised wind. The program involved significant tree planting and grass cover improvements. The rehabilitation area was inspected

---

---

and it was found that the majority of the work has proved successful. Some woody weeds have developed along the drainage line leading to Lake Breed and the original tree guards should be removed as they are no longer needed and will eventually break as trees mature.

### **3.6.8 Night time Visual Inspection**

A separate inspection of the cement facilities and surrounding area occurred on 12<sup>th</sup> April 2024. This inspection covered the main roads surrounding the plant to determine if light spillage was occurring. The cement plant is clearly visible at night from many elevated vantage points for up to 8 km in a westerly direction around Mandemar, 3 km from the south particularly around Gingenbullen Mountain, 4 km to east along Berrima-Moss Vale Road and at elevated locations to the north for over 5 km. Although the lights were visible, no direct glare was evident indicating that all internal light sources are directed towards the ground and within the cement plant site.

As the cement plant operates 24 hours per day, seven days per week, Boral has given consideration to the placement and direction of internal light sources and ensure that light spill outside the cement plant is minimised.

### **3.7 Community Liaison**

Boral maintains a strong reputation of positive communication within the local community including quarterly Community Liaison Group (CLG) Meetings and annual Whole of Community meetings. Additional Whole of Community meetings are also held when significant changes or announcements are to be made by the cement plant. Newsletters are delivered to the residents of New Berrima generally on an as needed basis such as when a new application has been made.

The CLG consists of Boral representatives, community representatives and a Wingecarribee Shire Council. The CLG currently meets twice per year however quarterly meetings are held when the consent modifications were being prepared and lodged for approval.

The newsletters and presentations from both community meetings including meeting notes are published on the Boral webpage which have been reviewed in this audit. The CLG meetings relevant to this audit were held on:

- 3<sup>rd</sup> September 2020
- 10<sup>th</sup> December 2020
- 5<sup>th</sup> August 2021
- 1<sup>st</sup> April 2022
- 29<sup>th</sup> July 2022
- 1<sup>st</sup> December 2022
- 14<sup>th</sup> July 2023
- 14<sup>th</sup> November 2023

The meetings have included briefings on the consent modifications made over the past three year audit period and sort feedback from the community on any issues of concern. Other general issues have been discussed such as dust issues, traffic and noise from time to time.

---

---

### **3.8 Record Keeping**

The success of site environmental management often rests with good data collection, proper analysis of data and record keeping. The environmental data is all kept on site and there is a system to enable ongoing management of data to identify trends and potential future exceedances. The raw environmental data has been inspected and found to be stored and kept up to date.

Paper records are kept of NSF receipts and data templates which are used for QA/QC of waste management were viewed as part of this Audit. Public data and monitoring result are published on the Boral webpage on a regular basis. Monitoring data is also kept and analysed as required. This data includes all stack emission and ambient environmental data. Records were readily at hand when discussed at the interview.

### **3.9 Environmental Management Plan Review**

All the management plans required by the consent have been prepared and approved, since the development commenced. These plans have been reviewed and updated since the 2017 Environmental Audit. The key management plans operating on site were reviewed as part of this audit. These are discussed in the following sections.

#### **3.9.1 Operations Environmental Management Plan**

The main management plan for the site is the Operations Environmental Management Plan (OEMP) which was revised in June 2023 (Version 7) to meet the requirements of development consent modifications 13 and 15 and to include DPHI comments. The OEMP covers the entire operation including the regulatory requirements, environmental management, communications including reporting, responses to incidents/non-conformances, monitoring and reviews. The requirements for the OEMP are listed under the Kiln 6 consent in conditions 6.3, 6.3A, 6.4 (noise management plan, air quality management plan, emergency plan, safety management system, water supply strategy, and transport code of conduct), 6.4A (air quality management plan), 6.5 and 6.6. The OEMP meets the requirements of these conditions as discussed in Appendix A of this report.

#### **3.9.2 Water Management Plan**

The latest version of the Water Management Plan (Version 7) was updated in June 2023 to meet the requirements of development consent modifications 13 and 15 and to include DPHI and WaterNSW comments. The WMP provides a water management system which addresses the management of stormwater on site, and supply of process water to the cement works. The plan also looks at the potential for water quality impacts from each operating activity conducted on site. The process water sources and requirements for water usage on site are detailed. Monthly and quarterly water quality sampling is required from Lake Breed and Lake Quality as well as monitoring of any discharges to Stony Creek are described in the WMP. The Water Management Plan satisfies the relevant conditions of the Consent.

#### **3.9.3 Waste Management Plan**

The Waste Management Plan was updated in May 2023 (Version 7) to meet the requirements from the development consent modifications 13 and 15. The plan describes the procedures in

---

---

place at Berrima Cement Works for handling, tracking and disposal of waste materials. Boral requires the site to monitor and measure all waste produced, reused, recycled, and disposed and the plan outlines how such procedures comply with the licence and regulatory requirements. It is important to note that this plan does not apply to the NSF or external waste brought on site as recovered material. The Waste Management Plan is comprehensive and adequately addresses the consent requirements.

### **3.9.4 Air Quality Management Plan**

This Air Quality Management Plan (AQMP) was revised in May 2023 (Version 6) to include the outcomes of the further Proof of Performance Trials for non-standard fuels and update for MOD 15. This plan informs staff of their obligations relating to air quality, including emission limits, and the controls and management actions in place to mitigate fugitive dust, odours and point source emissions. All possible gas and dust emission sources are identified within the plan with controls for the potential sources. The AQMP is in compliance with environmental legislative requirements and satisfies the relevant conditions of the consent.

### **3.9.5 Dust Management Plan**

The Dust Management Plan was updated in May 2023 (Version 4) with minor changes to reflect Modification 15 and tyre chip storage and usage. This plan is in place to reduce offsite dust impacts including PM10 and deposited dust. Sources of dust have been identified, and activities identified as high to medium priority are a focus of this plan, as dust minimisation in such areas will have the greatest reduction of dust generation overall. A comprehensive list of management measures to minimise dust from each operation is detailed under Section 7. A landscaping and revegetation program is discussed in the plan which aims to reduce dust pickup from exposed areas and immobilise dust generated from operations.

### **3.9.6 Noise Management Plan**

The Noise Management Plan (NMP) was updated in May 2023 (Version 10) to include a minor update to cater for MOD 13 and MOD 15. The whole of site noise limit was previously updated as a result of MOD 15. The plan is designed to address appropriate controls and management techniques to minimise noise levels. Current whole of site maximum allowable noise contribution limits are outlined in the NMP as 58 LA90(15minutes) for the day, evening and night. An independent consultant conducts a noise assessment on an annual basis to confirm the noise emissions remain below existing limits. The Plan also enables compliance with the conditions specified in the development approvals for Cement Mill 7, Kiln 6 and the EPL1698.

### **3.9.7 Traffic Management Plan**

The current Traffic Management Plan is dated April 2020. It was updated however as the Vehicle and Pedestrian Management Plan Modification 15 in 2023.

The purpose of the TMP is to outline the requirements for safe management and environmentally responsible road use and the mobile plant/equipment that uses the site and local external roads. Mitigation strategies for traffic/ transport impacts are discussed within the plan as well as the responsibilities of personnel on site. Additional traffic rules are applied to vehicles driving on site which can be found in the TMP.

---

---

### 3.9.8 Quality Assurance and Control Procedures Solid Waste Derived Fuel (SWDF)

Appendix 1 of the Kiln 6 consent 401-11-2002-I MOD12 provides a Quality Assurance and Control Procedure for the receipt and use of SWDF. The purpose of the procedure is to define a standard approach for ensuring that the quality of SWDF received and used at the Boral Berrima Cement Works meets the specified fuel requirements and relevant statutory regulations and policies including the NSW Energy from Waste Policy. The purpose of the procedure is to:

- Ensure the compatibility of SWDF supplier QA/QC systems with Boral's approved Control Procedures.
- Ensure that SWDF supplier QA/QC systems will enable Boral to continue to meet the specific SWDF specifications as listed in Table A1.1 of Development Consent 401-11-2002-I MOD12.
- Ensure that SWDF supplier QA/QC systems meet the requirements of the NSW Energy from Waste Policy.
- Ensure that there is a verifiable tracking and chain of custody of SWDF from each supplier's facility to the Berrima Cement Plant.
- Ensure that there is a standardised analysis of SWDF undertaken at each supplier which corresponds to the analysis undertaken by Boral.

These procedures are separately audited on an annual basis and to date have been found to be fully compliant. No further assessment of the QA/QC system was considered necessary as part of this current audit.

### 3.10 Actual Vs Predicted Impacts

There have been eight separate environmental assessment undertaken since 2002 for various approvals and subsequent modifications. The most recent comprehensive assessments have been prepared in support of the use of non-standard fuels. The predictions made in the 2015 Environmental Assessment supporting MOD9 has been referred to in this section.

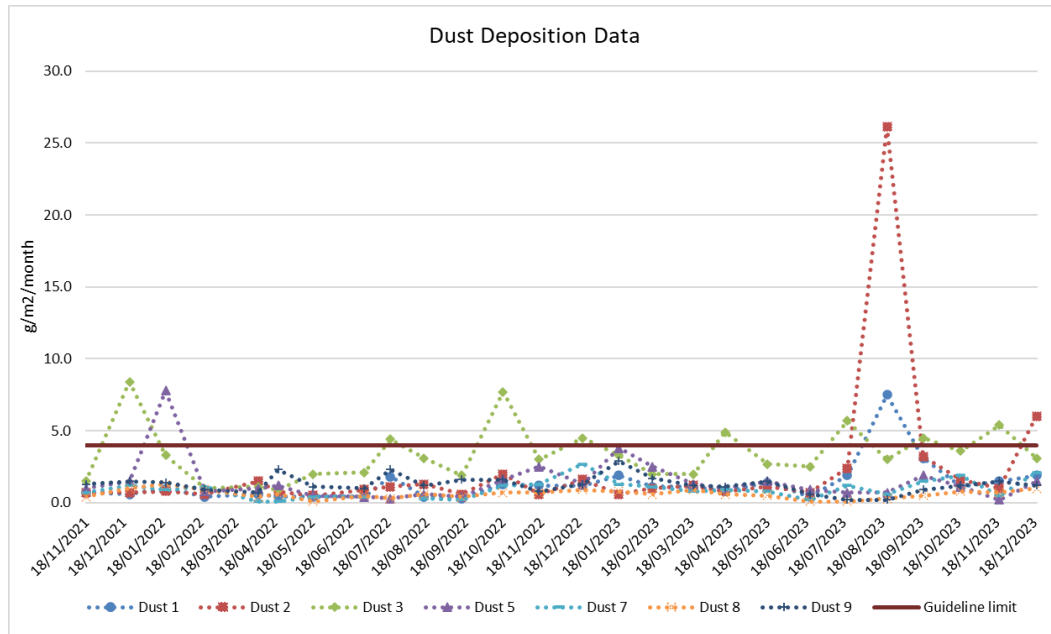
#### 3.10.1 Dust Monitoring Results vs Predicted

The results of ambient dust data have been reported in each AEMR covering the audit period. The results are also summarised in the annual EPL return. These are summarised in the following table.

**Table 3.2- Annual Ambient Air Quality Monitoring**

Parameter	EPA Limit	EA Prediction	2021 Average	2022 Average	2023 Average
DDG 1	4 g/m <sup>2</sup> /month	<4	0.8	0.9	2.0
DDG 2	4 g/m <sup>2</sup> /month	<4	1.0	1.0	1.8*
DDG 3	4 g/m <sup>2</sup> /month	<4	3.2	2.9	3.6
DDG 5	4 g/m <sup>2</sup> /month	<4	1.6	1.2	1.4
DDG 7	4 g/m <sup>2</sup> /month	<4	0.9	0.8	1.1
DDG 8	4 g/m <sup>2</sup> /month	<4	0.6	0.6	0.6
DDG 9	4 g/m <sup>2</sup> /month	<4	1.4	1.4	1.2
PM <sub>10</sub>	30 µg/m <sup>3</sup> Annual	<30	5.45	3.77	8.16
TSP	90 µg/m <sup>3</sup> Annual	<90	22.53	17.9	24.9

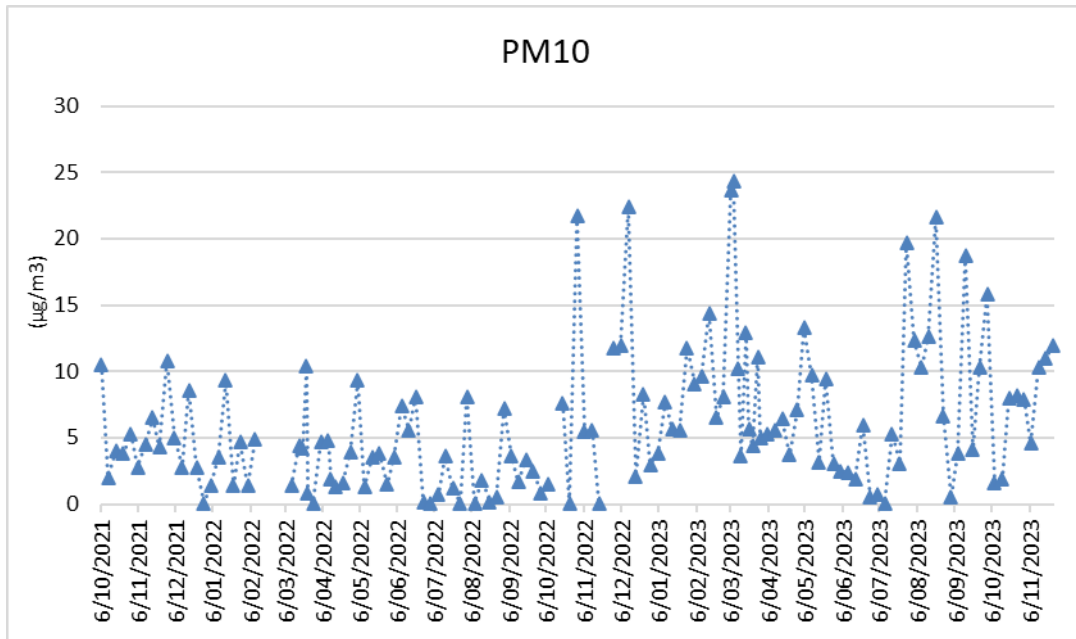
The data shows general compliance with the EA predictions. Dust gauge 2(\*), which is located to the north east of the cement works and north of the playing fields along Berrima Road had an exceptionally high reading of 26.1 g/m<sup>2</sup>/month in August 2023 which was viewed as being vandalised. It would not be possible to experience such a high reading so far from the cement works, particularly given that all other sites were within normal levels. The average without this reading was 1.8 g/m<sup>2</sup>/month. Raw dust deposition data has been graphed as shown below.



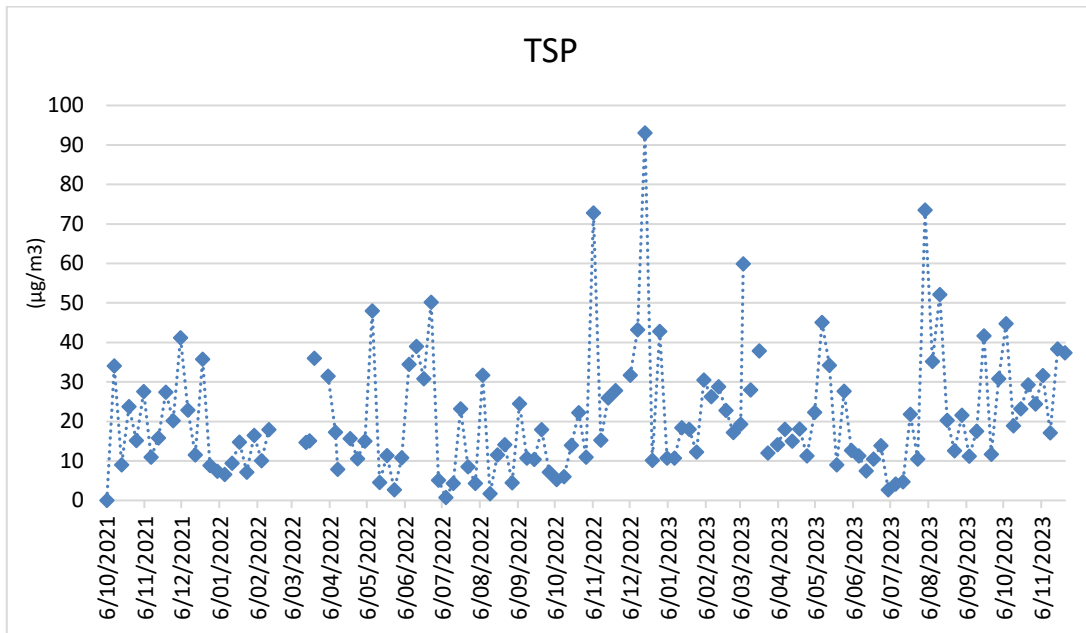
**Graph 4 – Raw Dust Deposition Data**

Although the guideline value is expressed as an annual average, it is useful to view the raw data as it shows specific months which are elevated. As mentioned before, Dust Gauge 2 result for August 2023 was considered an outlier and not a result of any dust emissions from the cement works.

Viewing the monitoring data in more detail shows that the PM<sub>10</sub> 24 hour goal of 50 µg/m<sup>3</sup> was not exceeded during the three year audit period. This is in contrast to several exceedances which occurred during the 2018 to 2019 audit period.



**Graph 5 – Raw PM<sub>10</sub> Data**



**Graph 6 – Raw Total Suspended Particulate Data**

The dust model provided in the assessment documentation predicted dust level contributions at the nearest residential receptors. The predictions at the highest prediction was a 10.1 µg/m<sup>3</sup> 24 hour increase above ambient. A review of the monitoring data would suggest that this increase has not occurred under normal operating conditions. The exceedances that have occurred in the past have been the result of identified failures in control equipment or from regionally high dust events caused by bushfires. There is also no correlation between the noted site exceedances and elevated levels at receiver locations as demonstrated by the monitoring data. This indicates that the exceedances have been relatively minor and quickly corrected.

---

---

### 3.10.2 Noise Monitoring Results vs Predicted

The assessment of noise compliance has been undertaken each year by an external noise consultant. For the 2021 to 2023 reporting period, the noise assessments were undertaken by Recognition Research. Each assessment has used the assessment criteria and locations specified on the consents which were derived from the original approval. Each assessment confirmed that the site was meeting the criteria specified in the consent.

### 3.11 Improvement Opportunities

Boral has progressively implemented a range of ongoing site improvements. This audit has identified the following improvements which should be considered:

- Proactively engage with the EPA to finalise the real-time monitoring program to better establish compliance with noise and dust emission criteria.
- Improve the management and life of dust filter bags to avoid burst events.
- Determine measures to further reduce trips on the Electrostatic Precipitator.
- Continue to seek measures to reduce fugitive dust emissions during high wind events.
- Progressively remove the stockpiled plasterboard in the quarry area as this is a source of dust during high winds.
- Survey the previous tree planting around the site and replace tube stock if necessary.

Each of these improvements will require ongoing verification and management to ensure that they are successfully reducing dust and noise emissions from the site.

### 3.12 Key Strengths

The Berrima Cement Plant has been operating for over 90 years. It has maintained its community presence and has well established communications with its local community. Based on the results of the Whole of Community meetings, it is evident that the operation's key strength is its relationship with the local community.

The village of New Berrima was originally built to house the cement plant workforce and despite the historic anomaly of having an isolated group of residents located close to a major industrial complex, Boral recognises that the impacts of its operation must meet stringent impact assessment criteria over a very short distance. This recognition has led Boral to be proactive in its environmental management systems and continuous improvements. Evidence of this has been the Chloride Bypass System and the proposed new road entry of the site from the Old Hume Highway.



## 4. Audit Conclusions and Recommendations

---

### 4.1 Audit Conclusions

This Independent Environmental Audit covers the three year period between November 2021 to November 2023 inclusive. During this period there has been a continuation of the use of non-standard fuels. To improve stack emissions, Boral has constructed a Chloride Bypass system and implemented improvements in the quality of NSF as a long term replacement for coal. Additional detailed Proof of Performance tests have been undertaken to include the use of up to 50% NSF in the fuel mix. The trials have been successful and have resulted in some fine tuning of the use and management within the process.

This audit found that although there was a similar level of non-compliance with the Kiln 6 consent DA401-11-2002-i-MOD15 during the audit period compared to the 2020 Audit, improvements had been made in the management of SWDF within the plant. Additional improvements have also been made with the Electrostatic Precipitator reducing the issue with tripping.

The non-compliances relate to monitoring and management of air emissions required by the EPL which were identified by Boral and reported to both the EPA and DPHI. There was one penalty infringement notice issued by the EPA following a dust event in November 2023, which was outside of the audit period. The EPA had also raised concerns in relation to performance of the Electrostatic Precipitators (ESP) and has sought information from Boral on the potential to replace these with bag filters. It is understood that Boral has now reconditioned the ESP electrical systems which should provide greater reliability. This will be an ongoing discussion and this audit has recommended that Boral study the potential replacement of the ESP and continue discussions with the EPA.

The Cement Works has maintained a high level of compliance with its development consents and has met the requirements of all pre-construction conditions and operating conditions.

As detailed in the tables in Appendix A, the cement works is complying with all other consent conditions.

### 4.2 Audit Recommendations

The following recommendations have resulted from this audit:

- Proactively engage with the EPA to finalise the real-time monitoring program to better establish compliance with noise and dust emission criteria.
- Improve the management and life of dust filter bags to avoid burst events.
- Determine measures to further reduce trips on the Electrostatic Precipitator.
- Investigation of causes of NOx concentration variability in the stack emissions.
- Continue to seek measures to reduce fugitive dust emissions during high wind events.
- Progressively reduce the stockpiled plasterboard in the quarry area until its height is less than the quarry batter to reduce dust generation during high winds.
- Survey the previous tree planting around the site, remove tree guards and replace tube stock if necessary.

## Appendix A1 –Kiln 6- Conditions of Consent

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
1	General					
1.1	<b>Obligation to Minimise Harm to the Environment</b> <i>The Applicant shall implement all practicable measures to prevent or minimise any harm to the environment that may result from the construction and operation of the cement works upgrade.</i>	This audit	Boral Cement continues to continually improve their environmental performance at the Berrima Cement Works. Boral Cement continues to maintain regular communications with the EPA and DPHI to pre-empt and address potential issues, monitor compliance, and work cooperatively to ensure legislated requirements are understood and delivered in an efficient and timely manner. The non-compliances noted in this audit have not resulted in harm to the environment.	Compliant	Compliant	Compliant
1.2	<b>Scope of Development</b> The Applicant shall carry out the development generally in accordance with:					
	a) <i>Development Application No. 401-11-2002-i, lodged with the Department of Planning on 22 November 2002;</i>	Previous audits	Previous audits have determined compliance with the environmental assessments which supported the original and subsequent modifications up until Mod 12. This audit has separately assessed compliance with the following environmental assessment documents: <ul style="list-style-type: none"> <li><input type="checkbox"/> MOD 13 Statement of Environmental Effects, Chloride Bypass System Modification' dated March 2021</li> <li><input type="checkbox"/> 'Response to Request for Information' dated May 2021</li> <li><input type="checkbox"/> MOD 14 Statement of Environmental Effects, Berrima Cement works Solid Waste Derived Fuels &amp; Delivery Variation Project' prepared by SLR Consulting Australia Pty Ltd, dated 9 March 2022 and 'Response to Submissions Report' prepared by SLR Consulting Australia Pty Ltd, dated 21 February 2023, Boral Limited's Responses to the Department's Request for Additional Information dated 5 May 2023, 3 July 2023, 25 August 2023 and Amendment Request, prepared by Boral Limited, dated 27 October 2023</li> <li><input type="checkbox"/> MOD 15 (DA401-11-2002-i-Mod-15) for the construction and operation of AKF5 storage and feed infrastructure, in</li> </ul>	Compliant	Compliant	Compliant
	b) <i>Berrima Kiln 6 Upgrade Project – Statement of Environmental Effects, dated November 2002 and prepared by Olsen Environmental Consulting;</i>	Previous audits		Compliant	Compliant	Compliant
	c) <i>Noise Impact Assessment for Kiln 6 Upgrade Project, dated 4 November 2002 and prepared by Hatch Associates Pty Limited;</i>	Previous audits		Compliant	Compliant	Compliant
	d) <i>Air Quality Review – New Berrima Plant, Number 6 Kiln Upgrade, dated 19 November 2002 and prepared by Holmes Air Sciences;</i>	Previous audits		Compliant	Compliant	Compliant
	e) <i>additional information supplied to the Department by the Applicant regarding noise, air and water dated 22 January 2003;</i>	Previous audits		Compliant	Compliant	Compliant
	f) <i>additional information supplied to the Department by the Applicant regarding the design of the second pre-heater tower dated 4 February 2003;</i>	Previous audits		Compliant	Compliant	Compliant
	g) <i>additional information supplied to the Department by the Applicant regarding air and noise dated 13 February 2003;</i>	Previous audits		Compliant	Compliant	Compliant
	h) <i>additional information supplied to the EPA by the Applicant regarding discharge points from Lake Quality dated 4 March 2003 &amp; forwarded to the Dept. by the Applicant on 31 March 2003;</i>	Previous audits		Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	i) <i>modification application MOD-2-1-2004-i and accompanying documents lodged on 5 January 2004, including:</i>	Previous audits	<p>accordance with the 'S.4.55(1A) Modification Application to Berrima Cement Works' dated 13 October 2022, prepared by SLR Consulting Australia Pty Ltd, 'Response to Submissions Report' dated 16 December 2022 Prepared by SLR Consulting Australia Pty Ltd and correspondence dated 25 January 2023 from Boral Limited to the Department</p> <p>At the time of this audit, the operation of Kiln 6 had been carried out in accordance with the requirements of Condition 1.2 a) to s) based the results of previous audits. As MOD13 to MOD 15 varied the construction requirements and environmental performance criteria, re-assessment of compliance with earlier environmental assessment documentation is no longer valid. This is further discussed in Section 1.6</p>	Compliant	Compliant	Compliant
	i) <i>the Statement of Environmental Effects, Berrima Kiln 6, Non-Standard Fuels and Materials prepared by Blue Circle Southern Cement; and</i>	Previous audits		Compliant	Compliant	Compliant
	ii) <i>Blue Circle Southern Cement Berrima Plant, Proposed Non-Standard Fuels Modifications, Additional Information, dated 3 June 2004;</i>	Previous audits		Compliant	Compliant	Compliant
	j) <i>modification application MOD-109-9-2006-i, relating to the definition of HiCal50 as an alternative fuel and prohibition of hazardous wastes;</i>	Previous audits		Compliant	Compliant	Compliant
	k) <i>modification application MOD-12-2-2007-l, to permit trial use of tyre chips;</i>	Previous audits		Compliant	Compliant	Compliant
	l) <i>MOD 4 to vary the usage rate of coke fines;</i>	Previous audits		Compliant	Compliant	Compliant
	m) <i>MOD 5 to permit coal deliveries by rail;</i>	Previous audits		Compliant	Compliant	Compliant
	n) <i>MOD 6 to permit coal stockpiling on the site, as detailed in Berrima Cement Works Modification 6: Environmental Assessment, Coal Stockpiling for Sale, prepared by EMGA Mitchell McLennan and dated 16 June 2014, and in Response to Submissions: Berrima Colliery Continued Operations MP 10_0172, Berrima Cement Works DA No. 401-11-2002-i MOD 6, prepared by EMGA Mitchell McLennan and dated November 2014;</i>	Previous audits		Compliant	Compliant	Compliant
	o) <i>MOD 7 for the trial and potential full-scale use of Granulated Blast Furnace Slag as an additive raw material in kiln 6 and accompanying documents:</i>	Previous audits		Compliant	Compliant	Compliant
	i. <i>the Environmental Assessment entitled 'Berrima Cement Works Planning Consent Modification 7 - Environmental Assessment - Use of Granulated Blast Furnace Slag in K6 at Berrima', dated 17 October 2001 and prepared by Boral Cement Limited; and</i>	Previous audits		Compliant	Compliant	Compliant
	ii. <i>the Response to Submissions report entitled 'Berrima Cement Works – Kiln 6 Development Consent Modification 7', dated 7 December 2014 and prepared by Boral Cement Limited.</i>	Previous audits	Compliant	Compliant	Compliant	
	p) <i>MOD 9 refer to the use of Solid Waste Derived Fuels as a non-standard fuel for Kiln 6 and accompanying documents:</i>	Previous audits	Compliant	Compliant	Compliant	

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	i. <i>the Environmental Assessment entitled 'Use of Waste Derived Fuels Kiln 6, Berrima Cement Works DA 401-11-2002 – Modification 9' dated July 2015 and prepared by Boral Cement Limited; and</i>	Previous audits		Compliant	Compliant	Compliant
	ii. <i>the Response to Submissions report entitled 'Boral Berrima Cement Works Modification 9 – Use of Solid Waste Derived Fuels Response to Submissions' dated 22 January 2016 and prepared by SLR Consulting Australia Pty Ltd.</i>	Previous audits		Compliant	Compliant	Compliant
	<b>Condition Introduced April 2019</b> q) <i>MOD 10 for the construction of extensions to the Solid Waste Derived Fuel shed in accordance with accompanying documents, namely the Statement of Environmental Effects entitled 'Solid Waste Derived Fuels Shed Extension' dated February 2019 and prepared by Boral Cement Limited</i>	Previous audits		Compliant	Compliant	Compliant
	<b>Condition Introduced October 2019</b> r) <i>MOD 11 for the use of Hi Cal 50 during start-up and shutdown in accordance with the 'State of Environmental Effects Hi Cal 50 Modification Application' dated 10 May 2019, prepared by Boral Land and Property Group.</i>	Previous audits		Compliant	Compliant	Compliant
	<b>Condition Introduced April 2020</b> s) <i>MOD 12 for the commencement of isotainer loading activities and the establishment of a site wide noise limit in accordance with accompanying documents, namely the Statement of Environmental Effects entitled 'Isotainer Loading Operations Modification' dated July 2019, prepared by Boral Cement Limited and correspondence dated 3 October 2019 and 10 January 2020 from Boral Land and Property Group.</i>	Previous audits		Compliant	Compliant	Compliant
t)	<b>MOD 13 for the construction and operation of a chloride bypass system and the use of woodchips as a standard fuel in Kiln 6, in accordance with the 'Statement of Environmental Effects, Chloride Bypass System Modification' dated March 2021, prepared by Boral Land and Property Group and correspondence dated 21 April 2021 and 'Response to Request for Information' dated May 2021 prepared by Boral Land and Property Group.</b>	This audit	Modification granted on 31 May 2021 to construct and operate a chlorine bypass system and permit the use of woodchips as a standard fuel in Kiln 6	Compliant	Compliant	Compliant
u)	<b>MOD 14 (DA401-11-2002-i-Mod-14) for the increase in SWDF quantities permitted to be received at the site, 24/7 delivery of SWDF, construction and operation of additional SWDF storage</b>	Not Triggered	Modification granted on 28 November 2023. Increase volume of SWDF received and used as a non-standard fuel in Kiln 6,	Not Triggered	Not Triggered	Not Triggered

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	sheds and a new site access road, in accordance with the 'Statement of Environmental Effects, Berrima Cement works, Solid Waste Derived Fuels & Delivery Variation Project' prepared by SLR Consulting Australia Pty Ltd, dated 9 March 2022 and 'Response to Submissions Report' prepared by SLR Consulting Australia Pty Ltd, dated 21 February 2023, Boral Limited's Responses to the Department's Request for Additional Information dated 5 May 2023, 3 July 2023, 25 August 2023 and Amendment Request, prepared by Boral Limited, dated 27 October 2023.		permit 24/7 delivery of SWDF, construct a new site access road and additional SWDF storage infrastructure.  This consent modification was triggered in February 2024 which is outside the period of this audit.			
v)	MOD 15 (DA401-11-2002-i-Mod-15) for the construction and operation of AKF5 storage and feed infrastructure, in accordance with the 'S.4.55(1A) Modification Application to Berrima Cement Works' dated 13 October 2022, prepared by SLR Consulting Australia Pty Ltd, 'Response to Submissions Report' dated 16 December 2022 Prepared by SLR Consulting Australia Pty Ltd and correspondence dated 25 January 2023 from Boral Limited to the Department	This audit	Modification granted 17 March 2023 Construct and operate new storage and feed Infrastructure for tyre chips	Not triggered	Not triggered	Compliant
1.3	<b>Limits of Consent</b> The Applicant shall operate the cement works upgrade to meet the following requirements:	94	Kiln 6 was the only kiln used on site during the compliance audit. Clinker production remained below the approval limit:  2021 FY: 1,310,456 tonnes 2022 FY: 1,301,289 tonnes 2023 FY: 1,319,485 tonnes			
	a) the upgraded Kiln 6 is to be utilised as the primary and principal kiln on the site; and	94		Compliant	Compliant	Compliant
	b) the production capacity of the upgraded Kiln 6 is to be limited to ensure that the maximum clinker production capacity of Kiln 6 does not exceed 1.560 million tonnes per annum (rolling annual average).	94		Compliant	Compliant	Compliant
1.3A	Deliveries of coal to the site may be made by road or rail transport	Doc 4 Table 1 Interview	Auditor verified coal had been delivered to cement works by road during 2020-2023.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status																																																																				
				2021	2022	2023																																																																		
1.4A	<p><b>Use of Non-Standard Fuels</b>  <i>Subject to meeting the requirements of this consent, and the requirements of a licence issued under the Protection of the Environment Operations Act 1997 for the site, the following fuels are permitted to be received at the site for use at the upgraded Kiln 6 development at the quantities, firing rates and proportions specified in Table 1 and at the firing rates and proportions specified in the EPL.</i></p> <p><b>Table 1 – Permitted Fuels for use in upgraded Kiln 6</b></p> <table border="1"> <thead> <tr> <th>Fuel</th> <th>Category</th> <th>Tonnes per annum</th> </tr> </thead> <tbody> <tr> <td>Natural Gas, Fuel Oil, Diesel</td> <td>Standard Fuel</td> <td>No limits</td> </tr> <tr> <td>Coal</td> <td>Standard Fuel</td> <td>No Limit</td> </tr> <tr> <td>Coke Fines</td> <td>Standard Fuel</td> <td>No Limit</td> </tr> <tr> <td>Hi Cal 50</td> <td>Non-Standard Fuel</td> <td>10,000</td> </tr> <tr> <td>AKF1</td> <td>Non-Standard Fuel</td> <td>20,000</td> </tr> <tr> <td>AKF5</td> <td>Non-Standard Fuel</td> <td>30,000</td> </tr> <tr> <td>Wood Waste</td> <td>Non-Standard Fuel</td> <td>100,000</td> </tr> <tr> <td>RDF</td> <td>Non-Standard Fuel</td> <td>200,000</td> </tr> <tr> <td>Woodchips</td> <td>Standard Fuel</td> <td>150,000</td> </tr> </tbody> </table>	Fuel	Category	Tonnes per annum	Natural Gas, Fuel Oil, Diesel	Standard Fuel	No limits	Coal	Standard Fuel	No Limit	Coke Fines	Standard Fuel	No Limit	Hi Cal 50	Non-Standard Fuel	10,000	AKF1	Non-Standard Fuel	20,000	AKF5	Non-Standard Fuel	30,000	Wood Waste	Non-Standard Fuel	100,000	RDF	Non-Standard Fuel	200,000	Woodchips	Standard Fuel	150,000	89, 94, 99, 100, 101 and 102. 104 to 107	<p>The fuel and NSF tonnes per annum for the 3 periods of interest have remained below the quantities outlined in Table 1 in the consent.</p> <p>The majority of fuel consumed was coal. Small amounts of diesel are used during kiln start-ups. The site commenced the use of SWDF's in mid 2020.</p> <p>NSF used, in tonnes, during the audit period was:</p> <table border="1"> <thead> <tr> <th>NSF</th> <th>FY21</th> <th>FY22</th> <th>FY23</th> </tr> </thead> <tbody> <tr> <td>Diesel</td> <td>346,872</td> <td>581,762</td> <td>323,907</td> </tr> <tr> <td>Coal</td> <td>175,907</td> <td>176,636</td> <td>159,271</td> </tr> <tr> <td>Coke fines</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Hi Cal 50</td> <td>3,516</td> <td>5,359</td> <td>5,005</td> </tr> <tr> <td>AKF1</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>AKF5</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Wood waste</td> <td>24,189</td> <td>14,189</td> <td>34,962</td> </tr> <tr> <td>RDF</td> <td>12,325</td> <td>18,837</td> <td>24,339</td> </tr> </tbody> </table>	NSF	FY21	FY22	FY23	Diesel	346,872	581,762	323,907	Coal	175,907	176,636	159,271	Coke fines	0	0	0	Hi Cal 50	3,516	5,359	5,005	AKF1	0	0	0	AKF5	0	0	0	Wood waste	24,189	14,189	34,962	RDF	12,325	18,837	24,339	Compliant	Compliant	Compliant
Fuel	Category	Tonnes per annum																																																																						
Natural Gas, Fuel Oil, Diesel	Standard Fuel	No limits																																																																						
Coal	Standard Fuel	No Limit																																																																						
Coke Fines	Standard Fuel	No Limit																																																																						
Hi Cal 50	Non-Standard Fuel	10,000																																																																						
AKF1	Non-Standard Fuel	20,000																																																																						
AKF5	Non-Standard Fuel	30,000																																																																						
Wood Waste	Non-Standard Fuel	100,000																																																																						
RDF	Non-Standard Fuel	200,000																																																																						
Woodchips	Standard Fuel	150,000																																																																						
NSF	FY21	FY22	FY23																																																																					
Diesel	346,872	581,762	323,907																																																																					
Coal	175,907	176,636	159,271																																																																					
Coke fines	0	0	0																																																																					
Hi Cal 50	3,516	5,359	5,005																																																																					
AKF1	0	0	0																																																																					
AKF5	0	0	0																																																																					
Wood waste	24,189	14,189	34,962																																																																					
RDF	12,325	18,837	24,339																																																																					
1.4AA	<p><b>Notwithstanding condition 1.4A of this consent, the Applicant must not receive any woodchips at the site for any purpose until:</b></p> <p>a) the new site access road approved under MOD 14 is constructed and operational; and</p> <p>b) the Applicant has notified the Planning Secretary in writing via the NSW Planning Portal that the site access road has been constructed in accordance with the consent and is operational; and</p> <p>c) the Planning Secretary has indicated in writing that it is satisfied the site access road has been constructed in accordance with the consent and is operational.</p>	Interview	<p>This component of the consent has not been triggered. Construction works on the new site access road has not commenced</p>	Not Triggered	Not Triggered	Not Triggered																																																																		
1.4AB	<p><b>Notwithstanding condition 1.4A of this consent, the Applicant must:</b></p> <p>a) limit the combined annual usage of SWDF to no more than 50% of total fuel mass until appropriate Proof of Performance Trials are undertaken to the satisfaction of the EPA and the</p>	73, 74	<p>Proof of Performance Testing undertaken for 50% SWDF. Approval obtained from EPA 8/12/22.</p> <p>SWDF not used above 50% and therefore not triggering item (b)</p>	Not Triggered	Compliant	Compliant																																																																		

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<p>Planning Secretary for each 10% incremental increase in SWDF usage above 50%; and</p> <p>b) not co-fire non-standard fuels permitted by condition 1.4A of this consent unless compliance with the air emission limits on the EPL has been demonstrated for that combination of fuel types through a Proof of Performance Trial to the satisfaction of the EPA and the Planning Secretary.</p>					
1.4B	<p>AKF5 is approved for use at the development under this consent subject to the necessary approvals under the Act being obtained for storage facilities and kiln feeding infrastructure. Use of AKF5 at the development must be carried out in compliance with the following:</p> <p>c) no AKF5 is permitted to be received at the site until the necessary storage facilities and kiln feeding infrastructure have been constructed in accordance with any such approvals;</p> <p>d) storage of AKF5 must be in accordance with Fire &amp; Rescue NSW (Fire Safety Branch) Guidelines for bulk storage of rubber tyres;</p> <p>e) if the Applicant proposes to exceed the stockpile sizes and heights within the above Guidelines, the Applicant must obtain written approval from Fire and Rescue NSW to the satisfaction of the Planning Secretary; and</p> <p>f) any AKF5 stored outside or in storage bunkers must be roofed to exclude rainwater.</p>	Interview	Trial undertaken in February 2023. Condition was triggered in August 2023. Storage facilities consisting of three bunkers has been built. Approval of NSW Fire Brigade obtained and sighted	Not Triggered	Not Triggered	Compliant
1.4BA	<p>Notwithstanding condition 1.4B of this consent, the Applicant must undertake an air emissions stack test within three months of the commencement of use of AKF5 as a fuel in Kiln 6, or as otherwise agreed to by the Planning Secretary. The Applicant must:</p> <p>a) carry out the air emissions stack test to the satisfaction of the Planning Secretary;</p> <p>b) undertake the air emissions stack test at a high feed rate of 4.5 tonnes per hour of AKF5, or as otherwise approved by the EPA;</p> <p>c) engage a suitably qualified and experienced person(s) to carry out the air emissions stack test;</p> <p>d) notify the Planning Secretary and EPA prior to the commencement of the air emissions stack test; and</p>	Interview, 83, 94 and 101	<p>Trial undertaken in February 2023. Condition was triggered in August 2023. Storage facilities consisting of three bunkers has been built. Approval of NSW Fire Brigade obtained and sighted.</p> <p>Stack testing undertaken 28<sup>th</sup>-29<sup>th</sup> November 2023</p> <p>EPA and DPHI advised on 23<sup>rd</sup> November 2023</p> <p>Kiln Emission Testing report- Tyre Fuel Trial 28 March 2022</p>	Not Triggered	Not Triggered	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	e) report the outcomes of the trial and stack test to the Planning Secretary and the EPA within one month of the conclusion of the test period, unless otherwise agreed by the Planning Secretary.					
1.4BB	The air emissions stack test report required by condition 1.4BA must include the following information: a) the dates and times when the air emissions stack test was carried out; b) the rates of feed of AKF5 during the air emissions stack test; c) the results of the air emissions stack test, including identification of any non-compliance with the conditions of this consent and the EPL; and d) details of additional measures to be implemented to address any non-compliance.	Interview, 83, 101, 102	Ektimo Report number R012341 Stack testing Kiln 6	Not Triggered	Not Triggered	Compliant
Condition 1.4B replaced by MOD15	No AKF5 is permitted to be received at the site until the necessary storage facilities and kiln feeding infrastructure have been constructed in accordance with any such approvals. Storage of AKF5 must be in accordance with the Fire and Rescue NSW Guidelines for Bulk Storage Of Rubber Tyres. If the Applicant proposes to exceed the stockpile sizes and heights within the above Guidelines, the Applicant must obtain written approval from Fire and Rescue NSW, to the satisfaction of the Secretary	Site Inspection  Docs 1-3 and 94	Storage facilities and kiln feeding infrastructure for the AKF5 NSF have been approved and construction completed. Stockpile size/height remains within the guidelines. No AKF 5 was received, stored or used at the site during the 3 year audit period. AKF5 deliveries commenced after this audit period.	Not triggered	Not triggered	Compliant
1.4C	Hi Cal 50 and AKF1 are approved for use at the development under this consent subject to the detailed design for any necessary storage facilities and kiln feeding infrastructure being approved to the Secretary. In particular, the detailed design shall:	Docs 1-3 Table 21	Compliance of this condition was confirmed in the 2021-2023 AEMR. HiCal50 is a carbon anode material used in the aluminium industry. Its supply is sporadic and governed by the supplier. The site used HiCal50 between 2018 and 2020. Supply is governed by the aluminium smelter operation.	Compliant	Compliant	Compliant
	a) demonstrate that the storage facilities would be appropriately bunded in accordance with the relevant Australian Standards, especially Australian Standard AS1940-2004 (for AKF1, this would include having a minimum capacity sufficient to accommodate catastrophic failure of the tank and that adequate measures are in place to ensure a catastrophic failure of a tanker during transfer was adequately contained to ensure no off-site discharge;	Site Inspection, interview	Oil separator installed and inspected. Site inspection shows evidence of appropriate bunding of storage facilities on designs.	Compliant	Compliant	Compliant
	b) include appropriate measures to ensure liquids draining from the bund (and other containment areas) are kept separate and adequately treated prior to discharge to the on-site	Site Inspection, interview	Site inspection showed evidence of adequate treatment of liquids prior to discharge. Oil separator installed and inspected	Compliant	Compliant	Compliant



Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>storm water management system, and demonstrate that these measures were developed in consultation with the Sydney Catchment Authority and Wingecarribee Shire Council; and</i>					
	<i>c) include a Fire Safety Study prepared in accordance with the Department's guideline Hazardous Industry Planning Advisory Paper No. 2: Fire Safety Study and in consultation with the Fire and Rescue NSW</i>	OEMP	Appropriate Fire Safety Study prepared and presented in OEMP. Accordance with guidelines and Fire and Rescue NSW consultation	Compliant	Compliant	Compliant
	A construction certificate must not be issued in relation to any necessary storage facilities and kiln feeding infrastructure until the Secretary has approved the detailed design parameters. No Hi Cal 50 or AKF1 is permitted to be received at the site under this consent until any necessary storage facilities and kiln feeding infrastructure have been constructed in accordance with the detailed design parameters approved by the Secretary.	Tank bunding inspected	Detailed design parameters approved by Secretary and construction certificate issued Storage facilities and NFS infrastructure constructed in accordance with detailed design drawings.	Compliant	Compliant	Compliant
1.4CA	Notwithstanding condition 1.4B of this consent, the Applicant is permitted to undertake a single trial of chipped tyres in the development, ahead of the construction of storage facilities and kiln feeding infrastructure for AKF5, provided that the trial meets the following requirements:	Docs 1-3, 101	AKF5 trial was completed in 2022  Non-standard fuels are not used during start-up or shut down. Controls are in place to ensure lockout of NSF during start-up.	Not Triggered	Compliant	Compliant
	<i>a) no more than 205 tonnes of 2" chipped tyres is to be received at the site for the trial;</i>	Interview, 101	Trial was completed with tyre chips supplied by Molycop at Cootamundra.	Not Triggered	Compliant	Compliant
	<i>b) the trial shall be conducted over no more than six months from the date of first receipt of the trial materials, after which any remaining trial materials shall be removed from the site to a facility lawfully permitted to accept the materials;</i>	Interview, 101	Investigation complete and data provided to EPA and DPHI	Not Triggered	Compliant	Compliant
	<i>c) the trial shall be undertaken for the purpose of investigation design and operational aspects of the full scale use of AKF5</i>	Interview, 101	Consultation activities were undertaken as required by the consent	Not Triggered	Compliant	Compliant
	<i>d) the trial shall be undertaken in full compliance with the environmental performance standards stipulated in this consent and the requirements of the EPL for the site</i>	Interview, 101	Advice from EPA obtained prior to trial and results provided to the EPA	Not Triggered	Compliant	Compliant
	<i>e) the Applicant shall consult with and meet the requirements of the EPA with respect to undertaking the trial, and shall not commence the trial without the prior written approval of the EPA;</i>	Interview	Advice from EPA obtained prior to trial and results provided to the EPA	Not Triggered	Compliant	Compliant
	<i>f) trial materials shall be stored in an area that is sealed, or otherwise treated to the satisfaction of the Secretary, and away from all potential ignition sources;</i>	Site Inspection	Area Inspected and found satisfactory	Not Triggered	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	g) the Applicant shall notify the Fire and Rescue NSW prior to the receipt of trial materials on the site, and address any requirements with respect to the safe storage of the trial materials;	Interview	Auditor advised that NSW Fire and Rescue were contacted	Not Triggered	Compliant	Compliant
	h) the Applicant shall notify the Planning Secretary, the EPA and the Community Liaison Group prior to the commencement of the trial; and	Site Interview	The trial was discussed at the CLG	Not Triggered	Compliant	Compliant
	i) the Applicant shall report the status and outcomes of the trial to the Planning Secretary and the EPA on a monthly basis from the date that trial materials are first received on the site until conclusion of the trial.	Site Interview, 83	Auditor advised that the Planning Secretary and EPA were advised monthly. This usually occurred at the time of receipt of the Ektimo reports.	Not Triggered	Compliant	Compliant
1.4D	During start-up and shutdown of the development, only the following fuels are permitted to be used: (a) natural gas (b) fuel oil (c) diesel (d) coal (e) coke fines (f) Hi Cal 50.	Site Interview Document 3 Table 21	Non-standard fuels are not used during start-up or shut down. Controls are in place to ensure lockout of NSF during start-up. Email Correspondence from DPIE extending storage of Hi Cal for 3 years	Compliant	Compliant	Compliant
1.4E	Non-Standard Fuels and woodchips are not permitted to be stored at the site for longer than 3 months, except with the written permission of the Planning Secretary.	Interview	SWDF is stored within a dedicated shed which is managed by an overhead grab. The material is progressively moved and mixed towards the delivery hopper. Average time within the storage shed is 3 days	Compliant	Compliant	Compliant
1.4F	No Non-Standard Fuel is permitted to be received at, or used at the development, unless it complies with:	Interview	Written approval was received from the Secretary on the 4/4/2019 to store 17 500t of HiCal 50 for three years. Storage was modified on 12/7/19 to enable processing on site.	Compliant	Compliant	Compliant
	a) the handling, transporting, sampling, analysis and quality control requirements of this consent;	Docs 15 and 17, 43, 81, 76	Characterisation sample analysis and quality assurance control procedures were reviewed for all current suppliers	Compliant	Compliant	Compliant
	b) any requirements of a licence issued under the Protection of the Environment Operations Act 1997 for the site &	Site Inspection Doc 18	Deliveries of non-standard fuels were in compliance of the POEOA. Ektimo Annual Emission Testing reports and PoP 6-month reports were reviewed during this audit.	Compliant	Compliant	Compliant
	c) the fuel specification for that specific fuel.	Doc 18, 19 and 20	Composite samples of NSF tested by supplier and by Boral. Any out of specification material is returned.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
1.4G	<i>Prior to the receipt of the first batch of a Group 1 Non-Standard Fuel from a particular supplier, the Applicant shall certify in writing to the Secretary that the supplier has implemented appropriate quality control and quality assurance procedures to ensure that the Applicant's responsibilities under this consent can be met. At the request of the Secretary, the Applicant shall forward a copy of the supplier's quality control and quality assurance procedures to the Department demonstrating how those procedures cause the Applicant to meet the requirements of this consent.</i>	Interview, doc 46	Use of HiCal50 extended for three years, all remaining stocks of HiCal50 have been used. No more deliveries are envisaged in the short term as this is entirely dependent on availability	Compliant	Compliant	Compliant
1.4H	<i>Prior to the receipt of the first batch of a Group 2 Non-Standard Fuel from a particular supplier, the Applicant shall certify in writing to the Secretary that the supplier has met the pre-qualification requirements set out in the approved Quality Assurance and Control Procedure for Receipt and NSW Use of Solid Waste Derived Fuels (Appendix 1 of the consent) and that the Applicant's Responsibilities under this consent can be met. At the request of the Planning Secretary, the Applicant shall forward a copy of the supplier's quality control and quality assurance procedures to the Department demonstrating how those procedures cause the Applicant to meet the requirements of this consent</i>	Docs 21- 23, 81	Boral has kept the DPHI informed of any new SWDF suppliers. Boral audits of suppliers confirms the pre-qualification requirements and responsibilities have been met for each supplier. Capability compliance checklists presented for each supplier Supplier audits conducted.	Compliant	Compliant	Compliant
1.4I	<i>Prior to the receipt of the first batch of SWDF the Applicant shall develop and submit operational procedures for co-firing SWDF to ensure that the temperature of gas generated in the process is raised to a minimum temperature of 850°C for a minimum of two seconds. Operational procedures must include interlocks in the process control system</i>	Operational procedures sighted during interview	Operational procedures for co-firing SWDF submitted prior to receipt of first batch as part of the POPT Plan process. Documentation was sighted during interview.	Compliant	Compliant	Compliant
1.4J	<b>Condition Introduced October 2019</b> <i>Hi Cal 50 must only be used in Kiln 6 when blended with coal to create a homogenous blend. The concentration of Hi Cal 50 in the coal blend must not exceed 4%.</i>	Site interview	Hi-Cal is blended within the coal blending plant when in use.	Compliant	Compliant	Compliant
1.6	<b>Statutory Requirements</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>	Interview, this audit findings	All required licenses, permits and approvals continue being maintained. Modification to the EPL is currently under negotiation with the EPA in relation to ambient monitoring conditions. In this regard, a non-compliance with the EPL is a corresponding non-compliance with the consent. As described in Section 3.2 there were several non-compliances with the EPL over each of the three years covered by this audit.	Non-Compliant	Non-Compliant	Non-Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
1.11	<b>Staged Submission of Strategies, Plans or Programs</b> <i>With the written consent of the Planning Secretary, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis and/or combines any strategy, plan or program required by this consent.</i>	Interview	No consents are currently being staged	Compliant	Compliant	Compliant
1.12	The Applicant must comply with all reasonable requirements of the Planning Secretary arising from the Department's assessment of:	Interview,	Boral has provided copies of the various management plans and updates as required by the consent. The OEMP and Construction Management Plan required under MOD 14, with respect to the road bypass has not yet been prepared.	Compliant	Compliant	Compliant
	a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this consent; and	Interview		Compliant	Compliant	Compliant
	b) the implementation of any actions or measures contained in these documents	Interview	Boral Cement has complied with all reasonable requirements of the Secretary arising from the Department's assessment.	Compliant	Compliant	Compliant
2	Construction and Occupation Certification		The construction of the Chloride Bypass system and Tyre Shed occurred during this audit period.			
2.1	In relation to the construction and occupation of the cement works upgrade, the Applicant shall provide to the Planning Secretary and Council the following:		The construction of an extension to the SWDF Shed occurred during the previous audit period while the construction of the Chloride Bypass system and the Tyre Shed occurring during the current audit period. This work did not relate to the original upgrade of the cement works.			
	a) written notification of the appointment of a Principal Certifying Authority;	Interview, docs 53, 93		N/A	Compliant	Compliant
	b) copies of all Construction Certificates issued for the cement works upgrade;	Interview, docs 53, 93		N/A	Compliant	Compliant
	c) written notification of the intention to commence construction work, to be received at least two working days prior to the commencement of construction. In the event that more than one Construction Certificate is issued, notification shall be provided prior to the commencement of construction the subject of each Certificate;	Interview, docs 53, 93	The current CEMP is Version 5 which covers MOD13 and MOD15	N/A	Compliant	Compliant
	d) copies of all Occupation Certificates issued for the cement works upgrade; and	Interview	Occupation Certificates not required.	N/A	Compliant	Compliant
	e) written notification of the intention to occupy all relevant components of the cement works for which an Occupation Certificate has issued, to be received at least two working days prior to occupation. In the event that more than one Occupation Certificate is issued, notification shall be provided prior to the occupation the subject of each Certificate.	Interview, docs 53, 93	Approvals obtained for new construction, this condition relates to the original construction activities.	N/A	N/A	N/A
3	Environmental Performance					

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
3.1	<b>Construction Noise</b> Construction activities associated with the cement works upgrade shall only be carried out:	Interview, 1, 2, 3 and 53	Annual noise surveys undertaken for the AEMR. Construction of the Chloride Bypass system and the Tyre Shed would yield no additional noise compared to ongoing operations and maintenance activities.	N/A	Compliant	Compliant
	a) <i>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;</i>	Interview, 53		N/A	Compliant	Compliant
	b) <i>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;</i>	Interview, 53	Main construction activities occurred during normal daytime hours. Connection of the chloride bypass system to the stack occurred during maintenance shut down.	N/A	Compliant	Compliant
	c) <i>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;</i>	Interview, 53	No additional noise compared to ongoing operations and maintenance activities.	N/A	Compliant	Compliant
	d) <i>at any time during periods in which the cement works is in operation; and</i>	Interview, 53	No additional noise compared to ongoing operations and maintenance activities.	N/A	Compliant	Compliant
	e) <i>at any time if construction noise is inaudible at the boundary of the site.</i>	Interview, 53	No additional noise compared to ongoing operations and maintenance activities.	N/A	Compliant	Compliant
3.1A	<i>The Development shall be constructed with the aim of achieving the construction noise management levels detailed in the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009). All feasible and reasonable noise mitigation measures shall be implemented and any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the CEMP</i>	Interview, docs 1, 2, 3 and 6	Noise monitoring each year and contained in the AEMR demonstrate compliance with statutory requirements and EPL limits	Compliant	Compliant	Compliant
3.1B	<i>Where Feasible and Reasonable, operation noise mitigation measures shall be implemented at the start of Construction (or at other times during construction) to minimise construction noise impacts.</i>	Interview, docs 1, 2, 3 and 6	Noise mitigations have been previously employed and documented in the previous AEMRs. Noise levels found in 2021, 2022 and 2023 met required noise limits	Compliant	Compliant	Compliant
3.2	<b>Operational Noise</b> <i>Subject to compliance with the requirements of this consent, the cement works upgrade may be operated 24 hours per day, 7 days of the week.</i>	Docs 1, 2, 3, 5 and 6	At the time of this audit, the Boral Cement works, including Kiln 6, continues to operate 24 hours a day, 7 days a week. The noise assessment demonstrated that Kiln 6 operated within the objectives required to achieve contribution criteria during the reporting period.	Compliant	Compliant	Compliant
3.3	<b>Condition amended in April 2020</b> <i>Noise generated at the site must not exceed the noise limits at the times and location specified in Table 2 below:</i>	Docs 1, 2, 3 5 and 6	At the time of this audit, the Boral Cement Plant was compliant with its license conditions for noise.  Numerous noise reduction strategies such as the replacement of kiln cooler fans with a quieter type are geared towards removing environmental noise issues and ensuring inspection	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status										
				2021	2022	2023								
	<p><b>Table 2 – Maximum Allowable Noise Limit (dB(A))</b></p> <table border="1"> <thead> <tr> <th>Location</th> <th>Day<sup>a</sup> L<sub>Aeq</sub>(15 minute)</th> <th>Evening<sup>b</sup> L<sub>Aeq</sub>(15 minute)</th> <th>Night<sup>c</sup> L<sub>Aeq</sub>(15 minute)</th> </tr> </thead> <tbody> <tr> <td>The Noise Compliance Point (Point 20) – Store Yard Close</td> <td>58</td> <td>58</td> <td>58</td> </tr> </tbody> </table> <p>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</p> <p>Note: The location of Noise Compliance Point (Point 20) – Store Yard Close is shown in <a href="#">Appendix 2</a>.</p>	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)	The Noise Compliance Point (Point 20) – Store Yard Close	58	58	58		hatches are closed when not in use and apply cladding/noise absorbing material in certain areas			
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)											
The Noise Compliance Point (Point 20) – Store Yard Close	58	58	58											
3.3A	<p><b>Condition amended in April 2020</b>  Any new or upgrade development projects the subject of any modification to this consent must give consideration to the Project Specific Noise Levels identified in the document titled 'PRP-7 Response – Identifying Environmental Noise Objectives For Berrima Cement Plant' dated 27 March 2018, prepared by Recognition Research.</p>		Noted	Compliant	Compliant	Compliant								
3.4	<p><b>Condition amended in April 2020</b>  All vehicles associated with the isotainer loading operations at the site must use a broad-band type reversing alarm instead of a tonal beeper reversing alarm.</p>	Interview, doc 5	Reversing alarm on isotainer loading vehicles meet requirements	Compliant	Compliant	Compliant								
3.5	<p><b>Condition amended in April 2020</b>  The locomotive of the train transporting isotainers to the site must be relocated to the eastern end of the train as soon as practically possible after arrival during daytime to avoid such movements in evening or night-time periods</p>	Site Inspection Interview	Details of this condition was discussed during the site interview however no locomotives were located within the isotainer spur line at the time of the site inspection.	Compliant	Compliant	Compliant								
3.6	<p><b>Condition amended in April 2020</b>  The Applicant must implement best practice technology with respect to the isotainer reach stacker to reduce L<sub>Amax</sub> noise events.</p>	Doc 5 Attachment 1	This is a very quiet operation, staff are careful whilst stacking so that no banging occurs. Operation was not observed during this audit period as the isotainer system was not in operation.	Compliant	Compliant	Compliant								
3.6A	<p>Condition added MOD 13 May 2021  A Noise Verification Report must be submitted to the satisfaction of the Planning Secretary at the following stages of the development:</p>													
	<p>(a) prior to the commencement of construction of the chloride bypass system for Kiln 6</p>	Interview	Noise verification report lodged but no response from DPHI available at the time of this audit	Not Triggered	Not Triggered	Compliant								
	<p>(b) within three months of the commencement of operation of the chloride bypass system.</p>	Interview	Testing of the new system occurred in November 2023, with the submission of a Verification report to the DPHI. CBS not in operation at the time of this audit inspection.	Not Triggered	Not Triggered	Compliant								

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
3.6B	The Noise Verification Reports required by condition 3.6A must be prepared by a suitably qualified and experienced acoustic consultant and include: (a) verification of compliance with noise limits specified in condition 3.3 in accordance with the Noise Policy for Industry (EPA, 2017)	Interview, 84	Noise Verification Report prepared and lodged	Not Triggered	Not Triggered	Compliant
	(b) a detailed analysis of annoying noise characteristics in accordance with Fact Sheet C of the Noise Policy for Industry (EPA, 2017) to confirm the plant and equipment associated with the chloride bypass system does not exhibit annoying noise characteristics	Interview, 84	Noise Verification Report prepared and lodged	Not Triggered	Not Triggered	Compliant
	(c) identification of any additional mitigation measures required to reduce noise impacts to no greater than the predicted impacts	Interview	Noise Verification Report prepared and lodged	Not Triggered	Not Triggered	Compliant
	(d) details of when the mitigation measures identified under clause (c) above are to be implemented and how their effectiveness is to be measured and reported to the Planning Secretary.	Interview	Noise Verification Report prepared and lodged	Not Triggered	Not Triggered	Compliant
	<b>Dust Minimisation</b>					
3.7	<b>Air Quality- Dust Minimisation</b> <i>The Applicant shall design, construct, operate and maintain the cement works upgrade in a manner that minimises dust emissions from the site and complies with the EPL.</i>	Docs 1-3, 7	There was a failure to minimize dust on five occasions in 2022 and 2023 as described in Section 3.2. Boral continues to investigate opportunities to reduce fugitive dust throughout the site. Deposited dust levels and HVAS data have remained below EPA Guidelines over the past three reporting periods. The approved Dust Management Plan has been in place since September 2011 with the latest update in May 2023. A new real-time dust monitor was commissioned in the 2020-21 period which provides additional information to plant operators. Dust complaints have reduced over the past 6 years. The following Controls were operational and appeared to be effective in minimising fugitive dust from coal stockpiles; -compaction of stockpile batters (being pushed up with a loader), -wetting down with a water cart in dry weather conditions and -stopping loading/unloading operations in high winds. The site's re-vegetation program included planting in the areas surrounding the stockpiles to create a windbreak and a dust screen.	Compliant	Non Compliant	Non Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
3.7A	<i>The Applicant shall apply all reasonable and feasible measures to minimise the generation of dust from coal stockpiles, including but not necessarily limited to:</i>	Docs 1-3, 7	<p>Boral Cement continues to investigate opportunities to reduce Fugitive Dust management throughout the site. Deposited dust levels and HVAS data have remained below EPA Guidelines over the past three reporting periods.</p> <p>An EPA-approved Dust Management Plan has been implemented since September 2011 and updated in May 2023. A new real-time dust monitor was commissioned in the 2020-21 period which provides additional information to plant operators. Dust complaints have reduced over the past 6 years.</p> <p>The following Controls were operational and appeared to be effective in minimising fugitive dust from coal stockpiles;</p> <ul style="list-style-type: none"> <li>-compaction of stockpile batters (being pushed up with a loader),</li> <li>-wetting down with a water cart in dry weather conditions and</li> <li>-stopping loading/unloading operations in high winds.</li> </ul> <p>The site's re-vegetation program included planting in the areas surrounding the stockpiles to create a windbreak and a dust screen.</p>			
	a) <i>compaction of stockpile batters to minimise pick up of dust;</i>			Compliant	Compliant	Compliant
	b) <i>installation of water sprays or use of a water cart to keep stockpile surfaces wet, if dust is being generated; and</i>			Compliant	Compliant	Compliant
	c) <i>cessation of stockpile generation during periods of high wind, if dust generation cannot be controlled.</i>			Compliant	Compliant	Compliant
3.8	<i>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.</i>	Docs 1-3, 7 Site inspection	<p>The NSW Chain of Responsibility Legislation clearly defines the requirements for all vehicles &gt;10 tonnes - loads must be covered and restrained.</p> <p>All transport contractors are made aware of this requirement during site inductions.</p> <p>Section 3 of the Driver Code of Conduct for Truck and Heavy Vehicles Operators states the requirements for all heavy vehicle drivers.</p> <p>Truck Operators were observed complying with the "Driver Code of Conduct". Trucks were sighted with covers on their load and were utilizing the truck wash facilities prior to leaving the site.</p>	Compliant	Compliant	Compliant
3.9	<i>All trafficable areas and vehicle manoeuvring areas on the site shall be maintained in a condition that will minimise the generation or emission of windblown or traffic generated dust from the site at all times.</i>	Docs 1-3, 7	<p>Some unsealed roads have been sealed in the previous years and some have been closed and recently re-vegetated.</p> <p>Paved roads are swept with a mechanical road sweeper which undergoes regular maintenance to ensure efficient work.</p> <p>Unpaved roads are watered with recycled water.</p> <p>The 2-wheel wash stations continue to be used effectively along with a truck wash station for cement trucks.</p> <p>Activities are modified to take place undercover, or are postponed during high wind events.</p>	Compliant	Compliant	Compliant



Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
3.10	<b>Air Quality Discharges</b> <i>The Applicant shall install and operate equipment in line with best practice to ensure that the Development complies with all load limits, air emission limits and air quality monitoring requirements as specified in the EPL for the site.</i>	Doc 1, 2 and 3, 98, 100, 103, 108-113	Elevated dust in the stack emissions occurred in 2022 and 2023 due to tripping of the Electrostatic Precipitator. Stack emission monitoring for Kiln 6 standard fuels was conducted by Ektimo in December 2021, November 2022 and November 2023. Results showed compliance with the emission limits for standard fuels for all monitoring parameters. However, exceedances or incidents due to failed equipment occurred in 2022 and 2023, refer Section 3.2.	Compliant	Non Compliant	Non Compliant
<b>SOILS AND WATER QUALITY</b>						
3.11	<i>Construction Soil and Water Management Soil and water management measures consistent with Managing Urban Stormwater – Soils and Construction Vol.1 (Landcom, 2004) (the Blue Book) shall be employed during construction of the Development to minimise soil erosion and the discharge of sediment and other pollutants to land and/or waters</i>	Docs 1-4, 9 and 53 Site inspection	Water only overflows from Lake Quality to Stony Creek during relatively high and sustained rainfall or large storms. During the audit period there were thirteen overflows from the Lake during the reporting period. Although no specific limits apply to discharges, the results of all flows were within guidelines.	Compliant	Compliant	Compliant
3.12	<i>All construction vehicles exiting the site, having had access to unpaved areas, shall depart via a wheel-wash facility</i>	Docs 1-4, 9 and 53 Site inspection, previous audits	The current 2023 CEMP covers all general construction activities and represents an updated version previously used for the original construction phase as well as the later construction of the SWDF facility. Aggregate was used to stabilise disturbed ground, and the wheel wash was used when required.	Compliant	Compliant	Compliant
3.13	<i>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.</i>	Site inspection, interview and previous audit reports	This condition specifically relates to the original construction program which was previously assessed as bring completed and in compliance. The water management system constructed under the original consent is still in place and consists of primary settling ponds, which overflow to the detention basin (Lake Breed) which functions as water detention, filtration and biological treatment. Lake Breed overflows to Lake Quality which is a large storage and settling basin. Water only overflows from Lake Quality to Stony Creek during relatively high and sustained rainfall or large storms.	Compliant	Compliant	Compliant
3.14	<i>The Applicant shall ensure that all surface water discharges from the site comply with the:</i>	Docs 1-4 Doc 9	This condition specifically relates to the original construction program which was previously assessed as bring completed and in compliance. The water management system constructed under the original consent is still in place and consists of primary settling ponds, which overflow to the detention basin (Lake Breed) which functions as water detention, filtration and biological treatment. Lake Breed overflows to Lake Quality which is a large storage and settling			
	<i>a) discharge limits (both volume and quality) set for the development in any EPL; or</i>	Docs 1-4 Doc 9		Compliant	Compliant	Compliant
	<i>b) relevant provisions of the POEO Act.</i>	Docs 1-4 Doc 9		Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
			basin. Water only overflows from Lake Quality to Stony Creek during relatively high and sustained rainfall or large storms.			
3.14A	<i>Watercourse Crossing</i> The Applicant must design and construct the watercourse crossing on the site access road approved under MOD 14 in accordance with the Department's Fact Sheet Controlled Activities – Guidelines for watercourse crossings on waterfront land (2022) and the design in the Roadworks and Drainage Layout Plan – Sheet 3 prepared by SLR dated 20 February 2023, Revision P3, Drawing Number 660.30247-CI-1103.	Site Interview	The road bypass approved under MOD14 had not commenced construction at the time of this audit.	Not Triggered	Not Triggered	Not Triggered
3.15	<b>Traffic and Access</b> The Applicant shall establish a bus transport system generally consistent with that identified in section 6.9 of the SEE to transport construction employees to and from the site during the construction period.	Previous audit documents	Construction had ceased prior to this audit period and bus systems were no longer required. This condition specifically relates to the original construction program which was previously assessed as bring completed and in compliance.	N/A	N/A	N/A
3.16	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 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.	Previous audit documents	Construction activities were completed prior to the last 3 reporting periods and this Compliance audit.	N/A	N/A	N/A
3.16A	The Applicant shall pay a road maintenance levy to Council of 4 cents/tonne/km for the transport of SWDF.	Docs 1, 2 and 3, site interview	Auditor advised that payments have now been made to Wingecarribee Shire Council, however there is a delay. Payments are outlined in the AEMR.	Compliant	Compliant	Compliant
3.16B	The Applicant must ensure the maximum number of heavy vehicle trips per day for the delivery of raw materials and Kiln 6 fuels does not exceed a maximum total of 256 trips (128 total heavy vehicle deliveries) as stated in Table 1 of Boral Limited's correspondence to the Department dated 21 September 2023 (Attachment 1 of the Amendment Request prepared by Boral Limited dated 27 October 2023, submitted as part of MOD 14). Note: For the purposes of this condition and condition 3.16C of this consent, "heavy vehicle trip" means a one-way heavy vehicle movement from one point to another, excluding the return journey	Interview	This condition was not triggered at the time of this audit	Not Triggered	Not Triggered	Not Triggered
3.16C	Notwithstanding condition 3.16B of this consent, the Applicant must ensure the maximum number of heavy vehicle trips per day	Interview	This condition was not triggered at the time of this audit	Not Triggered	Not Triggered	Not Triggered

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	for the delivery of raw materials and Kiln 6 fuels does not exceed 212 trips (106 total heavy vehicle deliveries) until such time the requirements of condition 1.4AA of this consent have been satisfied.					
3.16D	The Applicant must record and maintain a log of the total number of heavy vehicle movements per day associated with the receipt of raw materials and Kiln 6 fuels. The log must:	Interview	This condition was not triggered at the time of this audit	Not Triggered	Not Triggered	Not Triggered
	a) be kept on site and be available for inspection by either Council or Transport for NSW upon request; and	Interview	This condition was not triggered at the time of this audit	Not Triggered	Not Triggered	Not Triggered
	b) be published on the project website every six months.	Interview	This condition was not triggered at the time of this audit	Not Triggered	Not Triggered	Not Triggered
3.17	<b>Waste Management Impact</b> <i>Except as otherwise permitted by this consent and a licence issued under the Protection of the Environment Operations Act the Applicant shall not cause, or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal, or any waste generated at the site to be disposed of at the site</i>	Docs 1-3 Table 19 Doc 10	The Waste Management Plan & OEMP were revised in June and May 2023 respectively. All vehicles entering and exiting the site are monitored via cameras, to avoid illegal on site tipping. Except for raw materials and SWDF and other non-standard fuels approved in EPL 1698 no waste generated outside the Works was received at the site during the reporting period. As described above and prohibited by Condition L4.1 of the EPL, no waste generated outside the Works was received at the site during the reporting period.	Compliant	Compliant	Compliant
3.17A	Condition 3.17 of this consent only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require a licence under the Protection of the Environment Operations Act 1997, and does not include:	Docs 16 to 49	The Waste Management Plan & OEMP were revised in June and May 2023 respectively. All vehicles entering and exiting the site are monitored via cameras, to avoid illegal on site tipping. All NSF are approved prior to usage.  All raw materials used are approved by the consent and EPL.  All raw materials used are approved by the consent and EPL.  Waste recovery orders are in place as needed. These are held by suppliers of NSF and subject to separate auditing.			
	a) any Non-Standard Fuels approved for use at the upgraded Kiln 6 under this consent;	Docs 16 to 49		Compliant	Compliant	Compliant
	b) any material normally brought to the site for the purpose of cement clinker production (as detailed in the documents listed under condition 1.2 of this consent); and	Docs 16 to 49		Compliant	Compliant	Compliant
	c) any material normally recycled or reused within the cement works.	Docs 16 to 49		Compliant	Compliant	Compliant
	d) any material that is subject to a specific waste recovery exemption (RRE) issued by the EPA to exempt that material from the specific clauses of the Protection of the Environment (Waste) Regulation 2005.	Docs 16 to 49		Compliant	Compliant	Compliant
3.17A B	<b>Alternative Raw Material Trial - Granulated Blast Furnace Slag (GBFS)</b>	Docs 1-3 Table 19	The site-specific RRE for full-scale Blast Furnace Slag use was issued by EPA on 19 September 2012. The DPI issued a letter	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>Prior to the receipt of GBFS on-site, the Applicant must obtain a specific waste Resource Recovery Exemption (RRE) for GBFS from the EPA.</i>	Docs 1-3 Table 19	approving the full-scale Blast Furnace Slag use in September 2012.			
3.17A C	<b>GBFS Trial Requirements</b> Provided that the specific waste RRE is obtained for GBFS, the Applicant shall trial the use of up to 3,000 tonnes of GBFS as an alternate raw material in Kiln 6. The Applicant shall:	Docs 1-3 Table 19 Docs 65 to 75	The site-specific RRE for full-scale Blast Furnace Slag use was issued by EPA on 19 September 2012. The DPI issued a letter approving the full-scale Blast Furnace Slag use in September 2012.  The use of GBFS since 2012 has not resulted in an increase in stack emissions verified via responses to air quality. Compliance of this condition was detailed in the 2013 AEMR. Trials and stack testing was conducted in May 2012 and have not resulted in increased stack emissions since this date. These were updated in 2022. Quality of GBFS is confirmed by suppliers.			
	(a) undertake the trial over a continuous 3 day period, unless otherwise agreed in writing by the Secretary;			Compliant	Compliant	Compliant
	(b) conduct stack testing of all relevant air emissions and trace elements, to the satisfaction of the EPA; and			Compliant	Compliant	Compliant
	(c) Use quality controlled GBFS only.			Compliant	Compliant	Compliant
3.17A D	<b>GBFS Trial Verification Report</b> Within 1 month of the completion of the GBFS trial, the Applicant shall prepare and submit a Verification Report to the Department to the satisfaction of the Secretary and the EPA. The Verification Report shall include:	Previous audit documents	Compliance with this condition was detailed in the 2013 AEMR. The verification report was provided on 13/07/2013 which reported that there were no stack contributions from the GBFS, coal use decreased and CO2/CO emissions decreased. Compliance with this condition was detailed in the 2013 AEMR. The verification report was provided on 13/07/2013 which reported that there were no stack contributions from the GBFS, coal use decreased and CO2/CO emissions decreased. The site has been using less GBFS than the approved rate of 150,000 tonnes p.a since ongoing use was approved in 2012.			
	(a) stack emissions monitoring data measured for the duration of the trial;			Compliant	Compliant	Compliant
	(b) copies of all analytical test reports for all substances sampled and tested;			Compliant	Compliant	Compliant
	(c) comparison of monitoring results from the trial with the relevant EPA standards and requirements, as determined by the EPA.			Compliant	Compliant	Compliant
3.17A E	Provided the results of stack testing for the GBFS trial confirm that the air pollutants emitted from the cement Kiln 6 meet the relevant EPA standards and requirements, the Applicant may commence full-scale usage of GBFS as a raw material additive in Kiln 6 at a maximum usage rate that is determined in writing by the Secretary in consultation with the EPA. Note: the Applicant must not commence full-scale usage of GBFS as a raw material additive in Kiln 6 until it has received written approval from the Planning Secretary. In addition, the maximum usage rate per annum of GBFS in cement Kiln 6 must not exceed 150,000 tonnes per annum.	Docs 1-3 Table 19 Docs 1-3 Table 19	The site has been using less GBFS than the approved rate of 150,000 tonnes p.a since ongoing use was approved in 2012. During the audit period, no AKF1 or other Group A wastes were stored on site. The OEMP was updated in April 2018 to incorporate management measures for NSF.  Approximately 80,000 tonnes per annum was used during the 2020 to 2023 audit period.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
3.17B	Except as provided by any condition of a licence under the Protection of the Environment Operations Act 1997, only the following 'Group A' waste may be stored at the site:	Docs 1-3 Table 19	The site has been using less GBFS than the approved rate of 150,000 tonnes p.a since ongoing use was approved in 2012. During the audit period, no AKF1 or other Group A wastes were stored on site. The OEMP was updated in April 2018 to incorporate management measures for NSF. There has been no waste generated from the SWDF during the audit period.	Compliant	Compliant	Compliant
	a) AKF1.	Docs 1-3 Table 19 Site inspection Doc 46				
3.17C	<i>Except as provided by the condition of a licence under the Protection of the Environment Operations Act 1997, the Applicant must assess, classify and dispose of all wastes generated as a result of the use of Non-Standard Fuels in a accordance with the EPA's Waste Classification Guidelines.</i>	Site inspection Doc 46 Interview	There has been no waste generated from the SWDF during the audit period. Rejected SWDF has occurred due to oversized material being present. This material was sent back to the supplier.	Compliant	Compliant	Compliant
3.18	<b>Visual Amenity</b> <i>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.</i>	Night site inspection	Provision of lighting at the Berrima Cement Works complies with AS 4282(INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting.  No community complaints regarding light spill have been received during the reporting periods. Management measures are sufficient to keep light spill from the site within acceptable limits.	Compliant	Compliant	Compliant
3.19	<i>The second pre-heater tower shall be designed, constructed, operated and maintained in a manner that minimises the visual impact to surrounding properties and roadways. Note: The second pre-heater tower shall be built in a manner consistent with that described in the additional information provided (identified in condition 1.2f)). This includes using the building materials identified and minimising the height of the pre-heater tower.</i>	Docs 1-3 Table 23	Compliance has previously been confirmed for this condition. A tree screen shields the tower from sensitive receivers and will become more effective as vegetation thickens.	Compliant	Compliant	Compliant
3.19A	<i>Operational stockpiling of RDF in the external bale material storage area (identified on Drawing No.GE-B-2278-01 Revision DP, dated 15 January 2015) is limited to periods of extended kiln downtime for maintenance or repair only. RDF for stockpiling must be delivered in plastic wrapped 1 cubic metre bales. Stockpiles must not exceed a maximum height of five metres.</i>	Site inspection	Site inspection confirms that RDF bales were not present on site, and all material is delivered to an enclosed shed.	Compliant	Compliant	Compliant
3.20	<b>Non-Standard Fuels Specifications</b> <i>For each Group 1 or Group 2 Non-Standard Fuel approved for use at the development the Applicant shall provide a fuel specification, to be approved by the Secretary and the EPA prior to the use of that Non-Standard Fuel at the development under</i>	Doc 24	Only Group 2 non-standard fuels were used during the audit period. Analysis was undertaken in accordance with QA/QC specification. The specifications provided were met.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>this consent. The Group 1 or Group 2 Non-Standard Fuel specification shall include, but not be limited to, the minimum calorific value and the maximum quantity of all relevant pollutants, particularly the listed pollutants.</i>					
3.21	<i>Based on the Non-Standard Fuel specification specified in condition 3.20 the following fuel specification criteria are required to be met:</i>					
	<i>a) for Hi CAL 50 a mercury specification no greater than 1 mg/kg and a cadmium specification no greater than 10 mg/kg;</i>	Site interview	Fuel was used as a blend with other standard fuels (coal)	Compliant	Compliant	Compliant
	<i>b) for AKF1 a mercury specification no greater than 2 mg/kg and a cadmium specification no greater than 5 mg/kg; .</i>	Site interview	Material was not used during this audit period	Not Triggered	Not Triggered	Not Triggered
	<i>c) organohalogen compounds, expressed as chlorine, in any Non-Standard Fuel not to exceed 1% by weight; and</i>	Site interview	Material was not used during this audit period	Not Triggered	Not Triggered	Not Triggered
	<i>d) the waste materials to be used as Non-Standard Fuels must not be diluted or blended to meet any of the fuel specification requirements</i>	Site interview	Material was not used during this audit period	Not Triggered	Not Triggered	Not Triggered
3.22	<i>Prior to the use of Group 1 or Group 2 Non-Standard Fuels at the development in accordance with this consent, the Applicant shall implement a Tracking Program that meets the requirements of the Secretary. The Tracking Program shall include, but not be limited to, the identification and recording of the following information in accordance with the time periods specified in condition 3.23:</i>	Interview Docs 25-27, 30, 98 to 103	Tracking Program completed and provided both monthly and quarterly now to 6 monthly. Following advice from the EPA and DPHI a further set of proof of performance tests were undertaken in 2022 in order to verify the use of up to 50% SWDF.	Compliant	Compliant	Compliant
	<i>a) batch analyses of Group1 or Group 2 Non-Standard Fuels received at the development as provided by the suppliers, and the results of any check analyses carried out by the Applicant as part of the quality control management procedures required under condition 6.7 and condition 6.8 of this consent;</i>	Docs 21, 29, 30, 41	Routine compliance analysis of non-standard fuels outlined in the Tracking Program. QCQA of suppliers provided. Internal analysis undertaken as well	Compliant	Compliant	Compliant
	<i>b) a mass inventory of each listed pollutant entering the process in raw materials, conventional fuels and Group 1 or Group 2 Non-Standard Fuels, with particular attention to, but not limited to chlorine, mercury, cadmium and chromium;</i>	Doc 1 Table 6 Doc 53	Process inputs and outputs monitored on a routine basis as outlined in the Tracking Program. Inventory viewed on site and data provided in EPL return and Annual Review	Compliant	Compliant	Compliant
	<i>c) emission factors for each listed pollutant calculated from inputs, outputs, and measured air emissions, variance in the emissions factors from period to period and an assessment with regards to the reasons for any such variance; and</i>	Docs 29 and 45	Calculations of emission factors and variance reported quarterly for the first year and biannually thereafter	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	d) <i>any adjustments that may be necessary to Group 1 or Group 2 Non-Standard Fuel specifications arising from the Tracking Program analysis.</i>	Interview Docs 25-27, 30, 98 to 103	Adjustments were made during audit period. Quarterly tracking reports reduced to 6 monthly and additional Proof of Performance testing undertaken in 2022.	Compliant	Compliant	Compliant
3.23	The Applicant shall submit a Report that details and assesses the results of the Tracking Program prescribed in condition 3.22 of this consent to the Secretary. The Report shall be submitted to the Secretary:		Adjustments were made during audit period. Quarterly tracking reports reduced to 6 monthly and additional Proof of Performance testing undertaken in 2022. A data review on site showed that Kiln 6 has not dropped below required temperatures			
	a) <i>every three months in the first year of operation using Non-Standard Fuels under this consent, (to be synchronised with stack monitoring); and</i>	Interview Docs 21, 25-30, 41	Lockout system within control room stops the use of NSF if temperatures fall to 850°C.	Compliant	Compliant	Compliant
	b) <i>thereafter every six months, or as otherwise agreed to by the Secretary</i>	Interview Docs 25-27, 30, 98 to 103	A data review on site showed that Kiln 6 has not dropped below required temperatures. Lockout system within control room stops the use of NSF if temperatures fall to 850°C.	Compliant	Compliant	Compliant
3.24	<b>Process Parameters</b> The Applicant shall cease to burn Non-Standard Fuels in Kiln 6 if:		A data review on site showed that Kiln 6 has not dropped below required temperatures Lockout system within control room stops the use of NSF if temperatures fall to 850°C			
	a) <i>the temperature is below 850°C in the zone where Non-Standard Fuels are fired or in the vicinity of the pre-calcliner; or</i>	Data review Interview	A data review on site showed that Kiln 6 has not dropped below required temperatures	Compliant	Compliant	Compliant
	b) <i>the temperature is below 300°C at the outlet of the preheater strings.</i>	Data review Interview	Lockout system within control room stops the use of NSF if temperatures fall to 850°C This condition forms part of MOD11 and has yet to be triggered by the use of HiCal50	Compliant	Compliant	Compliant
3.24A	<b>Condition amended in October 2019</b> <i>The temperature requirement of Condition 3.24(b) does not apply to the Group 1 Non-Standard Fuel, Hi Cal 50, when Hi Cal 50 is blended with coal in accordance with the requirements of Condition 1.4J.</i>	Interview	This condition forms part of MOD11 and has yet to be triggered by the use of HiCal50	Not-triggered	Not-triggered	Compliant
3.24B	<b>Condition amended in October 2019</b> <i>Notwithstanding Condition 3.24A, the feed rate of the Group 1 Non-Standard Fuel, Hi Cal 50, must not exceed 400 kilograms per hour when the temperature is below 300°C at the outlet of the preheater strings.</i>	Interview	Hi Cal 50 was not used in 2020/23	Not-triggered	Not-triggered	Not-triggered
3.25	<b>PoP Trial Plan</b> The Applicant must undertake PoP trials for the burning of SWDF. The maximum length of the trial will be eight months. At least one month prior to the PoP trials, the Applicant shall submit a detailed plan(s) for the PoP trials, to the satisfaction of the	Docs 27 and 28, 98 to 103	Plans for RDF and WW submitted and comments from EPA and DPIE noted in report revision logs.			

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	Secretary. The plan(s) must be prepared for the co-incineration of each permitted SWDF and be prepared in consultation with the EPA. The plan(s) must, as a minimum:					
	a) verify the residence time, the minimum temperature and the oxygen content of the exhaust gas which will be achieved during normal operation and under the most unfavourable operating condition anticipated;	Docs 27 and 28, 98 to 103	Results for calculation of residence time (6.61s for RDF and WW)	Compliant	Compliant	Compliant
	b) establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in the EPL;	Docs 31 and 32, 98 to 103	Criteria has been established, as provided in the CEMS QA Plan	Compliant	Compliant	Compliant
	c) assess the performance of any monitors on the abatement system and establish a maintenance and calibration program for each monitor;	Docs 27, 28, 31, 98 to 103	Maintenance and calibration program is ongoing, as detailed in the CEMS QA Plan Calibration and Relative Accurate Test Audits (RATA) completed on all air emission monitoring equipment prior to the PoPT commencing	Compliant	Compliant	Compliant
	d) establish criteria for the control of all alternative fuel input including the maximum flow and maximum calorific value;	Document review	NSF specifications and QA/QC criteria have been established but do not include maximum calorific value as only minimum calorific value is relevant. As the trial is now completed it is not considered necessary to amend the consent	Compliant	Compliant	Compliant
	e) confirm that all measurement equipment of devices (including thermocouples) used for the purpose of establishing compliance with this approval have been subjected, in situ, to normal operating temperatures to prove their operation under such conditions;	Docs 27, 28, 31, 98 to 103	The CEMS QA Plan covers requirements for equipment checks, calibrations and preventative maintenance to ensure valid results from monitoring instruments. All work undertaken by independent specialist.	Compliant	Compliant	Compliant
	f) detail procedures for testing the performance of all major process components and emission control systems associated with the processing and burning of SWDF; and	Docs 27, 28, 98 to 103	Performance tests detailed in WW and RDF PoPT plans and in Appendices 4 and 5	Compliant	Compliant	Compliant
	g) address all relevant requirements of the EPL for the project.	Docs 27, 28, 98 to 103	EPL requirements addressed in section 4 of the POPT Plans for Refuse Derived Fuel and Wood Waste	Compliant	Compliant	Compliant
3.26	<b>Conduct of Trials</b> The PoP trials shall:		6-month PoP trials conducted from August 2018 to January 2019. Additional PoP tests were done in 2022			
	a) be carried out in accordance with a detailed PoP plan(s) approved by the Planning Secretary;	Docs 46- 49, 98 to 103	Trials conducted as per secretary approval Consistent with environmental and safety standards and in accordance with the regulatory requirements	Compliant	Compliant	Compliant
	b) be undertaken by a suitably qualified and experienced person(s);	Staff interview Doc 13	Trials conducted by qualified staff and Ektimo	Compliant	Compliant	Compliant
	c) test performance of all major process components including emission control systems using no SWDF, and representative	Doc 35	All major components tested for performance during trials Stack Test for PoP with SWDF in Ektimo Kiln Emission Testing Report Appendix 5	Compliant	Compliant	Compliant



Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>fuels containing SWDF designed to cover the range of materials and compositions of SWDF;</i>	Appendices 5 and 6, 98 to 103	Stack tests using coal only from 2016 -2018 in Boral Cement Consolidated PoP Trial Six Month Report Appendix 6			
	<i>d) identify changes to the Kiln 6 emission control system that may be necessary to achieve compliance with the consent and the EPL; and</i>	Doc 18 Section 7.1, 98 to 103	No significant increases to emissions required to be monitored as per EPL with results within approved limit	Compliant	Compliant	Compliant
	<i>e) demonstrate compliance with the relevant requirements of the EPL, development consent and relevant environmental and safety criteria</i>	Doc 18 Section 9, 98 to 103	The additional trials undertaken in 2022 did not result in any exceedances. This was not the case in the previous audit.	Compliant	Compliant	Compliant
3.27	<b>PoP Trial Report</b> The Applicant is to report on each PoP trial to the Secretary and EPA. The reports shall be submitted at:					
	<i>a) monthly intervals during the PoP trial. The information to be contained in these reports is to be determined in consultation with the EPA as part of the PoP Trial Plan required under condition 3.25; and</i>	Doc 26 to 30, 98 to 103	Monthly PoP trials have been provided for October, November, December 2018 and January 2019. Six monthly PoP covers one of the monthly reports	Compliant	Compliant	Compliant
	<i>b) six months after the commencement of the PoP trial. The six-month report shall contain but not be limited to the following information:</i>	Noted	Noted, this particular report was completed under the previous audit period.	Compliant	Compliant	Compliant
	<i>i. the total quantity of SWDF used during the previous six months;</i>	Doc 18 Section 6	Total of 5925t WW and 7991t of RDF has been consumed	Compliant	Compliant	Compliant
	<i>ii. the dates and times when the trial commenced and will conclude;</i>	Doc 18	Trial ran from 24 August 2018 – 28 April 2019	Compliant	Compliant	Compliant
	<i>iii. the results of stack emissions testing for the analytes and properties specified in any relevant trial plan and baseline emissions for comparison, where applicable;</i>	Docs 18, 33, 34, 45	Stack emissions results provided in the PoP Trial Six Month Report and in associated appendices	Compliant	Compliant	Compliant
	<i>iv. all monitoring data collected for the project during the previous six months;</i>	Docs 26, 37	All monitoring data is provided in monthly reports as well as the 6 monthly PoP trial report	Compliant	Compliant	Compliant
	<i>v. identification of any non-compliance with the conditions of this consent and the EPL;</i>	Doc 18 Section 9	Three elevated results above the EPL limits. Two during stack emission tests and one via CEMS monitoring: Electrostatic Precipitator Trip and Elevated HCl	Compliant	Compliant	Compliant
	<i>vi. details of additional measures to be implemented to address any non-compliance; and</i>	Doc 18 Section 10	Measures enforced to address each non-compliance were detailed in Section 10	Compliant	Compliant	Compliant
	<i>vii. an assessment of the suitability of the SWDF for ongoing use.</i>	Doc 18 Section 11	An SWDF suitability assessment is provided in Section 11	Compliant	Compliant	Compliant
	<i>Copies of the POP Trial Reports shall be made available to the public upon request.</i>	Doc 50	PEOLA data contained on Boral Cement's web page Stack emission tests published under POELA data and reviewed.	Compliant	Compliant	Compliant
3.28	<i>Use of SWDF is not permitted (outside of the approved PoP trials) until such time as the Secretary has indicated in writing</i>	Noted	SWDF was used only within the allocated trial period until notice of approval for further use	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>that it is satisfied with the results of the six-month PoP trial report specified under condition 3.27 b) for an individual SWDF.</i>					
3.29	<b>Fire Safety</b> The design and operation of the SWDF storage sheds and silo approved under MOD 14 must comply with FRNSW's Fire safety guideline – Fire safety in waste facilities (2020).	Interview	At the time of this audit, Boral was in the process of working through the specific conditions relating to MOD14. Consultation and determining species credits had commenced however the design of the bypass road had not commenced.	Not Triggered	Not Triggered	Not Triggered
3.30	The Applicant must provide adequate emergency vehicle access throughout the site in accordance with FRNSW's Fire safety guideline – Access for fire brigade vehicles and firefighters (2019).	Interview		Not Triggered	Not Triggered	Not Triggered
3.31	Prior to any clearing or construction works for the site access road approved under MOD 14, the Applicant must: a) purchase and retire 19 ecosystem credits to offset the removal of Plant Community Type 3304 – Southern Tableland Swamp Flats Shrub Woodland at the site;	Interview		Not Triggered	Not Triggered	Not Triggered
	b) purchase and retire 6 species credits to offset the loss of habitat for the Callocephalon fimbriatum (Gang-gang Cockatoo) at the site;	Interview		Not Triggered	Not Triggered	Not Triggered
	c) purchase and retire 24 species credits to offset the removal of Eucalyptus macarthurii (Paddys River Box, Camden Woollybutt) at the site; and	Interview		Not Triggered	Not Triggered	Not Triggered
	d) retire the ecosystem and species credits in accordance with the requirements of the Biodiversity Offsets Scheme and the Biodiversity Conservation Act 2016.	Interview		Not Triggered	Not Triggered	Not Triggered
3.32	The Applicant must not undertake any clearing or construction works for the site access road approved under MOD 14 until: a) the Applicant has provided the Planning Secretary with evidence that the retirement of ecosystem and species credits has been completed in accordance with condition 3.31	Interview		Not Triggered	Not Triggered	Not Triggered
	b) the Planning Secretary has confirmed in writing that it is satisfied the retirement of ecosystem and species credits has been completed in accordance with condition 3.31.	Interview		Not Triggered	Not Triggered	Not Triggered
4	<b>Environmental Monitoring and Auditing</b>					
4.1A	<b>Continuous Emissions Monitoring</b> <i>Continuous monitoring equipment for emissions, temperature and fuel feed rate, as required to meet the conditions of this consent and as agreed to by EPA must be installed prior to receipt at the site of and use of Non-Standard Fuels in the upgraded Kiln 6.</i>	Site Interview Doc 38, 44, 45	Equipment for continuous emissions monitoring was installed prior to receipt and use of NSF. Ambient Air Quality Monitoring Program was developed and implemented prior to the commencement of the PoPt. Monitoring stations were capable of obtaining ambient air quality data via monitoring TSP, PM10 and PM2.5 at	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
			appropriate frequencies. Associated meteorological data was also sampled as part of the program.			
4.1B	<p><b>Ambient Air Quality Monitoring Program</b> Prior to the commencement of the use of Non-Standard Fuels in accordance with this consent, the Applicant shall develop and implement an Ambient Air Quality Monitoring Program in consultation with, and to meet the requirements of, the Secretary and the EPA. The monitoring program shall be consistent with the EPA's Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales, shall monitor fugitive emission from site works, and be designed to generate sufficient information to meet the requirements of this consent. The ambient monitoring program shall include:</p>	Site Interview Docs 50, 104 to 107	Equipment for continuous emissions monitoring was installed prior to receipt and use of NSF. Ambient Air Quality Monitoring Program was developed and implemented prior to the commencement of the PoPt. Monitoring stations were capable of obtaining ambient air quality data via monitoring TSP, PM10 and PM2.5 at appropriate frequencies. Associated meteorological data was also sampled as part of the program. Monitoring programs are subject to review and updating by the EPA via the EPL. Monitoring of process data was integrated with the continuous stack emission monitoring and commenced prior to the PoPt trials in August 2018 and later in 2022. All parameters required to be monitored by the EPL were within compliance and recorded in the Non-Standard Fuels First Year Monitoring and Modelling Assessment Report.	Compliant	Compliant	Compliant
	a) appropriately located ambient air quality monitoring station/s designed to obtain representative air quality data;	Doc 11 Section 5.2 (Monitoring/ discharge locations and Figure 2)	Monitoring of process data was integrated with the continuous stack emission monitoring and commenced prior to the PoPt trials in August 2018 and later in 2022 with the 50% SWDF. All parameters required to be monitored by the EPL were within compliance and recorded in the Non-Standard Fuels First Year Monitoring and Modelling Assessment Report.	Compliant	Compliant	Compliant
	b) monitoring of TSP, PM10 and PM2.5 and other listed pollutants;	Doc 11 Section 5.2, 45	Monitoring of process data was integrated with the continuous stack emission monitoring and commenced prior to the PoPt trials in August 2018 and later in 2022 with the 50% SWDF. All parameters required to be monitored by the EPL were within compliance and recorded in the Non-Standard Fuels First Year Monitoring and Modelling Assessment Report.	Compliant	Compliant	Compliant
	c) sampling at a continuous or other appropriately justified frequency (to be agreed with the EPA);	Doc 11 Section 5.2 (Monitoring Schedule)	Real time dust monitoring is currently being undertaken to better inform the cement plant of any potential issues.	Compliant	Compliant	Compliant
	d) sampling over an appropriate period (to be agreed with the EPA); and	Doc 11 Section 5.2 (Monitoring Schedule)	Sampling is currently being undertaken in accordance with the EPL. The EPL monitoring program is currently under review by the EPA.	Compliant	Compliant	Compliant
	e) generation of suitable continuously sampled meteorological data including wind speed, wind direction, temperature, and variability of wind direction (sigma theta) in general accordance with the current Australian Standard/s.	Doc 11 Section 5.2 (Monitoring Schedule)	Site Weather station in place	Compliant	Compliant	Compliant
	The Applicant must ensure the ambient air monitoring program is underway prior to the PoP Trials starting. The continuation of ambient monitoring may be reviewed after analysis of at least one year's ambient monitoring data.	Doc 45	Real time dust monitoring is currently being undertaken to better inform the cement plant of any potential issues.	Compliant	Compliant	Compliant
			First-Year Monitoring and Modelling Assessment Report completed in November 2019			
4.1C	<b>Process Monitoring</b>					

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>From the time of commencement of the use of Non-Standard Fuels the Applicant shall continuously monitor the following process parameters:</i>		Monitoring of process data was integrated with the continuous stack emission monitoring and commenced prior to the PoPt trials in August 2018. All parameters required to be monitored by the EPL were within compliance and recorded in the Non-Standard Fuels First Year Monitoring and Modelling Assessment Report.			
	<i>a) gas temperature (or some agreed equivalent indication of the temperature):</i>	30, 36, 44, 45, 55-58, 60, 99-103		Compliant	Compliant	Compliant
	<i>i) in or near the firing zone at the main-firing end of the kiln where Non-Standard Fuels are being fired;</i>	30, 36, 44, 45, 55-58, 60, 99-103	Monitoring of process data was integrated with the continuous stack emission monitoring and commenced prior to the PoPt trials in August 2018. All parameters required to be monitored by the EPL were within compliance and recorded in the Non-Standard Fuels First Year Monitoring and Modelling Assessment Report.	Compliant	Compliant	Compliant
	<i>ii) in the kiln at the feed end;</i>	30, 36, 44, 45, 55-58, 60, 99-103		Compliant	Compliant	Compliant
	<i>iii) in the combustion zone or zones where Non-Standard Fuels are being fired in or adjacent to the pre-calciner/de-nox system;</i>	30, 36, 44, 45, 55-58, 60, 99-103	All monitoring results are within compliance, however to reduce variability and to increase the percentage of SWDF, a Chloride Bypass system was installed.	Compliant	Compliant	Compliant
	<i>iv) at the outlet of the suspension pre-heater strings; and</i>	30, 36, 44, 45, 55-58, 60, 99-103	Monitoring undertaken	Compliant	Compliant	Compliant
	<i>v) at the inlet to the electrostatic precipitator and the fabric filter.</i>	30, 36, 44, 45, 55-58, 60, 99-103	Monitoring undertaken. This area has been improved as a result of high dust emissions.	Compliant	Compliant	Compliant
	<i>b) carbon monoxide and volatile organic compounds (or total organic carbon or equivalents as agreed with the EPA) in the exhaust gases after all combustion is complete; and</i>	30, 36, 44, 45, 55-58, 60, 99-103	Monitoring undertaken	Compliant	Compliant	Compliant
	<i>c) rates of feed for Non-Standard Fuels AKF1 and AKF5 and the derived rate of feed for Hi CAL 50 in the coal feed.</i>	30, 36, 44, 45, 55-58, 60, 99-103	Monitoring undertaken during start up and shut down periods.	Compliant	Compliant	Compliant
	<i>d) rate of feed for SWDF; and</i>	30, 36, 44, 45, 55-58, 60, 99-103	Monitoring undertaken.	Compliant	Compliant	Compliant
	<i>e) nitrogen oxides, hydrogen chloride, sulphur dioxide, carbon monoxide, solid particles (total and volatile organic compounds).</i>	30, 36, 44, 45, 55-58, 60, 99-103	Monitoring undertaken.	Compliant	Compliant	Compliant
4.2	<i>If the results of the monitoring required under conditions 4.1A, 4.1B and 4.1C 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 limits imposed under condition conditions 4.1A, 4.1B and 4.1C and EPL No. 1698, the Applicant shall provide details of remedial</i>	Interview, docs 30, 36, 44, 45, 55-58, 60, 99-103	All monitoring results are provided to the EPA and DPHI. Although the majority show compliance, there have been instances of high dust emissions. Rectification works have been completed.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>measures to be implemented to reduce air quality limits to the levels required.</i>		Other improvements have included the installation of the Chloride Bypass system. This audit however has also made recommendations for improvements.			
	<i>Conditions 4.1 to 4.4 deleted</i>			Noted	Noted	Noted
4.5	<b>Auditing</b> <i>Within three years of the commencement of operation of the cement works upgrade, and every three years thereafter or as otherwise required by the Secretary, 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 Secretary, prior to the commencement of the Audit. An Environmental Audit Report shall be submitted for comment to the Secretary, the EPA and Council, within one month of the completion of the Audit. The Audit shall:</i>	This Audit	This audit represents the Independent Environmental Audit referred to in this condition. All conditions of the audit are presented in the findings of the audit report.  The Independent Environmental Audit of Non-Standard Fuels is completed annually. The first was in November 2019 to subsequently in 2020, 2021, 2022 and 2023.  The audit encompassed a review of: -management and operating procedures, -QAQC measures of the suppliers and of Boral, -a review of the process parameters and requirements outlined in condition 3.24 and -recommendations on the above conditions			
	<i>a) be carried out in accordance with ISO 14010 - Guidelines and General Principles for Environmental Auditing and ISO 14011 - Procedures for Environmental Auditing;</i>	44, 45, 112, 115		Compliant	Compliant	Compliant
	<i>b) assess compliance with the requirements of this consent, and other licences and approvals that apply to the cement works upgrade;</i>	44, 45, 112, 115	This audit reassessed compliance with Condition 4.6 for the period ending November 2023. Condition 4.5 is included in the triennial Independent Environmental Audi.	Compliant	Compliant	Compliant
	<i>c) assess the cement works upgrade operations against the predictions made and conclusions drawn in the SEE and other documents listed under conditions 1.2 a) to 1.2 h), inclusive; and</i>	44, 45, 112, 115	This audit reassessed compliance with Condition 4.6 for the period ending November 2023.	Compliant	Compliant	Compliant
	<i>d) review the effectiveness of the environmental management of the cement works upgrade, including any environmental impact mitigation works.</i>	44, 45, 112, 115		Compliant	Compliant	Compliant
	<i>The Secretary may, having considered any submission made by the EPA 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 Secretary may agree.</i>	44, 45, 112, 115	Copies of the audits are provided to the EPA, Council and DPHI.	Compliant	Compliant	Compliant
4.6	<b>NSF Auditing</b> <i>Within 12 months of the receipt of the first load of Group 1 or Group 2 Non-Standard Fuels under this consent, the Applicant shall arrange for and bear the full cost of an independent and comprehensive audit of the use of Non-Standard Fuels at the</i>	Doc 43, 44, 45, 112, 115	The Independent Environmental Audit of Non-Standard Fuels is completed annually. The first was in November 2019 to subsequently in 2020, 2021, 2022 and 2023.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	development. Further Audits are to be conducted every 12 months, or as otherwise directed by the Secretary. The Audits are to be carried out by a duly qualified and independent person or team to be approved by the Secretary, and submitted directly to the Secretary, the EPA and NSW Health unless otherwise directed by those agencies. The Audits shall be carried out in accordance with ISO 19011:2002 - Guidelines for Quality and/ or Environmental Management Systems Auditing and shall cover all aspects of the use of Non-Standard Fuels at the development, including, but not limited to:		This audit reassessed compliance with Condition 4.6 for the period ending November 2023.  The Independent Environmental Audit of Non-Standard Fuels was in November 2019 to assess the compliance of relevant conditions included in this consent. The audit encompassed a review of: -management and operating procedures, QAQC measures of the suppliers and of Boral, a review of the process parameters and requirements outlined in condition 3.24 and recommendations on the above conditions			
	a) an assessment of compliance with the requirements of this consent, and other licences and approvals that apply to the use of Non-Standard Fuels at the development;	Doc 44 Appendix A		Compliant	Compliant	Compliant
	b) a review of management practices and operating procedures regarding the proper and efficient operation of Kiln 6 whilst using Non-Standard Fuels, especially with regards to the minimisation of dioxins emissions;	Doc 44 Sections 7 and 8	This audit reassessed compliance with Condition 4.6 for the period ending November 2023.  The audit reports were submitted within the required timeframe	Compliant	Compliant	Compliant
	c) assessment of quality control and quality assurance measures implemented by the Non-Standard Fuel suppliers, especially with regards to the sampling and analysis undertaken to ensure that Non-Standard Fuels comply with the relevant fuel specification;	Doc 44 Section 8, 45, 112, 115	Supplier audits are undertaken separately on an annual basis	Compliant	Compliant	Compliant
	d) a review of the fuel quality control management procedures implemented by the Applicant including assessment of the Applicant's handling, processing, verification and analysis of information generated by the Applicant and received from the Non-Standard Fuel suppliers;	Doc 43 Section 8	QA/QC procedures are covered both the supplier and alternative fuels audits	Compliant	Compliant	Compliant
	e) suggestion of any recommendations with respect to any of the matters listed above; and	Doc 43 Section 9		Compliant	Compliant	Compliant
	f) a review of compliance with the process parameters specified in Condition 3.24 of this consent, including a report of the number of events and total number of hours required to cease the feed of any Group 2 Non-Standard Fuels.	Doc 43 Sections 7 and 8	Recommendations are made as required.  Compliance with process parameters specified in Condition 3.21 are included in the audits	Compliant	Compliant	Compliant
4.6A	The audit reports required by Conditions 4.5 and 4.6 of this consent must be submitted within three months of commissioning the audit, or as otherwise agreed by the Secretary.	Doc 43, 45, 112, 115	The audit reports were submitted within the required timeframe	Compliant	Compliant	Compliant
5	Community Information and Involvement					

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
5.1	<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>	This audit, Site inspection	At the time of this Audit, documents were accessible electronically via the Boral Cement website and upon Request. Non-confidential documentation in hard copy format was also readily available for inspection. The site complaints procedure appeared effective in capturing issues and providing evidence on the type to address the deficiencies. Contact details were signposted at each site entrance and included a contact phone number, postal address, email address & Boral internet site.  These details were also made available at each community meeting and were included in the meeting minutes	Compliant	Compliant	Compliant
5.2	<b>Complaints Procedure</b> 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):	This audit, Site inspection	At the time of this Audit, documents were accessible electronically via the Boral Cement website and upon Request. Non-confidential documentation in hard copy format was also readily available for inspection. The site complaints procedure appeared effective in capturing issues and providing evidence on the type to address the deficiencies. Contact details were signposted at each site entrance and included a contact phone number, postal address, email address & Boral internet site.  These details were also made available at each community meeting and were included in the meeting minutes The site Complaint Register appears well maintained. Reports provided details of complaint date and time; the means by which the complaint was made; incident details; action taken; and the complainants name and address. Noise and dust complaints are forwarded to EPA in the Annual Returns and the DPHI in the Annual Environmental Management Reports. BC continues to investigate strategies to actively reduce its dust and noise impacts on the local community. The site Complaint Register appears well maintained. Reports provided details of complaint date and time; the means by which the complaint was made; incident details; action taken; and the complainants name and address.	Compliant	Compliant	Compliant
	a) <i>a telephone number on which complaints about operations on the site may be registered;</i>	This audit, Site inspection		Compliant	Compliant	Compliant
	b) <i>a postal address to which written complaints may be sent; and</i>	This audit, Site inspection		Compliant	Compliant	Compliant
	c) <i>an email address to which electronic complaints may be transmitted, should the Applicant have email service</i>	This audit, Site inspection		Compliant	Compliant	Compliant
	<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.</i>	Site inspection Borals' webpage		Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
5.3	The Applicant shall record details of all complaints received through the means listed under condition 5.2 of this consent in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to:	This audit, Site inspection	The site Complaint Register appears well maintained. Reports provided details of complaint date and time; the means by which the complaint was made; incident details; action taken; and the complainants name and address.			
	a) <i>the date and time, where relevant, of the complaint;</i>	This audit, Site inspection	Noise and dust complaints are forwarded to EPA in the Annual Returns and the DPHI in the Annual Environmental Management Reports.	Compliant	Compliant	Compliant
	b) <i>the means by which the complaint was made (telephone, mail or email);</i>	This audit, Site inspection	Boral continues to investigate strategies to actively reduce its dust and noise impacts on the local community. A site Complaint Register is maintained.	Compliant	Compliant	Compliant
	c) <i>any personal details of the complainant that were provided, or if no details were provided, a note to that effect;</i>	This audit, Site inspection	Noise and dust complaints are forwarded to EPA in the Annual Returns and the DPHI in the Annual Environmental Management Reports.	Compliant	Compliant	Compliant
	d) <i>the nature of the complaint;</i>	This audit, Site inspection	Notes of meetings and/or copies of presentations for the CLC meetings were evaluated and found to meet all the requirements of this Condition.	Compliant	Compliant	Compliant
	e) <i>any action(s) taken by the Applicant in relation to the complaint, including any follow-up contact with the complainant; and</i>	This audit, Site inspection	Verification of the Boral Berrima Cement Solid Waste Derived Fuels Implementation Project Stakeholder Engagement & Consultation Plan.	Compliant	Compliant	Compliant
	f) <i>if no action was taken by the Applicant in relation to the complaint, the reason(s) why no action was taken.</i>	This audit, Site inspection		Compliant	Compliant	Compliant
5.4	<b>Community Liaison Group</b> Prior to the use of Non-Standard Fuels at the development the Applicant shall establish a Community Liaison Group that has access to all environmental management plans and monitoring data, environmental reporting and tracking and audit reports required by this consent. The Group shall:	Site interview OEMP Appendix 3 Letter to reformed community meeting	Notes of meetings and/or copies of presentations for the CLC meetings were evaluated and found to meet all the requirements of this Condition. Verification of the Boral Berrima Cement Solid Waste Derived Fuels Implementation Project Stakeholder Engagement & Consultation Plan.			
	a. Be comprised of the following, whose appointment has been approved by the Secretary:	This audit	During all 3 reporting periods, the CLC operated in accordance with Condition 5.5.	Compliant	Compliant	Compliant
	i) 1 or 2 representatives from the Applicant, including the person responsible for environmental management at the development;	This audit, Site inspection	Reviews from Community Meeting records validated compliance with meeting this Condition. Verification of the Boral Berrima Cement Solid Waste Derived Fuels Implementation Project Stakeholder Engagement & Consultation Plan.	Compliant	Compliant	Compliant
	ii) 1 representative from Council; and	Web page		Compliant	Compliant	Compliant
	iii) 3 or 4 representatives from the local community.	Web Page		Compliant	Compliant	Compliant
	b. Be chaired by a representative agreed to by the Group and approved by the Secretary;	Web Page		Compliant	Compliant	Compliant



Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	c. Meet a minimum of once in every 6-month period; and	Web Page	During all 3 reporting periods, the CLC operated in accordance with Condition 5.5. Currently looking to appoint a third representative. Reviews from Community Meeting records validated compliance with meeting this Condition. Verification of the Boral Berrima Cement Solid Waste Derived Fuels Implementation Project Stakeholder Engagement & Consultation Plan.	Compliant	Compliant	Compliant
	d. Review and provide advice on the environmental performance of the development, including providing comment where necessary on any environmental management plans, monitoring results, audit reports, or complaints.	Web Page, This audit		Compliant	Compliant	Compliant
5.5	The Applicant shall at its own expense:		During all 3 reporting periods, the CLC operated in accordance with Condition 5.5.			
	a) <i>Ensure that 1 or 2 of its representatives attend the Group's meetings;</i>	Interview, review of web page and minutes	Reviews from Community Meeting records validated compliance with meeting this Condition. Verification of the Boral Berrima Cement Solid Waste Derived Fuels Implementation Project Stakeholder Engagement & Consultation Plan.	Compliant	Compliant	Compliant
	b) <i>Provide the Group with regular information on the environmental management and performance of the development;</i>	Interview, review of web page and minutes	During all 3 reporting periods, the CLC operated in accordance with Condition 5.5.	Compliant	Compliant	Compliant
	c) <i>provide access to independent scientific/technical support to assist member in understanding and interpreting information provided, if requested;</i>	Interview, review of web page and minutes	Reviews from Community Meeting records validated compliance with meeting this Condition. Verification of the Boral Berrima Cement Solid Waste Derived Fuels Implementation Project Stakeholder Engagement & Consultation Plan.	Compliant	Compliant	Compliant
	d) <i>provide meeting facilities for the Group, where necessary;</i>	Interview, review of web page and minutes	Included in CLG	Compliant	Compliant	Compliant
	e) <i>arrange site inspections for the Group, if requested;</i>	Interview	Included in CLG	Compliant	Compliant	Compliant
	f) <i>take minutes of the Group's meetings and make these minutes available to the public for inspection within 14 days of the Group meeting, or as agreed to by the Group;</i>	review of web page and minutes	Included in CLG	Compliant	Compliant	Compliant
	g) <i>respond to any advice or recommendations the Group may have in relation to the environmental management or performance of the development; and</i>	review of web page and minutes	Included in CLG	Compliant	Compliant	Compliant
	h) <i>maintain a record and a copy of the minutes of each Group meeting, and any responses to the Group's recommendations, to be provided to the Secretary upon request.</i>	review of web page and minutes	Included in CLG	Compliant	Compliant	Compliant
6	Environmental Management					
6.1	<b>Construction Environmental Management Plan (CEMP)</b>	Doc 53		Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	The Applicant shall update the Construction Environmental Management Plan (CEMP) to the satisfaction of the Secretary. The updated CEMP shall:		Final revision of the Construction Environment Plan (CEMP) for Berrima Solid Waste Derived Fuels Project Kiln 6 Upgrade MOD 9 (DA401-11-2002 satisfied all sub-conditions in 6.1 CEMP for Berrima SWDF Project Kiln 6 Upgrade MOD 9 (DA401-11-2002). CEMP is up to Version 5 which covers both MOD 13 and MOD15.			
	a) be approved by the Secretary prior to the commencement of construction;	Doc 53	Included in current 2023 CEMP.	Compliant	Compliant	Compliant
	b) identify the statutory approvals that apply to the development;	Doc 53	Included in current 2023 CEMP.	Compliant	Compliant	Compliant
	c) outline all environmental management practices and procedures to be followed during construction works associated with the development;	Doc 53	Included in current 2023 CEMP.	Compliant	Compliant	Compliant
	d) describe all activities to be undertaken on the site during construction of the development, including a clear indication of construction stages;	Doc 53	Included in current 2023 CEMP.	Compliant	Compliant	Compliant
	e) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts	Doc 53	Included in current 2023 CEMP.	Compliant	Compliant	Compliant
	f) describe the roles and responsibilities for all relevant employees involved in construction works associated with the development; and	Doc 53	Included in current 2023 CEMP.	Compliant	Compliant	Compliant
	g) include the management plans required under condition 6.1A and 6.2 of this consent	Doc 53	Included in current 2023 CEMP.	Compliant	Compliant	Compliant
6.1A	As part of the CEMP required under condition 6.1 of this consent, the Applicant shall include the following:	Doc 53	CEMP is up to Version 5 which covers both MOD 13 and MOD15 dated 2/5/2023			
	a) Construction Traffic Management Plan;	Doc 53	Construction Traffic Management Plan (7.1.4)	Compliant	Compliant	Compliant
	b) Erosion and Sediment Plan;	Doc 53	Erosion and Sediment Plan (7.2.5)	Compliant	Compliant	Compliant
	c) Construction Noise Management Plan;	Doc 53	Construction Noise Management Plan (7.2.3)	Compliant	Compliant	Compliant
	d) Construction and Demolition Waste Management Plan;	Doc 53	Construction and Demolition Waste Management Plan (7.2.1)	Compliant	Compliant	Compliant
	e) a protocol to manage groundwater and contaminated soil;	Doc 53	protocol to manage groundwater and contaminated soil (7.2.2)	Compliant	Compliant	Compliant
	f) a Community Consultation and Engagement Plan, including complaints management.	Doc 53	Community Consultation and Engagement Plan, including complaints management (6.4.1)	Compliant	Compliant	Compliant
6.1AB	Prior to the commencement of construction of any works approved under a modification to this consent, the Applicant must update the Construction Environmental Management Plan required under condition 6.1 of this consent to the satisfaction of the Planning Secretary.	Doc 53	CEMP is up to Version 5 which covers both MOD 13 and MOD15 dated 2/5/2023. The CEMP was prepared in consultation with EPA and DPHI and approved by DPHI	Compliant	Compliant	Compliant
6.1B	The Applicant shall carry out the construction of the development in accordance with the CEMP approved by the Secretary (and as revised and approved by the Secretary from time to time), unless otherwise agreed by the Planning Secretary.	Doc 53	The construction of the development remained in accordance with the CEMP.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
6.2	As part of the CEMP for the cement works upgrade, required under condition 6.1 of this consent, the Applicant shall prepare and implement the following Management Plans:	Doc 53	The CEMP included various studies and component plans covering items listed in the following subsections to Condition 6.2			
	a) a Fire Safety Study for the cement works upgrade, covering all relevant aspects detailed in the Department's publication Hazardous Industry Planning Advisory Paper No. 2 – Fire Safety Guidelines and the New South Wales Government's Best Practice Guidelines for Contaminated Water Retention and Treatment Systems. The Study shall be submitted for the approval of the Commissioner of the NSW Fire Brigades prior to inclusion in the CEMP.	Doc 53	Included in latest 2023 CEMP	Compliant	Compliant	Compliant
	b) a Hazard and Operability Study of the cement works upgrade chaired by an independent, qualified person or team approved by the Director-General. The Study shall be carried out in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 8 - HAZOP Guidelines.	Doc 53	Included in latest 2023 CEMP	Compliant	Compliant	Compliant
	c) a Construction Safety Study for the cement works upgrade, prepared in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 7 - Construction Safety Study Guidelines.	Doc 53	Included in latest 2023 CEMP	Compliant	Compliant	Compliant
	d) an Erosion and Sedimentation Management Protocol to detail measures to minimise erosion during construction of the cement works upgrade. The Plan shall address the requirements of the EPA and shall include, but not necessarily be limited to:	Doc 53	Included in latest 2023 CEMP	Compliant	Compliant	Compliant
	i) details of erosion, sediment and surface water pollution control measures and practices to be implemented during construction of the cement works upgrade; and	Docs 4, 9 and 53	Included in latest 2023 CEMP and Water Management Plan	Compliant	Compliant	Compliant
	ii) demonstration that erosion and sediment control measures will conform with, or exceed, the relevant requirements and guidelines provided in the DLWC's publication Urban Erosion and Sedimentation Handbook, the EPA's publication Pollution Control Manual for Urban Stormwater, and the Department of Housing's publications Soil and Water Management for Urban Development and Managing Urban Stormwater – Soils and Construction.	Docs 4, 9 and 53	Included in latest 2023 CEMP and Water Management Plan.	Compliant	Compliant	Compliant
6.2A	Prior to the commencement of any clearing works or construction of the site access road approved under MOD 14, the Applicant must, in addition to the requirement under condition 6.1AB, update the CEMP required under condition 6.1 to include a	Not Triggered	This condition has yet to be triggered	Not Triggered	Not Triggered	Not Triggered

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	Vegetation Management Plan to the satisfaction of the Planning Secretary. The Vegetation Management Plan must: a) include the mitigation measures in Section 5 of the Biodiversity Development Assessment Report prepared by Lodge Environmental, Version 2, dated 3 August 2023, approved under MOD 14;					
	b) include a compensatory revegetation plan to replace any juvenile <i>Eucalyptus macarthurii</i> (Paddys River Box) removed as a result of the works approved under MOD 14;	Not Triggered	This condition has yet to be triggered	Not Triggered	Not Triggered	Not Triggered
	c) specify that where successful translocation of <i>Eucalyptus macarthurii</i> (Paddys River Box, Camden Woollybutt) is not feasible or reasonable, this species must be sourced from a nursery instead and planted, with a maintenance period specified.	Not Triggered	This condition has yet to be triggered	Not Triggered	Not Triggered	Not Triggered
	d) include measures to protect native vegetation that would be retained on site from construction and operational activities, including tree protection methods outlined in the Australian Standard 4970-2009 Protection of trees on development sites;	Not Triggered	This condition has yet to be triggered	Not Triggered	Not Triggered	Not Triggered
	e) specify performance indicators and completion criteria, including criteria for triggering remedial action, if necessary; and	Not Triggered	This condition has yet to be triggered	Not Triggered	Not Triggered	Not Triggered
	f) include a maintenance and monitoring schedule for construction and operation of the development.	Not Triggered	This condition has yet to be triggered	Not Triggered	Not Triggered	Not Triggered
6.3	<b>Operation Environmental Management Plan (OEMP)</b> The Applicant shall prepare and implement an 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:	Doc 4	At the time of this audit, the Operation Environmental Management Plan OEMP, had been reviewed and updated in June 2023, to more accurately reflect the extent of current operations and environmental management needs associated with these operations.			
	a) <i>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;</i>	Doc 4 Sections 2.1, 2.2 and 2.3	Included in June 2023 OEMP.	Compliant	Compliant	Compliant
	b) <i>a description of the roles and responsibilities for all relevant employees involved in the operation of the cement works upgrade;</i>	Doc 4 Section 4	Included in June 2023 OEMP.	Compliant	Compliant	Compliant
	c) <i>overall environmental policies and principles to be applied to the operation of the cement works upgrade;</i>	Doc 4 Section 3	Included in June 2023 OEMP.	Compliant	Compliant	Compliant
	d) <i>standards and performance measures to be applied to the cement works upgrade, and a means by which</i>	Docs 5-11 Section 7	Included in June 2023 OEMP.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>environmental performance can be periodically reviewed and improved;</i>					
	e) <i>management policies to ensure that environmental performance goals are met and to comply with the conditions of this consent; and</i>	Doc 4 Section 3	Included in June 2023 OEMP.	Compliant	Compliant	Compliant
	f) <i>the Management Plans listed under condition 6.4 of this consent;</i>	Doc 4 Appendices	Included in June 2023 OEMP.	Compliant	Compliant	Compliant
	<i>The OEMP shall be submitted for the approval of the Planning Secretary no later than one month prior to the commencement of operation of the cement works upgrade, or within such period otherwise agreed by the Planning Secretary. Operation shall not commence until written approval has been received from the Secretary. Upon receipt of the Planning Secretary's approval, the Applicant shall supply a copy of the OEMP to the EPA and Council as soon as practicable.</i>	Interview, correspondence sighted	The latest OEMP has been approved by DPHI	Compliant	Compliant	Compliant
6.3A	Prior to the receipt of any Non-Standard Fuels, the Applicant shall update the OEMP required by condition 6.3 of this consent to include the following:	Doc 4	Included in June 2023 OEMP.			
	a. <i>details of how the development will comply with the requirements of the EPL and development consent throughout operation;</i>	Doc 4 Appendix 4	Management practises outlined to ensure EPL compliance	Compliant	Compliant	Compliant
	b. <i>an update of the Community Consultation and Engagement Plan required by Condition 6.1A that outlines how the community will be kept informed about the results of the PoP trials and the ongoing use of SWDF;</i>	Doc 4 Appendix 3	Updated Community Consultation and Engagement Plan provided	Compliant	Compliant	Compliant
	c. <i>the environmental monitoring requirements outlined in the EPL and under conditions 4.1A, 4.1B and 4.1C of this consent; and</i>	Doc 4 Appendices 4 and 11 AQMP Section 5.2	EPL monitoring requirements outlined in the updated AQMP and WMP	Compliant	Compliant	Compliant
	d. <i>an updated Air Quality Management Plan, as required by condition 6.4A of this consent.</i>	Doc 4 Appendix 4 (AQMP)	Updated Air Quality Management Plan provided	Compliant	Compliant	Compliant
	<i>Following completion of the PoP trials, the Applicant shall amend the Operation Environmental Management Plan, to the satisfaction of the Secretary, to describe any proposed changes to limits contained in the EPL and development consent including detailed justification for the changes and relevant results of the PoP trials.</i>	Interview Doc 4 Section 1.2.1 & Appendix 4	An update to the OEMP has been recommended as part of this audit however as there were no changes to the EPL required, this condition has not been triggered The updated OEMP included the isotainer reach stacker Code of Practice and noise monitoring and management requirements.	Not Triggered	Not Triggered	Not Triggered

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
6.3B	<b>Condition Amended April 2020</b> Prior to the use of isotainers on the site, the Applicant must update the OEMP required by condition 6.3 of this consent to include the following:	Doc 5	An update to the OEMP has been recommended as part of this audit however as there were no changes to the EPL required, this condition has not been triggered The updated OEMP included the isotainer reach stacker Code of Practice and noise monitoring and management requirements.			
	a) a Code of Practice for operators of the isotainer reach stacker to reduce LAmox noise events	Doc 4 Appendix 6 Attachment 1	The Berrima Noise Management Plan (current NMP was updated in April 2020 to include EPL Variation (Whole of site noise limit) and MOD 11 and 12 (Use of Isotainers and Whole of Site Noise Limit). The Plan has since been updated in May 2023 in line with Mod 13 and 15.	Compliant	Compliant	Compliant
	b) the noise monitoring and management requirements specified in conditions 3.3 to 3.6 of this consent.	Doc 1 to 3, doc 4 Appendix 6 Attachment 1	The assessment of noise compliance has been undertaken each year by an external noise consultant.	Compliant	Compliant	Compliant
6.4	As part of the OEMP for the cement works upgrade, required under condition 6.3 of this consent, the Applicant shall prepare and implement the following Management Plans:	Doc 5	The Berrima Noise Management Plan (NMP was recently updated in April 2020 to include EPL Variation (Whole of site noise limit) and MOD 11 and 12 (Use of Isotainers and Whole of Site Noise Limit). The Plan has since been updated in May 2023 in line with Mod 13 and 15.			
	a) a <b>Noise Management Plan</b> 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 EPA and shall include, but not necessarily be limited to:	Doc 5 Appendix 6	The assessment of noise compliance has been undertaken each year by an external noise consultant including 2020, 2021, 2022 and 2023. Each assessment has used the assessment criteria and locations specified on the consents which were derived from the original approval. Each assessment confirmed that the site was meeting the criteria specified in the consent.	Compliant	Compliant	Compliant
	i. identification of all major sources of noise that may be emitted as a result of the operation of the cement works upgrade;	Doc 5 Section 6.1		Compliant	Compliant	Compliant
	ii. specification of the noise criteria as it applies to the particular activity;	Doc 5 Table 3		Compliant	Compliant	Compliant
	iii. procedures for the monitoring of noise emissions from the cement works upgrade, in accordance with any requirements of the EPA;	Doc 5 Section 5.2- Monitoring		Compliant	Compliant	Compliant
	v. protocols for the minimisation of noise emissions;	Doc 5 Section 6.2 / 6.3	The Air Quality Management Plan May 2023 was reviewed and found to meet consent conditions. Annual Stack Testing Results for the 3 Reporting periods were validated for each Annual Returns.	Compliant	Compliant	Compliant
	v. measures to consider and manage the cumulative impact of operating both kilns simultaneously; and description of procedures to be undertaken if any non-compliance is detected.	Doc 5 Section 6.2 / 6.3 Engineering controls/ Buffer zones and screening	Included in Noise Management Plan	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>vi. description of procedures to be undertaken if any non-compliance is detected.</i>	Doc 5 Section 8.1- Noise Complaints	Assessed in Noise Management Plan	Compliant	Compliant	Compliant
6.4	b) an <b>Air Quality Management Plan</b> 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 EPA, should there be any. The Plan shall include, but not necessarily be limited to:	Doc 4 Appendix 4	The Air Quality Management Plan May 2023 was reviewed and found to meet consent conditions. Annual Stack Testing Results for the 3 Reporting periods were validated for each Annual Returns.			
	<i>i. identification of all major sources of particulate and gaseous 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;</i>	Doc 11 Section 5.1 (Emission sources), Table 4	All requirements defined in this Condition, were assessed and found to meet all requirements of this Condition.  Contained in Air Quality Management Plan	Compliant	Compliant	Compliant
	<i>ii. monitoring of particulate and gaseous emissions from the cement works upgrade, in accordance with any requirements of the EPA;</i>	Doc 11	Contained in Air Quality Management Plan Section 5.2- Monitoring/ Discharge locations (Fig 2), Stack Emission Limits, Monitoring requirements.	Compliant	Compliant	Compliant
	<i>iii. procedures for the minimisation of particulate and gaseous emissions from the cement works upgrade, and the reduction of these emissions over time, where appropriate;</i>	Doc 11	Contained in Air Quality Management Plan Section 5.2	Compliant	Compliant	Compliant
	<i>iv. protocols for regular maintenance of process equipment to minimise the potential for dust emissions;</i>	Doc 11	Contained in Air Quality Management Plan Section 5.2	Compliant	Compliant	Compliant
	<i>v. measures to consider and manage the cumulative impact of operating both kilns simultaneously; and</i>	Doc 11	Contained in Air Quality Management Plan Section 5.2	Compliant	Compliant	Compliant
	<i>vi. description of procedures to be undertaken if any non-compliance is detected.</i>	Doc 11	Contained in Air Quality Management Plan Section 7- Incident reporting, PIRMP, Emergency Plan (Section 6.2).	Compliant	Compliant	Compliant
6.4	c) an <b>Emergency Plan</b> for the cement works upgrade. The Plan shall be prepared in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 1 - Industry Emergency Planning Guidelines. Should an Emergency Plan for the cement works already be in existence, this condition may be satisfied by updating the Plan to reflect changes to the site as a result of the cement works upgrade.	Doc 4 Appendix 7	All requirements defined in this Condition, were assessed and found to meet all requirements of this Condition. The PIRMP undergoes regular review and updating. The current version is dated April 2023.	Compliant	Compliant	Compliant
6.4	d)a <b>Safety Management System</b> , covering all operations at the cement works upgrade and associated transport activities involving any hazardous materials. The System shall clearly specify all safety-related procedures, responsibilities and policies, along with details of mechanisms for ensuring	Boral Intranet documents sighted	The Boral OHS Management System was the most current Safety System in use at the time of the audit.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>adherence to safety procedures. The System shall be developed in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 9 - Safety Management. Should a Safety Management System for the cement works already be in existence, this condition may be satisfied by updating the System to reflect changes to the site as a result of the cement works upgrade.</i>					
6.4	e) a <b>Water Supply Strategy</b> 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.	Doc 4 Appendix 11, Interview	Boral continues to manage and increase the harvesting, storage and use of rainwater falling on the site. 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 ways water can be moved around the site for improved storage options.  Currently looking at supplying water from the Berrima Colliery	Compliant	Compliant	Compliant
6.4	f) The Applicant shall prepare and implement a Transport Code of Conduct to outline management of traffic conflicts associated with the construction and operation of the cement works upgrade. The Code shall meet the requirements of Council, NSW Police and the RTA, should there be any. The Code shall include, but not necessarily be limited to:	Doc 4 Appendix 9, 51	Driver Code of Conduct for Truck and Heavy Vehicles Operators Version 7 of the now named Vehicle and Pedestrian Management Plan. Driver codes outline the driving behaviour expected of all Workers (employees and contractors).	Compliant	Compliant	Compliant
	i) details of any restriction to traffic routes;	51	Included in Plan.	Compliant	Compliant	Compliant
	ii) minimum requirements for vehicle maintenance to address noise and exhaust emissions;	51	Included in Plan.	Compliant	Compliant	Compliant
	iii) speed limits to be observed along routes to and from the sites and within the site; and	51	Included in Plan.	Compliant	Compliant	Compliant
	iv) behaviour requirements for vehicle drivers to and from the site and within the site.	51	Included in Plan.	Compliant	Compliant	Compliant
	g) <b>The vegetation Management Plan approval under condition 6.2A</b>	Not Triggered	Not Triggered	Not Triggered	Not Triggered	Not Triggered
6.4A	As part of the updated OEMP required under condition 6.3A of this consent, the Applicant shall provide an updated Air Quality Management Plan prepared in consultation with the EPA. The updated plan shall be prepared by a suitably qualified and experienced person and shall:	Doc 4 Appendix 4	The Air Quality Management Plan was updated in May 2023 to include all the sub-conditions in 6.4A relating to the increased monitoring requirements for the use of NSF.			



Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	a) verify whether the development is complying with the air quality criteria specified in the EPL, and identify the additional measures to be implemented to ensure compliance should any non-compliance be detected;	Doc 11 attachment 3 POPT Additional measures	At the time of this audit, Boral Cement had undertaken a full review of their site OEMP and the associated specific EMPs (Water, Air, Noise, Waste, Dust and Traffic Management Plans. Newly revised Plans were issued in 2023, within the expected 3 year cycle. Boral Cement undertook a full review of their Environmental Management Plans for Berrima Cement Works in the context of the Alternate Fuels Project. Boral Cement engaged a consultant to create these Plans on their behalf. The OEMP, forms part of Berrima's Environmental Management Plans.  Section 7- Pollution Complaints OEMP Section 5.  Section 5.2 Monitoring/Discharge Locations (Fig 2)  Section 5.2 Stack Emissions Limits, Monitoring requirements  Section 5.2 Monitoring/Discharge Locations (Fig 2) Section 5.2- Air quality management controls, dust management plan	Compliant	Compliant	Compliant
	b) validate that the performance of the project reflects the assumptions, estimates and conclusions made in the Human Health Risk Assessment and Air Quality Impact Assessment submitted with MOD 9;	Assumptions in MOD 9 EA validated by the independent audit dated 31/10/19		Compliant	Compliant	Compliant
	c) provide details of any complaints received relating to air quality generated by the development, and action taken to respond to those complaints;	Doc 11 3		Compliant	Compliant	Compliant
	d) include ambient monitoring of emissions from the development, including PM2.5 and PM10;	Doc 11		Compliant	Compliant	Compliant
	e) include stack emissions monitoring at Kiln 6, including for each pollutant considered and assessed as a part of the Human Health Risk Assessment and Air Quality Impact Assessment submitted with MOD 9. The pollutants shall include but not be restricted to individual VOCs, heavy metals, dioxins and PAHs;	Doc 11		Compliant	Compliant	Compliant
	f) include an ambient air monitoring program; and	Doc 11		Compliant	Compliant	Compliant
	g) include details of all proposed emission control measures.	Doc 11		Compliant	Compliant	Compliant
6.4B	Prior to the commencement of operation of the permanent AKF5 storage and feed infrastructure approved under MOD 15 to this consent, the Applicant must review and update the OEMP to the satisfaction of the Planning Secretary. The must include a review and update of the following sub-plans: a) Water Management Plan;	Doc 4	OEMP updated in June 2023 and approved by DPHI	Not Triggered	Compliant	Complaint
	b) Emergency Plan; and	Doc 4	OEMP updated in June 2023 and approved by DPHI	Not Triggered	Compliant	Complaint
	c) Pollution Incident Response Management Plan.	Doc 13	PIRMP updated in April 2023			
6.4C	The updated OEMP required by condition 6.4B must include: a) all operational requirements for the receipt, storage and handling of AKF5;	Doc 4	OEMP updated in June 2023 and approved by DPHI	Not Triggered	Compliant	Complaint

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	b) details of the water management measures in the AKF5 storage area, including a description of how this area will be drained and connected to the existing stormwater management system;	Doc 4	OEMP updated in June 2023 and approved by DPHI	Not Triggered	Compliant	Complaint
	c) details of how the fire water catchment bund adjacent to the AKF5 storage area will be managed during a storm event and following a fire incident;	Doc 4	OEMP updated in June 2023 and approved by DPHI	Not Triggered	Compliant	Complaint
	d) the quality assurance / quality control measures for AKF5, including the approved AKF5 fuel specification and details of how non-conforming waste will be managed; and	Doc 4	OEMP updated in June 2023 and approved by DPHI	Not Triggered	Compliant	Complaint
	e) an Emergency Services Information Package prepared in accordance with the Fire and Rescue NSW Fire Safety Guideline - Emergency services information package and tactical fire plans.	Doc 4	OEMP updated in June 2023 and approved by DPHI	Not Triggered	Compliant	Complaint
6.4D	Prior to the commencement of operation of the site access road approved under MOD 14, the Applicant must review and update the Water Management Plan, a sub-plan of the OEMP required under condition 6.3 of this consent, to the satisfaction of the Planning Secretary. The updated Water Management Plan must: a) be prepared in consultation with WaterNSW; and	Not Triggered	Not triggered at the time of this audit	Not Triggered	Not Triggered	Not Triggered
	b) include a maintenance program for the stormwater quality improvement devices and drainage infrastructure along the new site access road for the life of the development.	Not Triggered	Not triggered at the time of this audit	Not Triggered	Not Triggered	Not Triggered
6.4E	Prior to the commencement of operation of the new SWDF storage infrastructure approved under MOD 14, the Applicant must review and update the Emergency Services Information Package required under condition 6.4C of this consent and the Emergency Plan required under condition 6.4B of this consent, in consultation with FRNSW to the satisfaction of the Planning Secretary.	Not Triggered	Not triggered at the time of this audit	Not Triggered	Not Triggered	Not Triggered
6.5	<i>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 OEMP required under condition 6.3 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 Secretary, Council and the EPA of the completion of each review, and shall supply a copy of the updated OEMP to those</i>	Doc 4 Section 7.3	At the time of this audit, Boral Cement had undertaken a full review of their site OEMP and the associated specific EMPs (Water, Air, Noise, Waste, Dust and Traffic Management Plans). Newly revised Plans were issued in June 2023, within the expected 3 year cycle. Boral Cement undertook a full review of their Environmental Management Plans for Berrima Cement Works in the context of the Alternate Fuels Project. Boral Cement engaged a	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>parties on request. The Applicant shall also make any revised OEMP available for public inspection on request.</i>		consultant to create these Plans on their behalf. The OEMP, forms part of Berrima's Environmental Management Plans			
6.6	<i>Prior to the use of any Group 1 or Group 2 Non-Standard Fuels under this consent, the Applicant shall update the OEMP required under conditions 6.3 and 6.4 of this consent to reflect any modifications required at the development in light of the use of Non-Standard Fuels. Where the Applicant considers that the OEMP does not require any amendment then a clear justification of this must be provided. The Applicant shall not receive or use Non-Standard Fuels at the development until the Secretary has approved the amended OEMP. Updating of the Plan shall include, but not necessarily be limited to providing additional detailed measures to the AQMP to minimise the emissions of air pollutants (including toxic pollutants and dioxins) to ensure compliance with the EPL.</i>	Doc 4	The Operation Environmental Management Plan was updated in June 2023 as required under conditions of this consent to reflect any modifications required at the development in light of the use of Non-Standard Fuels	Compliant	Compliant	Compliant
6.7	Prior to the receipt of any Group 1 Non-Standard Fuels at the development in accordance with this consent, the Applicant shall establish and implement quality control management procedures to ensure Group 1 Non-Standard Fuels delivered to the development comply with the fuel specifications. The procedures shall be prepared in consultation with the EPA and, be approved by the Secretary and shall, at the request of the Secretary, be updated to reflect the recommendations of the annual Non-Standard Fuels audit required under condition 4.6 of this consent. The procedures shall include:	N/A	No Group 1 NSF used during period of this audit	N/A	N/A	N/A
	<i>a) assessment of the sampling and laboratory processes used by the Non-Standard Fuel suppliers with a view to ensure these processes are sufficient for the Applicant to meet the requirements of this consent;</i>	Doc 21- Pg 9 Doc 42	Supplier audits assessed sampling and laboratory processes with information provided in the listed documents. Boral undertake its own laboratory testing as well to verify physical and chemical properties	Compliant	Compliant	Compliant
	<i>b) carrying out of periodic, random parallel sampling of Non-Standard Fuels with analysis of substances to which limits have been applied in the fuel specifications; and</i>	Doc 21 and 41	Boral undertake separate monthly testing of NSF received from both suppliers	Compliant	Compliant	Compliant
	<i>c) measures to ensure handling, processing and analysis of information provided by Non-Standard Fuel suppliers and that generated by the activities under b) is appropriately stored and managed.</i>	Site interview Docs 39 and 40	Measures have been applied to ensure appropriate management and storage of records	Compliant	Compliant	Compliant
6.8	<i>Prior to the receipt of any Group 2 Non-Standard Fuels at the development in accordance with this consent, the Applicant shall adopt and implement the approved Quality Assurance and</i>	Docs 21, 28, 31, 32, 42	The Quality Assurance and Control Procedure for Receipt and Use of Solid Waste Derived Fuels has been implemented since the receipt of Non-Standard Fuels on site.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>Control Procedure for Receipt and Use of Solid Waste Derived Fuels, dated 11 July 2016, prepared by the Applicant (Appendix 1 of this consent), to ensure Group 2 Non-Standard Fuels delivered to the development comply with the fuel specifications. The procedures shall, at the request of the Secretary, be updated to reflect the recommendations of the annual Non-Standard Fuels audit required under condition 4.6 of this consent and the First-Year Monitoring and Modelling Assessment Report required by condition 7.6 of this consent.</i>					
7	Environmental Reporting					
7.1	<b>Incident reporting</b> <i>The Applicant shall notify the Planning Secretary and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment associated with the facility immediately after the Applicant becomes aware of the incident.</i>	Doc 13	All Incidents continue to be captured in an online Incident Report Register called "Sequence" If an Incident has occurred, that meets the reporting requirements, then a summary of the incident will be sent to the EPA, within the required timeframes for reporting. If an Incident has occurred, a Monthly summary of incidents would be forwarded to the DPHI and the EPA. If and when air quality levels exceed the required limits, Boral Cement have implemented protocols to ensure the Department of Health, EPA and CoPE are informed as soon as practicable. PIRMP and Immediate Notification SOP were reviewed as per annual schedule.	Compliant	Compliant	Compliant
7.2	<i>Within seven days of the date of this incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident</i>	Doc 13	The Department of Planning and EPA were emailed. Email correspondence sighted	Compliant	Compliant	Compliant
7.2A	<i>Prior to the commencement of the use of Non-Standard Fuels under this consent, the Applicant shall establish an agreed arrangement with the Sydney South West Public Health Unit to ensure that NSW Health is advised in a timely manner of the details of any incident with actual or potential significant off-site impacts on human health or amenity.</i>	Interview Doc 12	At the time of this audit, Conditions and procedures for reporting Non-Standard Fuel incidents were agreed with NSW Health and implemented in December 2006 prior to the commencement of the NSF program and remain unchanged. Correspondence with Sydney South West Public Health Unit now replaced by Public Health Unit (Sydney South West) Camperdown Office. The AEMR's for the last 3 reporting periods had included documented evidence to validate requirements 7.3 a-h were being met. Boral Cement demonstrated their commitment to implement the environmental management targets and strategies detailed above.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
7.3	The Applicant shall, throughout the life of the cement works upgrade, prepare and submit for the approval of the Planning Secretary, 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 6.3 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:	Docs 1-3	AEMR Reports prepared for the period of this audit.  The AEMR's for the last 3 reporting periods had included documented evidence to validate requirements 7.3 a-h were being met	Compliant	Compliant	Compliant
	a) details of compliance with the conditions of this consent;	Docs 1-3	AEMR Sections 2 and 7	Compliant	Compliant	Compliant
	b) a copy of the Complaints Register (refer to condition 5.3 of this consent) for the preceding twelve month period (exclusive of personal details), and details of how these complaints were addressed and resolved;	Docs 1-3	AEMR Appendix 2	Compliant	Compliant	Compliant
	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 1.2;	Docs 1-3	AEMR Section 5	Compliant	Compliant	Compliant
	d) results of all environmental monitoring required under this consent and other approvals, including interpretations and discussion by a suitably qualified person;	Docs 1-3	AEMR Section 5	Compliant	Compliant	Compliant
	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;	Docs 1-3	Contained in AEMR for each reporting year.	Compliant	Compliant	Compliant
	f) identification of trends in monitoring data over the life of the cement works upgrade to date;	Docs 1-3	Contained in AEMR for each reporting year.	Compliant	Compliant	Compliant
	g) a list of variations obtained to approvals applicable to the cement works upgrade and to the site during the preceding twelve-month period;	Docs 1-3	Contained in AEMR for each reporting year.	Compliant	Compliant	Compliant
	h) Environmental management targets and strategies for the following twelve-month period, taking into account identified trends in monitoring results	Docs 1-3	Contained in AEMR for each reporting year.	Compliant	Compliant	Compliant
7.3A	In each Annual Environmental Management Report submitted after the First Year Monitoring and Modelling Assessment Report required in accordance with condition 7.6 has been submitted, the	Docs 1-3	The First Year Monitoring and Modelling Assessment Report was submitted in November 2019. The 2020, 2021, 2022 and 2023 AEMRs have been submitted following this date, and this	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	Applicant shall include the details of the use of all Non-Standard Fuels at the development, including, but not necessarily limited to:		report has included documented evidence to validate requirements 7.3A a-d were being met.			
	a) <i>the nature, quantity and quality of Non-Standard Fuels used at the development;</i>	Docs 1-3	Included in AEMR	Compliant	Compliant	Compliant
	b) <i>details of any fuels that did not meet the Fuel Specification, including the source of the fuels and how the rejected fuels were managed or disposed of;</i>	Docs 1-3	Included in AEMR	Compliant	Compliant	Compliant
	c) <i>a review of the results of the Non-Standard Fuels Tracking Program and the Non-Standard Fuels Quality Control Management procedures; and</i>	Docs 1-3	Included in AEMR	Compliant	Compliant	Compliant
	d) <i>the results of all monitoring undertaken in accordance the requirements of this consent and an assessment of these monitoring results, including comparison of stack emissions against the concentration limits set in condition 3.10.</i>	Docs 1-3	Included in AEMR	Compliant	Compliant	Compliant
7.4	The Applicant shall submit a copy of the AEMR to the Planning Secretary, the EPA and Council every year, with					
	a) <i>the first AEMR to be submitted within twelve months of commencement of operation of the cement works upgrade; and</i>	Docs 1-3	Included in AEMR	Compliant	Compliant	Compliant
	b) <i>the second and subsequent AEMRs to be submitted concurrently with the EPA's Annual Return.</i>	Docs 1-3	Included in AEMR	Compliant	Compliant	Compliant
7.5	The Planning Secretary 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 EPA and/or Council. Any action required to be undertaken shall be completed within such period as the Secretary may agree.	Interview, docs 62 to 76	The DPHI has made some requests for further information in relation to review of management plans and the use of up to 50% SWDF.  At the time of this audit, there were no other requests submitted to Boral in relation to this Condition for Kiln 6. .	Compliant	Compliant	Compliant
7.6	One year after the commencement of the use of Non-Standard Fuels in accordance with this consent, the Applicant shall prepare a First-Year Monitoring and Modelling Assessment Report. The Report shall be submitted to the Secretary, the NSW Department of Health and the EPA not more than 15 months after the commencement of the use of Non-Standard Fuels in accordance with this consent, and shall:	Docs 1-3, 44, 45	At the time of this audit, there were no other requests submitted to Boral in relation to this Condition for Kiln 6. The First-Year Monitoring and Modelling Assessment Report was submitted in November 2019 and as within the timeframe for submission. The report included details of the use of the NSF, all monitoring results, an assessment of the Tracking Program, quality control procedures and detailed the modifications required to the development. The report satisfied sub-conditions a-e in Condition 7.6.	Compliant	Compliant	Compliant
	a) <i>detail the nature, quantity and quality of Non-Standard Fuels used at the development;</i>	Doc 45		Compliant	Compliant	Compliant
	b) <i>assess the results of the Continuous Emissions Monitoring, the Ambient Air Quality Monitoring Program and the Process Monitoring requirements under conditions 4.1, 4.1B and</i>	Doc 45	Contained in First Year Monitoring and Modelling Report.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	4.1C of this consent against the relevant emission limits and process parameters prescribed by this consent and within the context of the predictions made in the documents listed under condition 1.2 i) of this consent;		Contained in First Year Monitoring and Modelling Report.			
	c) assess the results of the Non-Standard Fuels Tracking Program including detailed description and assessment of any trends identified through the Program;	Doc 45	Contained in First Year Monitoring and Modelling Report.	Compliant	Compliant	Compliant
	d) assess the adequacy of the Non-Standard Fuels Quality Control Management Procedures required under condition 6.7; and	Doc 45	Contained in First Year Monitoring and Modelling Report.	Compliant	Compliant	Compliant
	e) based on this assessment, review the necessity for continuing or modifying any of the emissions monitoring, reporting or pollutant tracking requirements of this consent.	Doc 45	Contained in First Year Monitoring and Modelling Report.	Compliant	Compliant	Compliant
7.7	Within three months of: a) the submission of an Annual Environmental Management Report under condition 7.3;	Interview, docs 1-3	Each AEMR is approved by DPHI, additional information was not requested.	Compliant	Compliant	Compliant
	b) the submission of an incident report under condition 7.1	Interview, 109, 111	Two Incident reports were lodged during the reporting period. Incidents did not require updates to any management plans	Compliant	Compliant	Compliant
	c) the approval of any modification of the conditions of this consent; or	Interview	Management Plans and OEMP cover MOD13 and MOD15 but not at this stage MOD14 as this has not been triggered	Compliant	Compliant	Compliant
	d) the issue of a direction of the Planning Secretary, the strategies, plans and programs required under this consent must be reviewed, and the Planning Secretary must be notified in writing of any actions arising out of any review.	Interview	No directions have been issued by DPHI.	Compliant	Compliant	Compliant
7.8	If the review under condition 7.7 identifies any revisions required to any strategies, plans or programs, or if any revisions are considered necessary to improve the environmental performance of the development, the relevant strategies, plans and programs must be revised to the satisfaction of the Planning Secretary. The revised document(s) must be submitted to the Planning Secretary via the Major Projects Portal for approval within six weeks of the review carried out under condition 7.7, or such other timing as agreed by the Planning Secretary. Note: This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.	Interview	All updated plans for MOD13 and MOD 15 were submitted to the Planning Secretary via the Major Projects Portal for approval within six weeks of the review carried out under condition 7.7	Compliant	Compliant	Compliant
Appendix A	Quality Assurance and Control Procedure for Receipt and Use of Solid Waste Derived Fuels	114, 115	Ongoing NSF Independent audits	Compliant	Compliant	Compliant

## Appendix A2 – Cement Mill 7 - Conditions of Consent Table

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
1	General					
1.1	<p><b>Scope of Development</b> The Applicant shall carry out the development generally in accordance with:</p> <p>a) <i>Development Application No. 85-4-2005-i lodged with the Department of Infrastructure, Planning and Natural Resources on 15 April 2005</i></p> <p>b) <i>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</i></p> <p>c) <i>Noise Impact Assessment: Boral BCSC Berrima, Cement Mill 7 Project dated 3 April 2005 and prepared by Connell Hatch</i></p> <p>d) <i>Air Impact Assessment: Air Quality Assessment for SEE, Cement Mill 7 Project, dated 6 April 2005 and prepared by Holmes Air Sciences</i></p> <p>e) <i>Traffic Report: Berrima Cement Works, Cement Mill 7 Project dated 11 April 2005 and prepared by Masson Wilson Twiney Pty Ltd</i></p> <p>f) <i>Correspondence with subject 'Cement Mill 7 – Implementation Dates' prepared by Mr Grant Williams, Blue Circle Southern Cement Ltd and dated 6 July 2005; and</i></p> <p>g) <i>the conditions of this consent.</i></p> <p>In the event of an inconsistency between a condition of this consent and the documents listed under a) to g) above, the condition of</p>	<p>Previous Audits</p> <p>Previous Audits</p> <p>Previous Audits</p> <p>Previous Audits</p> <p>Previous Audits</p> <p>Previous Audits</p> <p>Previous Audits</p>	<p>Since the last Compliance Audit in 2017, Boral Cement continues to demonstrate their commitment to continually improve their EMS at Berrima.</p> <p>It was noted that the previously installed truck warning signs on Taylor Avenue as required by condition 2.17 had been removed. Boral has requested Council reinstate the truck warning signage on Taylor Avenue.</p>	Compliant	Compliant	Compliant
				Compliant	Compliant	Compliant
				Compliant	Compliant	Compliant
				Compliant	Compliant	Compliant
				Compliant	Compliant	Compliant
				Compliant	Compliant	Compliant
				Compliant	Compliant	Compliant
				Compliant	Compliant	Compliant



Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	consent shall prevail to the extent of the inconsistency.					
1.2	The Applicant shall operate the cement works upgrade to meet the following requirements:	Doc 1- Section 3.4 Doc 2- Section 3.4 Doc 3- Section 3.4	CM5 was not operated during the reporting period. The total production from CM7 for the reporting period: 2021 FY: 1,310,456 tonnes 2022 FY: 1,301,289 tonnes 2023 FY: 1,319,485 tonnes			
	a) CM7 is utilised in place of CM5; and			Compliant	Compliant	Compliant
	b) CM5 may be utilised as a secondary, back-up mill when CM7 is inoperative.			Compliant	Compliant	Compliant
1.3	<b>Provision of Documents</b> <i>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.</i>	Boral Webpage Email correspondence	All documentation had been provided to the Auditor electronically to minimise resource consumption.	Compliant	Compliant	Compliant
1.4	<b>Statutory Requirements</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>	Interview Doc 58, Previous audits	All required licenses, permits and approvals were being maintained on site at Boral Cement Berrima and were current. The Environmental Protection License (EPL) No.1698; Revision Dec 2023, was in place for the site with reporting through to the EPA	Compliant	Compliant	Compliant
1.5	<b>Compliance</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>	Interview, Previous audits	Site Inductions for all workers (employees, contractors and sub-contractors) and compliance packages have been reviewed and rewritten due to a major company restructure Environmental Refresher Training for site employees and contractors appears ongoing Conditions of this Consent and other regulatory documents for the site are communicated at environmental refresher training Environmental issues and environmental compliance reviewed at daily Site Lean/Management Meetings, weekly/monthly Health & Safety Meetings, and Monthly Management Meetings	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
			Management conducts Lean/5S/HSE site inspections to identify any issues regarding resource efficiency, environment and safety concerns.			
1.6	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:	Previous audits	Compliance was demonstrated in the 2007 – 2008 AEMR There were no changes to the operation of CM7 that required additional evidence of compliance.	Compliant	Compliant	Compliant
	a) construction of the cement works upgrade	Previous audits	Condition no longer relevant	N/A	N/A	N/A
	b) operation of the cement works upgrade	Previous audits	Condition no longer relevant	N/A	N/A	N/A
1.7	<i>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.</i>	Interview, Previous audits	It is understood the DPPI had not requested further updates at the time this audit was conducted.	Compliant	Compliant	Compliant
1.8	<i>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</i>	Interview, Previous audits	At the time this audit was conducted, it was understood the DPPI had not requested any action be taken under this Condition.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>in accordance with the conditions of this consent, within such time as the Director-General may agree.</i>					
2	Environmental Performance					
2.1	<b>Noise Impacts</b> Construction activities associated with the cement works upgrade shall only be carried out:	Previous Audits	This Condition refers to the original construction project rather than ongoing operations All construction work was completed prior to these 3 reporting periods.			
	a) <i>between 7:00 am and 6:00 pm, Monday - Friday inclusive, during periods in which the cement works is shut-down, and construction noise is audible at the boundary of the site</i>	Previous Audits	This condition has been superseded by the current Environment Protection License and noise conditions contained in consent 401-11-2002 MOD15	N/A	N/A	N/A
	b) <i>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</i>	Previous Audits	This condition has been superseded by the current Environment Protection License and noise conditions contained in consent 401-11-2002 MOD15	N/A	N/A	N/A
	c) <i>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</i>	Previous Audits	This condition has been superseded by the current Environment Protection License and noise conditions contained in consent 401-11-2002 MOD15	N/A	N/A	N/A
	d) <i>at any time during periods in which the cement works is in operation; and</i>	Previous Audits	This condition has been superseded by the current Environment Protection License and noise conditions contained in consent 401-11-2002 MOD15	N/A	N/A	N/A
	e) <i>at any time if construction noise is inaudible at the boundary of the site.</i>	Previous Audits	This condition has been superseded by the current Environment Protection License and noise conditions contained in consent 401-11-2002 MOD15	N/A	N/A	N/A
2.2	<i>Subject to compliance with the requirements of this Consent, the cement works upgrade may be operated 24 hours per day, 7 days per week.</i>	Documents 1-5	At the time of this audit, the Berrima site, including CM7, operates 24 hours per day, 7 days per week Existing management measures effectively contain noise levels below contribution criteria.	Compliant	Compliant	Compliant
2.3	<i>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.</i>	Documents 5 and 6	Numerous noise reduction strategies have already been implemented through Plant Maintenance programs since the 2011 compliance audit. Site remains compliant with license conditions as per Recognition Research Reports from 2018 – 2020 Existing management measures effectively contain noise levels below contribution criteria. However, Boral will ensure inspection	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>Refer to Table 1 in the Conditions of Consent – Maximum Allowable Noise Contribution Limit (dB(A))</i>		hatches are closed when not in use and apply cladding/noise absorbing material in certain areas.			
2.4	The maximum allowable noise contributions identified in condition 2.3 apply under all meteorological conditions, except:	Documents 5 and 6	This condition has been superseded by the current Environment Protection License and noise conditions contained in consent 401-11-2002 MOD15			
	<i>a) during wind speeds greater than 3 ms-1 measured at 10 metres above ground level, or</i>			Not Applicable	Not Applicable	Not Applicable
	<i>b) during temperature inversion conditions of greater than 3°C/100m and wind speeds of greater than 2 ms-1 measured at 10 metres above ground.</i>			Not Applicable	Not Applicable	Not Applicable
2.5	For the purpose of assessment of noise contributions specified under condition 2.3, noise from the cement works upgrade shall be:	Document 6	Boral undertake an annual Noise Assessment Report using an external noise consultant. These reports satisfy these conditions; however it is recommended that the noise report specifies that it is being prepared to satisfy these conditions.  This condition has been superseded by the current Environment Protection License and noise conditions contained in consent 401-11-2002 MOD15	Compliant	Compliant	Compliant
	<i>a) measured at the most affected point on or within the receptor site boundary or at the most affected point within 30 m of the dwelling (rural situations), where the dwelling is more than 30 m from the property boundary, and</i>	Document 6		Compliant	Compliant	Compliant
	<i>b) where applicable, subject to the modification factors provided in Section 4 of the New South Wales Industrial Noise Policy (EPA, 2000).</i>	Document 6		Compliant	Compliant	Compliant
2.6	<i>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 accepted by the EPA shall be submitted to the Director-General prior to the implementation of the assessment method.</i>	Document 6	The Audit assessment validated that no alternative noise assessment method has been required. The INP provides alternate methods for determining noise compliance, in which the site has used Method 2 for CM 7 “measuring the noise emissions from each of the premises at reference locations and then calculating the noise-emission levels back to the receiver”.  This method has been used in previous AEMRs for the site and results have been accepted by DPHI.	Compliant	Compliant	Compliant
2.7	<b>Air Quality</b>	Documents 7 and 11	Test results from annual stack monitoring of CM7 continued compliance with the total solid particle license limit of 20 mg/m <sup>3</sup> .	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>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.</i>		An EPA-approved Dust Management Plan has been implemented since September 2011 and updated in April 2023 Dust is controlled through the implementation of the Dust Management Plan. Sound control measures are in place and this is supported by monitoring data, therefore operations will continue.			
2.8	<i>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.</i>	Doc 4 Appendix 9, 51 Site inspection	Driver Code of Conduct for Truck and Heavy Vehicles Operators Version 7 of the now named Vehicle and Pedestrian Management Plan. Driver codes outline the driving behaviour expected of all Workers (employees and contractors). All transport contractors are made aware of this requirement during site inductions. Section 3 of the Berrima Works Driver Code of Conduct for Truck and Heavy Vehicles Operators defines all requirements for all drivers of heavy vehicles to ensure they cover their loads to prevent spillage Truck Operators were observed complying with this condition, as trucks were sighted with covers on their load and were utilising the truck wash facilities prior to leaving the site.	Compliant	Compliant	Compliant
2.9	<i>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.</i>	Doc 4 Appendix 9, 51 Site inspection	Boral Cement continues to investigate opportunities to reduce Fugitive Dust management throughout the site. Paved roads are continually swept with a mechanical road sweeper. Unpaved roads are watered with recycled water. Boral Cement continues to investigate opportunities to reduce Fugitive Dust throughout the site. Issues are managed through immediate corrective action and reporting through the Incident Management Database SIMS.	Compliant	Compliant	Compliant
2.10	<i>The Applicant shall design, construct, operate and maintain the cement works upgrade to ensure that total solid particle emission from</i>	Doc 1- Figure 12 Doc 2- Figure 12 Doc 3- Figure 12	Annual stack testing of CM7 for the last 3 reporting periods confirm compliance with CM7 emission limit. All test certificates sighted were NATA endorsed.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>the exhaust stack on CM7 (EPA Identification Point 10) does not exceed 20 mg/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.</i>					
2.11	<b>Water Quality Impacts</b> <i>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.</i>	Previous audits	All Construction work on the Berrima site had ceased prior to the last three reporting periods.	N/A	N/A	N/A
2.12	<b>Erosion and Sediment Control</b> <i>All construction vehicles exiting the site, having had access to unpaved areas, shall depart via a wheel-wash facility.</i>	Previous audits	All Construction work on the Berrima site had ceased prior to the last three reporting periods.	N/A	N/A	N/A
2.13	<i>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.</i>	Previous audits	Since Construction has ceased prior to this reporting period and the ground had been stabilised and rehabilitated.	N/A	N/A	N/A
2.14	<b>Drainage and Stormwater</b> <i>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.</i>	Previous audits	All works associated with the cement works upgrade were complete prior to this audit period.	N/A	N/A	N/A

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
2.15	<b>Traffic and Transport</b> <i>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.</i>	Previous audits	This condition refers to construction rather than the ongoing operation and therefore does not apply to this reporting period. Compliance has been demonstrated in the previous AEMRs.	N/A	N/A	N/A
2.16	<i>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 onsite 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.</i>	Previous audits	All works associated with the cement works upgrade were complete prior to this audit period.	N/A	N/A	N/A
2.17	<i>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 cement works upgrade.</i>	Site Inspection	Boral Cement Berrima have installed appropriate advance “Warning Signage” along Taylor Avenue. The signs were installed and signed off prior to operations commencing but appear to have been removed during recent roadworks but have now been reinstated.	Compliant	Compliant	Compliant
2.18	<b>Waste Management Impacts</b> <i>The Applicant shall not cause, permit or allow any waste generated outside CM7 to be received at CM7 for storage, treatment, processing, reprocessing or disposal, or any waste generated at CM7 to be disposed of at CM7, except as expressly permitted by a licence under the Protection of the Environment</i>	Doc 10	No waste generated outside CM7 has been received for storage, treatment, processing, reprocessing or disposal, nor has any waste generated at CM7 or been disposed of, at CM7.  The Waste Management Plan was updated in May 2023 (Version 7)	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>Operations Act (POEO) 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.</i>					
2.19	<b>Visual Amenity</b> <i>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.</i>	Doc 3 Table 23	The cement works upgrade was complete prior to this audit period. There have been no complaints regarding external lighting during the last three reporting periods Management measures are sufficient to keep light spill from the site within acceptable limits – a minimum amount of lights must be on during night-time for safety. Cement Mill 7 is a one-story building which does not spill excess light.	Compliant	Compliant	Compliant
3	<b>Environmental Monitoring and Auditing</b>					
3.1	<b>Air Quality</b> <i>During operation of the cement works upgrade, the Applicant shall periodically determine the pollutant concentration for total solid particles (mg/m3) at the main exhaust stack for CM7 (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.</i>	Docs 1-3 Table 13, Figure 12 Doc 11 Table 7	The cement works upgrade was complete prior to the timing of this audit.  Stack emission monitoring for Kiln 6 for standard fuels was conducted by Ektimo in July, November 2019 and February, April 2020 in accordance with the sampling methods in EPL 1698. Reports demonstrated compliance with the emission limits for standard fuels for all monitoring parameters. Table 7 of the AQMP indicates that the sampling method TM-15 is used for solid particle testing.	N/A	N/A	N/A
3.2	<i>If the results of the monitoring required under condition 3.1 and EPL 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 1698, the Applicant shall provide</i>	Docs 1-3 Table 12	Annual stack testing of CM7 for the three reporting periods confirms compliance with Condition 2.10 and EPL 1698 No remedial measures were required.	Compliant	Compliant	Compliant



Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<p>details of remedial measures to be implemented to reduce air quality limits to the levels required.</p> <p>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.</p>					
3.3	<p><b>Auditing</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></p> <p>a) <i>be carried out in accordance with ISO 19011: Guidelines for Quality and/or Environmental Management Systems Auditing</i></p> <p>b) <i>assess compliance with the requirements of this consent, and other licences and approvals that apply to the cement works upgrade</i></p>	<p>Previous audits</p> <p>This document</p> <p>This document</p>	<p>The Compliance Audit of CM7 and K6 was completed in November 2020 by Robert Byrnes with approval given by DPHI. All requirements defined in sections a, b, c and d of this Condition were audited and found to meet all requirements. The recommendations made in the 2017 audit included:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Ensure Incident Reports remain open until all key stakeholders have completed their corrective actions and ongoing monitoring is undertaken to verify that all corrective/preventative actions were effective to prevent further re-occurrences.</li> <li><input type="checkbox"/> Ensure Register is revised when changes occur and communicated to all Workforce and key Stakeholders. (The Auditor observed the Legal Register had not been updated with recent changes to the Environment)</li> <li><input type="checkbox"/> The following deficiencies require attention; <ul style="list-style-type: none"> <li>▪ Potential for worker's exposure to silica quartz in CM7 Building</li> <li>▪ L7 – Concrete mound/hump – potential for workers to trip</li> <li>▪ Clinker Gallery on top of A Frame – door left open allowing continual dust to escape, especially when SE or southerly wind impacts onto village.</li> </ul> </li> </ul>	<p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p>	<p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p>	<p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p>

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	c) <i>assess the cement works upgrade operations against the predictions made and conclusions drawn in the SEE and other documents listed under conditions 1.1 a) to 1.1 f), inclusive; and</i>	This document	<ul style="list-style-type: none"> <li>▪ S7U Silos – small amounts of dust leakage from Building.</li> <li>▪ High points are a problem –dust escaping from the cooling air vents.</li> <li>▪ Clinker Mole door left open instead of closed</li> <li>▪ Build-up of product on floors requires cleaning to prevent dust escaping.</li> </ul>	Compliant	Compliant	Compliant
	d) <i>review the effectiveness of the environmental management of the cement works upgrade, including any environmental impact mitigation works.</i>	This document	<ul style="list-style-type: none"> <li><input type="checkbox"/> Ensure all Issues identified as Priority 1 and Priority 2 in Section 3 of the Essential Fire Safety Measure Assessment Report No 3863772, are actioned immediately to avoid Council &amp;/or Fire and Rescue NSW finding the signatory guilty of an offence under the Regulations by not taking action.</li> <li><input type="checkbox"/> Ensure all follow-up Actions raised during HSE Inspections are effectively actioned. Ensure each element of the ISO 14001:2004 Standard is to be audited by Senior HSE Auditors during 3 year planned intervals.</li> <li><input type="checkbox"/> Ensure Management Reviews are conducted in accordance with annual planned intervals to avoid non-conformances being raised.</li> </ul> <p>The above listed recommendations were actioned over the 2018 reporting period.</p>	Compliant	Compliant	Compliant
3.4	<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>	Interview	At the time of this Audit - no action was required in any of the three reporting periods.	Compliant	Compliant	Compliant
4	Community Information and Involvement					
4.1	<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</i>	This audit	Where appropriate, documents are made available electronically via the Boral Cement website.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>documents at the site for inspection by visitors, and in an appropriate electronic format on the Applicant's internet site, should one exist.</i>		All non-confidential documentation in hard copy format, is made available for inspection at the Boral Cement Berrima site on request.			
4.2	<b>Complaints Procedure</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>	Site inspection Document 51	The site complaints procedure continues to be effectively managed. Contact details are sign-posted at each site entrance and include a contact telephone number, postal address and email address. Contact details are also provided on the Boral website.  The complaints register at the time of this audit was only updated to May 2019 online. The register was sighted and the updated version was to be uploaded.	Compliant	Compliant	Compliant
	<i>a) a telephone number on which complaints about operations on the site may be registered</i>			Compliant	Compliant	Compliant
	<i>b) a postal address to which written complaints may be sent; and</i>			Compliant	Compliant	Compliant
	<i>c) an email address to which electronic complaints may be transmitted,</i>			Compliant	Compliant	Compliant
4.3	<i>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:</i>	Docs 1-3 Appendix B	Complaints are addressed in AEMRs and are attached as Appendix 2 to the AMER documents. The site Complaint Register is up to date in all 3 AEMR documents reviewed. Noise and dust complaints are forwarded to EPA in the Annual Returns and the DPHI in the AEMRs. Boral Cement Berrima continues to investigate strategies to actively reduce its dust and noise impacts on the local community as per the Management Plans.  It was not clear if the time of complaint was recorded in every case	Compliant	Compliant	Compliant
	<i>a) the date and time, where relevant, of the complaint;</i>			Compliant	Compliant	Compliant
	<i>b) the means by which the complaint was made (telephone, mail or email);</i>			Compliant	Compliant	Compliant
	<i>c) any personal details of the complainant provided, or if no details were provided, a note to that effect;</i>			Compliant	Compliant	Compliant
	<i>d) the nature of the complaint;</i>			Compliant	Compliant	Compliant
	<i>e) any action(s) taken by the Applicant in relation to the complaint, including any follow-up contact with the complainant; and</i>			Compliant	Compliant	Compliant
	<i>f) if no action was taken by the Applicant in relation to the complaint, the reason(s) why no action was taken.</i>			Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
5	Environmental Management					
5.1	<p><b>Construction Environmental Management Plan</b>  <i>The Applicant shall prepare and implement a Construction Environmental Management Plan (CEMP) 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:</i></p>					
	a) <i>a description of all activities to be undertaken on the site during construction, including an indication of stages of construction, where relevant</i>	Previous audits	All construction activities were completed prior to this reporting period.	N/A	N/A	N/A
	b) <i>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</i>	Previous audits	All construction activities were completed prior to this reporting period.	N/A	N/A	N/A
	c) <i>specific consideration of measures to address any requirements of the Department and the DEC during construction</i>	Previous audits	All construction activities were completed prior to this reporting period.	N/A	N/A	N/A
	d) <i>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</i>	Previous audits	All construction activities were completed prior to this reporting period.	N/A	N/A	N/A
	e) <i>a description of the roles and responsibilities for all relevant employees involved in construction; and</i>	Previous audits	All construction activities were completed prior to this reporting period.	N/A	N/A	N/A
	f) <i>the Management Plans listed under condition 5.2 of this consent.</i>	Previous audits	All construction activities were completed prior to this reporting period.	N/A	N/A	N/A
	<i>The CEMP shall be submitted for the approval of the Director-General prior to the</i>	Previous audits	All construction activities were completed prior to this reporting period.	N/A	N/A	N/A

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>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.</i>					
5.2	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:	Previous audits	All construction activities were completed prior to the last three reporting periods. Boral Cement Berrima continues to monitor levels of noise emissions from its operations.			
	a) <b>A Noise Management Plan</b> 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:	Previous audits	Noise monitoring is conducted annually and contained in the AEMR each year. Previous audits have demonstrated compliance with this condition during the construction works covered by this consent. These conditions are non longer relevant to the current period of this audit.	N/A	N/A	N/A
	i. identification of all major sources of noise that may be emitted as a result of the construction of the cement works upgrade	Previous audits		N/A	N/A	N/A
	ii. specification of the noise criteria as it applies to the particular activity	Previous audits		N/A	N/A	N/A
	iii. procedures for the monitoring of noise emissions from the cement works upgrade, in accordance with any requirements of the DEC	Previous audits		N/A	N/A	N/A
	iv. protocols for the minimisation of noise emissions	Previous audits		N/A	N/A	N/A

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	v. <i>description of procedures to be undertaken if any non-compliance is detected.</i>	Previous audits		N/A	N/A	N/A
	b) A <b>Traffic Management Plan</b> 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:	Previous audits	All construction activities were completed prior to the last three reporting periods.			
	i. <i>details of traffic routes used by construction vehicles</i>	Previous audits		N/A	N/A	N/A
	ii. <i>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</i>	Previous audits		N/A	N/A	N/A
	iii. <i>minimum requirements for vehicle maintenance to address noise and exhaust emissions</i>	Previous audits		N/A	N/A	N/A
	iv. <i>speed limits to be observed along routes to and from the sites and within the site; and</i>	Previous audits		N/A	N/A	N/A
	v. <i>behaviour requirements for vehicle drivers to and from the site and within the site.</i>	Previous audits		N/A	N/A	N/A
	c) An <b>Erosion and Sedimentation Management Plan</b> 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:	Previous audits		Since all construction activities were completed prior to the last three reporting periods, IEC recommends the DPHI removes this condition out of the Consent as it refers to the original project construction and not to ongoing operations.		
	i) <i>details of erosion, sediment and surface water pollution control measures and practices to be implemented during construction of the cement works upgrade; and</i>	Previous audits	N/A		N/A	N/A

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>ij)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, 4th Edition, March 2004.</i>	Previous audits		N/A	N/A	N/A
5.3	The Applicant shall prepare and implement an <b>Operation Environmental Management Plan (OEMP)</b> 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:	Previous audits	The original compliance submission and approval of the OEMP was detailed in the 2007/2008 AEMR The OEMP was updated in April 2020 (Version 6) to address the outcomes of the MOD9 POPT, MOD 11 Hi-Cal and MOD 12 Isotainer and site noise limits.  The OEMP was further updated in May 2023 and addresses Mods 13 and 15 now as well.			
	<i>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, Licenses, approvals and consultations;</i>	Document 4 Sections 2.1, 2.2, 2.3		Compliant	Compliant	Compliant
	<i>b) a description of the roles and responsibilities for all relevant employees involved in the operation of the cement works upgrade;</i>	Document 4 Section 4		Compliant	Compliant	Compliant
	<i>c) overall environmental policies and principles to be applied to the operation of the cement works upgrade;</i>	Document 4 Section 3		Compliant	Compliant	Compliant
	<i>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;</i>	Documents 5, 7-11 Section 7		Compliant	Compliant	Compliant
	<i>e) management policies to ensure that environmental performance goals are</i>	Document 4 Section 3		Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<p><i>met and to comply with the conditions of this consent;</i></p> <p>f) <i>the Management Plans listed under condition 0 of this consent; and</i></p> <p>g) <i>the environmental monitoring requirements outlined under conditions 3.1 to 3.4 of this consent, inclusive.</i></p> <p>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 cement works 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 as soon as practicable.</p>	<p>Document 4 Appendices</p> <p>This document Document 11</p> <p>Previous audits</p>	<p>The OEMP was submitted prior to the cement works upgrade and before the time of this audit.</p>			
				Compliant	Compliant	Compliant
				Compliant	Compliant	Compliant
				Compliant	Compliant	Compliant
5.4	<p>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</p>	<p>Previous audits</p>	<p>No submissions have been made by Boral Cement</p>	N/A	N/A	N/A
5.5	<p>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:</p>	<p>Previous audits</p>				
	<p>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:</p>	<p>Document 5</p>	<p>The Berrima Noise Management Plan (NMP); CMT-ENV-004 version 9 was last updated in May 2023</p> <p>External noise monitoring undertaken by Recognition research, for the last 3 reporting periods, adequately demonstrates Boral has continued a noise monitoring program to identify the sources of site noise that contribute to off-site noise complaints and has</p>			



Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	i) <i>identification of all major sources of noise that may be emitted as a result of the operation of the cement works upgrade;</i>	Section 6.1	implemented a number of improvement plans since the last audit, to address these concerns.	Compliant	Compliant	Compliant
	ii) <i>specification of the noise criteria as it applies to the particular activity;</i>	Section 5.1		Compliant	Compliant	Compliant
	iii) <i>procedures for the monitoring of noise emissions from the cement works upgrade, in accordance with any requirements of the DEC;</i>	Section 5.2		Compliant	Compliant	Compliant
	iv) <i>protocols for the minimisation of noise emissions;</i>	Sections 6.2 and 6.3		Compliant	Compliant	Compliant
	v) <i>description of procedures to be undertaken if any non-compliance is detected.</i>	Section 8.1		Compliant	Compliant	Compliant
	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:	Document 11	Air Quality monitoring and reporting to the EPA continues to occur in each Licensing period. The Air Quality Management Plan (Version 7) May 2023 includes the following requirements: i. identification of all major sources of particulate and gaseous 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 and gaseous emissions from the cement works upgrade, in accordance with any requirements of the EPA; iii. procedures for the minimisation of particulate and gaseous 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. measures to consider and manage the cumulative impact of operating both kilns simultaneously; and vi. description of procedures to be undertaken if any non-compliance is detected.			
	i. <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;</i>	6.4(b)(i): 5.1 (Emission sources), Table 4		Compliant	Compliant	Compliant
	ii. <i>monitoring of particulate emissions from the cement works upgrade, in accordance with any requirements of the DEC;</i>	6.4(b)(ii): 5.2 (Monitoring/discharge locations and Figure 2), 5.2 (Stack emission limits), 5.2 (Monitoring requirements)		Compliant	Compliant	Compliant
	iii. <i>procedures for the minimisation of particulate emissions from the cement</i>	6.4(b)(iii): 5.2 (Air quality management controls)		Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>works upgrade, and the reduction of these emissions over time, where appropriate;</i>					
	<i>iv. protocols for regular maintenance of process equipment to minimise the potential for dust emissions;</i>	6.4(b)(iv): Work instructions not attached to AQMP		Compliant	Compliant	Compliant
	<i>v. description of procedures to be undertaken if any non-compliance is detected.</i>	6.4(b)(v): 5.2 (Air quality management controls), dust management plan		Compliant	Compliant	Compliant
	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.	Document 9	A Water Supply Strategy was initially prepared in 2003 and is now incorporated into the Water Management Plan. Water Management Plan was last reviewed in May 2023 and is part of Berrima's EMP and the plan/s are required to be formally reviewed 3 yearly.	Compliant	Compliant	Compliant
	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:	Document 8	The Traffic Management Plan was last updated in May 2023. Appendix 2 outlines the designated Front End Loader and Bulk Truck Traffic Routes. The Roles and Responsibilities Section 3 of the plan summarises the personnel code of conduct to outline conditions d)iii and d)iv			
	<i>i) details of any restriction to traffic routes;</i>	Appendix 2 of OEMP	The transport code of conduct is also supplied in Appendix 9 of the OEMP	Compliant	Compliant	Compliant
	<i>ii) minimum requirements for vehicle maintenance to address noise and exhaust emissions;</i>	Boral Driver Guide on intranet site	Light vehicles are to be serviced and maintained by the regular driver/responsible person in accordance with the Boral Driver Guide (available on the intranet: <a href="http://intranet.boral.com.au/Shared_Business_Services/docs/TFM-Boral-driver-guide.pdf">http://intranet.boral.com.au/Shared_Business_Services/docs/TFM-Boral-driver-guide.pdf</a> )	Compliant	Compliant	Compliant
	<i>iii) speed limits to be observed along routes to and from the sites and within the site; and</i>	Section 4.11		Compliant	Compliant	Compliant
	<i>iv) behaviour requirements for vehicle drivers to and from the site and within the site.</i>	Section 3		Compliant	Compliant	Compliant
5.6	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	Docs 4-11	Boral Cement had undertaken a full review of their site OEMP and the associated specific EMPs (Water, Air, Noise, Waste, Dust and Traffic, Emergency, PIRMP) in May 2023. The most recent OEMP and associated appendices are all available on the Boral webpage.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	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.					
6.0	<b>Environmental Reporting</b>					
6.1	<b>Incident Reporting</b> 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.	Interview, Previous audits	All Incidents are captured in an online Incident Report Register called SEQUENCE At the time of this audit there had not been any environmental incidents associated with Cement Mill 7.	Compliant	Compliant	Compliant
6.2	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.	Interview, Previous audits	The Director General has not required Boral Cement to address any incidents relating to Cement Mill 7 during the three reporting periods nor at the time this audit was undertaken.	Compliant	Compliant	Compliant
6.3	<b>Annual Performance Reporting</b> 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	Previous audits	An AEMR is submitted by Boral on an annual basis to cover the period from 1 <sup>st</sup> May to 30 <sup>th</sup> April. The 2020, 2021 and 2022 AEMRs include the information required to satisfy condition 6.3.	Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	this consent and other Licenses and approvals relating to the cement works upgrade. The AEMR shall include, but not necessarily be limited to:					
	a) <i>details of compliance with the conditions of this consent</i>	Doc 1- 3 Section 7		Compliant	Compliant	Compliant
	b) <i>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</i>	Doc 1- 3 Appendix B		Compliant	Compliant	Compliant
	c) <i>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</i>	Doc 1- 3 Section 5		Compliant	Compliant	Compliant
	d) <i>results of all environmental monitoring required under this consent and other approvals, including interpretations and discussion by a suitably qualified person</i>	Doc 1- 3 Section 5		Compliant	Compliant	Compliant
	e) <i>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</i>	Doc 1- Doc 2- Doc 3-		Compliant	Compliant	Compliant
	f) <i>identification of trends in monitoring data over the life of the cement works upgrade to date</i>	Doc 1- 3 Section 5		Compliant	Compliant	Compliant
	g) <i>a list of variations obtained to approvals applicable to the cement works upgrade and to the site during the preceding twelve-month period; and</i>	Doc 1- Doc 2- Doc 3-		Compliant	Compliant	Compliant

Condition	Requirement	Evidence Collected	Audit Findings/ Recommendations	Compliance Status		
				2021	2022	2023
	<i>h) environmental management targets and strategies for the following twelve-month period, taking into account identified trends in monitoring results.</i>	Doc 1- 3 Section 8		Compliant	Compliant	Compliant
6.4	<b>Annual Performance Reporting</b> 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.	Correspondence sighted	All Boral's external reporting obligations have been met on time, including the annual report to EPA and the AEMRs to DPHI.	Compliant	Compliant	Compliant
6.5	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.		No other requests have been submitted to Boral in relation to this Condition for Cement Mill 7 There were no actions identified by the DPHI after submitting the AEMRs prepared for the development consents for Kiln 6 and Mill 7 for the 2021, 2022 and 2023 reporting periods.	Compliant	Compliant	Compliant
6.6	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.		To date, no submissions were made to the Director-General for consideration.	Compliant	Compliant	Compliant

## Appendix A3 - Statement of Environmental Effects (SEE): MOD13 Chloride Bypass System and Use of Woodchips

	Compliance	Status
1.	The combined annual usage of AKF5, Wood Waste, RDF and Wood Chips will not exceed 100 000t.	Compliant
2.	Construction activities of the proposed CBS area would generate no construction traffic beyond the limits of the site.	Compliant
3.	Construction waste would be minimal and will be managed in accordance with the contractor's construction management plan with a requirement to minimise waste generation through avoidance, reuse and recycling, with appropriate segregation, and disposal of residual waste to appropriate offsite licensed facilities.	Compliant
4.	A review of the existing management plans will be completed, and updates implemented where appropriate, to ensure the operational phase impacts of the proposal are appropriately reflected in the site's documentation.	Compliant
5.	Site preparation activities would involve a minimal amount of earthworks with any surplus spoil being reused on site. Construction waste would be minimal and will be managed in accordance with the contractor's construction management plan with a requirement to minimise waste generation through avoidance, reuse and recycling, with appropriate segregation, and disposal of residual waste to appropriate offsite licensed facilities.	Compliant
6.	The introduction of the CBS system will not alter traffic volumes or rates at the site.	Compliant
7.	The proposal will have a positive impact on total GHG emissions from the facility as it will allow the increase use of SWDF and the introduction from time to time of fire impacted plantation forestry woodchips as fuel which will reduce the ongoing reliance of coal, will not have an impact on greenhouse gas emissions out of the facility.	Compliant
8.	By increasing usage of SWDFs to the consented volumes, the site will reduce consumption of coal by approximately 22 500t annum. 22 500t of coal consumed would generate 42 525t of CO <sub>2</sub> e. Depending on the percentage of RDF, WW and Woodchip consumed, this could be reduced by up to 42 525t of CO <sub>2</sub> e per annum.	Compliant
9.	The proposed modification would not result in significant environmental impacts to nearby sensitive receivers.	Compliant

## Statement of Environmental Effects (SEE): MOD14 SWDF & Delivery Variation Project

	Compliance	Status
1.	The new carbon reduction targets mean Boral is committed to net zero carbon emissions by no later than 2050,	Not Triggered
2.	The modification proposes a new haul road access from the Cement Works west to the Old Hume Highway	Not Triggered
3.	Increased storage would improve operational efficiencies within the site, while allowing for variable supply.	Not Triggered
4.	The proposed modification would also reduce vehicle movements through New Berrima in proximity to local residences along Taylor Avenue.	Not Triggered
5.	The site has an established community liaison group (CLG), which meet bi-annually to discuss all matters relating to the activities at the site	Not Triggered
6.	Berrima Cements Works also holds a 'Whole of Community' meeting on an annual basis	Not Triggered
7.	Increase the consumption of SWDF materials within the Kiln (increase to the tonnes per annum limitations for specific fuel types);	Not Triggered
8.	Increase SWDF truck deliveries and hours	Not Triggered
9.	This modification proposes to increase the SWDF Consumption limit to 250,000 tpa.	Not Triggered

10.	Wood waste- Increase combined cap to 250,000. Standalone cap to increase to 100,000.	Not Triggered
11.	RDF- Increase combined cap to 250,000. Standalone cap to increase to 200,000.	Not Triggered
12.	Woodchips- No longer contain within the combined cap. Standalone cap to increase to 150,000, with definition extended to include sawdust.	Not Triggered
13.	Undertake trial in Feb 2022 using the existing SWDF sheds and feeding infrastructure and if successful AKF5 will be stored within the existing and proposed SWDF sheds and fed using the same SWDF infrastructure.	Not Triggered
14.	Increased truck movements via new access route from 6,285 trucks p.a to 2,100 trucks p.a for kiln fuels (coal) (change from 22 to 12 trucks per day)	Not Triggered
15.	Increased truck movements via new access route from 4,166 trucks p.a to 10,415 trucks p.a for kiln fuels (SWDF) (change from 16 to 39 trucks per day)	Not Triggered
16.	Increased truck movements via new access route from 0 trucks p.a to 1,250 trucks p.a for kiln fuels (AKF-5)	Not Triggered
17.	The haul road usage will improve amenity and road safety in New Berrima, with reduced noise and emissions from trucks.	Not Triggered
18.	The haul road will reduce noise impacts for sensitive receivers along Taylor Avenue, lifting the constraint to 24-hour operations for trucks transporting SWDF.	Not Triggered
19.	Two additional storage sheds are proposed for construction, with a combined additional floor space of 1,968 m2. The additional sheds will be used for SWDF storage and handling, as well as for the potential, storage, handling, and feed infrastructure associated with AKF-5.	Not Triggered
20.	The operations will remain substantially the same, with the proposed MOD only resulting in an increase to storage and handling facilities, and the use of a new site access to facilitate the increased consumption of SWDF at the site while reducing noise and traffic on surrounding properties.	Not Triggered
21.	The proposed modification is not anticipated to create any significant operational impacts associated with environmental matters including air quality, noise and vibration, waste management, traffic, Aboriginal cultural heritage, or biodiversity.	Not Triggered
22.	The CALPUFF emissions estimation and the dispersion modelling result show that the new site access will not achieve a reduction in vehicle kilometres travelled on site, but improvement in air quality for the New Berrima township is demonstrated.	Not Triggered
23.	The Dust Management Plan mentions a street sweeper be regularly used for maintenance of the sealed internal haul roads.	Not Triggered
24.	The off site traffic noise scenario predicts the proposed modification primarily reduces the existing road traffic noise levels at residences on Taylor Avenue by around 2 dB(A) during the daytime and 1 dB(A) at night.	Not Triggered
25.	During the construction and operational phases of the haul road, all ESC devices will require on-going maintenance to ensure they remain fully operational. All ESC measures will be maintained in a functioning condition until individual areas have been deemed 'successfully' sealed, stabilised, or rehabilitated. If any of the devices are seen to have a reduced level of service or is damaged in anyway, they are to be repaired immediately with the appropriate reporting documented filed and issued.	Not Triggered
26.	Sediment build up within the sediment control measures will be regularly removed. If this sediment is not suitable for reuse, then it shall be disposed of in a suitable and approved manner. Where significant erosion is observed to be occurring on a regular basis, additional controls will be implemented.	Not Triggered
27.	Temporary stockpiling of surplus materials for use in later stages;	Not Triggered
28.	Building waste materials shall be reused, recycled, or disposed to approved landfill sites;	Not Triggered
29.	Store waste on site appropriately to prevent cross-contamination and guarantee the highest possible reuse value;	Not Triggered
30.	Consider the potential of any new materials to be reused and recycled at the end of the proposed modification's life;	Not Triggered

31.	Retain used crates for storage purposes unless damaged;	Not Triggered
32.	Recycle cardboard, glass, and metal waste;	Not Triggered
33.	Recycle or dispose of solid waste timber, brick, concrete, asphalt, and rock, where such waste cannot be re-used on site, to an appropriately licenced construction and demolition waste recycling facility or an appropriately licenced landfill; and	Not Triggered
34.	Dispose of all garbage via a council approved system.	Not Triggered
35.	Waste materials from site preparation and construction activities are to be separated at the source where practical and stored separately on-site.	Not Triggered
36.	Documentation, such as receipts or weighbridge docket, for the transport and disposal of waste and recycling materials from the site must be retained	Not Triggered
37.	In the unlikely scenario that excavated soils are sent off-site for disposal, the material must be classified in accordance with the Waste Classification Guidelines and Protection of the Environment Operations (Waste) Regulation 2014 (Waste Regulation 2014). Sampling must be undertaken, and waste classification report prepared by a suitably qualified environmental consultant as per section 5.5.3.4 of the SEE	Not Triggered
38.	In accordance with best practice waste management, standard signage is to be posted in all waste storage and collection areas. All waste containers should be labelled correctly and clearly to identify stored materials.	Not Triggered
39.	Records of waste volumes recycled, reused or contractor removed are to be maintained. This can include docket or receipts verifying recycling and disposal. This evidence should also be presented to regulatory bodies when required.	Not Triggered
40.	Daily visual inspections of waste storage areas will be undertaken by site personnel and inspection checklists and logs recorded for reporting to the Site Manager on a weekly basis or as required. These inspections will be used to identify and rectify any resource and waste management issues.	Not Triggered
41.	Any Aboriginal objects are identified during the proposed modification, these will need to be managed through an Unexpected Finds Protocol. Should Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations.	Not Triggered
42.	Air quality: To reduce wheel generated dust emissions from sealed roads, road cleanliness is important and surface silt levels need to be kept low from carry out from less clean areas and spills. The Dust Management Plan mentions a street sweeper be regularly used for maintenance of the sealed internal haul roads. This should be reviewed and optimised, and consideration should be given to updating the TARP to list street sweeping as part of the 'Level 1' trigger dust mitigation strategy actions.	Not Triggered
43.	Soil and water: - Minimising the disturbance footprint.	Not Triggered
44.	- Undertake any high risk short-term ground disturbance works during a period when good weather has been forecast;	Not Triggered
45.	- Staging the construction works (where possible) to minimise the area of disturbance at any one time and to reduce the potential for erosion to occur;	Not Triggered
46.	- Undertake any high risk short-term ground disturbance works during a period when good weather has been forecast;	Not Triggered



47.	- Separation and/or diversion of 'clean' water catchment runoff from disturbed runoff areas to minimise sediment-laden water volumes for management (where possible). This may involve the construction of small temporary bunds to divert upslope clean water runoff where this is required;	Not Triggered
48.	- Staging the construction works (where possible) to minimise the area of disturbance at any one time and to reduce the potential for erosion to occur.	Not Triggered
49.	- Minimising soil erosion (i.e. rehabilitation, drainage, and erosion control measures) at the source, rather than trapping resultant sediment. Where this is not practicable, then all reasonable measures will be made to trap sediment by implementing sediment control measures compliant with the required treatment standards. ESC measures shall be installed prior to any ground disturbance.	Not Triggered
50.	- Sediment fences will be installed to control sheet flow from the ground disturbance areas during the construction works. Check dams (such as sandbags, filter socks, coir logs, rock, etc.) will be used to trap mobilised sediment in concentrated flow paths and where sediment fences cannot be installed due to impermeable surfaces. The check dams shall be installed and removed as required in relation to the staging of the ground disturbance works.	Not Triggered
51.	- Sealing or revegetation of disturbed areas as soon as possible.	Not Triggered
52.	- Stabilised rock pads will be installed at all site entry and exit points during the construction works. Where this is not possible, visual inspections of all vehicles leaving the site will be undertaken and where it is deemed possible that sediment could be tracked onto the adjacent streets the vehicles shall be washed down in a suitable location such that the wash down water reports to appropriate sediment controls. Street sweeping will be used as an additional contingency measure where sediment is observed on the adjacent streets.	Not Triggered
53.	- Soil stockpiles will be placed in areas away from roadways and other drainage lines. Suitable sediment control measures will be installed downslope of soil stockpiles and upslope clean water runoff diverted (where possible).	Not Triggered
54.	- Any liquid wastes, fuels, and oils stored on-site will be sufficiently bunded to contain any potential spills. Accidental spillage or poor management of fuels, oils, lubricants, hydraulic fluids, solvents, and other chemicals during the construction phase will be controlled through spill management actions (including the availability of spill kits) to prevent water quality impacts. Captured liquid wastes, fuels, and oils should be pumped out by a liquid waste contractor and disposed of at an appropriately licenced facility.	Not Triggered
55.	- Any sodic soils encountered on site need to be managed by the application of Gypsum at a rate of approximately 1 kg/m <sup>2</sup>	Not Triggered
56.	- Bitumen sealing of the haul road with sufficient road crossfall to safely convey runoff from the road surface.	Not Triggered
57.	- Adequate drainage design including appropriate longitudinal and lateral water conveyance structures. Culvert structures will be installed beneath the haul road, as required, to safely convey upslope runoff past the haul road. Any culverts will include suitably designed and constructed headwalls/wingwalls and suitable downstream scour protection measures.	Not Triggered
58.	- Visual inspections of all vehicles leaving the site will be undertaken and where it is deemed possible that sediment could be tracked onto the adjacent streets the vehicles shall be washed down in a suitable location such that the wash down water reports to appropriate sediment controls (a designated wheel wash facility is recommended). Street sweeping will be used as an additional contingency measure where sediment is observed on the adjacent streets.	Not Triggered
59.	- All ESC devices structures will be inspected weekly and following significant rainfall events (i.e. > 10 mm in a 24 hour period).	Not Triggered

60.	- Sediment laden runoff in any site excavations shall be directed into a designated sump area, treated with an appropriate flocculating agent, trucked off site by a licensed contractor and be disposed of in a suitable manner. Runoff shall only be released offsite if it conforms with the following water quality requirements: <ul style="list-style-type: none"> <li>• Total Suspended Solids (TSS) less than 50 mg/l;</li> <li>• ph in the range 6.5 to 8.5 except where, and to the extent that, the natural receiving waters lie outside this range; and</li> <li>• No visible oil or grease.</li> </ul>	Not Triggered
61.	- During the construction works monitoring of any sediment laden runoff and creek flows is recommended during or immediately following rainfall and/or flow events. If the water quality requirements detailed above are exceeded then an investigation to determine the cause of the exceedance shall be undertaken with rectification measures carried out as required.	Not Triggered
62.	Waste Management: <ul style="list-style-type: none"> <li>- Develop a purchasing policy based on the approximate volumes of materials to be used so that the correct quantities are purchased.</li> </ul>	Not Triggered
63.	- Arrange for delivery of materials on an 'as needed' basis to avoid material degradation through weathering and moisture damage.	Not Triggered
64.	- Communicate strategies to handle and store waste to minimise environmental, health and amenity impacts.	Not Triggered
65.	- Select materials with a low environmental impact over the lifecycle of the building.	Not Triggered
66.	- Design the proposed modification to require standard material sizes or make arrangements with manufacturing groups for the supply of non-standard material sizes.	Not Triggered
67.	- Enough space should be for separate storage, for example, separate skip bins or appropriately managed stockpiles, for landfill waste, recyclable waste, reusable materials, excavation materials, and hazardous waste (if any).	Not Triggered
68.	- Documentation, such as receipts or weighbridge dockets, for the transport and disposal of waste and recycling materials from the site must be retained.	Not Triggered
69.	Aboriginal Heritage: <ul style="list-style-type: none"> <li>- The SSD modification is exempt from the provisions of the NPW Act. As such, if any Aboriginal objects are identified during the proposed modification, these will need to be managed through an Unexpected Finds Protocol. Should Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object, the archaeologist will provide further recommendations. These may include notifying Heritage NSW and Aboriginal stakeholders.</li> </ul>	Not Triggered
70.	- Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity, you must: <ul style="list-style-type: none"> <li>• Immediately cease all work at that location and not further move or disturb the remains;</li> <li>• Notify the NSW Police and Heritage NSW's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location;</li> <li>• Not recommence work at that location unless authorised in writing by OEH.</li> </ul>	Not Triggered
71.	- To ensure no impacts to local heritage items in the vicinity of works, lots identified as containing items of local heritage are to be detailed within any Construction Environment Management Plan (CEMP) as 'no-go zones.'	Not Triggered

## Statement of Environmental Effects (SEE): MOD15 AKF-5 Storage and Feeder Solution

	Compliance	Status
1.	Minimal construction shall occur on site owing to infrastructure being prefabricated off-site, accordingly minor ESC will be provided throughout construction and installation phases.	Compliant
2.	A specific ESC Plan will be developed for the proposed works in accordance with the 'Blue Book' following obtaining the modified development consent and incorporated into the project Construction and Environmental Management Plan (CEMP).	Compliant
3.	Surface water impacts associated with the operational phase will relate to surface water runoff from the focus area. Runoff from the focus area will steadily flow into the proposed 162,000L fire water catchment bund and the proposed swale that shall direct flows into the existing settling ponds and sediment basins.	Compliant
4.	All ESC devices structures will be inspected weekly and following significant rainfall events (i.e. > 10 mm in a 24 hour period).	Compliant
5.	Runoff shall be directed into the existing sediment basins, following the stormwater control of the existing site operations. If runoff is required to be released from the site, it shall conform with the following water quality requirements: <ul style="list-style-type: none"> <li>• Total Suspended Solids (TSS) less than 50mg/l;</li> <li>• pH in the range of 6.5 to 8.5 except where, and to the extent that, the natural receiving waters lie outside this range; and</li> <li>• No visible oil or grease.</li> </ul>	Compliant
6.	During the construction and operational phases of the works associated with the proposed modification, all ESC devices will require on-going maintenance to ensure they remain fully operational and effective. If any of the devices are seen to have a reduced level of service or is damaged in anyway, they are to be repaired immediately with the appropriate reporting documented, filed, and issued. If significant erosion is observed to be occurring on a regular basis, additional controls will be implemented.	Compliant
7.	A minor deviation of the separation distance between the tyre storage bunkers and the existing SWDF storage shed has been identified by Minera (Minerva Group, 2022). The bunkers could be moved a small distance to ensure an 18 m separation distance is achieved, which would have minimal impact on the final design.	Compliant
8.	Effective management of construction materials and construction and demolition waste, including options for reuse and recycling where applicable and practicable, will be conducted. Only waste that cannot be cost effectively reused or recycled is to be sent to landfill or appropriate disposal facilities.	Compliant
9.	It is anticipated that the Project will provide bins and areas on-site for the sorting, recycling and disposal of building waste materials and indicated on the site plans or drawings. Enough space should be for separate storage, for example, separate skip bins or appropriately managed stockpiles.	Compliant
10.	Based on the proposed construction works, it is expected that no excavated soils will be disposed off-site. However, in the unlikely scenario that excavated soils are sent off-site for disposal, the material must be classified in accordance with the NSW EPA (2014) Waste Classification Guidelines and Protection of the Environment Operations (Waste) Regulation 2014.	Compliant
11.	Records of waste volumes recycled, reused or contractor removed are to be maintained. This can include dockets or receipts verifying recycling and disposal. This evidence should also be presented to regulatory bodies when required.	Compliant
12.	Daily visual inspections of waste storage areas will be undertaken by site personnel and inspection checklists and logs recorded for reporting to the Site Manager on a weekly basis or as required. These inspections will be used to identify and rectify any resource and waste management issues.	Compliant

## Appendix A4 – Environmental Protection License 1698 Cement Mill 7 & Kiln 6 Summary

Cement Mill 7 & Kiln 6 EPL 1698 Compliance Summary		2021	2022	2023
<b>1 License Details</b>		No Change	No Change	No Change
<b>2 Discharges to air and water and applications to land</b>		No Change	No Change	No Change
<b>3 Limit Conditions</b>				
L1	Pollution of waters	Compliant	Compliant	Compliant
L2	Load limits	Compliant	Compliant	Compliant
L3	Concentration limits	Compliant	Compliant	Non Compliant
L4	Volume and Mass Limits	Compliant	Compliant	Compliant
L5	Waste	Compliant	Compliant	Compliant
L6	Noise Limits	Compliant	Compliant	Compliant
<b>4 Operating Conditions</b>				
O1	Activities must be carried out in a competent manner	Compliant	Compliant	Compliant
O2	Maintenance of plant and equipment	Compliant	Non Compliant	Non Compliant
O3	Dust	Compliant	Non Compliant	Non Compliant
O4	Waste Management	Compliant	Compliant	Compliant
O5	Other Operating Conditions – O5.1 reinstatement of non-standard fuel use.	Compliant	Compliant	Compliant
<b>5 Monitoring and Recording Conditions</b>				
M1	Monitoring and recording conditions	Compliant	Compliant	Compliant
M2	Requirement to monitor concentration of pollutants discharged	Non Compliant	Non Compliant	Compliant
M3	Testing methods - concentration limits	Compliant	Compliant	Compliant
M4	Testing methods - load limits	Compliant	Compliant	Compliant
M5	Recording of pollution complaints	Compliant	Compliant	Compliant
M6	Telephone complaints line	Compliant	Compliant	Compliant
M7	Other monitoring & recording Conditions	Compliant	Compliant	Compliant
<b>6 Reporting Conditions</b>				
R1	Annual return documents	Compliant	Compliant	Compliant
R2	Notification of environmental harm	Compliant	Compliant	Compliant
R3	Written report	Compliant	Compliant	Compliant
<b>7 General Conditions</b>				
G1	Copy of licence kept at the premises or plant	Compliant	Compliant	Compliant
G1	Other general conditions	Compliant	Compliant	Compliant

<b>8 Pollution Studies and Reduction Programs</b>				
PRP 4	Analysis of CEMS Data	Compliant	Compliant	Compliant
PRP 5	NOx Reduction Investigation	Compliant	Compliant	Compliant
PRP 7	Project Specific Noise Limits	Compliant	Compliant	Compliant
PRP 9	Landscape & Rehabilitation Works; Stages 1, 2 and Stage 3	Compliant	Compliant	Compliant
<b>9 Special Conditions</b>				
E1	Resource Recovery Investigation – BOS Secondary Fines in Kiln No 6	Compliant	Compliant	Compliant
E2	Ambient Quality Monitoring Program	Compliant	Compliant	Compliant
E3	Coal Washery Reject Air Emissions Assessment Reporting (RRE 28/6/2012)	Compliant	Compliant	Compliant

## Appendix B – Site Inspection Photographs



Photo 1 – Bag filters and Chlorine Bypass System



Photo 2 - Kiln 6



Photo 3 - Kiln 6



Photo 4 – Oxy-Acetylene Storage



Photo 5 - Kiln 6 Furnace



Photo 6 - Mill 7



Photo 7 - Coal Reveal and Furnace



Photo 8 - Coal Reveal Hopper



Photo 9- Truck dumping coal into hopper



Photo 10 - Water Treatment Ponds



Photo 11 - Transformers



Photo 12 - Waste Concrete CO2 Trial



Photo 13 - Raw Material Storage Area



Photo 14 - Raw Material Storage Area



Photo 15 – Firefighting Water Supply Tank



Photo 16 – Pollution Control Pond



Photo 17 – Shale Quarry



Photo 18 – Shale Quarry Rehabilitated Batters



Photo 19 – Bank Rehabilitation



Photo 20 – African Boxthorn in Quarry

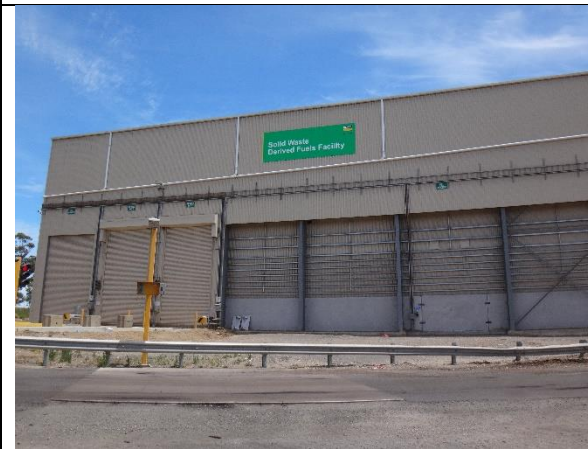


Photo 21- NSF Storage Facility



Photo 22- Water cart used for dust suppression



Photo 23 – Control Room



Photo 24 – Control Room





Photo 25 – Control Room



Photo 26 – Control Room



Photo 27 - Training Room



Photo 28 - Training Room

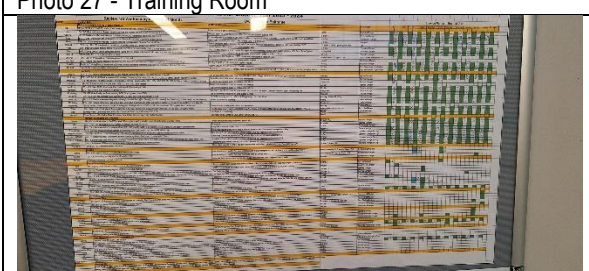


Photo 29 – Cement Works Environment Permit Planner



Photo 30 – Plant Management Organisation



Photo 31 – Plant from Berrim Road



Photo 32 – Cement Plant at night viewed 3 km to the east

## Appendix C – Documentation Sighted and Reviewed

The following documents have been used in the preparation of this audit.

ID #	Title	Date	Summary
1.	AEMR 2020-21	29/06/21	Actions required from previous AEMR, environmental performance, independent audit, incidents and non-compliances, activities to complete in next year
2.	AEMR 2021-22	28/06/22	Actions required from previous AEMR, environmental performance, independent audit, incidents and non-compliances, activities to complete in next year
3.	AEMR 2022-23	29/06/23	Actions required from previous AEMR, environmental performance, independent audit, incidents and non-compliances, activities to complete in next year
4.	Operations Environmental Management Plan	June-2023	Regulatory Requirements Strategic Framework for Environmental Management Roles and Responsibilities Communication and Reporting Incident and Non-Conformance Response Monitoring, Auditing and Review
5.	Noise Management Plan	May-2023	Noise Limits and Monitoring Managing Specific Noise Sources Implementation and Training Requirements Reporting and Record Keeping Reach Stacker Operator Code of Practice
6.	Noise Monitoring Report	30/11/21	Contribution Sound Level Objectives and Method of Measurement and Assessment Measured Sound Levels in 2019 Compared to Previous Measurements Residential Receiver Sound Levels - Review for 2019
7.	Dust Management Plan	May-2023	Current Dust Monitoring Dust Management Measures Landscaping and Revegetation Programme Communication, Reporting and Training
8.	Traffic Management Plan	June-2023	Traffic and Transport Impacts and Mitigation Strategies Roles and Responsibilities Health Safety and Environment Considerations Front End Loader and Bulk Truck Traffic Routes
9.	Water Management Plan	June-2023	Environment Management Structures Site Licences/ Approvals Description of Operations Site Water Usage Process Water Sources Stormwater Management Monitoring Implementation and Training Reporting/ Record Keeping
10.	Waste Management Plan	May-2023	Process Implementation and Training Record Keeping Legal References Site Waste Register
11.	Air Quality Management Plan	May-2023	Manufacturing Operations – Potential Emission Sources Emission Limits & Emission Monitoring Baseline Data Emission Estimations Used in Mod 9 Application Site Air Emission Register NSW Department of Planning and Environment POP Ongoing Use Letter

ID #	Title	Date	Summary
			Berrima Dust TARP
12.	Vehicle & Pedestrian Management Plan	June-2023	Health, safety and envt considerations Signage, markings & separation Speed limits, quarry and shale pad, workshop management Safe operating/approach distance, parking, horn signals Stock pile access, deliveries and loading Incident & near miss Auditing and emergency response
13.	Pollution Incident Response Management Plan	April-2023	Required under the Protection of the Environment Operations Regulation 2009
14.	SWDF Stakeholder Engagement & Consultation Plan	May-2023	IAP2 Spectrum Primary Stakeholders Channels, Timeframes and Key Messages Stakeholder enquiries/ complaints Monitoring, Adjusting and Measuring Success Anticipated Cost Implications of this Plan
15.	HiCal50 Modification Application	10/5/2019	Documents associated with MOD11 for the use of HiCal50 during start-up and shut down including SEE and correspondence
16.	Characterisation Sample Analysis as RecourceCo	16/06/18	RDF Waste Characterisation Results- Table
17.	Quality Assurance _ Control Plan	15/05/19	Veolia: Quality Assurance and Control Plan For the Horsley Park Waste Wood Derived Fuel Facility
18.	Characterisation sample analysis as per QAQC specification	1/06/18	Table: Wood Waste Characterisation Result
19.	Consolidated PoP Trial Six Month Report	28/02/19	Proof of Performance Trial Consolidated Six Month Report for Solid Waste Derived Fuels
20.	Appendix 3 – WW quality results including Dec' 18	28/02/19	<i>HRL Technology Group</i> Analysis of Fuels: Result Sheet – 27/09/18, 25/10/18, 22/11/18, 7/01/19, 25/01/19 ALS Certificate of Analysis- 27/09/18, 1/11/18, 22/11/2018, 31/12/18, 23/01/19
21.	Appendix 4 – RDF quality results including Dec' 18	28/02/19	<i>HRL Technology Group</i> Analysis of Fuel Sample: Result Sheet- 12/10/18, 15/10/18, 22/11/18, 7/01/19, 25/01/19 ALS Certificate of Analysis- 27/09/18, 22/10/18, 22/11/18, 31/12/18, 23/01/19
22.	ResourceCo RRF Quality Control and Assurance	Undated	Quality Control and Assurance: ResourceCo Resource Recovery Facility, Wetherill Park
23.	PRO - Management of Wood Waste Materials	13/05/19	Veolia Quality Assurance and Control Plan: Work Instructions and Procedures: Waste Wood Derived Fuel Material Quality Assurance Procedure
24.	DPE Letter Re Wood Waste Supplier Audit – Brandown	6/07/18	Boral Berrima Cement Works-Wood Waste Supplier Audit of Brandown Pty Ltd
25.	Appendix C - Supply Agreement Part C & F	Undated	Veolia QACP Appendix Items- Part C: Specification of Waste Wood Derived Fuel; Part F: Quality Assurance Activities
26.	PoPT RDF Monthly Reports	Oct 18- Jan 19	RDF Proof of Performance Trial Monthly Reports for Oct 18, Nov 18, Dec 18, Jan 19 (Separate Reports)
27.	PoPT Wood Monthly Reports	Oct 18- Jan 19	Wood Waste Proof of Performance Trial Monthly Reports for Oct 18, Nov 18, Dec 18, Jan 19 (Separate Reports)
28.	PoP Trial plan Refuse Derived Waste	5/08/19	Proof of Performance Trial Plan for Refuse Derived Waste
29.	PoPT Plan - Wood Waste	17/05/18	Proof of Performance Trial Plan for Wood Waste
30.	SP10.01.01_NSF Pollutant Tracking	6/07/18	Pollutant Tracking Program
31.	Brandown Inspection Report	5/08/19	Boral Letter to EPA: Proposal for Supplementary Light And Heavy Fuel Use At Berrima Cement Works EPL 1698

ID #	Title	Date	Summary
32.	Appendix 4 – CEMS QA Plan	6/04/18	Continuous Emissions Monitoring System Quality Assurance Plan No.6 Kiln Stack Final Rev 2.
33.	Appendix 5 – PCME QA Plan	18/10/17	<i>Ektimo</i> CEMS Quality Assurance Plan for PCME
34.	Stack Test for PoP with SWDF	28/02/19	<i>Ektimo</i> Kiln Emission Testing Report – Trials 1-9 and Preliminary Report
35.	Stack Test 2016-2018 using only coal	28/02/19	<i>Ektimo</i> Annual Emission Testing NPI Reports: 4/10/16, 8/9/17, 19/2/19 <i>Ektimo</i> Annual Emission Testing Compliance Report 4/10/16, 8/9/17, 19/2/19
36.	<i>Ektimo</i> Kiln Emission Testing Report	28/02/19	Stack Test for PoP with SWDF - Trials 1-9 and Preliminary Report
37.	MOD9 Response to Submissions report	22/1/16	Documents associated with MOD9 use of Solid Waste Fuels
38.	CEMS Monthly Monitoring Data	Aug 18- Jan 19	Monitoring Data for the months Aug 18, Sep 18, Oct 18, Nov 18, Dec 18, Jan 19 (Separate documents)
39.	CEMS Quality Assurance Plan	18/10/17	<i>Ektimo</i> CEMS Quality Assurance Plan for PCME
40.	Veolia OEMP	10/12/18	OEMP for Horsley Park Resource Recovery Facility Boundary Plan, Traffic Flow Plan, NSW Resource Recovery Screening & Recording of Waste Procedure, VES Control of Non-Conforming Waste Procedure, Complains Chart, Emergency Response Plan, PIRMP
41.	Data recording templates: Veolia WMP		Data recording templates from Veolia Waste Management Plan: Quality Assurance Control Plan
42.	Monthly NSF test sheets Brandown and ResourceCo	Oct-19	Monthly Analysis of NSF delivered from Brandown / ResourceCo. Analysis in accordance with QA/QC specification
43.	Appendix 2 Supplier Capability Assessment	6/07/18	Quality Assurance Quality Control Procedure
44.	Alternative Fuels Audit Report 2019	Nov 2019	Audit Methodology, Findings, Conclusions/ Recommendations, Compliance Table, Reviewed Documents, Audit Certification
45.	First-Year Monitoring and Modelling Assessment Report	Nov 2019	Use of NSF, Monitoring (CEMS, Process, Ambient), QC management Procedures (Brandown/ ResourceCo), Tracking Program, Modifications for future use of NSF
46.	Correspondence from DPIE extending storage of Hi Cal for 3 years	12/06/19	Letter from Department of Planning Industry and Housing
47.	EPL 1698	31/12/24	Environment Protection Licence for Berrima Cement Works downloaded on 31 <sup>st</sup> December 2024
48.	DA for Cement Mill 7 (DA No. 85-4-2005-I 2005	2005	Original DA for Cement Mill 7
49.	DA for modifications 1 to 9 to DA No. 401-11-2002-i MOD 15	2023	Current Consent document for Kiln 6 Modification 15
50.	POEO Act 1997	2023	Downloaded December 2023, includes all published monitoring data required under the EPL.
51.	Vehicle and Pedestrian Management Plan	16/6/23	Driver Code of Conduct for Truck and Heavy Vehicles Operators Version 7 of the now named Vehicle and Pedestrian Management Plan
52.	Complaints Register	May-19	Table includes Month, Person Type, Risk, Rank, Division, Site, Category, and Element
53.	Construction Environmental Management Plan	2/5/23	Version 5 of the CEMP covers MOD13 and MOD15
54.	EPL Annual Returns	2020, 2021 and 2022	Annual EPL Returns
55.	Quarterly NSF tracking report July 2019	31/7/19	Stack Testing Result, Raw Material Inputs, Kiln Fuel Inputs, Total Fuel Inputs and Associated Emission Factors, Alternate Fuel Inputs and

ID #	Title	Date	Summary
			Total Inputs Raw Material and Fuel, Variance in Emission Factors between reporting periods
56.	Quarterly NSF tracking report Nov 2019	14/11/19	Stack Testing Result, Raw Material Inputs, Kiln Fuel Inputs, Total Fuel Inputs and Associated Emission Factors
57.	Quarterly NSF tracking report Feb 2020	19/02/20	Stack Testing Result, Raw Material Inputs, Kiln Fuel Inputs, Total Fuel Inputs and Associated Emission Factors
58.	Quarterly NSF tracking report July 2020	8-9April	Stack Testing Result, Raw Material Inputs, Kiln Fuel Inputs, Total Fuel Inputs and Associated Emission Factors, Alternate Fuel Inputs and Total Inputs Raw Material and Fuel, Variance in Emission Factors between reporting periods
59.	Mining Purposes Leases	Ex 2028	MPLS 559, 592, 622, 623, 628 coving power and water access and ML 1723 covering the Blue Shale Quarry
60.	Approval of Final POP Trial Report	23/4/19	Letter from DPHI approving final Proof of Performance testing
61.	HCl Continuous Emissions Monitoring	12/10/20	Approval to return to six monthly periodic and continuous HCl monitoring
62.	IEA EPA correspondence	1/12/2023	Request for information Response- focus on air quality, dust mitigation, surface water controls
63.	IEA Council correspondence	1/12/2023	Request for information
64.	IEA DPHI correspondence	1/12/2023	Request for information Response- focus on air quality, correspond with council and EPA
65.	SWDF Request to increase feed rate - DPHI	7/7/2021	Boral- SWDF Request to increase feed rate to 50%
66.	SWDF Request to increase feed rate – DPHI more info	3/8/2021	Boral- Further information provided on percentage feed rate stack tests
67.	SWDF Request to increase feed rate – DPHI response	22/9/2021	DPHI Unable to recommend approval for the increase in feed rate
68.	SWDF Request to increase feed rate – DPHI more info	30/3/2022	Additional PoP Trials be undertaken- results summarised
69.	SWDF Request to increase feed rate – DPHI more info requested	28/4/2022	Request for additional information- reason for 3 PoP trials, Clarification of WW to be used in operational scenarios >23%
70.	SWDF Request to increase feed rate – DPHI more info provided	28/4/2022	Explanation of why 3 PoP trials completed; Clarification of WW to be used in operational scenarios >23%
71.	SWDF Request to increase feed rate – DPHI more info	23/9/2022	Results from additional 5 PoP Trials
72.	SWDF Request to increase feed rate – DPHI response	8/12/2022	Approval for increase of SWDF feed rate in Kiln 6 from 40% to 50%
73.	SWDF Request to increase feed rate more info- EPA	25/8/2021	Boral- Further information provided on percentage feed rate stack tests
74.	SWDF Request to increase feed rate- EPA response	17/9/2021	EPA recommend that DPHI require that Boral demonstrate that the ESP is operating effectively and consistently
75.	SWDF Request to increase feed rate- EPA response	27/4/2022	Request for additional information- reason for 3 PoP trials, Clarification of WW to be used in operational scenarios >23%
76.	DPIE response to NSF Audit	22/3/2023	Audit report satisfied condition 4.6
77.	Proposed licence conditions- EPA	25/9/2023	ESP, ambient dust monitoring network and air quality monitoring

ID #	Title	Date	Summary
78.	Proposed draft conditions relating to ESP- EPA	12/10/2023	ESP, ambient dust monitoring network and air quality monitoring
79.	Proposed draft conditions relating to real time monitoring- EPA	30/11/2023	Agreement on proposed draft wording, review to be undertaken by 25/1/2024
80.	Notification of EPA ERA	1/3/2021	Environmental Risk Assessment to consider- impacts of daily activities, risk of pollution, environmental performance
81.	Notification of New Supplier - RFI	31/3/2022	Notify DPHI of new RFI supplier Benedict Recycling
82.	NSF 2022 Audit cover letter	7/2/2022	NSF 2022 Audit cover letter
83.	Notification of stack testing for use of AKF5	23/11/2023	Letter to DPHI and EPA Stack tests undertaken 28 <sup>th</sup> -29 <sup>th</sup> Nov 23.
84.	Pre-Construction Noise Verification Report	28/9/2021	DPHI acceptance of report
85.	NSF IEA Report	11/2/2022	DPHI acceptance of report
86.	Notice of Variation of Conditions- DPHI	14/8/2022	Timeframe for submissions expired
87.	Proposed variation of mining lease ML1723- DPHI	18/5/2022	Streamline conditions by removing duplicate or redundant conditions.
88.	MOD 13 Assessment Report	31/5/2021	Chloride Bypass System and use of Woodchips
89.	RFI Response Table 2	10/5/2021	Response to department queries
90.	SEE- MOD13	March-2021	Statement of Environmental Effects
91.	MOD 15 Assessment Report	13/10/2022	Report by Department of Planning Housing and Infrastructure
92.	Consolidated emissions report- MOD 13	20/4/2020	Ektimo Testing- EPA#2, Kiln 6
93.	Construction Certificate	31/05/2021	Construct and operate Chloride bypass system for Kiln 6
94.	Annual Fuel Usage	FY 2021-2023	Total fuel use breakdown
95.	Dust gauge map	2023	Location of monitors
96.	Dust deposition data	FY 2021-2023	Routine monthly deposited dust samples
97.	HVAS Ambient air quality monitoring	FY 2021-2023	6 daily PM10, TSP, PM2.5
98.	Annual Emissions Testing Compliance report	15/1/2024	Ektimo Report number R015613-1 Stack testing Kiln 6, Cement Mill Ducts 1&2, Kiln cooler stack and cement mill stack
99.	Half yearly emission testing compliance report	30/5/2023	Ektimo Report number R014636-1 Stack testing Kiln 6
100.	Annual Emissions Testing Compliance report	22/11/2022	Ektimo Report number R013511-1 Stack testing Kiln 6, Cement Mill Ducts 1&2, Kiln cooler stack and cement mill stack
101.	Kiln Emission Testing report- Tyre Fuel Trial	28/3/2022	Ektimo Report number R012341 Stack testing Kiln 6
102.	Kiln Emission Testing report- trial 3	21/2/2022	Ektimo Report number R011867- Stack testing Kiln 6
103.	Annual Emissions Testing Compliance report	2/12/2021	Ektimo Report number R011682 Stack testing Kiln 6, Cement Mill Ducts 1&2, Kiln cooler stack and cement mill stack
104.	Stack emissions raw data	Nov-2021	24 hrs average dust & NOx, 1h average NOx, HCL, SO2 and VOC
105.	Stack emissions raw data	Dec-2021	24 hrs average dust & NOx, 1h average NOx, HCL, SO2 and VOC
106.	Stack emissions raw data	Monthly 2022	24 hrs average dust & NOx, 1h average NOx, HCL, SO2 and VOC
107.	Stack emissions raw data	Monthly 2023	24 hrs average dust & NOx, 1h average NOx, HCL, SO2 and VOC
108.	Formal Warning EPA	7/7/2023	Formal warning from EPA for failure to notify EPA of a dust emission due to equipment failure
109.	24hr particulate emission incident report	24/7/2023	Advice to both EPA and DPHI on exceedance of 24 hr particulate emissions from stack
110.	Cyclone Dust Release	16 April 2023	Incident report to EPA and DPHI on Cyclone Blockage Dust release

---



---

<b>ID #</b>	<b>Title</b>	<b>Date</b>	<b>Summary</b>
111.	Dust Complaint and Incident report	29/11/2023	Follow-up incident report reported by emails of 21 and 22 November 2023 in relation to dust release
112.	Formal warning from EPA	13/2/2024	Formal warning in relation to notifying the EPA of excessive dust emissions. Letter from EPA in relation to the incident on 18-19/11/23
113.	Penalty Infringement Notice	13/2/2024	Infringement Notice for \$15,000 in relation to dust emissions on 18 November 2023
114.	NSF Independent Audit	1/1/2023	Independent Environmental Audit prepared to satisfy Condition 4.6 of Development Consent 401-11-2002
115.	NSF Independent Audit	1/1/2022	Independent Environmental Audit prepared to satisfy Condition 4.6 of Development Consent 401-11-2002



## Appendix D – Consultation

---

**robert.byrnes@iec.com.au**

---

**From:** Jarryd Thomson <jarryd.thomson@epa.nsw.gov.au>  
**Sent:** Monday, 4 December 2023 11:52 AM  
**To:** robert.byrnes@iec.com.au  
**Subject:** Boral Berrima Cement Plant IEA

Hi Robert

Thanks for your email regarding the upcoming Independent Environmental Audit (IEA) on the Conditions of Approval issued for the Boral Berrima Cement Plant DA401-11-2002-I MOD15 being conducted by IEC.

As discussed, the EPA would recommend particular focus on the following aspects:

- Air quality impacts, particularly management and monitoring of emissions and dust generation
- Adequacy of current dust controls, including reliability, performance and whether there is room for any improvements. Note that recently the electrostatic precipitators had a failure relating to a high voltage cable, which led to a shutdown of the kiln until the issue was resolved.
- Adequacy of and compliance with site surface water controls and discharges.

Something else to be aware of is that the EPA is currently in discussions with Boral around updating the ambient dust monitoring network to incorporate real-time monitors to help inform an operational response to elevated dust levels (in the form of a Trigger Action Response Plan).

The EPA looks forward to reviewing the IEA report and findings. Please contact me if you have any further questions.

Regards

**Jarryd Thomson**  
Operations Officer  
NSW Environment Protection Authority  
D 02 4224 4143

.....



[www.epa.nsw.gov.au](http://www.epa.nsw.gov.au) @NSW EPA

*The EPA acknowledges the traditional custodians of the land and waters where we work. As part of the world's oldest surviving culture, we pay our respect to Aboriginal elders past, present and emerging.*

Report pollution and environmental incidents 131 555 or +61 2 9995 5555

---

This email is intended for the addressee(s) named and may contain confidential and/or privileged information.

If you are not the intended recipient, please notify the sender and then delete it immediately. Any views expressed in this email are those of the individual sender except where the sender expressly and with authority states them to be the views of the Environment Protection Authority.

PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

**From:** robert.byrnes@iec.com.au  
**Sent:** Friday, 1 December 2023 12:30 PM  
**To:** Matthew.Fuller@epa.nsw.gov.au  
**Subject:** Berrima Cement Plant Three Yearly Environmental Audit  
**Attachments:** Boral Berrima Cement Works Consolidated Consent MOD15.pdf; Appointment of Experts\_24102023\_103448.pdf

Dear Matthew

I have been engaged to prepare the Independent Audit of the Boral Berrima Cement Plant as required by Condition 4.5 of Schedule 2 of development consent DA401-11-2002-I MOD15. This audit will include Modification 13 (Chlorine Bypass System), Modification 14 (Increase volume of Solid Waste Derived Fuel and construction of new access road) and Modification 15 (Construction of new storage and feed systems for tyre chips). The scope of the audit will include:

- . an assessment of compliance with the requirements of the consent, and other licences and approvals that apply to the cement works upgrade;
- . an assessment of the environmental performance of the upgraded operations against the predictions made and conclusions drawn in the various environmental assessments which supported the modifications; and
- . review the effectiveness of the environmental management of the cement works upgrade, including any environmental impact mitigation works.

As required by the Department of Planning and Environment, I am require to consult with key government agencies of which the EPA is included.

I would appreciate your advice on any issues of concern to the EPA in relation to the operation of the Berrima Cement Plant or other matters which you would like included or addressed as part of the audit. I have attached a copy of the Consolidated Consent and Department notification for your information but if you require any further information or clarification please do not hesitate to contact me.

Regards  
Rob Byrnes

International Environmental Consultants  
"Longmead"  
700 Wombeyan Caves Road  
High Range NSW 2575  
Phone: 02 48785502  
Mobile: 0417437120

**robert.byrnesc@iec.com.au**

---

**From:** Georgia Dragicevic <Georgia.Dragicevic@planning.nsw.gov.au>  
**Sent:** Friday, 1 December 2023 4:13 PM  
**To:** robert.byrnesc@iec.com.au  
**Cc:** Katrina O'Reilly  
**Subject:** RE: DA401-11-2002-I Berrima Cement Plant Independent Environmental Audit

Hi Robert,

Thanks for consulting the department. I was going to request that in addition to the consent condition requirements, you consider the air quality, in particular, but I see you have that covered already.

EPA and the Council are the two other main agencies to be consulted.

Kind Regards,  
Georgia

---

**From:** robert.byrnesc@iec.com.au <robert.byrnesc@iec.com.au>  
**Sent:** Friday, 1 December 2023 3:27 PM  
**To:** Georgia Dragicevic <Georgia.Dragicevic@planning.nsw.gov.au>  
**Subject:** DA401-11-2002-I Berrima Cement Plant Independent Environmental Audit

Hi Georgia

I wish to confirm that Boral has commissioned me to undertake the Independent Environmental Audit for the Berrima Cement Plant as required by Condition 4.5 of DA401-11-2002-i. I have attached the main consent to which the audit relates which includes the latest modification approval, issued by the Department on 28<sup>th</sup> November 2023. I propose that the audit period will be from November 2020 to November 2023, which aligns with previous three yearly audit periods and I anticipate the final audit document will be available by February 2024. The scope of the audit will include:

- . an assessment of compliance with the requirements of the consent, and other licences and approvals that apply to the cement works;
- . an assessment of the environmental performance of the upgraded operations against the predictions made and conclusions drawn in the various environmental assessments which supported the modifications;
- . review the effectiveness of the environmental management of the cement works upgrade, including any environmental impact mitigation works;
- . a detailed compliance table covering all conditions relating to Kiln 6 DA401-11-2002-i MOD15, Cement Mill 7 DA85-4-2005-I and Environment Protection Licence 1698;
- . comply with ISO 19011:2019, the Department's latest Post Approval Independent Audit guidelines and other matters raised in your appointment letter attached.

The audit will include an analysis of all monitoring data including stack emissions, plant operating data, non-standard fuel supply data and ambient environmental monitoring results to determine compliance with performance criteria. Comparisons will be made to the anticipated performance set out in the various environmental assessments which supported the consent modifications, including long term trends.

I have sought input into the audit from both the EPA and Wingecarribee Shire Council and would appreciate your advice on any other government agency you feel should be included in the consultation process. I would also appreciate your Department's advice on any specific matters which you would like included in the audit.

Kind Regards

Rob Byrnesc

**From:** robert.byrnes@iec.com.au  
**Sent:** Friday, 1 December 2023 12:25 PM  
**To:** Barry Arthur (barry.arthur@wsc.nsw.gov.au)  
**Subject:** Berrima Cement Plant Three Yearly Environmental Audit  
**Attachments:** Boral Berrima Cement Works Consolidated Consent MOD15.pdf; Appointment of Experts\_24102023\_103448.pdf

Dear Barry

I have been engaged to prepare the Independent Audit of the Boral Berrima Cement Plant as required by Condition 4.5 of Schedule 2 of development consent DA401-11-2002-I MOD15. This audit will include Modification 13 (Chlorine Bypass System), Modification 14 (Increase volume of Solid Waste Derived Fuel and construction of new access road) and Modification 15 (Construction of new storage and feed systems for tyre chips). The scope of the audit will include:

- . an assessment of compliance with the requirements of the consent, and other licences and approvals that apply to the cement works upgrade;
- . an assessment of the environmental performance of the upgraded operations against the predictions made and conclusions drawn in the various environmental assessments which supported the modifications; and
- . review the effectiveness of the environmental management of the cement works upgrade, including any environmental impact mitigation works.

As required by the Department of Planning and Environment, I am require to consult with key government agencies of which the Wingecarribee Shire Council is included.

I would appreciate your advice on any issues of concern to Council in relation to the operation of the Berrima Cement Plant or other matters which you would like included or addressed as part of the audit. I have attached a copy of the Consolidated Consent and Department notification for your information but if you require any further information or clarification please do not hesitate to contact me.

Regards  
Rob Byrnes

International Environmental Consultants  
"Longmead"  
700 Wombeyan Caves Road  
High Range NSW 2575  
Phone: 02 48785502  
Mobile: 0417437120

Our ref: DA401-11-2002-i-PA-54

Mr Greg Johnson

Environmental Sustainability Manager

Boral Limited

Trinti Campus, T2, Level 5

39 Delhi Road

North Ryde, NSW 2113

24/10/2023

---

Sent via the Major Projects Portal only

Dear Mr Johnson

**Boral Cement Berrima (DA 401-11-2002-i)**

**Independent Environment Audit 2023**

I refer to your letter of 20 October 2023 seeking Planning Secretary's approval of Mr Robert Byrnes of International Environmental Consultants Pty Limited as the lead auditor for the upcoming Independent Environment Audit of Boral Cement Berrima Kiln 6 (the development), in accordance with Schedule 2, Condition 4.5 of development consent DA 401-11-2002-i, as modified (the consent).

Having considered the qualifications and experience of Mr Byrnes, the Planning Secretary endorses the appointment of Mr Byrnes to undertake the audit in accordance with Schedule 2, Condition 4.5 of the consent. This approval is conditional on Mr Byrnes being independent of the development and maintaining a relevant industry certification.

Please ensure this correspondence is appended to the Independent Audit Report.

The audit is to be conducted in accordance with AS/NZS ISO 19011 Australian/New Zealand Standard: Guidelines for quality and/or environmental management systems auditing and you may wish to consider the Audit Post Approval Requirements (Department 2020 or as updated). A copy of this guideline can be located at <http://planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/Integrated-Mining-Policy>.

The audit report is to include the following:

1. consultation with any relevant agencies;

1. a compliance table indicating the compliance status of each condition of approval and any relevant EPL;
2. not use the term "partial compliance";
3. recommend actions in response to non-compliances;
4. review the adequacy of plans and programs required under this consent; and
5. identify opportunities for improved environmental management and performance.

Within one month of the completion of the audit, Boral is to submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report and a timetable to implement the recommendations. Prior to submitting the audit report to the Planning Secretary, it is recommended that Boral review the report to ensure it complies with the relevant consent condition.

Failure to meet these requirements will require revision and resubmission of the Audit Report.

Should you have any enquiries in relation to this matter, please contact Georgia Dragicevic, Senior Compliance Officer, on (02) 4247 1852 or by email to [Georgia.Dragicevic@planning.nsw.gov.au](mailto:Georgia.Dragicevic@planning.nsw.gov.au).

Yours sincerely



Katrina O'Reilly  
Team Leader - Compliance  
Compliance

As nominee of the Planning Secretary

## Appendix E – Audit Certification

---

Development Name: Berrima Cement Works  
Development Consent: DA 401-11-2002-l and DA DA85-4-2005i  
Development Description: Berrima Cement Plant  
Development Address: Berrima Cement Plant, Taylor Ave, New Berrima NSW 2577  
Operator: Boral Limited  
Operator Address: 39 Delhi Road, North Ryde NSW 2113  
Title of Audit: Triennial Independent Environmental Audit

I certify that I have undertaken the independent environmental audit and prepared the contents of the attached independent audit report and to the best of my knowledge:

- The audit has been undertaken in accordance with relevant approval condition(s) and in accordance with the auditing standard AS/NZS ISO 19011:2014 and Post Approval Guidelines – Independent Audits
- The findings of the audit are reported truthfully, accurately and completely;
- I have exercised due diligence and professional judgement in conducting the audit;
- I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;
- I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;
- I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);
- Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared prior to the audit; and
- I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.

### Note.

a) The Independent Audit is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.

b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, *or both*).



---



Robert Byrnes  
Global Exemplar Lead Auditor Certificate C-458984  
Director

International Environmental Consultants Pty Limited  
"Longmead"  
700 Wombeyan Caves Road  
High Range NSW 2575

[robert.byrnes@iec.com.au](mailto:robert.byrnes@iec.com.au)

30 June 2024