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BORAL BERRIMA CEMENT

5 August 2021
Via Microsoft Teams (Virtual)

> Community Liaison Group meeting

Agenda

- > **Acknowledgement of Country, welcome, administration and safety moment**
- > **Operations**
- > **Environment**
- > **Planning matters**
- > **General business**



Meeting administration

- > Acknowledgement of Country
- > Welcome and re-introductions
- > Safety moment
- > Previous meeting of the Community Liaison Group
 - > 10 December 2020
 - > **Note:** Presentations and meeting notes from previous meetings are also available from the Cement Works website – www.boral.com.au/berrimacement
- > Action items
 - > 1. Provide cleaning of solar panels information to interested residents - **COMPLETE**
 - > 2. Discuss Boral's view regarding habitat corridor proposal with BRA - **COMPLETE**
 - > 3. Arrange visit to site regarding habitat corridor alternatives - **PENDING**
 - > 4. Facilitate access to Boral-owned land in Remembrance Driveway Grove for tree inventory – **AWAITING DATE FROM BRA.**
 - > 5. Nominate Boral representative to Remembrance Driveway Grove Management Committee – **AWAITING INVITATION.**
 - > 6. Share information regarding Boral's environmental product disclosures with CLG - **COMPLETE**
- > Other matters arising and apologies for this meeting





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> Operations

Operations update

> ZERO harm – is always our priority and the job is never done:

- > No **serious** injuries or harm to people during FY21 (another good year looking after each other)
- > **960** consecutive lost time injury (LTI) free days. Great deliberate focus by people
- > **Minor** medical treatments were a total 4 in FY21 (small lacerations to hands and a back strain)
- > **Shutdown** in June for planned kiln maintenance 300 extra personnel/contractors and ~ 45,000 man hours with only 1 MTI sustained (contractor struck and cut top of thumb with a small hammer)
- > **COVID**, no positive cases to date on the site. Safe control plans and business continuity plans are in place and utilised for the onsite management associated with the pandemic.

> ONE - people, customer, community:

- > **New people** 2 new apprentices, all current apprentices converted to direct Boral employees, 2 new mechanical tradesman/fitters appointed, 1 automation engineer appointed, 1 mechanical engineer appointed, 1 maintenance and major shutdown coordinator appointed, 2 production operators appointed, 1 process controller being appointed (**10 new people in past 6 months**).
- > **Southern highlands EA**, the enterprise agreement is due for renewal since June and negotiations are currently progressing with our employees and respective unions for a new EA.
- > No major issues with supply to **customers** despite challenges and Covid restrictions.
- > We continue to have proactive communications with members of the **Berrima community** which has been great.
- > We are continually improving **nuisance dust** controls. Upgrades to dust collectors, improvements to building ventilation systems, sealing of buildings and routine cleaning of the plant areas and roadways (refer air monitoring slides)
- > Electro-static precipitator (ESP) **dust trips** from the kiln pre-heater stack has been improved by some process upgrades. Recent history on average 9 ESP trips/month which has been currently reduced to 5/month (July was only 1 trip). More improvement work progressing on this.

Operations update

> TEN – operational performance:

- > Total clinker **production** for FY21 **1.31Mt**. Grey clinker 1.25Mt, Off white clinker 63kt.
- > **Major planned** maintenance shutdown in March safely and successfully completed in **18 days**. Main works being 40 metres of refractory reline of the kiln, re-bagging of the large process dust filters, raw mill relines.
- > **Solid waste derived fuels (SWDF)** usage has been lower than budgeted primarily due to the reason of supply constraints during the Covid restriction impacts in the Sydney region.
- > **Chlorine bypass** approval for the construction by DPIE granted earlier in the year. This technology upgrade to the processing plant is a further significant investment as part of the longer-term strategic road map to increase the usage of SWDF at Berrima.





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> Environment

Environmental overview

- > The 2021 Annual Environmental Management Review (May 2020 – April 2021) was submitted to DPIE in late June 2021 and acknowledged by DPIE in July 2021. Full report is available on the website.
- > The following is a summary of management plan updates, monitoring, audits and complaints received over the 12 month reporting period.



Boral Cement Limited

Berrima Cement Works

Annual Environmental Management Review

Development Consents	Development Consent No. 401-11-2002-i (Kiln 6)
Addressed:	Development Consent No. 85-4-2005-i (Mill 7)
Review Period:	1 May 2020 - 30 April 2021
Approved By:	Environmental Manager - Cement



Mr Adnan Voloder
Planning and Development Manager
Boral Limited
Trinti Campus, T2, Level 5
39 Delhi Road
North Ryde, NSW 2113

Dear Mr Voloder

Boral Cement Berrima (DA 401-11-2002-i and DA 85-4-2005-i)
Annual Environmental Management Report 1 May 2020 – 30 April 2021

I refer to the Annual Environmental Management Report (Annual Report) for the reporting period from 1 May 2020 to 30 April 2021 for Boral Cement Berrima (the project), submitted for the Secretary's consideration, as required under Condition 7.3 of development approval DA 401-11-2002-i, as modified and Condition 6.3 of development approval DA 85-4-2005-i for the Kiln 6 Upgrade Project and the Cement Mill 7 Project, respectively (the approvals).

The Department considers that the Annual Report generally satisfied Conditions 7.3 and 6.3 of the respective approvals. Please note that approval of this Annual Report is not endorsement of the compliance status of the project.

The Department requests that the Annual Report is made available on the company website within one month of the date of this letter.

Should you need to discuss the above, please contact Georgia Dragicevic, Senior Compliance Officer, on (02) 4247 1852 or by email to Georgia.Dragicevic@planning.nsw.gov.au.

Yours sincerely

Katrina O'Reilly
Team Leader - Compliance
Compliance
As nominee of the Planning Secretary

Management Plan Updates

- > It is a requirement that we review our Management Plans at least every 3 years or after any modification or changes to the EPL.
- > Boral undertook a review of the OEMP, and the sites Air Quality Management Plan & Noise Management Plan in April 2020 to reflect Mod 11 and 12 to the consent and changes to the EPL completed by the EPA on 18 December 2019.
- > These were submitted to the Department on 5 June 2020 and approved on the 29 June 2020.
- > We will shortly undertake another review to reflect Mod 13 which included the Chloride By-Pass and approval to consume fire impacted plantation forestry woodchips as a standard fuel.
- > **Our update OEMP is available on our website**



Mr Greg Johnson
Environmental Sustainability Manager
Boral Cement
Level 3, 40 Mount Street
NORTH SYDNEY NSW 2060

Boral Cement Limited Berrima Works

Operation Environmental Management Plan

Document Filename:	CMT-ENV-002 Berrima Operation Environmental Management Plan
Document Owner:	Environmental Business Partner
Approved By:	Operations Manager

Version History:

Version	Date	By Whom	Description of Changes
1	30 November 2007	Grant Williams	Original version
2	7 October 2008	Grant Williams	Update to include requirements of Boral Cement corporate procedure, include NSF requirements.
3	September 2011	Alex Wronowski	Global revision and formatting change
4	September 2014	Michael Curley	3-yearly review
5	March 2018	Michael Curley	Update to include new requirements from Modification 9 development consent.
6	April 2020	Greg Johnson	Update to outcomes of MOD 9 PCPT, MOD 11 (Use of Hicat 50), MOD 12 (Isotainer and whole of site noise limit)

Dear Mr Johnson

Boral Cement, Berrima Operational Environmental Management Plan

I refer to the updated Operational Environmental Management Plan (OEMP) and appendices submitted to the Planning Secretary in accordance with Conditions 6.3, 6.3A, 6.3B, 6.4 and 6.4A of Schedule 2 of the development consent for the Boral Cement Facility, Berrima (DA 401-11-2002-4, as modified).

The Department has carefully reviewed the updated documents in consultation with the NSW Environment Protection Authority (see attached) and concludes the updated documents satisfy the requirements of the conditions.

Accordingly, I approve the following documents:

- 'Boral Cement Limited, Berrima Works, Operational Environmental Management Plan, Version 6' prepared by Boral Cement Limited dated April 2020
- 'Boral Cement Limited, Berrima Works, Air Quality Management Plan (Appendix 4 of OEMP), Version 6' prepared by Boral Cement Limited dated 28 April 2020
- 'Boral Cement Limited, Berrima Works, Noise Management Plan (Appendix 6 of OEMP), Version 6' prepared by Boral Cement Limited dated April 2020.

Please ensure the approved plans are placed on the Boral Berrima Cement website at the earliest convenience.

If you wish to discuss the matter further, please contact Sally Munk on 9274 6431 or via email at sally.munk@channing.nsw.gov.au.

Yours sincerely

29 June 2020

Chris Ritchie
Director, Industry Assessments
As nominee of the Planning Secretary

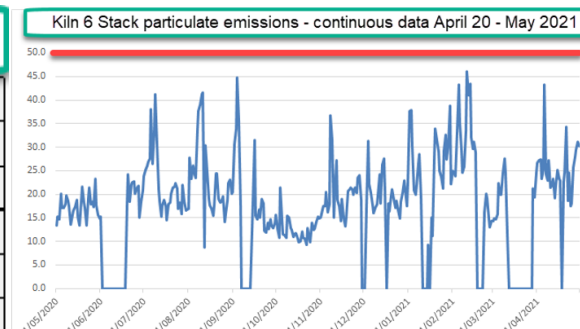
Attached: Correspondence from NSW Environment Protection Authority

Issue Date: April 2020	Printed On: 5 June 2020	Printed copies are uncontrolled
Next Review Date: April 2023	Review Date is 3 years from Issue Date	Page 1 of 42

Monitoring - Air Quality Management

- > During the reporting period the site implemented the trial real-time dust monitor which links directly to the control room along with the site Trigger Action Response Management Plan (TARP) for dust which the site monitors current and forecast weather to manage potentially dust generating activities on site.
- > Two Stack tests were undertaken during the reporting period, both compliant
- > Real-time monitoring of stack continues, we were compliant during the period

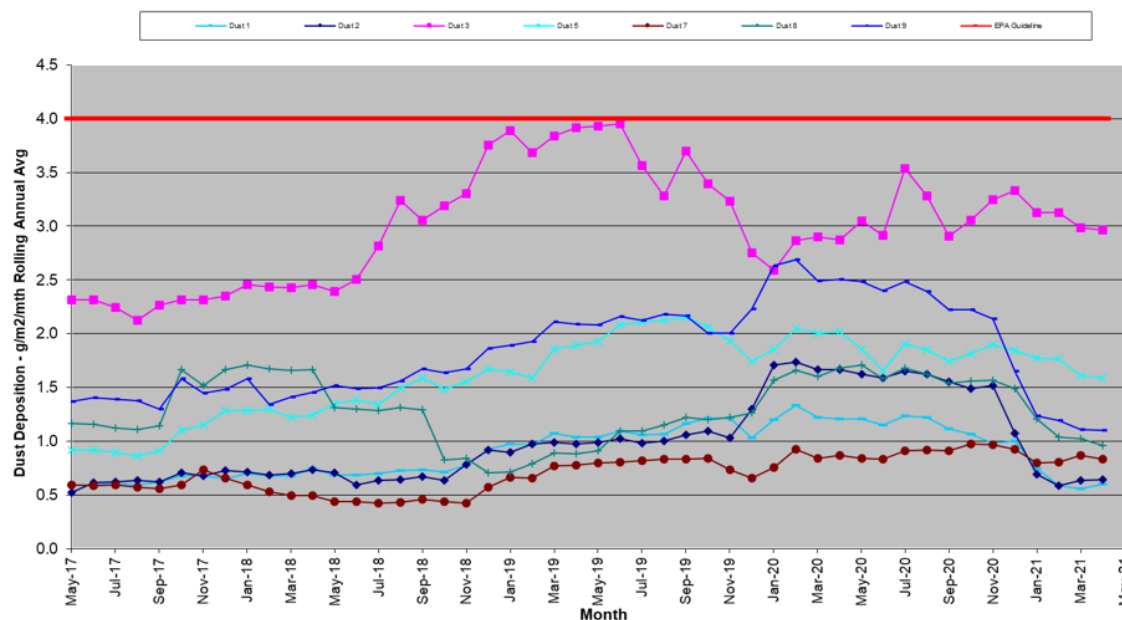
			2019/20				2020/21	
Report no			R007956-1	R008378	R008764	R008894	R009302-1	R010398
Date tested			31/7 - 1/8/2019	12,13&14/11/19	18-19/02/20	7-8/4/20	22-23/6/20 25/9/20	9-10/2/21 7/4/21
Date final report received			17/08/2019	8/01/2020	20/04/2020	15/06/2020	7/10/2020	11/05/2021
Parameter	Unit	Limits						
Mercury	mg/m3	0.05	0.0088	0.0091	0.0075	0.0072	0.0037	0.008
Type 1 and type 2 substances	mg/m3	0.5	≤0.079	≤0.14	<0.03	≤0.046	≤0.046	≤0.03
Solid particles	mg/m3	50	47	28	31	33	27	20
Nitrogen oxides	mg/m3	1250	940	750	1000	1100	930	980
Cadmium and Thallium	mg/m3	0.05	≤0.0034	≤0.043	≤0.0024	≤0.0037	0.0028	≤0.07
Chlorine	mg/m3	50	<0.02	0.012	0.015	<0.02	<0.01	0.023
Dioxin and Furans (I-TEQ middle bound)	ng/m3	0.1	0.0021	0.0017	0.0027	0.00084	0.0018	0.0018
Hydrogen chloride	mg/m3	10	0.057	0.19	0.14	0.4	0.22	0.087
Hydrogen fluoride	mg/m3	1	≤0.47	0.18	≤0.041	<0.03	≤0.03	≤0.084
Sulfur dioxide	mg/m3	50	0.8	0.13	0.13	0.86	0.037	0.054
Sulfuric acid mist and sulfur trioxide	mg/m3	50	0.096	2	≤0.023	0.043	≤0.033	0.068
Volatiles organic compounds	mg/m3	40	2.8	4	1.5	1.1	2.1	1.3



Air Quality Management

> Dust Deposition trends from May 2017 – May 2021

Total Deposited Dust (12-Month Rolling Average)
Berrima Cement Works - May 2017 - April 2021



All dust gauges were below the 4g/month annual average goal

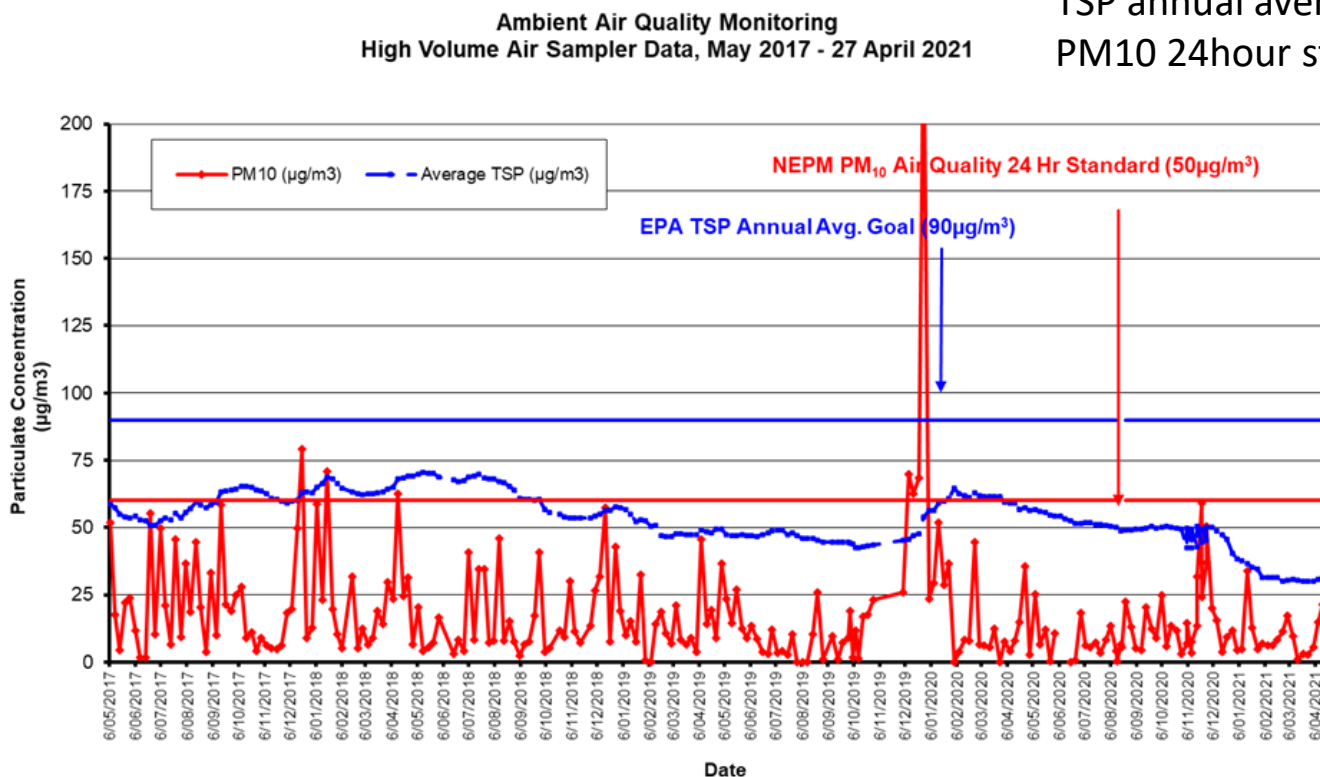
- > During the reporting period 14 complaints were received from the community in relation to deposited dust on vehicles and property, this was a decrease from 78 in 2019/20 reporting period.



Air Quality Management

> Ambient Air Monitoring Program – HVAS.

All readings were below the TSP annual average goal and PM10 24hour standard



Noise Monitoring

- > Boral manages noise on site in accordance with the *Berrima Cement Works – Noise Management Plan* (Boral 2018, updated April 2020), which describes the monitoring points, frequency and criteria.
- > *The Boral Cement Berrima works has a single noise limit condition for the total site, of LA90, 15-minute not greater than 58 dBA at Location 20 in the Store Yard.*
- > *Monitoring for total site emissions at Location 20 over a 17 day period in October 2020 has confirmed that total site emissions are in compliance with the licence condition.*
- > *Our next annual noise survey will be undertaken in the coming months*



Independent Audit

- > We are required to have our operations (development consent conditions and EPL conditions) audited every three years by an independent auditor approved by the DPIE
- > During November 2020, Rob Byrnes from IEC undertook the audit covering 2017-2020.
- > The audit was finalised and submitted to the DPIE on 3 February 2021
- > The DPIE accepted the audit on 11 March 2021.

Audit Findings

- > The audit identified 5 non-compliances through the 3-year period which related to Condition 1.6, which is a general condition
- > These non-compliances all related to reported non-compliances to the EPA under EPL 1698 which were all appropriately reported and addressed at the time.

Table 3.1 – Compliance Status Summary

Instrument	Condition	Year of Non-Compliance	Details
DA401-11-2002i	1.6	2019, 2020	Five Non-compliances with EPL conditions in relation to monitoring and emissions (as outlined in below)
EPL1698	L3.3	2018	Cadmium and Thallium exceedance of limits
	L3.3	2018	Solid particles exceedance of limits
	L3.3	2018	Hydrogen Chloride exceedance of limits
	M2.2	2019	HVAS failure to run on 4 occasions
	O2.1	2019	Failure of bag house filtration system resulting in excessive dust emissions. EPA infringement notice issued

Triennial Environmental Audit

Independent Data Analysis for

Conditions of Consent
Cement Mill 7 - DA No. 85-4-2005-i
Kiln 6 - DA No. 401-11-2002-i



February 2021

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

Independent Audit

- > The 2018 non-compliances were during the Solid Waste Derived Fuels Proof of Performance Trials, were of short duration and addressed at the time as part of the commissioning process.
- > The High Volume Air Sampler (required every 6 days) did not operate on four occasions during 2019 reporting period, which was beyond control of site. To make it abundantly clear for future reporting periods the Air Quality Management Plan was updated and approved to include the following wording:
 - > *'As with any type of monitoring equipment there is potential for failure to run. Should a sample not be collected due to equipment error and unintentional human error, this would not be considered a non-compliant event and an additional day will be added to make up for the missed sample.'*
- > The baghouse failure incident resulted in a Penalty Infringement of \$15000. Boral addressed this issue at the time of the event.



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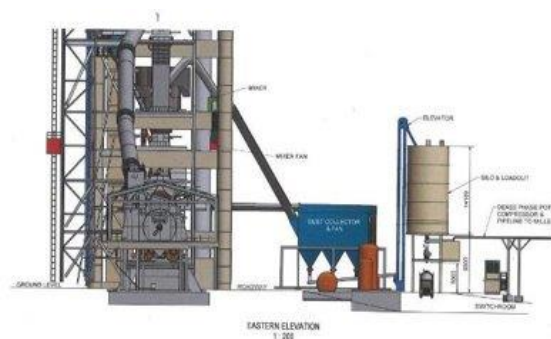


> Solid Waste Derived Fuels Planning matters

Solid Waste Derived Fuels (SWDF) and Planning

CHALLENGES OPERATING WITH SWDF:

- > To manage the volatile components within the kiln (naturally occur in SWDF materials)
- > SOLUTION: Chloride Bypass System (Mod 13 – approved 31 May 2021)
- > To compete with cheaper imports we need to operate more efficiently and sustainably. We need to receive more materials on consistent basis and need to adjust our processes to appropriately store, handle and feed into the kiln.
- > Currently permissible limit is 100,000 tonnes per annum, we will request 250,000 tonnes per annum
- > SOLUTION: Mod 14 – lodgement expected late 2021



Solid Waste Derived Fuels (SWDF) and Planning

> **Proposed modifications to the Cement Works consent (Mod14):**

- > Expansion to current storage and handling facilities at the site & feeding infrastructure
- > An increase of truck deliveries and hours
- > Increase consumption of SWDF materials within the kiln (increase to the tonnes per annum limitations for specific fuel types)
- > Construct an alternative haulage access road through the site
- > Construct an additional site access

- > **Environmental benefits** - reduce the site's reliance on coal – less carbon emissions - diverting up to 250,000 tonnes per year solid waste materials from landfill and 150,000 tonnes of woodchip materials.

- > **Traffic changes** – there will be a minor increase in total trucks (**6% overall for the site**) but a significant reduction (**approximately 20%**) of heavy vehicle movements along Taylor Avenue is proposed as movements will be split between existing access and new access.

- > **Traffic improvements** - removal of current restrictions (6am-6pm Mon-Fri, 7am-1pm Sat) and request for unrestricted delivery times to allow for more consistent operations. This more dispersed delivery program will be reflected in the traffic impact assessment submitted.

Solid Waste Derived Fuels (SWDF) and Planning

- > **Proposed modifications to the Cement Works consent (Mod14):**
 - > **Traffic improvements** - internal haulage route for trucks to access the Old Hume Highway and Hume Motorway. To be constructed on Boral land.
 - > **Traffic improvements** - additional site access proposed, (primarily for deliveries of fuel for the kiln) to reduce noise impacts of neighbours. Will require a new intersection with the Old Hume Highway.



Solid Waste Derived Fuels (SWDF) and Planning

> **Proposed modifications to the Cement Works consent (Mod14):**

- > **Air quality and odour** - continue operations within current consent limits. A report will be submitted outlining implications associated with increased SWDF consumption
- > **Greenhouse gas** - no change to consent limitations. Reduced CHG expected due to reduction in coal consumption. A qualitative report will be provided
- > **AKF5 Feed Variation** – 2014 consent allowed for a trial to be done. Changes in Federal legislation has shifted the market dynamic of used tyre exports. The Mod will seek to vary the way we feed used tyres into the plant, utilising our new SWDF infrastructure.
- > Emissions are expected to be the same as what you see today, with a reduction in Greenhouse Gas emissions due to lower consumption of coal. This combustion method is used globally, including in New Zealand.
- > **Visual impacts** - shed extension not expected to alter the appearance of the site from any significant vantage points.
- > **Land use zone** – The site is zoned Heavy Industrial (IN3). The proposed modification remains entirely consistent with the land use definitions applicable to the existing operations on the site.



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> Other Planning matters

Other Planning Matters

> Berrima Colliery – Water Treatment System

> <https://www.boral.com.au/berrima-colliery>

- > **Long term solution** - seeking to establish a long-term sustainable solution for the management of naturally rising water from the colliery
- > **First Step** – obtaining the approval, commissioning the system and seeing how it could operate in the long term, is the first step in determining whether this solution is the best solution for the colliery

> Boral Concrete Batching Plant

- > **New Batch Plant** – Co-located at the Berrima Cement Works site, the concrete business will be seeking a new consent from Council to establish a new batch plant at the site
- > **Utilising new roads** – the business will use the new internal haul road, and new site access to Old Hume Hwy, to avoid any traffic impacts to Taylor Avenue and the New Berrima community

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BORAL CEMENT BERRIMA

> General Business

Next meeting and close

- > General business
- > Next meetings
 - > 'Whole of Community' meeting – meeting to be held in November.
- > Boral Berrima Cement contacts:
 - > Berrima Cement Works Reception
4860 2222
 - > www.boral.com.au/berrimacement
 - > feedback@boral.com.au
 - > Like us on Facebook: [@Boral Australia](https://www.facebook.com/BoralAustralia)



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> Thank you for your attendance