Berrima Cement Works Community Liaison Group Meeting

1 December 2022

Agenda

1. **Welcome and apologies**
2. **Operations summary**
3. **Environmental works update**
4. **Planning and projects**
5. **Communications update**
6. **General business and contacts**
7. **Next meeting**

Welcome and Apologies

Attendees

CLG representatives

Clive West, Berrima resident and Berrima Resident Association representative
Andrew Wood, New Berrima resident
Barry Arthur, Environment Manager, Wingecarribee Shire Council

Boral staff

Dean Beltrame, Operations Manager Berrima
Greg Johnson, Environmental Sustainability Manager, Boral Cement
Elissa Martino, Planning and Approvals Manager NSW/ACT
Avneel Datt, Project Manager Innovation
Cameron McArthur, Development Manager Land Property Planning
Gabriel Paicu, Technical Manager Berrima
Kate, Woodbridge, Stakeholder Relations Manager NSW/ACT

Review of Minutes and actions arising from last meeting

Previous meeting Minutes – 29 July 2022

Matters arising from last meeting

- Develop an email distribution list for alerts regarding unusual noise or maintenance that will include contact details for community enquiries.

- Invite the Boral Property Development team to discuss the future Berrima site development plan.

Operations summary

Safety

- Zero harm achieved (no serious incidents).
- Wet weather continues to present hazardous conditions on site in particular with material handling.
- January major shutdown risk assessment and safety management plan review currently in progress.

Customer and People

- No supply or product quality issues.
- Berrima Intermodal operation (cement to VIC) ceased in October with the 2 new grinding mills in Geelong now on line.
- New starters to the team: Chris Durante (senior mechanical engineer), Kazim Syed (process controller), Oscar Lee (fitter), Bronson Vasavalu (fitter), Noah Hallal (electrical apprentice), Mohammed Ali (electrical engineer). Current vacancies in progress: Maintenance manager, Maintenance planner, Mechanical apprentice, Process controller.
- Retirements: Paul Smith (shift supervisor), Gana Athreya (electrical engineer), Brett McMahon (shift supervisor), Stuart Davidson (fitter), Gary Guymer (fitter), Mick Gauci (maintenance manager).
- Boral cement southern highlands EA finalised/agreed.

Production/Performance

- Clinker and cement volumes similar to last year (~ 1.35Mt & ~ 1Mt respectively).
- Energy costs continue to be a significant head wind (coal & electricity). Value Improvement Projects identified and progressing to assist mitigate these costs (SWDF, GBFS, Cement milling efficiencies).
- SWDF use progressing well.
- Plant reliability is always an ongoing opportunity to improve costs and we have a cross functional committee which meets weekly with a focus on this.
- Annual planned kiln maintenance shutdown scheduled for early January and the team is currently very busy planning for this.

Environmental works update

Environmental overview

- Independent Annual Non-Standard Fuels Audit scheduled for November.
- High Rate WW/RDF Proof of Performance Trials submitted to DPE to support our SWDF usage from 40 to 50%.
- Tyre Chip trial approved by EPA and DPIE completed. EPA accepted trial completed as required in consent.
    - Run at up to 4.5t per hour, fed through SWDF conveyor into calciner.
    - No evidence of steel deposited in riser ducts.
    - Stack emission results compliant with licence conditions.
    - Trial results used to support MOD 15 to permit external storage.

The following licence comparison table shows that all analytes highlighted in green are within the licence set by the NSW EPA as per licence 1698 (last amended on 18 December 2019).

EPA	Parameter	Units	Licence limit	Detected values	Detected values (corrected to 10% O_2)
EPA 2 - Kiln Stack No. 6	Mercury	mg/m^3	0.05	0.0086	0.0093
	Type 1 and Type 2 substances in aggregate	mg/m^3	0.5	≤0.044	≤0.047
	Solid particles	mg/m^3	50	18	18
	Nitrogen oxides	mg/m^3	1250	1000	1100
	Cadmium + Thallium	mg/m^3	0.05	≤0.00053	≤0.00057
	Chlorine	mg/m^3	50	<0.01	<0.01
	Dioxins & furans (I-TEQ middle bound)	ng/m^3	0.1	0.0007	0.00072
	Hydrogen chloride	mg/m^3	10	0.4	0.42
	Hydrogen fluoride	mg/m^3	1	0.06	0.063
	Sulfur dioxide	mg/m^3	50	<0.02	<0.02
	Sulfuric acid mist and sulfur trioxide (as SO_3)	mg/m^3	50	1.9	1.9
	Volatile organic compounds	mg/m^3	40	1.2	1.2

nsw epa

Ms Sally Munk
Principal Planning Officer
Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Email: sally.munk@planning.nsw.gov.au

Dear Ms Munk

AKF6 (Waste Tyres) Materials Handling Trial – Kiln 6 – Final Report
Boral Cement Limited – Berrima Plant - Environment Protection Licence 1698

I refer to your email and supporting documentation to the Environment Protection Authority (EPA) on 5 August 2022, inviting comments on the final AKF6 trial report submitted by Boral Cement Limited (Boral). The report was prepared following the finalisation of the materials handling trial of chipped waste tyres (AKF6) as a Solid Waste Derived Fuel (SWDF) in Kiln 6.

Condition 1.4CA of Boral's Department of Planning, Industry & Environment (DPIE) Conditions of Approval (CoA) states that a single trial of chipped waste tyres is permitted at the Taylor Avenue, New Berrima premises following consultation with the EPA & notification to DPIE. The EPA regulate the activities at the premises through Environment Protection Licence number 1698 (the licence).

The EPA has reviewed the information provided by Boral and make the following observations:

- A total of 102 tonnes of AKF6 was consumed as a fuel in Kiln 6 during the trial.
- Boral (Ekimo Pty Ltd) undertook an air emissions test on the Kiln 6 stack during the AKF6 trial on 27th and 28th January 2022. The *Kiln Emission Testing Report* dated 28th March 2022 by Ekimo Pty Ltd shows compliance with the emissions limits in the licence.
- Boral reported that all continuous emissions monitoring data complied with the licence limits.
- The AKF6 feed-rate limits outlined in Condition O6.3 of the licence (a maximum feedrate of 6.5 tonnes per hour and a maximum total fuel mass percentage of 21%) were complied with.
- The trial appears to have been undertaken as per the requirements of Condition 1.4CA.

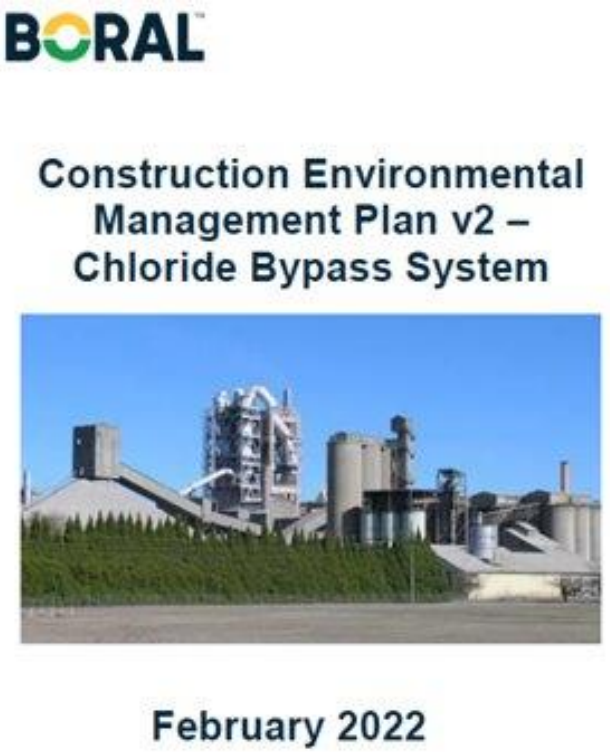
If you have questions regarding the above, please phone Matthew Fuller on (02) 4224 4100.

Yours sincerely

Management plan update

There have been no recent updates.

Future updates to the OEMP and other management plans will be undertaken as required when consent modifications are made with a full review due next April 2023.



Environmental monitoring – air quality management

- Our last stack test was undertaken on over 30/6 and 1/7 2022.
- All stack tests YTD have been compliant along with our Continuous Emission Monitoring (CEMs).

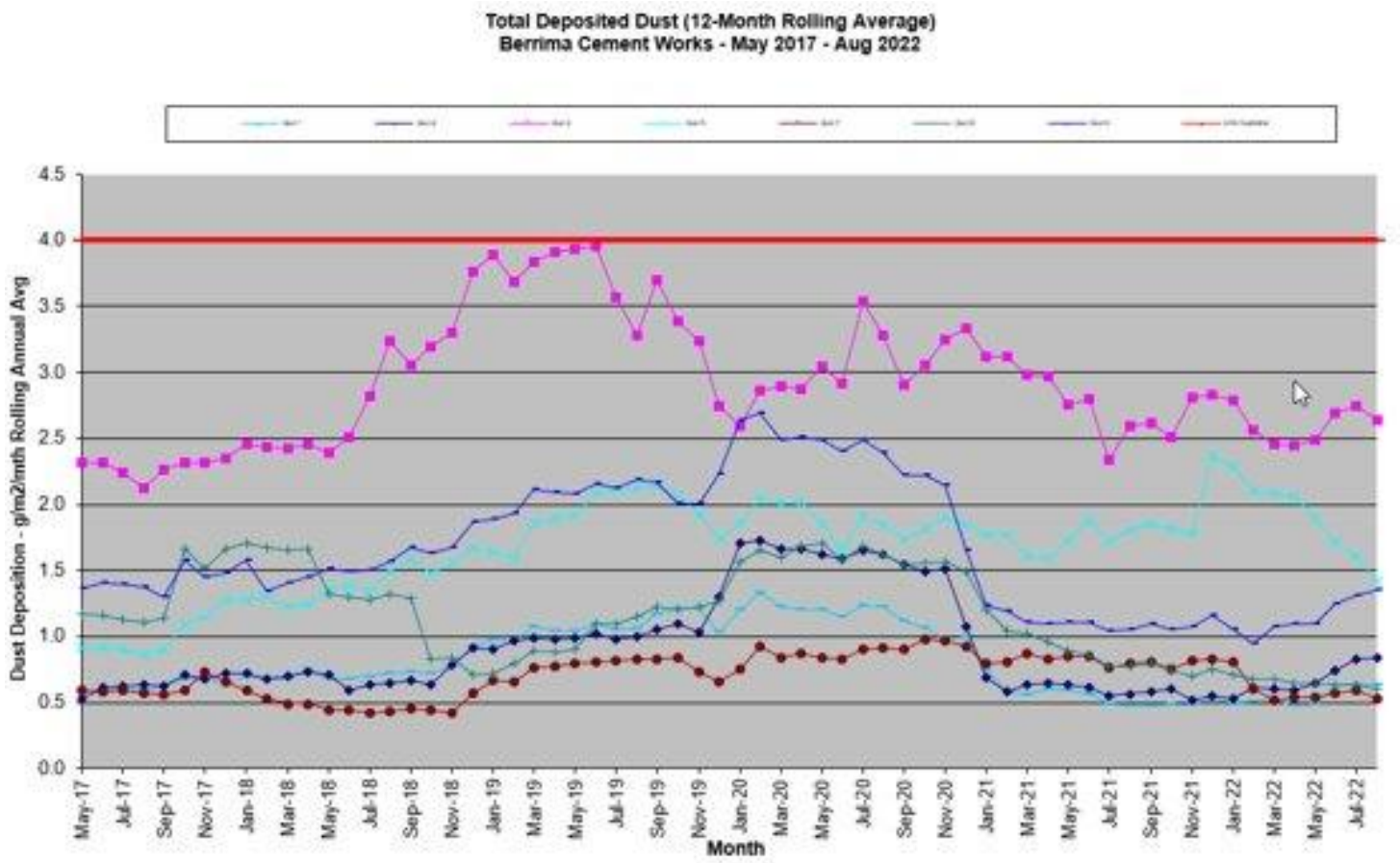
The following licence comparison table shows that all analytes highlighted in green are within the licence limit set by the NSW EPA as per licence 1698 (last amended on 18 December 2019).

EPA	Parameter	Units	Licence limit	Detected values	Detected values (corrected to 10% O_2)
EPA 2 - Kiln Stack No. 6	Mercury	mg/m^3	0.05	0.0093	0.0086
	Type 1 and Type 2 substances in aggregate	mg/m^3	0.5	<0.03	<0.03
	Solid particles	mg/m^3	50	26	24
	Nitrogen oxides	mg/m^3	1250	670	690
	Cadmium + Thallium	mg/m^3	0.05	<0.001	<0.001
	Chlorine	mg/m^3	50	≤0.013	≤0.012
	Dioxins & furans (I-TEQ middle bound)	ng/m^3	0.1	0.0029	0.0031
	Hydrogen chloride	mg/m^3	10	0.18	0.17
	Hydrogen fluoride	mg/m^3	1	<0.02	<0.02
	Sulfur dioxide	mg/m^3	50	0.03	0.028
	Sulfuric acid mist and sulfur trioxide (as SO_3)	mg/m^3	50	0.078	0.073
	Volatile organic compounds	mg/m^3	40	1.6	1.6

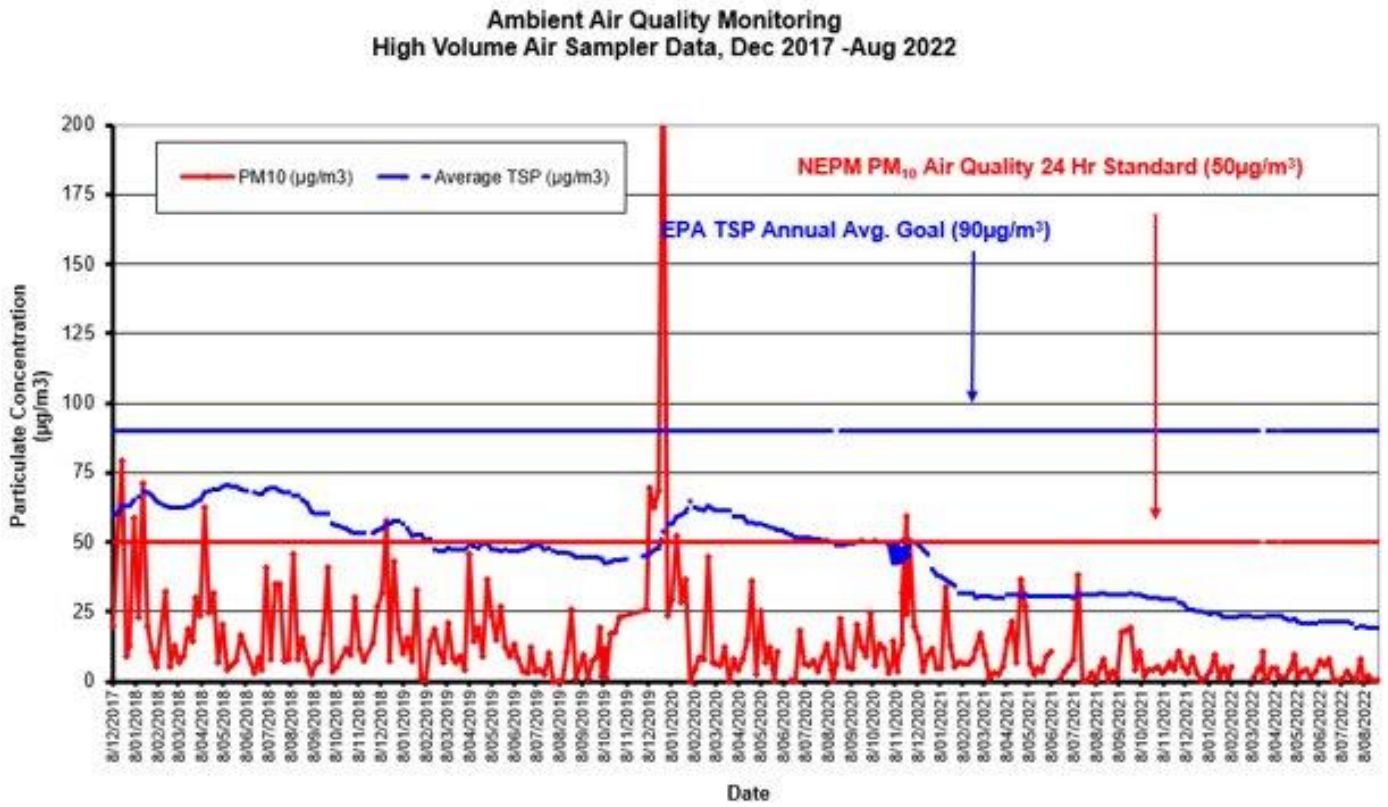
Location	Test Date	Test Parameters*
EPA 2 – No.6 Kiln Stack	30 June 2022	Speciated volatile organic compounds (VOCs) Dioxins and furans (PCDD & PCDF) Polycyclic aromatic hydrocarbons (PAHs) Nitrogen oxides, carbon monoxide, carbon dioxide, oxygen
	1 July 2022	Solid particles, fine particulates (PM_{10}) by particle size analysis (PSA), fine particulates ($PM_{2.5}$) by particle size analysis (PSA), coarse particulates Sulfur dioxide, sulfur acid mist and sulfur trioxide (as SO_x) Type 1 & 2 substances in aggregate (Sb, As, Cd, Pb, Hg, Be, Cr, Co, Mn, Ni, Se, Sn, V), copper, thallium, zinc Total fluoride, hydrogen chloride, chlorine Hexavalent chromium

* Flow rate, velocity, temperature, and moisture were also determined.

Environmental monitoring – dust deposition trends



Environmental monitoring – high volume air sampler data



Property planning and approvals update

Modification 14 – solid waste derived fuels (SWDF)

Project Objective

- Increase the volume of SWDF from 100,000tpa to 250,000tpa;
- Expansion of existing SWDF storage and handling facilities;
- Construct an alternate access to the site;
- Additional 13 truck movements per day; and
- Permit 24 hour delivery of materials.

Project status & progress

- Modification including Environmental Impact Statement exhibited from 14 to 27 April 2022.
- No community submissions received.
- Eight (8) agency comments seeking further information to address water & fire management and intersection design.
- Consultants preparing response to submissions.
- Anticipated lodgement December 2022.

Project link Modification 14 SWDF Increase, Delivery Variation & Site Access | Planning Portal - Department of Planning and Environment (nsw.gov.au)

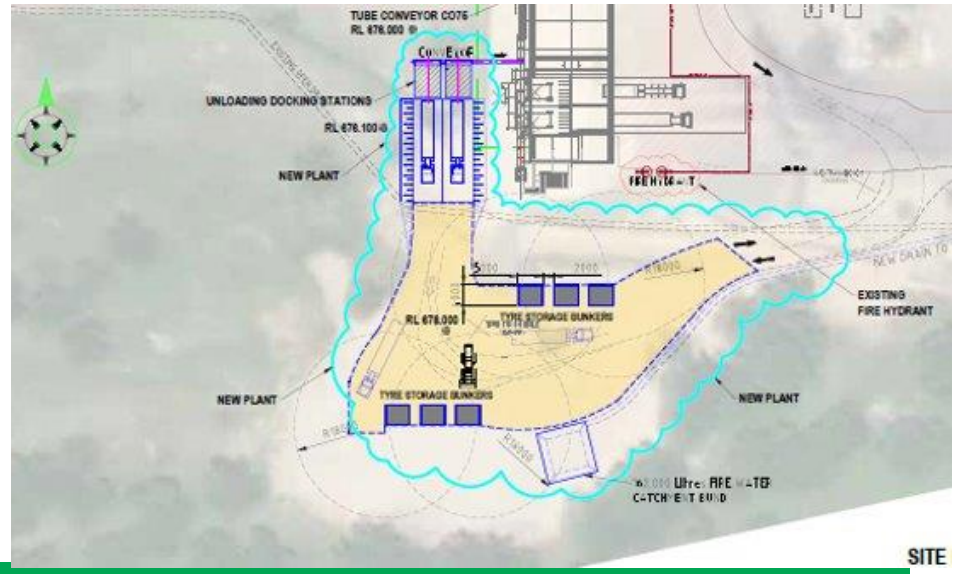
Modification 15 – tyre chip storage and feed infrastructure

Project Objective

- Permit new permanent outdoor storage and feed system to support use of tyre chips;
- Modification of relevant conditions of consent; and
- Tyre chip use already permitted under Kiln 6 development consent, no change in volume stored or used, no increase in trucks or hours.

Project status & progress

- Scoping report submitted and Secretary's Environmental Assessment Requirements (SEARs) provided June 2022;
- Planning report and technical assessment lodged in October 2022.
- No exhibition due to "minimal impact" assessment level.
- Request for further information (RFI) received 16 November 2022. Response is currently being prepared.



Project link https://www.planningportal.nsw.gov.au/major-projects/projects/berrima-cement-mod-15-tyre-chip-storage-feed-infrastructure

Carbon Capture Pilot Plant

Project Objective

- 1 - 3 year trial to research carbon emissions reduction associated with the production/manufacture of clinker;
- Importation of up to 2,000 tonnes of recycled concrete aggregates processed from construction and demolition waste;
- Installation of pre-fabricated plant to trial sequestration of carbon into aggregates & sand;
- Pilot plant trials to focus on optimising temperature, residence time and relative humidity.

Project status & progress

- DA application lodged in September;
- Two primary process units procured;(1) Rotary Dryer, (2) Mixer
- Extensive lab trials completed

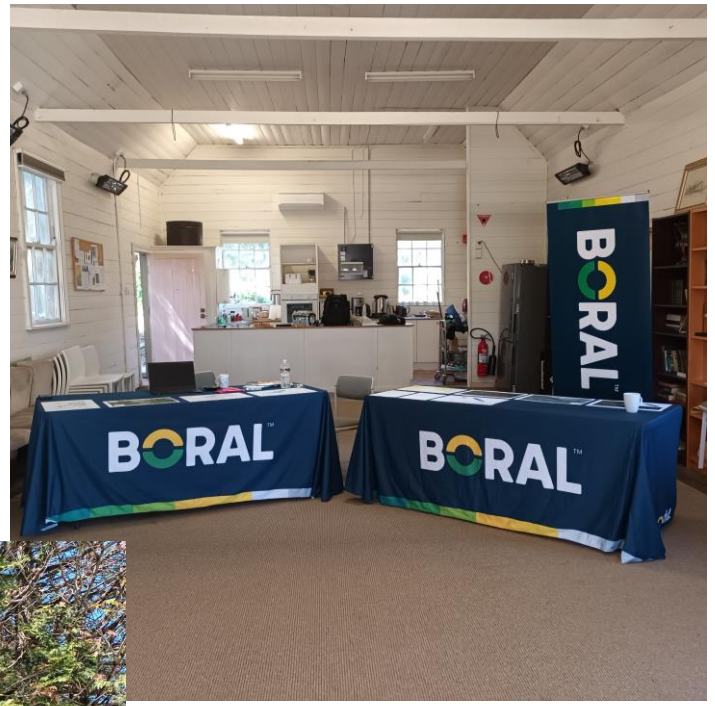
Planned applications

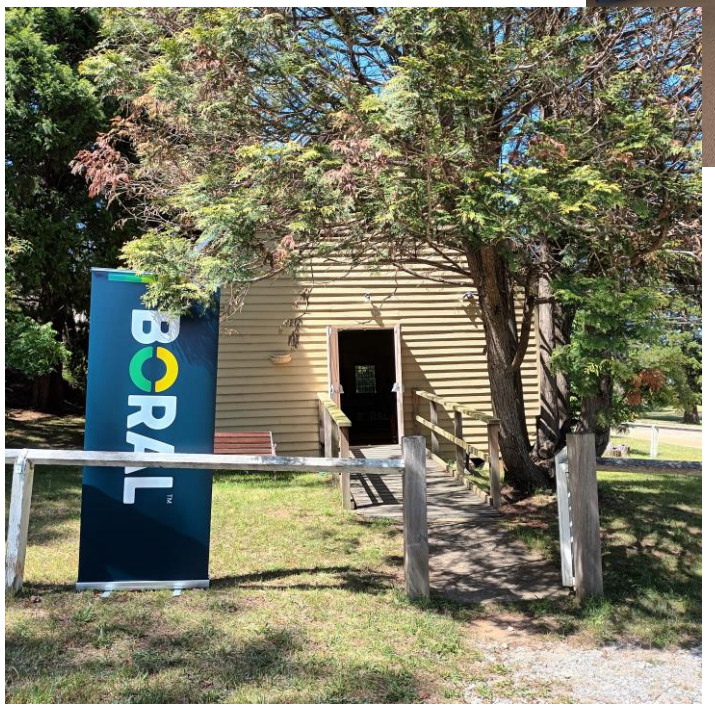
Consent to be modified	Description	Timing
Ball Mill Consent (DA85-4-2005)	Modification to align noise management conditions of the ball mill consent with approved site wide noise management plan	Currently on hold

Communications update

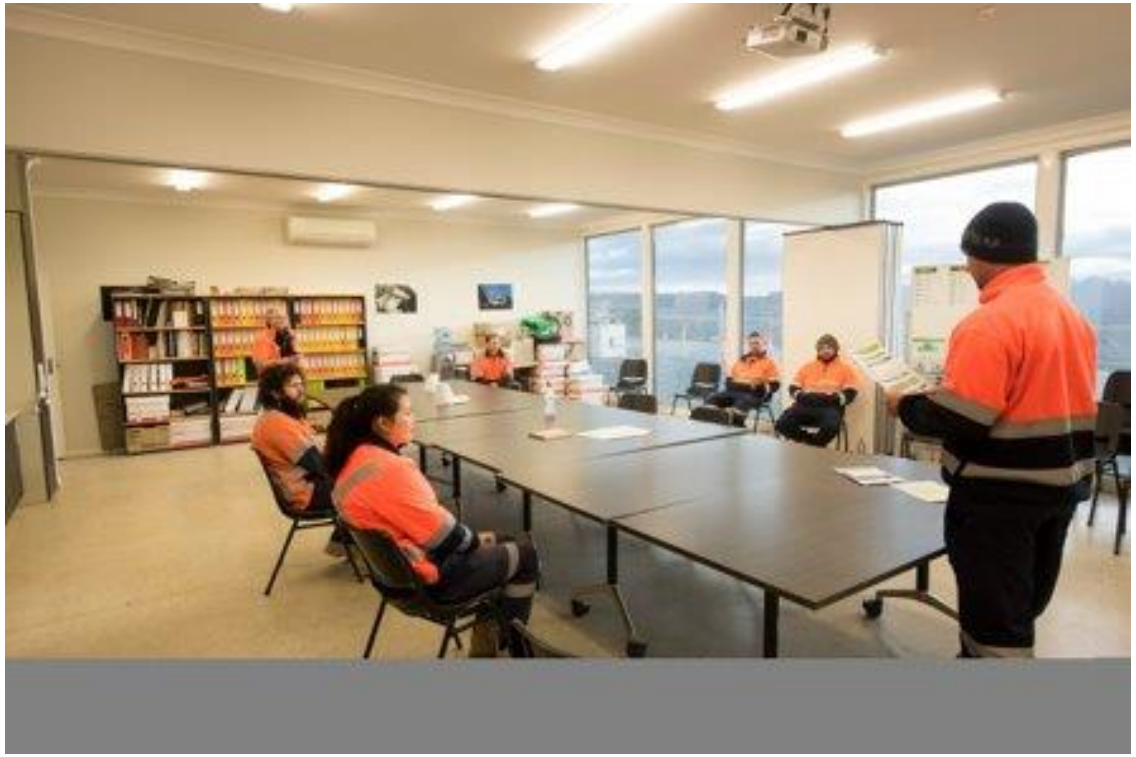
Advertisement for the EOI for the vacant CLG position has been put on the notice board at the post office and will be shared with the Berrima Residents Association.

A community drop-in session was held in Berrima on 26 November to answer questions regarding the proposed pit top treatment and pipeline project from the colliery to the cement works.





General business and contacts



General business

Items of general business:

- Habitat corridors along the riparian zones on Boral land – (Cameron McArthur)
- What is an electrostatic precipitator (esp) trip ? (Gabriel Paicu)

Contacts

Boral Berrima Cement contacts:

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02 4860 2222

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Next meeting

- Move to six monthly meetings?

BORAL

Building something great