



Tuesday, 21 December 2021

Sally Munk

Principal Planning Officer - Industry Assessments

Planning Services Division - NSW Department of Planning and Environment

320 Pitt Street Sydney 2000

(By email to Sally.Munk@planning.nsw.gov.au)

Boral Cement Limited

ABN 62 008 528 523

Level 18, 15 Blue Street

North Sydney, NSW 2060

PO Box 1228

North Sydney, NSW 2059

T: +61 (02) 9220 6300

F: +61 (02) 9233 6605

boral.com.au

Dear Sally

Boral Berrima Cement (DA 401-11-2002-i) – Condition 1.4CA Storage acceptance and Notification of chipped Tyre Trial

Condition 1.4CA of the Kiln 6 development approval from the Department of Planning, Industry and Environment states that a single trial of chipped waste tyres is permitted to be undertaken following consultation and written approval from the EPA, notification to Fire and Rescue NSW prior to receipt of material, storage to the satisfaction of the Planning Secretary, notification to the Community Liaison Group, the EPA and the Planning Secretary prior to commencement of the trial.

Boral met with the EPA on 8 October 2021 to discuss the trial and subsequently received a letter of support from the EPA on 22 October 2021 to undertake the trial (see attached). The purpose of the trial is to determine if the tyres can be fed through our existing SWDF infrastructure into the calciner and if the tyre chips create blockages in the riser ducts.

Boral has notified both the RFS and Fire and Rescue (verbally and by the attached letter dated 15 December 2021) on the proposed trial and the storage and handling of the chipped tyres during the trial. As of the date of this letter there has been no concerns raised about the proposed storage methodology.

Boral is proposing to handle and store the tyre chips as outlined below on an earthen hardstand area behind the SWDF storage sheds away of any potential ignition sources:



Photo 1: Fire Hydrant

Figure 1: Tyre chip tyre handling and storage area



Photo 2: Storage bins



Photo 3: Chip tyre storage bin and ground storage and chipped tyre handling and stockpile storage

While not our preference, if the chipped tyres are to be emptied from the bins and stored on the ground other than for immediate use, the stockpiles of chipped tyres will follow the requirements of the NSW Fire and Rescue Bulk Storage of Rubber Tyres as follows:

- (b) **Large tyre facilities (50 tonnes or more)** — tyre stacks should be at least 18m from any boundary or any building (see Figure 11 below);

Note: A public road may form part of this separation distance, however tyre stacks must be at least 6m from the site boundary facing the public road;

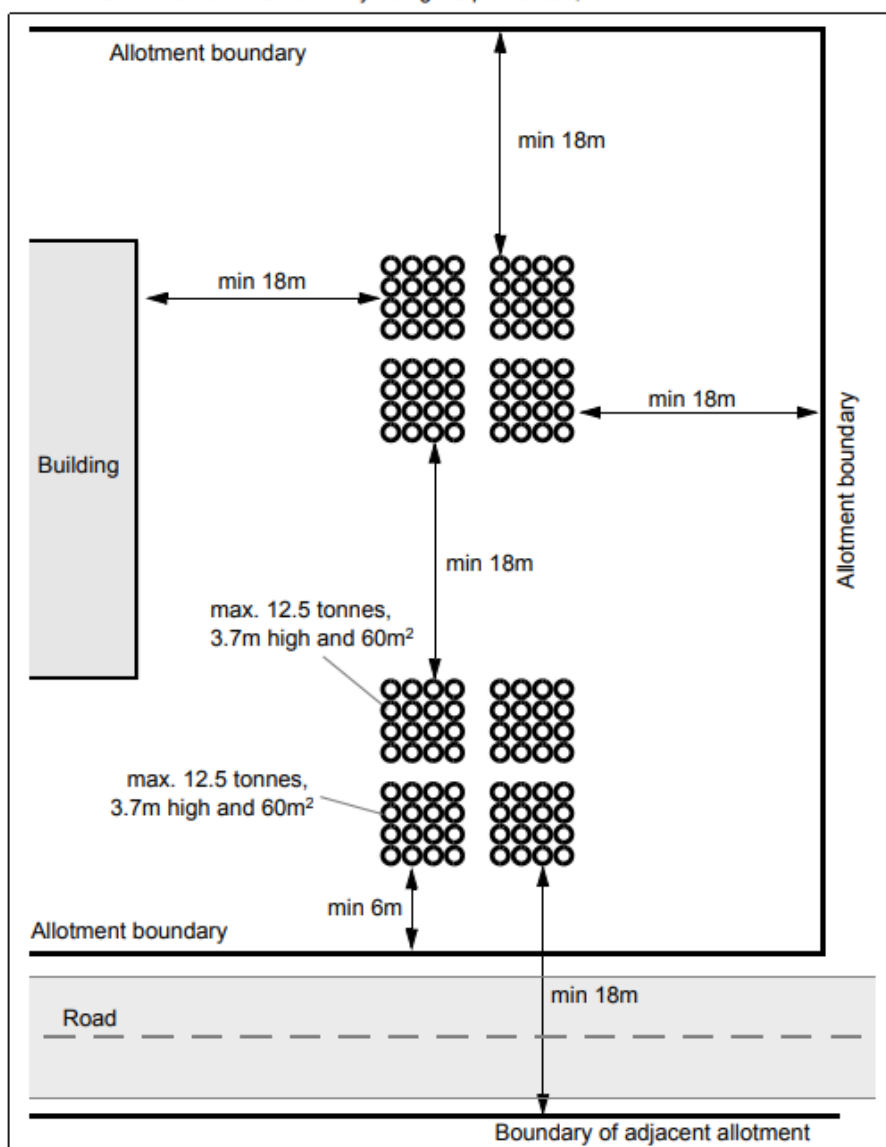


Figure 11 Minimum boundary clearances for large facilities

6.4 Site access for FRNSW appliances

Any external tyre storage facility should have at least two site access points for FRNSW appliances, each being not less than 4m wide (see Figure 12 below).

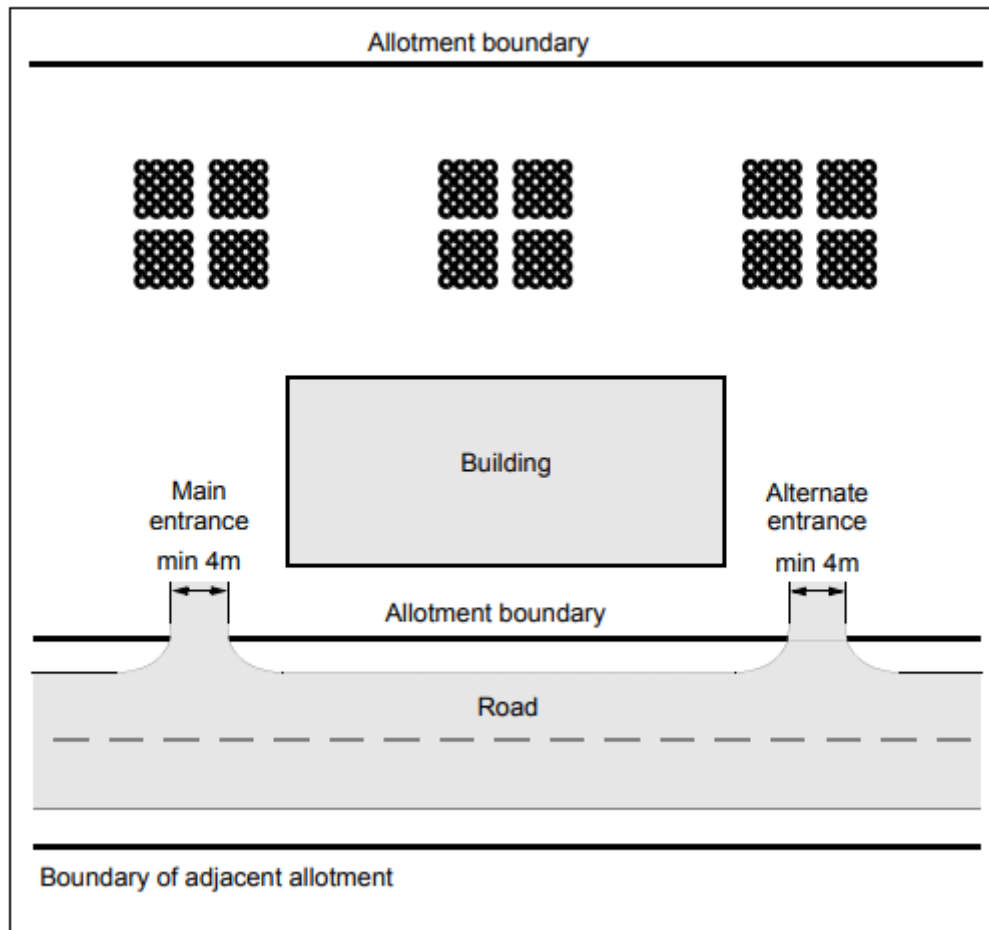


Figure 12 Alternative site access for FRNSW appliances

Originally the trial was planned for late December to align with the kiln shut in early to mid January 2022, however the annual kiln shut has now been rescheduled to commence on 4 February for 21 days. Subsequently the trial is likely to occur in the last week prior to shut being late January/early February 2022. The trial needs to be undertaken as close as possible to the kiln shut to enable inspections of the riser ducts for any evidence of product blockages.

The Community Liaison Group was formally notified of the trial on Monday 20 December 2021 (see attached), however have been informed previously during our August 2021 CLG meeting of our intention to revisit the use of tyres as a fuel.

This letter is our notification to the DPIE of the proposed trial and evidence of the required consultation and notification of the trial. If you have any questions regarding the trial or concerns regarding the temporary storage of the chipped tyres please let myself or the Operations Manager Dean Beltrame – 0401 896 979 know.

Regards

Greg Johnson

A handwritten signature in blue ink, appearing to be "MS", followed by a long horizontal flourish.

Environmental Sustainability Manager – Boral Cement

Attachments

- 1) EPA written acceptance of chipped tyre trial 22 October 2021
- 2) Boral Notification to RFS/Fire and Rescue 15 December 2021
- 3) Boral Notification to Community Liaison Group (email 20 December 2021)
- 4) Boral Notification of updated trial date with EPA (email 9 December 2021)



DOC21/865608-2

Mr Greg Johnson
Environmental Sustainability Manager
Boral Cement Limited
PO Box 1228
NORTH SYDNEY NSW 2059

Email: greg.johnson@boral.com.au

Dear Mr Johnson

Proposed AKF5 (Waste Tyres) Materials Handling Trial – Kiln 6
Boral Cement Limited – Berrima Plant - Environment Protection Licence 1698

I am writing in response to your email dated 23 September 2021 to the Environment Protection Authority (EPA) seeking consultation on a proposal by Boral Cement Limited (Boral) to conduct a materials handling trial of chipped waste tyres (AKF5) as a Solid Waste Derived Fuel (SWDF) in Kiln 6. The EPA met with Boral to discuss the proposal on 8 October 2021.

Condition 1.4CA of Boral's Department of Planning, Industry and Environment (DPIE) Conditions of Approval (CoA) states that a single trial of chipped waste tyres is permitted to be undertaken at the Taylor Avenue, New Berrima premises following consultation with the EPA and notification to DPIE. Boral is the holder of Environment Protection Licence No. 1698 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act").

As discussed during the meeting Boral confirmed that the proposed trial would be undertaken in accordance with the CoA and the licence. Boral advised that the trial was necessary to assess the risk of blockages at certain points in ducting within the Kiln 6 preheater calciner. Boral provided the following advice:

- It was intended to undertake the trial in December 2021 prior to the annual plant maintenance shut.
- The trial would be conducted over a 5-day period with a feed rate of approximately 40 tonnes per day (and approximately 1.5 tonnes per hour)
- The trial would consume a maximum of 205 tonnes of AKF5 with pieces chipped to 2 inches in size
- The chipped tyres would be fed into Kiln 6 using the existing SWDF storage, handling and feed system
- The trial would be well within the AKF5 feed-rate limits outlined in Condition O6.3 of the licence (a maximum feed rate of 4.5 tonnes per hour and a maximum total fuel mass percentage of 21%)
- There was unlikely to be any noticeable visual or concentration changes in Kiln 6 emissions

Phone 131 555
Phone 02 4224 4100
(from outside NSW)

Fax 02 4224 4110
TTY 131 677
ABN 43 692 285 758

PO Box 513
WOLLONGONG
NSW 2520

Level 3
84 Crown Street
WOLLONGONG
NSW 2500
AUSTRALIA

info@epa.nsw.gov.au
www.epa.nsw.gov.au

- Boral would liaise with DPIE following consultation with EPA, prior to commencing the trial
- Following the conclusion of the trial Boral would report on the outcomes to DPIE and the EPA as per Condition 1.4CA

The EPA have considered the information provided by Boral and are supportive of the AKF5 trial proceeding, subject to compliance with condition in the CoA and the licence.

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

Yours sincerely



22.10.2021

WILLIAM DOVE
Unit Head Regulation

Copy to DPE – Sally Munk

Chipped tyre as fuel Materials Handling Trial

Gabriel Paicu <Gabriel.Paicu@boral.com.au>

Wed 15/12/2021 9:50 AM

To: gpoll@dux.com.au <gpoll@dux.com.au>

Cc: Ian Thorpe <Ian.Thorpe@boral.com.au>; Greg Johnson <Greg.Johnson@boral.com.au>; Bill Lockley <Bill.Lockley1@boral.com.au>; Sunil Ram <Sunil.Ram@boral.com.au>

 1 attachments (1 MB)

20211210 Berrima Tyre as a Fuel Trial.docx;

Dear Gerard,

Boral Cement Berrima is looking to undertake a trial of chipped tyres within our Kiln at our Taylor Avenue, New Berrima.

EPA is supportive of the proposed trial

As per DA 401-11-2002-i Condition 1.4CA g), Boral shall notify Fire and Rescue NSW prior to the receipt of trial materials and to address any requirements with respect to the safe storage of the trial materials.

Boral is proposing to handle and store the tyre chips as outlined in the attached document and is seeking any feedback from you of our methodology.

Please contact myself or Greg Johnson - Environmental Manager Boral Cement (cc: in this email) if any comments.

Thank you,

Gabriel

GABRIEL PAICU

Technical Manager

Telephone: +61 2 4860 2211

Mobile: +61 401 897 301

Fax: +61 2 4860 2388

Email: Gabriel.Paicu@boral.com.au



Follow us:



Boral Cement

Taylor Avenue, New Berrima

Locked Bag 4, New Berrima, Berrima NSW 2577

www.boral.com.au

Wednesday, 15 December 2021

Gerard Poll

The Berrima RFS Captain

By email to gpoll@dux.com.au

Cc: Ian Thorpe

The Moss Vale NSW Fire and Rescue Captain

By email to ian.thorpe@boral.com.au

Boral Cement Limited

ABN 62 008 528 523

Level 18, 15 Blue Street
North Sydney, NSW 2060

PO Box 1228

North Sydney, NSW 2059

T: +61 (02) 9220 6300

F: +61 (02) 9233 6605

boral.com.au

Dear Gerard

Boral Berrima Cement (DA 401-11-2002-i) – Chipped Tyre as Fuel Materials Handling Trial

As per Condition 1.4CA of Boral's Department of Planning, Industry and Environment (DPIE) Conditions of approval, Boral is permitted to undertake a single trial of chipped waste tyres (205t) within our Kiln at our Taylor Avenue, New Berrima premises following appropriate consultation with the NSW EPA.

Following consultation with the EPA on 8 October 2021, the EPA responded on 22 October 2021, that they were supportive of the proposed trial (see attached). This was to be undertaken in late December 2021 before our annual kiln shut, however is more likely to occur in late January or early February 2022 as our shut has been delayed.

As per Condition 1.4CA g), Boral shall notify Fire and Rescue NSW prior to the receipt of trial materials and to address any requirements with respect to the safe storage of the trial materials. Boral is proposing to handle and store the tyre chips as outlined below and is seeking any feedback from you of our methodology.



Photo 1: Hydrant

Figure 1: Tyre chip tyre handling and storage area.

The trial will use up to 205t of tyre chips over a number of days. The chipped tyres will be supplied in storage bins of approximately 15t and remained stored in the bins until they are emptied on the ground for immediate handling where by the chips will be transferred by a front end loader into the temporary hopper which will feed directly into the SWDF system.



Photo 2: Storage bins



Photo 3: Chip tyre storage bin and ground storage and chipped tyre handling and stockpile storage

While not our preference, if the chipped tyres are to be emptied from the bins and stored on the ground other than for immediate use, the stockpiles of chipped tyres will follow the requirements of the NSW Fire and Rescue Bulk Storage of Rubber Tyres as follows:

- (b) **Large tyre facilities (50 tonnes or more)** — tyre stacks should be at least 18m from any boundary or any building (see Figure 11 below);

Note: A public road may form part of this separation distance, however tyre stacks must be at least 6m from the site boundary facing the public road;

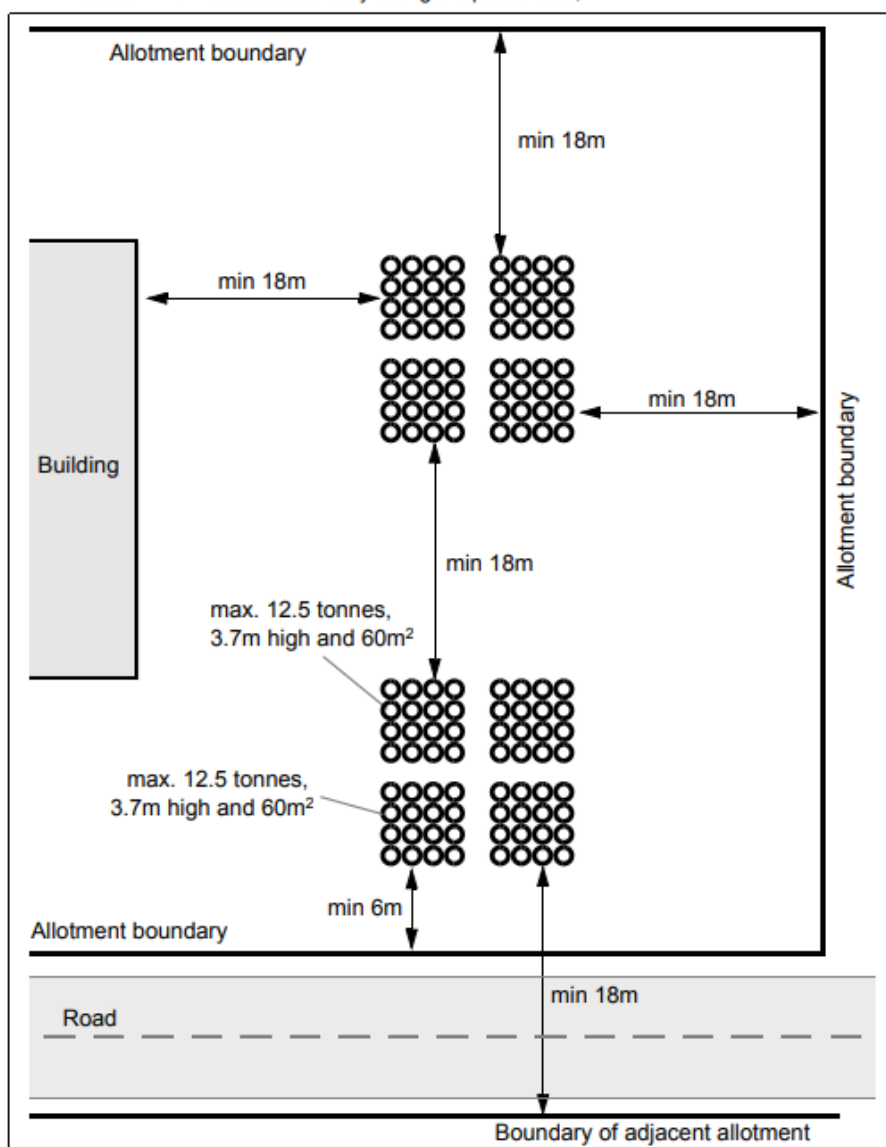


Figure 11 Minimum boundary clearances for large facilities

6.4 Site access for FRNSW appliances

Any external tyre storage facility should have at least two site access points for FRNSW appliances, each being not less than 4m wide (see Figure 12 below).

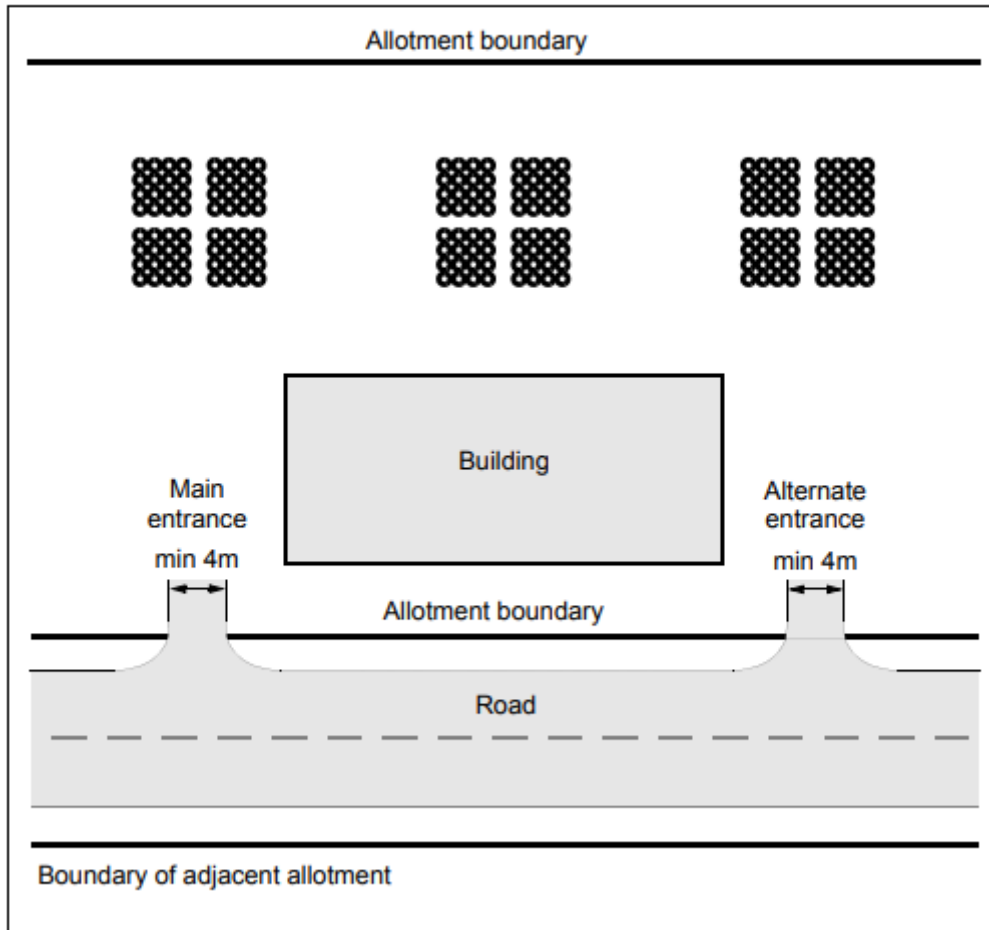


Figure 12 Alternative site access for FRNSW appliances

As outlined above we would welcome any feedback on our proposed trial if there are any additional requirements that we need to meet or consider and would welcome any inspection of the proposed area.

Regards,

Gabriel Paicu

Technical Manager

Boral Cement Berrima

Boral Cement Berrima - Tyre Chip Trial.

Dean Beltrame <Dean.Beltrame@boral.com.au>

Mon 20/12/2021 11:13 AM

To: Clive West (savwest@bigpond.com) <savwest@bigpond.com>; woodsa_05@yahoo.com.au (woodsa_05@yahoo.com.au) <woodsa_05@yahoo.com.au>; barry.arthur@wsc.nsw.gov.au <barry.arthur@wsc.nsw.gov.au>
Cc: Greg Johnson <Greg.Johnson@boral.com.au>

 1 attachments (236 KB)

EPA Response to Boral Cement re AKF5 Chipped Waste Tyre Trial - EPL 1698 - Boral Cement Berrima 22.10.2021.pdf;

Dear CLG members,

I hope you are all well and looking forward to the Christmas break. As members of the CLG we are providing you with an update on our waste derived fuels progress and a plan to undertake a small trial (205t) of tyre chips prior to the annual kiln shut.

Condition 1.4CA of the Kiln 6 development approval from the Department of Planning, Industry and Environment states that a single trial of chipped waste tyres is permitted to be undertaken following consultation with the EPA and notification to the DPIE.

Boral met with the EPA on 8 October 2021 to discuss the trial and subsequently received a letter of support from the EPA on 22 October 2021 to undertake the trial (see attached). The purpose of the trial is to determine if the tyres can be fed through our existing SWDF infrastructure into the calciner and if the tyre chips create blockages in the riser ducts.

Originally the trial was planned for late December to align with the kiln shut in early to mid January 2022, however the annual kiln shut has now been rescheduled to commence on 4 February for 21 days. Subsequently the trial is likely to occur in the last week prior to shut being late January/early February 2022. The trial needs to be undertaken as close as possible to the kiln shut to enable inspections of the riser ducts for any evidence of product blockages.

If you are interested in attending during the trial please let me know and we can organise an inspection.

Regards

Dean.

DEAN BELTRAME

Operations Manager - Berrima

Mobile: 0401896979

Office: 02 48602267

Email: dean.beltrame@boral.com.au



Follow us:



Boral Cement

Taylor Avenue, New Berrima NSW 2577

www.boral.com.au

Re: Boral Berrima Cement - EPL 1698 - Chipped Tyre Trial Consultation & Request for approval

Greg Johnson <Greg.Johnson@boral.com.au>

Thu 09/12/2021 3:44 PM

To: Matthew Fuller <Matthew.Fuller@epa.nsw.gov.au>

Cc: Sunil Ram <Sunil.Ram@boral.com.au>; Gabriel Paicu <Gabriel.Paicu@boral.com.au>; William Dove <William.Dove@epa.nsw.gov.au>; Sally Munk <Sally.Munk@planning.nsw.gov.au>; Dean Beltrame <Dean.Beltrame@boral.com.au>

Hi Matthew,

Just an update to the trial. We likely to run this late January/early Feb to align with a delay to the proposed kiln shut.

Regards

GREG JOHNSON

Environmental Sustainability Manager

Boral Cement

Phone: 02 9033 4916 Mobile: 0401 893 420

greg.johnson@boral.com.au



Follow us:



Boral Cement

Trinity 2, 39 Delhi Road, North Ryde NSW 2113

www.boral.com.au

Boral National

Trinity 2, 39 Delhi Road, North Ryde NSW 2113

www.boral.com.au

From: Matthew Fuller <Matthew.Fuller@epa.nsw.gov.au>**Sent:** 22 October 2021 2:19 PM**To:** Greg Johnson <Greg.Johnson@boral.com.au>**Cc:** Sunil Ram <Sunil.Ram@boral.com.au>; Gabriel Paicu <Gabriel.Paicu@boral.com.au>; William Dove <William.Dove@epa.nsw.gov.au>; Sally Munk <Sally.Munk@planning.nsw.gov.au>; Dean Beltrame <Dean.Beltrame@boral.com.au>**Subject:** RE: Boral Berrima Cement - EPL 1698 - Chipped Tyre Trial Consultation & Request for approval

Dear Greg,

As discussed at our recent meeting (and in response to your enquiry below) please see attached EPA's response regarding a proposed trial of waste tyres (AKF5) in Kiln 6 at Berrima.

Please give me a call if you wish to discuss.

Regards

Matthew Fuller

Senior Operations Officer

Regulatory Operations Metro South

NSW Environment Protection Authority

D 02 42244128 | M 0409 516 497

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

From: Greg Johnson <Greg.Johnson@boral.com.au>**Sent:** Thursday, 23 September 2021 4:04 PM

To: EPA Regulatory Operations Metro South Mailbox <RegOps.MetroSouth@epa.nsw.gov.au>; Matthew Fuller <Matthew.Fuller@epa.nsw.gov.au>; William Dove <William.Dove@epa.nsw.gov.au>
Cc: Sunil Ram <Sunil.Ram@boral.com.au>; Gabriel Paicu <Gabriel.Paicu@boral.com.au>
Subject: Boral Berrima Cement - EPL 1698 - Chipped Tyre Trial Consultation & Request for approval

Good afternoon William/Matt,

As foundation members of MECLA as well as Boral's commitment to Net Zero by 2050, which aligns with the NSW Governments goal and a 42% reduction by 2030 of our total emissions, our Berrima operations will be key to driving down embodied carbon in our cementitious products. Additionally, the kiln is well placed to assist the NSW Government on their 20 year waste strategy.

As per the Energy from Waste Policy, tyres are considered a permitted energy from waste fuel in cement works. As Boral has the only operating kiln in NSW, this pertains to our site. We currently have approval within our EPL to receive and consume tyres as a fuel and have approval within our development consent.

To date we have not commenced using tyres due to the cost of tyres as fuel compared to conventional fuels and operational constraints on how to feed the tyre material into the kiln and the risk to blockages in the riser duct from wires in the tyres. However recent limitations on waste tyre exports and our focus to reduce our reliance on higher embodied standard fuels is leading us consider how best to feed tyres into our kiln.

On 13 February 2007, MOD12-2-2007-I was approved to undertake a trial with tyre chips. This MOD included the following condition:

1.4CA Notwithstanding condition 1.4C 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:

- a) no more than 205 tonnes of 2" chipped tyres is to be received at the site for the trial;
- 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;
- c) the trial shall be undertaken for the purpose of investigating design and operational aspects of the full-scale use of AKF5;
- d) the trial shall be undertaken in full compliance with the environmental performance standards stipulated in this consent, and the requirements of the Environmental Protection Licence for the site;
- 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;
- 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;
- g) the Applicant shall notify 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;
- h) the Applicant shall notify the Secretary, the EPA and the Community Liaison Group prior to the commencement of the trial; and
- i) the Applicant shall report the status and outcomes of the trial to the 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.

This condition was sought and granted prior to the SWDF MOD and the subsequent installation of the SWDF shed, SWDF grab and feeding conveyor.

As noted earlier, the main concern operationally in using tyres in the Berrima process is the potential for tyre wires to build up within the riser duct (CY14). In order to assess this the Berrima operations is proposing to undertake a trial as per condition 1.4CA of the consent in December 2021 prior to the end of year shut. The tyre chips will be fed via the SWDF and associated feed system. While we are still to finalise the trial plan, it is anticipated that various rates will be trialled to monitor kiln performance but more so to determine if there is any risk to blockages. The CY14 ducts will be inspected during the end of year shut.

As per condition 14CA e) Boral is to consult 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. Boral is seeking your feedback on the proposed trial and would like to meet via Teams to discuss the above and expectations from the EPA to undertake the trial. I will shortly send a meeting request to enable that consultation.

Regards

GREG JOHNSON

Environmental Sustainability Manager
Boral Cement

Phone: 02 9033 4916 Mobile: 0401 893 420
greg.johnson@boral.com.au



Follow us:



Boral Cement

Triniti 2, 39 Delhi Road, North Ryde NSW 2113

www.boral.com.au

Boral National

Triniti 2, 39 Delhi Road, North Ryde NSW 2113

www.boral.com.au

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