

Modification of Minister's Approval

Section 75W of the *Environmental Planning and Assessment Act 1979*

As delegate for the Minister for Planning, under the Instrument of Delegation executed on 16 February 2015, I approve the modification of the development consent referred to in Schedule 1, subject to the modified conditions of consent outlined in Schedule 2.

Chris Ritchie
Director
Industry Assessments

Sydney 5 OCTOBER

2016

SCHEDULE 1

Development Consent (DA 401-11-2002-i), granted by the former Minister for Planning on 12 May 2003 for the upgrade of Kiln 6 and associated works at the existing cement works at Taylor Avenue, New Berrima in the Wingecarribee local government area.

SCHEDULE 2

- 1) Delete all of the Definitions in Schedule 2 and replace with the following:

In this consent, except in so far as the context or subject-matter otherwise indicates or requires, the following terms have the meanings indicated:

Act	<i>Environmental Planning and Assessment Act 1979</i>
AEMR	Annual Environmental Management Report
AKF 1	a Non-Standard Fuel, being liquid oily residues comprising of recovered oil from the treatment of wash waters, oils, dewatered sludges and grease trap emulsions, that is approved for use as a Non-Standard Fuel by the EPA and in accordance with the requirements of this consent
AKF 5	a Non-Standard Fuel, being used and unwanted tyres, that is approved for use as a Non-Standard Fuel by the EPA and in accordance with the requirements of this consent
Applicant	Boral Cement Limited
BCA	Building Code of Australia
cement works	existing development on the site as at the date of this consent
cement works upgrade	the development to which this consent applies
construction	the demolition of buildings or works, the carrying out of works, including bulk earthworks, and erection of buildings and other infrastructure covered by this consent
Council	Wingecarribee Shire Council
dB(A)	decibel (A-weighted scale)
Department	NSW Department of Planning and Environment or its successors
the development	the development the subject of this development consent as described in the SEE and any subsequent modifications
dioxins	Dioxins and Furans (as TCCD I-TEQs)
dust	any solid material that may become suspended in air or deposited
SEE	Statement of Environmental Effects for the upgrade to Kiln 6 entitled <i>Statement of Environmental Effects – Berrima Kiln 6 Upgrade Project</i> , dated November 2002 and prepared by Olsen Environmental Consulting.
EPA	NSW Environment Protection Authority

EPL	Environment Protection Licence issued under the <i>Protection of the Environment Operations Act 1997</i>
Feasible	Feasible relates to engineering considerations and what is practical to build
Fuel Specification	the allowable concentration of certain contaminants in fuel
Group 1 non-standard fuel	for the purposes of this consent, Group 1 non-standard fuels include Hi-Cal 50 and AKF1
Group 2 non-standard fuel	for the purposes of this consent, Group 2 non-standard fuels include AKF5 and SWDF
Hi CAL 50	a Non-Standard Fuel, being spent aluminium electrode carbon that is approved for use as a Non-Standard Fuel by the EPA and in accordance with the requirements of this consent
incident	a set of circumstances causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this consent
kiln Start-up	a start-up period—that is, while the kiln is being brought up to normal operation following a period of inactivity
kiln Shutdown	a shutdown period—that is, while the kiln is being taken out of service from normal operation to inactivity
L _{Aeq} (15 minute)	equivalent average sound pressure level that is measured over a 15 minute period
Listed pollutants	for the purposes of this consent listed pollutants are antimony, arsenic, beryllium, cadmium, chromium, chromium (hexavalent), cobalt, copper, lead, manganese, mercury, nickel, selenium, tin and vanadium as the elements and their compounds
Minister	NSW Minister for Planning, or delegate
Mtpa	Million tonnes per annum
Non-Standard Fuel	for the purposes of this consent, Non-Standard Fuels are those approved for use by this consent, being Hi-Cal 50, AKF1, AKF5 and SWDF
operation	any activity that results in the production, or intended production of commercial quantities of cement clinker after commissioning of the cement works upgrade
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Proof of Performance Trial	a trial of the use of a SWDF as a fuel in Kiln 6 to demonstrate the appropriateness of that SWDF at different ratios and feed rates until the desired performance is achieved. Carried out in accordance with an approved Proof of Performance Trial Plan.
Principal Certifying Authority	the Minister or an accredited certifier, appointed under section 109E of the Act, to issue a Part 4A Certificate as provided under section 109C of the Act
RDF	Refuse Derived Fuel – A fuel produced by processing the residues of waste by sorting and shredding (particle size reduction), dehydrating (moisture removal), and removal of recyclable and hazardous materials.
Reasonable	Reasonable relates to the application of judgment in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements
Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
Secretary	Secretary of the Department of Planning and Environment
RMS	Roads and Maritime Service
site	the land to which this consent applies
Standard Fuel	for the purposes of this consent Standard Fuels are those fuels permitted to be used at the development as approved by the Minister on 12 May 2003 being coal, coke fines, natural gas, fuel oil and diesel
SWDF	Solid Waste Derived Fuel (includes Wood Waste and RDF)
the Policy	<i>NSW Energy from Waste Policy Statement</i> (EPA, 2015)
Wood Waste	organic fibrous wood residues and natural wood wastes that result from the processing of waste.

- 2) Delete all references to "Director-General" and replace with "Secretary".
- 3) Delete all references to "New South Wales Fire Brigades (Fire Safety Division)" and replace with "Fire and Rescue NSW".

- 4) Delete all references to "DEC" and replace with "EPA".
- 5) Delete the word "generally" in Condition 1.2.
- 6) Delete clause p) in Condition 1.2 and replace with new clause p) as follows:
 - p) MOD 9 to allow the use of Solid Waste Derived Fuel as a non-standard fuel for Kiln 6 and accompanying documents:
 - 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
 - ii. 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.

If there is any inconsistency between the plans and documentation listed under a) to p) above, the most recent document shall prevail to the extent of the inconsistency. However, conditions of this consent prevail to the extent of any inconsistency.

- 7) Insert the heading "Limits of Consent" above Condition 1.3.
- 8) Delete Condition 1.3B.
- 9) Delete Table 1 in Condition 1.4A and replace with the following:

Table 1 – Permitted Fuels for use in upgraded Kiln 6

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	≤100,000 combined
Wood Waste	Non-Standard Fuel	50,000	
RDF	Non-Standard Fuel	80,000	

- 10) Insert the following additional words at the end of Condition 1.4B:

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.
- 11) Insert the words "Group 1" immediately before the words "Non-Standard Fuel" in Condition 1.4G.
- 12) Insert new conditions 1.4H and 1.4I immediately after Condition 1.4G as follows:
 - 1.4H 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 Use of Solid Waste Derived Fuels* (Appendix 1 of this consent) and 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.
 - 1.4I 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.

13) Delete Condition 1.5.

14) Delete Conditions 1.7, 1.8, 1.9 and 1.10.

15) Insert new Conditions 1.11 and 1.12 after Condition 1.6 as follows:

Staged Submission of Strategies, Plans or Programs

1.11 With the written consent of the Secretary, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis and/or combine any strategy, plan or program required by this consent.

1.12 The Applicant must comply with all reasonable requirements of the Secretary arising from the Department's assessment of:

- a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this consent; and
- b) the implementation of any actions or measures contained in these documents.

16) Delete Condition 2.2.

17) Insert new heading "NOISE" and sub-heading "Construction Noise" immediately before Condition 3.1.

18) Insert new Conditions 3.1A and 3.1B immediately after Condition 3.1 as follows:

3.1A 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.

Note: The Interim Construction Noise Guideline identifies 'particularly annoying' activities that require the addition of 5dB(A) to the predicted level before comparing to the construction NML.

3.1B 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.

19) Insert the sub-heading "Operational Noise" immediately before Condition 3.2.

20) Delete Conditions 3.4, 3.5 and 3.6.

21) Insert the heading "AIR QUALITY" and sub-heading "Dust Minimisation" immediately before Condition 3.7.

22) Insert the words "and complies with the EPL" at the end of condition 3.7.

23) Delete Condition 3.10 and replace with the following:

Air Quality Discharges

3.10 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.

24) Delete Condition 3.10A.

25) Delete Condition 3.11 and replace with the following:

SOILS AND WATER QUALITY

Construction Soil and Water Management

3.11 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.

26) Delete Condition 3.14 and replace with the following:

Water Discharge Limits

- 3.14 The Applicant shall ensure that all surface water discharges from the site comply with the:
- a) discharge limits (both volume and quality) set for the development in any EPL; or
 - b) relevant provisions of the POEO Act.

27) Insert the heading "TRAFFIC AND ACCESS" immediately before Condition 3.15.

28) Delete Conditions 3.16A, 3.16B, 3.16C, 3.16D and 3.16E and insert new Condition 3.16A as follows:

- 3.16A The Applicant shall pay a road maintenance levy to Council of 4 cents/tonne/km for the transport of SWDF.

29) Insert the heading "WASTE" immediately before the sub-heading "Waste Management Impacts" above Condition 3.17.

30) Delete the words "*Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-liquid Wastes*" in Condition 3.17C and replace with the words "Waste Classification Guidelines".

31) Insert the heading "VISUAL AMENITY" immediately before the sub-heading "Visual Amenity Impacts" above Condition 3.18.

32) Insert new Condition 3.19A immediately after Condition 3.19 as follows:

- 3.19A 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 one cubic metre bales. Stockpiles must not exceed a maximum height of five metres.

33) Insert the words "Group 1 or Group 2" immediately before the first instance of the words "Non-Standard Fuel" in Condition 3.20 and Condition 3.22.

34) Insert the words "and condition 6.8" immediately after the words "condition 6.7" in Condition 3.22 clause a).

35) Delete Condition 3.24 and replace with the following:

- 3.24 The Applicant shall cease to burn Non-Standard Fuels in Kiln 6 if:
- a) the temperature is below 850°C in the zone where Non-Standard Fuels are fired or in the vicinity of the pre-calciner; or
 - b) the temperature is below 300°C at the outlet of the preheater strings.

36) Delete Condition 3.25 and replace with new Conditions 3.25, 3.26, 3.27 and 3.28 immediately after Condition 3.24 as follows:

PROOF OF PERFORMANCE TRIALS (POP TRIALS)

PoP Trial Plan

- 3.25 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 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;
 - 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;
 - c) assess the performance of any monitors on the abatement system and establish a maintenance and calibration program for each monitor;

- d) establish criteria for the control of all alternative fuel input including the maximum flow and maximum calorific value;
- 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;
- 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
- g) address all relevant requirements of the EPL for the project.

Conduct of Trials

3.26 The PoP trials shall:

- a) be carried out in accordance with a detailed PoP plan(s) approved by the Secretary;
- b) be undertaken by a suitably qualified and experienced person(s);
- c) test performance of all major process components including emission control systems using no SWDF, and representative fuels containing SWDF designed to cover the range of materials and compositions of SWDF;
- d) identify changes to the Kiln 6 emission control system that may be necessary to achieve compliance with the conditions of the consent and the EPL; and
- e) demonstrate compliance with the relevant requirements of the EPL, development consent and relevant environmental and safety criteria.

PoP Trial Reports

3.27 The Applicant is to report on each PoP trial to the Secretary and EPA. The reports shall be submitted at:

- 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
- 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. the total quantity of SWDF used during the previous six months;
 - ii. the dates and times when the trial commenced and will conclude;
 - 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;
 - iv. all monitoring data collected for the project during the previous six months;
 - v. identification of any non-compliance with the conditions of this consent and the EPL;
 - vi. details of additional measures to be implemented to address any non-compliance; and
 - vii. an assessment of the suitability of the SWDF for ongoing use.

Copies of the PoP Trial Reports shall be made available to the public upon request.

3.28 Use of SWDF is not permitted (outside of the approved PoP trials) until such time as the Secretary has indicated in writing that it is satisfied with the results of the six month PoP trial report specified under condition 3.27 b) for an individual SWDF.

37) Delete Condition 4.1.

38) Delete Condition 4.1B and replace with the following:

4.1B Prior to the commencement of the use of any 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:

- a) appropriately located ambient air quality monitoring station/s designed to obtain representative air quality data;
- b) monitoring of PM₁₀ and PM_{2.5} and other listed pollutants;
- c) sampling at a continuous or other appropriately justified frequency (to be agreed with the EPA);
- d) sampling over an appropriate period (to be agreed with the EPA); and

- 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.

The Applicant must ensure the ambient air monitoring program is underway prior to SWDF PoP Trials starting. The continuation of ambient monitoring may be reviewed after analysis of at least one year's ambient monitoring data.

39) Insert the following immediately after clause c) in Condition 4.1C:

- a) rates of feed for SWDF; and
- b) nitrogen oxides, hydrogen chloride, sulfur dioxide, carbon monoxide, solid particles (total) and volatile organic compounds.

40) Delete both instances of the words "condition 4.1" in Condition 4.2 and replace with the words "conditions 4.1A, 4.1B and 4.1C".

41) Delete Conditions 4.3, 4.3A and 4.4.

42) Insert the words "any Group 1 or Group 2" immediately before the first instance of the words "Non-Standard Fuels" in Condition 4.6.

43) Delete the word "and" at the end of clause d) and insert the following immediately after clause e) in Condition 4.6:

and;

- c) 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.

44) Insert new Condition 4.6A immediately after Condition 4.6 as follows:

- 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.

45) Insert new Condition 5.3A immediately after Condition 5.3 as follows:

5.3A Prior to the commencement of construction of the Non-Standard Fuel infrastructure, the Applicant shall prepare a Community Consultation Plan. The Plan should be prepared in consultation with Council and the Community Liaison Group established by condition 5.4 of this consent, and be approved by the Secretary. The Plan shall include, as a minimum:

- a) objectives of the consultation process;
- b) roles and responsibilities;
- c) the frequency and format of consultation;
- d) complaints management; and
- e) monitoring, review and reporting procedures.

46) Delete Conditions 6.1 and 6.2 and replace with the following:

6.1 The Applicant shall update the Construction Environmental Management Plan (CEMP) to the satisfaction of the Secretary. The updated CEMP shall:

- a) be approved by the Secretary prior to the commencement of construction;
- b) identify the statutory approvals that apply to the development;
- c) outline all environmental management practices and procedures to be followed during construction works associated with the development;
- d) describe all activities to be undertaken on the site during construction of the development, including a clear indication of construction stages;
- 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;
- f) describe the roles and responsibilities for all relevant employees involved in construction works associated with the development; and
- g) include the management plans required under condition 6.1A and 6.2 of this consent.

- 6.1A As part of the CEMP required under condition 6.1 of this consent, the Applicant shall include the following:
- a) Construction Traffic Management Plan;
 - b) Erosion and Sediment Plan;
 - c) Construction Noise Management Plan;
 - d) Construction and Demolition Waste Management Plan;
 - e) a protocol to manage groundwater and contaminated soil; and
 - f) Community Consultation and Engagement Plan, including complaints management.

- 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 Secretary.

47) Delete the word "and" at the end of clause f) and insert the word "and" at the end of clause e) of Condition 6.3.

48) Insert new Condition 6.3A immediately after Condition 6.3 as follows:

- 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:
- a) details of how the development will comply with the requirements of the EPL and development consent throughout operation;
 - b) 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;
 - c) the environmental monitoring requirements outlined in the EPL and under conditions 4.1A, 4.1B and 4.1C of this consent; and
 - d) an updated Air Quality Management Plan as required by condition 6.4A of this consent.

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.

49) Insert new Condition 6.4A immediately after Condition 6.4 as follows:

- 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:
- 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;
 - 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;
 - c) provide details of any complaints received relating to air quality generated by the development, and action taken to respond to those complaints;
 - d) include ambient monitoring of emissions from the development, including PM_{2.5} and PM₁₀;
 - 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;
 - f) include an ambient air monitoring program; and
 - g) include details of all proposed emission control measures.

50) Insert the words "any Group 1 or Group 2" immediately before the first instance of the words "Non-Standard Fuels" in condition 6.6.

51) Delete the first two sentences in Condition 6.7 and replace with the following:

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.

52) Insert new Condition 6.8 immediately after Condition 6.7 as follows:

- 6.8 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 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.

53) Delete Conditions 7.1 and 7.2 of this consent and replace with the following:

- 7.1 The Applicant shall notify the 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.
- 7.2 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.

54) Insert a new Appendix 1 to the consent as follows:

Appendix 1 - Quality Assurance and Control Procedure for Receipt and Use of Solid Waste Derived Fuels

END OF DA 401-11-2002-i MOD 9
