proposed changes marked up in text

DETERMINATION OF A DEVELOPMENT APPLICATION FOR STATE SIGNIFICANT AND INTEGRATED DEVELOPMENT UNDER SECTION 80 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

I, the Minister for Infrastructure and Planning, under Section 80 of the *Environmental Planning and Assessment Act 1979* ("the Act"), determine the development application ("the Application") referred to in Schedule 1 by granting consent subject to the conditions set out in Schedule 2.

The reason for the imposition of conditions is to:

a) minimise any adverse environmental impacts associated with the development;
b) provide for the on-going environmental management of the development; and
c) provide for regular monitoring and reporting on the development.

Text in red is amendments made by MOD 2-1-2004-i (Non-Standard Fuels) modified 26 September 2005.

Text in blue is amendments made by MOD 109-9-2006-i (remove prohibition of hazardous wastes) modified 22 September 2006.

Text in green is amendments made by MOD 12-2-2007-I (trial use of tyre chips) modified 13 February 2007.

Text in purple is amendments made by MOD 4 (variation to usage rate of coke fines) modified 24 April 2008.

Text in orange is amendments made by MOD 5 (coal deliveries by rail) modified 31 August 2009.

Craig Knowles MP
Minister for Infrastructure and Planning
Minister for Natural Resources

Sydney, 12 May 2003 File No. S02/01719

SCHEDULE 1

Application made by: Blue Circle Southern Cement Limited ("the Applicant');

To: The Minister for Planning;

In respect of: Lot 1 DP 582277, Lot 2 DP 774598, Lot 22 DP 582276, Lot 100 DP 882139, Taylor Avenue, New Berrima, Wingecarribee local government area;

For the following:	The upgrade of Kiln 6 and associated works at the existing cement works ("the development") as described in *Berrima Kiln 6 Upgrade Project – Statement of Environmental Effects* prepared by Olsen Environmental Consulting and dated November 2002, and includes the following: • increase in the output of Kiln 6 from 0.98 Mtpa to approximately 1.35 Mtpa; • installation of a raw mill with dust collector and second preheater string with pre-calciner and tertiary air duct; • modification to the raw materials reclaim system; • widening of the cooler bed and upgrade of the heat exchanger and cooler dust collection; • replacement of the clinker handling conveyor; • upgrade of the coal mill capacity; • intermittent use of existing Kiln 5 during periods of Kiln 6 maintenance, shut-down and during high production demands;
Development Application:	Integrated DA No. 401-11-2002-i, lodged with the Department of Planning on 22 November 2002, accompanied by *Berrima Kiln 6 Upgrade Project – Statement of Environmental Effects* prepared by Olsen Environmental Consulting and dated November 2002;
State Significant Development:	Under section 76A(7) of the Act, the proposed development is classified as State significant development because it is a type of development (minerals processing) listed in Schedule 1 of *State Environmental Planning Policy No. 34 – Major Employment-Generating Industrial Development* and has a capital investment in excess of $20 million.
BCA Classification:	Class 8 – HV/LV Switchroom, rawmill building, gas conditioning plant, second pre-heater tower, switchroom for second pre-heater tower, tertiary air duct, coal milling switchroom, coal milling and firing upgrade, cooler heat exchanger, cooler baghouse, cooler switchroom, and clinker conveyor AF05
Note:	1) To ascertain the date upon which this consent becomes effective, refer to section 83 of the Act 2) To ascertain the date upon which this consent is liable to lapse, refer to section 95 of the Act. 3) If the Applicant is dissatisfied with this determination, section 97 of the Act grants him or her a right of appeal to the Land and Environment Court, which is exercisable within 12 months of receiving notice of this determination.

SCHEDULE 2

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	*Environmental Planning and Assessment Act, 1979*
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	Blue Circle Southern 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	any activity requiring a Construction Certificate, the laying of a slab or significant excavation work
Council	Wingecarribee Shire Council
dB(A)	decibel (A-weighted scale)
Department	NSW Department of Urban and Transport Planning
the development	the development the subject of this development consent as described in Schedule 1
Dioxins	Dioxins and Furans (as TCCD I-TEQs)
Director-General	Director-General of the NSW Department of Urban and Transport Planning, or delegate
DLWC	NSW Department of Land and Water Conservation
dust	any solid material that may become suspended in air or deposited
SEE	Statement of Environmental Effects for the upgrade to Kiln 6 entitled *Statement of Environmental Effects – Berrima Kiln 6 Upgrade Project*, dated November 2002 and prepared by Olsen Environmental Consulting.
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence issued under the *Protection of the Environment Operations Act, 1997*
Fuel Specification	the allowable concentration of certain contaminants in fuel
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
$L_{Aeq\ (15\ minute)}$	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 Infrastructure and Planning, or delegate
Mtpa	Million tonnes per annum
Non-Standard Fuel	any fuel that does not meet the criteria for Standard Fuel

operation	any activity that results in the production, or intended production of commercial quantities of cement clinker after commissioning of the cement works upgrade
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
Regulation	*Environmental Planning and Assessment Regulation, 2000*
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

1. GENERAL

Obligation to Minimise Harm to the Environment

1.1 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.

Scope of Development

1.2 [1]The Applicant shall carry out the development generally in accordance with:

a) Development Application No. 401-11-2002-i, lodged with the Department of Planning on 22 November 2002;
b) *Berrima Kiln 6 Upgrade Project – Statement of Environmental Effects*, dated November 2002 and prepared by Olsen Environmental Consulting;
c) *Noise Impact Assessment for Kiln 6 Upgrade Project*, dated 4 November 2002 and prepared by Hatch Associates Pty Limited;
d) *Air Quality Review – New Berrima Plant, Number 6 Kiln Upgrade*, dated 19 November 2002 and prepared by Holmes Air Sciences;
e) additional information supplied to the Department by the Applicant regarding noise, air and water dated 22 January 2003;
f) additional information supplied to the Department by the Applicant regarding the design of the second pre-heater tower dated 4 February 2003;
g) additional information supplied to the Department by the Applicant regarding air and noise dated 13 February 2003;
h) additional information supplied to the EPA by the Applicant regarding discharge points from Lake Quality dated 4 March 2003 and forwarded to the Department by the Applicant on 31 March 2003;
i) modification application MOD-2-1-2004-i and accompanying documents lodged on 5 January 2004, including:
    i) the *Statement of Environmental Effects, Berrima Kiln 6, Non-Standard Fuels and Materials* prepared by Blue Circle Southern Cement; and
    ii) *Blue Circle Southern Cement Berrima Plant, Proposed Non-Standard Fuels Modifications, Additional Information*, dated 3 June 2004;
j) modification application MOD-109-9-2006-i, relating to the definition of HiCal50 as an alternative fuel and prohibition of hazardous wastes;
k) modification application MOD-12-2-2007-I, to permit trial use of tyre chips;
l) MOD 4 to vary the usage rate of coke fines;
m) MOD 5 to permit coal deliveries by rail; and
n) the conditions of this consent.

In the event of an inconsistency between a condition of this consent and the documents listed under a) to m) above, the conditions of consent shall prevail to the extent of the inconsistency.

1.3 The Applicant shall operate the cement works upgrade to meet the following requirements:

a) the upgraded Kiln 6 is to be utilised as the primary and principal kiln on the site, subject to shut-down and maintenance requirements;
b) Kiln 5 may be utilised as a secondary, back-up kiln during shut-downs, maintenance and periods of clinker demand above the maximum capacity of the upgraded Kiln 6;
c) the production capacity of the upgraded Kiln 6 is to be limited to ensure that the maximum clinker production capacity of the combined upgraded Kiln 6 and Kiln 5 does not exceed 1.560 million tonnes per annum (rolling annual average); and

[1] Incorporates an EPA General Term of Approval (A1)

d) any other combination of production capacities through the upgraded Kiln 6 and Kiln 5 that may be agreed by the Director-General in writing, on a case-by-case basis, prior to the implementation of that production capacity regime. Any such regime will be constrained by the general scope of the development application for the cement works upgrade and subject the requirements of this consent (other than this condition) and the requirements of any Environment Protection Licence or other instrument applying to the cement works upgrade;

1.3A Deliveries of coal to the site may be made by road or rail transport.

Note: The development application for the cement works upgrade has been assessed and determined as a non-designated development under Part 2, Schedule 3 of the *Environmental Planning and Assessment Regulation 2000*. That Part requires that the cement works upgrade will not significantly increase the environmental impacts of the cement works as posed prior to the commencement of the cement works upgrade. Condition 1.3 aims to limit the impacts of the cement works, as upgraded in accordance with this consent, to reflect the intent of Part 2, Schedule 3 of the *Environmental Planning and Assessment Regulation 2000*. It is understood that should clinker demand increase significantly in future, the Applicant intends to investigate options to satisfy the increased demand without increased reliance on Kiln 5, as configured prior to the approval of the cement works upgrade.

Use of Non-Standard Fuels

1.4A 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.

Table 1 – Permitted Fuels for use in upgraded Kiln 6

Fuel	Category	Tonnes per annum	Tonne per hour	Percent of total fuel (by mass)
Natural Gas, Fuel Oil, Diesel	Standard Fuel	No limits		
Coal	Standard Fuel	No Limit	No Limit	≥ 60.0
Coke Fines	Standard Fuel	No Limit	≤ 10.0	≤ 30.0
Hi Cal 50	Non-Standard Fuel	10,000	≤ 1.0	≤ 6.0
AKF1	Non-Standard Fuel	20,000	≤ 1.3	≤ 4.7
AKF5	Non-Standard Fuel	30,000	≤ 4.5	≤ 21.0

Note: The consent, as modified, permits only the use of the fuels listed above at the specified quantities and firing rates. The use of any additional fuels would be the subject of appropriate assessment and determination under the Act. This consent, as modified, does NOT approve the establishment of a protocol for general use of Non-Standard Fuels.

1.4B 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. 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 New South Wales Fire Brigades' (Fire Safety Division) *Guidelines For Bulk Storage Of Rubber Tyres*.

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 Director-General. In particular, the detailed design shall:

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;

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 stormwater management system, and demonstrate that these measures were developed in consultation with the Sydney Catchment Authority and Wingecarribee Shire Council; and

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 NSW Fire Brigades.

A construction certificate must not be issued in relation to any necessary storage facilities and kiln feeding infrastructure until the Director-General 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 Director-General.

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 DEC with respect to undertaking the trial, and shall not commence the trial without the prior written approval of the DEC;

f) trial materials shall be stored in an area that is sealed, or otherwise treated to the satisfaction of the Director-General, and away from all potential ignition sources;

g) the Applicant shall notify the NSW Fire Brigades prior to the receipt of trial materials on the site, and address any requirements of the Brigades with respect to the safe storage of the trial materials;

h) the Applicant shall notify the Director-General, the DEC 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 Director-General and the DEC on a monthly basis from the date that trial materials are first received on the site until conclusion of the trial.

1.4D Only Standard Fuels are permitted to be used at the development during start-up and shut-down.

1.4E Non-Standard Fuels are not permitted to be stored at the site for longer than 3 months, except with the written permission of the Director-General.

1.4F No Non-Standard Fuel is permitted to be received at, or used at the development, unless it complies with:

a) the handling, transporting, sampling, analysis and quality control requirements of this consent;

b) any requirements of a licence issued under the *Protection of the Environment Operations Act 1997* for the site; and

c) the fuel specification for that specific fuel.

1.4G Prior to the receipt of the first batch of a Non-Standard Fuel from a particular supplier, the Applicant shall certify in writing to the Director-General 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 Director-General, 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.

Provision of Documents

1.5 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.

Note: At the date of this consent, an appropriate electronic format for submission to the Director-General is the "portable document format" (pdf) or another format that may be readily converted to pdf.

Statutory Requirements

1.6 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.

Compliance

1.7 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.

1.8 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:

a) construction of the cement works upgrade; and

b) operation of the cement works upgrade.

1.9 Notwithstanding conditions 1.8 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.

1.10 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 1.2. 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 in accordance with the conditions of this consent, within such time as the Director-General may agree.

2. CONSTRUCTION AND OCCUPATION CERTIFICATION

2.1 In relation to the construction and occupation of the cement works upgrade, the Applicant shall provide to the Director-General and Council the following:

a) written notification of the appointment of a Principal Certifying Authority;
b) copies of all Construction Certificates issued for the cement works upgrade;
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;
d) copies of all Occupation Certificates issued for the cement works upgrade; and
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.

Note: Part 4A of the *Environmental Planning and Assessment Act 1979* provides specific details of the Applicant's obligations in relation to construction certification and provides the overarching requirements in this regard. These requirements have been summarised and reproduced under condition 2.1 of this consent to highlight the need for this certification.

2.2 Prior to the commencement of any construction work associated with the cement works upgrade, the Applicant shall erect at least one sign at the site and in a prominent position at the site boundary where the sign can be viewed from the nearest public place. The sign shall indicate:

a) the name, address and telephone number of the Principal Certifying Authority;
b) the name of the person in charge of the construction site and telephone number at which that person may be contacted outside working hours; and
c) a statement that unauthorised entry to the construction site is prohibited.

The sign(s) shall be maintained for the duration of construction works.

3. ENVIRONMENTAL PERFORMANCE

Noise Impacts

3.1 Construction activities associated with the cement works upgrade shall only be carried out:

a) 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;
b) 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;
c) 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;
d) at any time during periods in which the cement works is in operation; and
e) at any time if construction noise is inaudible at the boundary of the site.

3.2 Subject to compliance with the requirements of this consent, the cement works upgrade may be operated 24 hours per day, 7 days per week.

3.3 [2]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 2 below, the noise level at each receiver location does not exceed the maximum allowable noise contribution limit at the receiver location specified.

Table 2 – Maximum Allowable Noise Contribution Limit (dB(A))

Receiver Location	Day[a] $L_{Aeq(15\ minute)}$	Evening[b] $L_{Aeq(15\ minute)}$	Night[c] $L_{Aeq(15\ minute)}$
4 Melbourne Street	37	37	37
Chelsey Park Farm	30	30	30
Candowie Farm	37	37	37

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

Note: Noise contributions specified in Table 2 are to be interpreted as contributions from the new and upgraded components forming part of cement works upgrade only and not as noise limits for the site as a whole.

3.4 [3]The maximum allowable noise contributions identified in condition 3.3 apply under all meteorological conditions, except:

a) during wind speeds greater than $3ms^{-1}$ measured at 10 metres above ground level; or
b) during temperature inversion conditions of greater than 3°C/ 100m and wind speeds of greater than $3ms^{-1}$ measured at 10 metres above ground.

3.5 [4]For the purpose of assessment of noise contributions specified under condition 3.3, noise from the cement works upgrade shall be:

[2] Incorporates EPA General Terms of Approval (L6.1 and L6.2)
[3] Incorporates an EPA General Term of Approval (L6.4)
[4] Incorporates an EPA General Term of Approval (L6.3)

a) measured at the most affected point on or within the receptor site boundary or at the most affected point within 30m of the dwelling (rural situations), where the dwelling is more than 30m from the property boundary; and
b) where applicable, subject to the modification factors provided in Section 4 of the *New South Wales Industrial Noise Policy* (EPA, 2000).

3.6 [5]Notwithstanding condition 3.5 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.

Air Quality Impacts

Dust Emissions

3.7 The Applicant shall design, construct, operate and maintain the cement works upgrade in a manner that minimises dust emissions from the site.

3.8 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.

3.9 All trafficable areas and vehicle manoeuvring areas on the site 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.

Discharge Limits

3.10 The Applicant shall design, construct, operate and maintain the cement works upgrade to ensure that for each discharge point listed in Table 3 (Standard Fuels Only) and Table 4 (Non-Standard Fuels) below, the concentration of each pollutant listed for that discharge point does not exceed the maximum allowable discharge concentration limit for that pollutant at the discharge point specified. All concentration limits specified in the table are based on 101.3 kPa, 273 K, dry reference conditions (unless otherwise agreed with the EPA) and shall be determined in accordance with the monitoring requirements described under condition 4.1.

Table 3 – Maximum Allowable Discharge Concentration Limits (Air) When Kiln 6 is using only Standard Fuels

EPA Identification Point	Pollutant	Units of Measure	Concentration Limit
2 – Main Exhaust Stack on Kiln No. 6 [a]	Cadmium	mgm^{-3}	0.1
	Mercury	mgm^{-3}	0.1
	Hazardous substances	mgm^{-3}	1.0
	Nitrogen oxides	mgm^{-3}	1000
	Solid particles	mgm^{-3}	95
	Opacity	% Opacity	20
8 – New Baghouse Outlet	Solid particles	mgm^{-3}	50

a. the location of this point is the same as that described in Environment Protection Licence No. 1698

[5] Incorporates an EPA General Term of Approval (L6.3)

Table 4 – Maximum Allowable Discharge Concentration Limits (Air) When Kiln 6 is using Non-Standard Fuels

EPA Identification Point	Pollutant	Units of Measure	Concentration Limit
2 – Main Exhaust Stack on Kiln No. 6 [a]	Cadmium and Thallium	mg/m^3	0.05
	Chlorine	mg/m^3	200
	Dioxins & Furans	ng/m^3	0.1
	Hazardous substances [b]	mg/m^3	0.5
	Hydrogen chloride	mg/m^3	10
	Hydrogen fluoride	mg/m^3	1
	Mercury	mg/m^3	0.05
	Nitrogen Oxides	mg/m^3	800
	Opacity	%Opacity	20
	Solid Particles	mg/m^3	30
	Sulphur Dioxide	mg/m^3	50
	Sulphuric acid mist and/or sulphur trioxide	mg/m^3	100
	Volatile Organic Compounds [c]	ppm [c]	20 [c]

a. The location of this point is the same as that described in Environment Protection Licence No. 1698.
b. Aggregate of Sb, As, Be, Cd, Cr, Co, Pb, Mn, Hg, Ni, Se, Sn and V.
c. Or Total Organic Carbon or other equivalent(s) as agreed to by EPA.

3.10A For the purposes of compliance with condition 3.10, for each pollutant specified in Table 4 in condition 3.10, the reference conditions and averaging period of a pollutant discharged must be reported according to the reference conditions and averaging period specified for that pollutant in Table 5, or as otherwise agreed to by EPA.

Table 5 – Reporting Reference Conditions and Averaging Periods

EPA Identification Point	Pollutant	Units of Measure	Concentration Limit
2 – Main Exhaust Stack on Kiln No. 6	Opacity	Gas stream temperature above dew point, path length corrected to stack exit diameter	6 minute block, calculated from at least 36 data points evenly spaced over each 6 minute period.
	Solid particles	Dry, 273K, 101.3 kPA, 10%O_2	As per test method (for campaign monitoring)
	Solid particles	Dry, 273K, 101.3 kPA, 10%O_2	24-hour average per method agreed to by EPA (for continuous monitoring)
	Nitrogen Oxides	Dry, 273K, 101.3 kPA, 10%O_2	1-hour average per method agreed to by EPA (for continuous monitoring)
	Dioxins and Furans	Dry, 273K, 101.3 kPA, 10%O_2, I-TEQ	As per test method
	All other air pollutants	Dry, 273K, 101.3 kPA, 10%O_2	As per test method
	All other air pollutants	As agreed to by EPA (for continuous monitoring)	As agreed to by EPA (for continuous monitoring)

Water Quality Impacts

3.11 [6]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.

Erosion and Sediment Control

3.12 All construction vehicles exiting the site, having had access to unpaved areas, shall depart via a wheel-wash facility.

3.13 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.

Site Drainage and Stormwater

3.14 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.

Traffic and Transport Impacts

3.15 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.

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.

Waste Management Impacts

3.17 Except as otherwise permitted by this consent and a licence issued under the *Protection of the Environment Operations Act 1997* the Applicant shall not cause, permit 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.

Mod 6 applies

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:

a) any Non-Standard Fuels approved for use at the upgraded Kiln 6 under this consent;

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

c) any material normally recycled or reused within the cement works.

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:

a) AKF1.

[6] Incorporates an EPA General Term of Approval (L1.1)

3.17C 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 *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-liquid Wastes.*

Visual Amenity Impacts

3.18 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.*

3.19 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 1.2 f)). This includes using the building materials identified and minimising the height of the pre-heater tower.

Non-Standard Fuels

Non-Standard Fuels Specifications

3.20 For each Non-Standard Fuel approved for use at the development the Applicant shall provide a fuel specification, to be approved by the Director-General and the EPA prior to the use of that Non-Standard Fuel at the development under this consent. The 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.

3.21 Based on the Non-Standard Fuel specification specified in condition 3.20 the following fuel specification criteria are required to be met:

a) deleted MOD-109-9-2006-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;

b) for AKF1 a mercury specification no greater than 2 mg/kg and a cadmium specification no greater than 5 mg/kg;

c) organohalogen compounds, expressed as chlorine, in any Non-Standard Fuel not to exceed 1% by weight; and

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.

Non-Standard Fuels Pollutant Tracking

3.22 Prior to the use of Non-Standard Fuels at the development in accordance with this consent, the Applicant shall implement a Tracking Program that meets the requirements of the Director-General. 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:

a) batch analyses of 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 of this consent;

b) a mass inventory of each listed pollutant entering the process in raw materials, conventional fuels and Non-Standard Fuels, with particular attention to, but not limited to chlorine, mercury, cadmium and chromium;
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
d) any adjustments that may be necessary to Non-Standard Fuel specifications arising from the Tracking Program analysis.

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 Director-General. The Report shall be submitted to the Director-General:
a) every three months in the first year of operation using Non-Standard Fuels under this consent, (to be synchronised with stack monitoring); and
b) thereafter every six months, or as otherwise agreed to by the Director-General.

Process Parameters

3.24 To ensure the emissions of air pollutants are minimised, the Applicant shall NOT use Non-Standard Fuels unless:
a) the feed rates for Non-Standard Fuels are maintained at a steady controlled rate to provide for combustion in a proper and efficient manner; and
b) a temperature of above 850°C is maintained in the zone where Non-Standard Fuels are fired at the main-firing end of Kiln 6; and
c) a temperature of above 800°C is maintained in the zone where Non-Standard Fuels are fired at or in the vicinity of the pre-calciner/ de-nox system for Kiln 6; and
d) a temperature of above 300°C is maintained at the outlet of pre-heater strings for Kiln 6; and
e) a temperature of below 200°C is maintained at the inlet to the electrostatic precipitator and fabric filter for Kiln 6; and
f) the continuous measurements required by this consent, show that all maximum allowable discharge concentration limits values prescribed in Table 4 of condition 3.10 are complied with. The Applicant shall cease to use Non-Standard Fuels immediately in Kiln 6 if any maximum allowable discharge concentration limit is exceeded.

3.25 Without prejudice to condition 3.24e), Kiln 6 shall under no circumstances continue to use Non-Standard Fuels for a period of more than four hours uninterrupted where emission limits are exceeded; and the cumulative duration of operation under such conditions over one year shall be less than 60 hours.

Note: This condition refers to abnormal operating conditions associated with technically unavoidable stoppages, disturbances, trips, or failures of the kiln or its pollution control or pollutant measurement equipment, during which the concentrations in the discharges of regulated substances into the air may briefly exceed the prescribed emission limit values.

4. ENVIRONMENTAL MONITORING AND AUDITING

Air Quality Monitoring

4.1 During operation of the upgraded Kiln 6, the Applicant shall determine the pollutant concentrations and emission parameters specified in Table 6 (Standard Fuels Only) and Table 7 (Non-Standard Fuels) below, at the discharge points indicated and

employing the sampling and analysis method specified. All pollutant concentrations and emission parameters for each discharge point shall be determined concurrently and at the frequency indicated in the table, unless otherwise agreed with the EPA.

Table 6 – Discharge Point and Parameter Monitoring (Air) when Kiln 6 is using only Standard Fuels.

Discharge Point	Pollutant/Parameter	Units of Measure	Frequency	Sampling Method [b]
Point 1 [a] – Main exhaust stack on Kiln No. 5; and Point 2 [a] – Main Exhaust Stack on Kiln No. 6	Cadmium	mgm^{-3}	Annual	TM-12, 13, 14
	Mercury	mgm^{-3}	Annual	TM-12, 13, 14
	Hazardous substances	mgm^{-3}	Annual	TM-12, 13, 14
	Nitrogen oxides	mgm^{-3}	Annual	TM-11
	Velocity	ms^{-1}	Annual	TM-2
	Volumetric flow rate	m^3s^{-1}	Annual	TM-2
	Temperature	°C	Annual	TM-2
	Moisture content in stack gases	%	Annual	TM-22
	Dry gas density	kgm^{-3}	Annual	TM-23
	Molecular weight of stack gases	$g.gmole^{-1}$	Annual	TM-23
	Carbon dioxide in stack gases	%	Annual	TM-24
	Oxygen in stack gases	%	Annual	TM-25
Point 8 – New Baghouse Outlet	Solid particles	mgm^{-3}	Post commissioning	TM-15
	Velocity	ms^{-1}	Post commissioning	TM-2
	Volumetric flow rate	m^3s^{-1}	Post commissioning	TM-2
	Temperature	°C	Post commissioning	TM-2
	Moisture content in stack gases	%	Post commissioning	TM-22
	dry gas density	kgm^{-3}	Post commissioning	TM-23
	Molecular weight of stack gases	$g.gmole^{-1}$	Post commissioning	TM-23
	carbon dioxide in stack gases	%	Post commissioning	TM-24
	oxygen in stack gases	%	Post commissioning	TM-25

a. the location of this point is the same as that described in EPL No. 1698.
b. the Sampling Method shall be undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*

Table 7 – Discharge Point and Parameter Monitoring (Air) when Kiln 6 is using Non-Standard Fuels.

Discharge Point	Pollutant/Parameter	Units of Measure	Frequency	Sampling Method [b]
Point 2 [a] – Main Exhaust	Antimony (Sb)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Arsenic (As)	mg/m^3	Special Frequency 1	TM - 12,

Stack on Kiln No. 6				13 & 14
	Beryllium (Be)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Cadmium (Cd)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Carbon dioxide	%	Special Frequency 1 and Continuous	CEM-3
	Carbon monoxide	%	Special Frequency 1 and Continuous	CEM-4
	Chlorine	mg/m^3	Special Frequency 1	TM – 7, 8
	Chromium (Cr)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Cobalt (Co)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Copper (Cu)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Dioxins & Furans	ng/m3	Special Frequency 1	TM - 18
	Dry gas density	kg/m3	Special Frequency 1	TM-23
	Hazardous substances [c]	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Hexavalent chromium (Cr 6+)	mg/m^3	Special Frequency 1	OM - 4
	Hydrogen chloride	mg/m^3	Special Frequency 1	TM - 7, 8
	Hydrogen fluoride	mg/m^3	Special Frequency 1	TM - 9
	Lead (Pb)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Manganese (Mn)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Mercury	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Mercury (Hg)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Moisture content	%	Special Frequency 1 and Continuous	As agreed to by EPA
	Molecular weight of stack gases	g/g-mole	Special Frequency 1	As agreed to by EPA
	Nickel (Ni)	mg/m^3	Special Frequency 1	TM - 12, 13

				& 14
	Nitrogen Oxides (as NO2)	mg/m^3	Special Frequency 1 and Continuous	CEM-2
	Opacity	%Opacity	Special Frequency 1 and Continuous	CEM-1
	Oxygen (O2)	%	Special Frequency 1 and Continuous	CEM-3
	Selenium (Se)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Solid Particles	mg/m^3	Special Frequency 1 and Continuous	As agreed to by EP A
	Sulphur Dioxide	mg/m^3	Special Frequency 1 and Continuous	CEM-2
	Sulphuric acid mist and/or sulphur trioxide	mg/m^3	Special Frequency 1	TM - 3
	Temperature	^oC	Special Frequency 1 and Continuous	As agreed to by EP A
	Thallium	mg/m^3	Special Frequency 1	As agreed to by EP A
	Tin (Sn)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Vanadium (V)	mg/m^3	Special Frequency 1	TM - 12, 13 & 14
	Velocity	m/s	Special Frequency 1 and Continuous	As agreed to by EP A
	VOC [d]	ppm [d]	Special Frequency 1 and Continuous [d]	As agreed to by EP A
	Volumetric flowrate	m^3/s	Special Frequency 1 and Continuous	As agreed to by EP A

a. the location of this point is the same as that described in EPL No. 1698.
b. Special Frequency 1 is defined as a round of air emission monitoring (for each of the parameters nominated for a discharge point) conducted:
- every 3 months for a minimum of 12 months, and
- if no parameter exceeds its relevant limit (if any) for 4 consecutive 3-monthly tests over 12 months, thereafter bi-annually for a minimum of 12 months, and
- if no parameter exceeds its relevant limit (if any) for 2 consecutive bi-annual tests over 12 months, thereafter as agreed to by EPA.
c. aggregate of Sb, As, Be, Cd, Cr, Co, Pb, Mn, Hg, Ni, Se, Sn and V.

d. or Total Organic Carbon or other equivalent(s) as agreed to by EPA.

Continuous Emissions Monitoring

4.1A 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.

Ambient Air Quality Monitoring Program

4.1B Prior to the commencement of the use of Non-Standard Fuels in accordance with this consent, the Applicant shall establish an Ambient Air Quality Monitoring Program in consultation with, and to meet the requirements of, the Director-General, the EPA, and the NSW Department of Health. The monitoring program shall be consistent with the EPA's *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales* and shall be designed to generate sufficient information to meet the requirements of this consent with regards to the First-Year Monitoring and Modelling Assessment Report. The ambient monitoring program shall include:

a) an ambient air quality monitoring station which shall:
   i) be placed at a location near New Berrima, but away from its immediate influence in terms of air pollution;
   ii) monitor TSP, PM_{10} and listed pollutants with sampling to be undertaken over an appropriate period (to be agreed with the EPA) every six days; and
   iii) continue to sample for at least one year from the commencement of the use of Non-Standard Fuels, its continuation thereafter to be reviewed after analysis of the First-Year Monitoring and Modelling Assessment Report.

b) 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 *Australian Standard AS2923 – 1987.*

Process Monitoring

4.1C From the time of commencement of the use of Non-Standard Fuels the Applicant shall continuously monitor the following process parameters:

a) gas temperature (or some agreed equivalent indication of the temperature):
   i) in or near the firing zone at the main-firing end of the kiln where Non-Standard Fuels are being fired;
   ii) in the kiln at the feed end;
   iii) in the combustion zone or zones where Non-Standard Fuels are being fired in or adjacent to the pre-calciner/de-nox system;
   iv) at the outlet of the suspension pre-heater strings; and
   vi) at the inlet to the electrostatic precipitator and the fabric filter.

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

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.

4.2 [7]If the results of the monitoring required under condition 0 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 0 and EPL No. 1698, the Applicant shall provide details of

[7] Incorporates an EPA General Term of Approval (L3.1)

remedial measures to be implemented to reduce air quality limits to the levels required.

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.

Water Quality Monitoring

4.3 [8]During operation of the cement works upgrade, the Applicant shall determine the pollutant concentrations and discharge parameters specified in Table 8 below, at the discharge point indicated and employing the sampling and analysis method specified. All pollutant concentrations and discharge parameters for the discharge point shall be determined concurrently at the frequency indicated in the table.

Table 8 - Discharge Point Pollutant and Parameter Monitoring (Water)

Discharge Point	Pollutant / Parameter	Units of Measure	Frequency	Sampling Method[a]
Point 1 – Overflow point as shown on the document identified in condition 1.2h)	Biological Oxygen Demand (BOD)	mgL^{-1}	Daily, during discharge	Grab Sample
	Oil and Grease	mgL^{-1}	Daily, during discharge	Grab Sample
	Total suspended solids	mgL^{-1}	Daily, during discharge	Grab Sample
	pH		Daily, during discharge	Grab Sample
	Chemical Oxygen Demand (COD)	mgL^{-1}	Daily, during discharge	Grab Sample
	Total Phosphorus	mgL^{-1}	Daily, during discharge	Grab Sample
	Metals (Aluminium, Barium, Calcium, Copper, Lead, Magnesium, Manganese, Nickel, Potassium, Sodium, Total Iron, Zinc)	mgL^{-1}	Daily, during discharge	Grab Sample
	Boron	mgL^{-1}	Daily, during discharge	Grab Sample
	Chloride	mgL^{-1}	Daily, during discharge	Grab Sample
	Cyanide	mgL^{-1}	Daily, during discharge	Grab Sample
	Fluoride	mgL^{-1}	Daily, during discharge	Grab Sample
	Sulfate	mgL^{-1}	Daily, during discharge	Grab Sample

a. the Sampling Method shall be undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales.*

4.4 [9]The Applicant may seek the approval of the Director-General to alter the frequency of and/or requirement to monitor any pollutant concentration or parameter required under condition 4.3 of this consent. Any request for approval shall only be made provided:

a) concentration/ parameter determination has been undertaken for a period of no less than 12 months (measured from the commencement of operation of the cement works upgrade);
b) there has been no exceedence of any limit placed on the subject concentration/ parameter by any statutory guidelines within that 12-month period;
c) there has been no reasonable complaint received from the public in relation to the subject concentration/ parameter within the preceding 12-month period (refer to condition 5.3 of this consent); and

[8] Incorporates an EPA General Term of Approval (M2.2)
[9] Incorporates an EPA General Term of Approval (M3.2)

d) the request is accompanied by written agreement of the EPA with the proposed alteration to the frequency and/ or requirement to monitor of pollutant concentration or parameter determination.

Note: Condition 4.4 recognises that on-going monitoring may demonstrate that the concentration of pollutants and/ or parameters discharged from the site consistently meets relevant statutory guidelines, and the need for rigorous and frequent monitoring may be relaxed.

Auditing

4.5 Within three years 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 EPA and Council, within one month of the completion of the Audit. The Audit shall:

a) be carried out in accordance with *ISO 14010 - Guidelines and General Principles for Environmental Auditing* and *ISO 14011 - Procedures for Environmental Auditing*;
b) assess compliance with the requirements of this consent, and other licences and approvals that apply to the cement works upgrade;
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
d) review the effectiveness of the environmental management of the cement works upgrade, including any environmental impact mitigation works.

The Director-General 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 Director-General may agree.

Non-Standard Fuels Auditing

4.6 Within 12 months of the receipt of the first load of 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 development. Further Audits are to be conducted every 12 months, or as otherwise directed by the Director-General. The Audits are to be carried out by a duly qualified and independent person or team to be approved by the Director-General, and submitted directly to the Director-General, 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:

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;
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;
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;

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; and

e) suggestion of any recommendations with respect to any of the matters listed above.

Note: There is nothing that prevents the Applicant from combining the annual auditing requirements provided in conditions 4.5 and 4.6.

5. COMMUNITY INFORMATION AND INVOLVEMENT

5.1 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.

Complaints Procedure

5.2 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):

a) a telephone number on which complaints about operations on the site may be registered;
b) a postal address to which written complaints may be sent; and
c) an email address to which electronic complaints may be transmitted, should the Applicant have email capabilities.

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, should one exist.

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:

a) the date and time, where relevant, of the complaint;
b) the means by which the complaint was made (telephone, mail or email);
c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
d) the nature of the complaint;
e) any action(s) taken by the Applicant in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the Applicant in relation to the complaint, the reason(s) why no action was taken.

The Complaints Register shall be made available for inspection by the EPA or the Director-General upon request.

Community Liaison Group

5.4 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:

a) Be comprised of the following, whose appointment has been approved by the Director-General:
i) 1 or 2 representatives from the Applicant, including the person responsible for environmental management at the development;
ii) 1 representative from Council; and
iii) 3 or 4 representatives from the local community.
b) Be chaired by a representative agreed to by the Group and approved by the Director-General;
c) Meet a minimum of once in every 6 month period; and
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.

5.5 The Applicant shall at its own expense:
a) Ensure that 1 or 2 of its representatives attend the Group's meetings;
b) Provide the Group with regular information on the environmental management and performance of the development;
c) provide access to independent scientific/technical support to assist member in understanding and interpreting information provided, if requested;
d) provide meeting facilities for the Group, where necessary;
e) arrange site inspections for the Group, if requested;
f) 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;
g) respond to any advice or recommendations the Group may have in relation to the environmental management or performance of the development; and
h) 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 Director-General upon request.

6. ENVIRONMENTAL MANAGEMENT

Construction Environmental Management Plan (CEMP)

6.1 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:
a) a description of all activities to be undertaken on the site during construction, including an indication of stages of construction, where relevant;
b) 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;
c) specific consideration of measures to address any requirements of the Department and the EPA during construction;
d) 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;
e) a description of the roles and responsibilities for all relevant employees involved in construction; and
f) the Management Plans listed under condition 6.2 of this consent.

The CEMP shall be submitted for the approval of the Director-General prior to the 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 EPA as soon as practicable.

6.2 [10]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:

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.

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.*

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.*

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:

   i) details of erosion, sediment and surface water pollution control measures and practices to be implemented during construction of the cement works upgrade; and

   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.*

Operation Environmental Management Plan (OEMP)

6.3 The Applicant shall prepare and implement an **Operation Environmental Management Plan** (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:

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, licences, approvals and consultations;

b) a description of the roles and responsibilities for all relevant employees involved in the operation of the cement works upgrade;

c) overall environmental policies and principles to be applied to the operation of the cement works upgrade;

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;

e) management policies to ensure that environmental performance goals are met and to comply with the conditions of this consent;

f) the Management Plans listed under condition 6.4 of this consent; and

[10] Incorporates an EPA General Term of Approval (O3.2)

g) the environmental monitoring requirements outlined under conditions 0 to 4.3 of this consent, inclusive.

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 EPA and Council as soon as practicable.

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:

a) 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 EPA and shall include, but not necessarily be limited to:
   i) identification of all major sources of noise that may be emitted as a result of the operation of the cement works upgrade;
   ii) specification of the noise criteria as it applies to the particular activity;
   iii) procedures for the monitoring of noise emissions from the cement works upgrade, in accordance with any requirements of the EPA;
   iv) protocols for the minimisation of noise 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.

b) an **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 EPA, should there be any. The Plan shall include, but not necessarily be limited to:
   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.

c) an **Emergency Plan** 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.

d) a **Safety Management System**, 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 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.

e) a **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.

> Note: Options for the use of alternative water sources considered as part of the Water Supply Strategy may be the subject of a separate approvals process.

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:

i) details of any restriction to traffic routes;
ii) minimum requirements for vehicle maintenance to address noise and exhaust emissions;
iii) speed limits to be observed along routes to and from the sites and within the site; and
iv) behaviour requirements for vehicle drivers to and from the site and within the site.

6.5 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 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 Director-General, Council and the EPA 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.

6.6 Prior to the use of Non-Standard Fuels under this consent, the Applicant shall update the Operation Environmental Management Plan 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 Operation Environmental Management Plan 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 Director-General has approved the amended Operation Environmental Management Plan. Updating of the Plan shall include, but not necessarily be limited to providing additional detailed measures to the Air Quality Management Plan to minimise the emissions of air pollutants (including toxic pollutants and dioxins) to ensure compliance with the process parameters specified in condition 3.24 of this consent and the air emissions limits specified in condition 3.10 of this consent.

Non-Standard Fuels Quality Control Management Procedures

6.7 Prior to the receipt of Non-Standard Fuels at the development in accordance with this consent, the Applicant shall establish and implement quality control management procedures to ensure Non-Standard Fuels delivered to the development comply with the fuel specifications. The procedures shall, be forwarded to and meet the requirements of the Director-General, and shall, at the request of the Director-General, be updated to reflect the recommendations of the

annual Non-Standard Fuels audit required under condition 4.7 of this consent. The procedures shall include:

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;

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

b) 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.

7. ENVIRONMENTAL REPORTING

Incident Reporting

7.1 The Applicant shall notify the EPA 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.

Note: Under condition 7.1 the Applicant must notify the EPA and the Director-General of the details of all technically unavoidable stoppages, disturbances, trips, or failures of the kiln or its pollution control or pollutant measurement equipment, during which the concentrations in the discharges of regulated substances into the air may have exceeded the prescribed emission limits.

7.2 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 7.1, within such period as the Director-General may agree.

Note: Condition 7.2 of this consent does not limit or preclude the EPA from requiring any action to address the cause or impact of any incident, in the context of the EPA's statutory role in relation to the cement works upgrade.

Notice of Incident to NSW Health

7.2A 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 Pubic 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.

Annual Performance Reporting

7.3 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 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:

a) details of compliance with the conditions of this consent;

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;

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;
d) results of all environmental monitoring required under this consent and other approvals, including interpretations and discussion by a suitably qualified person;
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;
f) identification of trends in monitoring data over the life of the cement works upgrade to date;
g) a list of variations obtained to approvals applicable to the cement works upgrade and to the site during the preceding twelve-month period; and
h) environmental management targets and strategies for the following twelve-month period, taking into account identified trends in monitoring results.

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 Applicant shall include the details of the use of all Non-Standard Fuels at the development, including, but not necessarily limited to:
a) the nature, quantity and quality of Non-Standard Fuels used at the development;
b) 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;
c) a review of the results of the Non-Standard Fuels Tracking Program and the Non-Standard Fuels Quality Control Management procedures; and
d) 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.

7.4 The Applicant shall submit a copy of the AEMR to the Director-General, the EPA and Council every year, with
a) the first AEMR to be submitted within twelve months of commencement of operation of the cement works upgrade; and
b) the second and subsequent AEMRs to be submitted concurrently with the EPA's Annual Return.

7.5 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 EPA and/or Council. Any action required to be undertaken shall be completed within such period as the Director-General may agree.

Note: The AEMR does not aim to satisfy any requirement of the EPA with regard to any Annual Return required under any licence issued for the cement works upgrade under the *Protection of the Environment Operations Act 1997.*

Non-Standard Fuels First Year Assessment Report

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 Director-General, 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:
a) detail the nature, quantity and quality of Non-Standard Fuels used at the development;

b) 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 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;
c) assess the results of the Non-Standard Fuels Tracking Program including detailed description and assessment of any trends identified through the Program;
d) assess the adequacy of the Non-Standard Fuels Quality Control Management Procedures required under condition 6.7; and
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.