Draft Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Lafarge Cauldon Limited

Cauldon Cement Works
Yelsway Lane
Waterhouses
Stoke-on-Trent
ST10 3EQ

Variation application number

EPR/TP3334AW/V005

Permit number

EPR/TP3334AW

WORKING DRAFT ONLY

Cauldon Cement Works
Permit number EPR/TP3334AW

Introductory note

This introductory note does not form a part of the notice.

Under the Environmental Permitting (England & Wales) Regulations 2010 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Brief description of the changes introduced by this variation notice:

This is an Environment Agency initiated variation and consolidation – consolidating previous variations of environmental permit EPR/TP3334AW. This variation incorporates a number of changes as a result of:-

- a statutory review of permits in the Cement and Lime sector
- the incorporation of legislative changes following the publication of "Best Available Techniques (BAT) conclusions" for the production of cement, lime and magnesium oxide – published 9 April 2013.

As part of the permit review we have considered an application for derogations from the operator. This related to BAT Conclusions 17. Where we have granted a derogation, that derogation and the reasons for granting it, are also included in Annex 1 to the variation notice to the permit, as required by Article 15(4) of IED.

Brief description of the process:

Cauldon Cement Works (the Installation) is operated by Lafarge Cauldon Limited and is located at grid reference SK 08504960, near Waterhouses, in the south of the Staffordshire Peak District, about 8 miles from the town of Leek.

The main activity taking place at the installation is the production of cement which is a listed activity under 'The Environmental Permitting (England and Wales) Regulations 2010':

- Section 3.1 part A(1)(a) Producing cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day.

The plant has the capacity to manufacture up to 1.1 million tonnes of clinker on a single pre-calciner kiln and from this, to produce around 1.4 million tonnes of cement per annum.

The installation includes:

- The quarries and associated activities except drilling and blasting
- All raw material handling and raw meal preparation operations
- All associated fuel handling and storage operations.
- All clinker manufacturing, handling, grinding and storage operations
- All cement handling, storage and bagging operations

Raw Materials and Materials Handling

The main raw materials used in the single dry process kiln at Cauldon are limestone, shale and sand. The raw materials are normally stored in open stockpiles, and are blended in pre-determined ratios before being transported into the process. Alternative raw materials (ARM's) may be blended at this stage of raw material preparation, or fed directly into the system. Limestone and shale are both quarried on site – the limestone quarry is located to the south of the main works area, and the shale quarry is to the north. These materials

are crushed on site and transported via covered conveyor into the main works processing area, blended with sand, which is imported by road, and appropriate ARM's (when available). This material is then weighed and ground to form a fine dry powder, known as raw meal, in a vertical mill. The raw meal is pumped into blending silos opposite the vertical mill, where it may be analysed and mixed before storage and then use in the kiln feed system.

Cement Clinker production

The raw meal is extracted from storage, weighed and transported via an enclosed bucket elevator to the top of the four-stage preheater system which precedes the kiln. Hot exhaust gases taken from the kiln system rise up through the four stages of cyclones, as the raw meal passes down the cyclones. This starts the calcination process, preparing the material to an optimum temperature to enter the rotary kiln. In the final stage of the preheater tower, or precalciner, temperatures will reach around 900°C, so that most of the raw meal is calcined before it enters the kiln. This allows for a more efficient kiln process to produce the final product, known as clinker.

The calcined raw meal now passes from the precalciner into the back end of the kiln. The kiln rotates slowly and this, together with the slight gradient of the kiln, allows the raw meal to slowly travel down to the burning zone, where temperatures reach around 1450°C. The main kiln burner is fuelled in pre-determined and tightly controlled ratio to provide a flame at about 2000°C. Various fuels are used in this process including pulverised coal and Waste Derived Fuels (WDFs). At these temperatures, the material in the kiln converts to nodules of hydraulic calcium silicates, or clinker. The clinker drops out of the kiln into the cooler where the temperatures are reduced from around 1100°C to 100°C to allow storage of the clinker prior to cement manufacture. Whilst the majority of the clinker cooler gases are drawn into the kiln process, around 10% of the exhaust is vented externally and are treated by a bag filter system before discharge to atmosphere.

Clinker is transported by bucket conveyors to the clinker store and is then extracted from beneath the clinker store and conveyed to the cement mill reception silos. Occasionally clinker is despatched directly for processing at other cement works and it may also be imported to the site.

Cement production

There are 5 cement mills at Cauldon Cement Works, 3 open circuit and 2 closed circuit mills. These grind the cement clinker along with gypsum and limestone to produce the finished cement products. Dust laden air from all mills is treated by bag filtration systems, which are continuously monitored, before release to atmosphere via specific low level stacks. Cement is pneumatically transported from the mill house to designated storage silos. Cement silos are fitted with appropriate dust filters which discharge to atmosphere at the height of the silos. Cement stored in silos is either loaded into bulk tankers or bagged in the packing plant on site; all finished product is transported by road. Occasionally clinker may be despatched directly for processing elsewhere at other locations. Dust laden air from the bulk loading facilities and the packing plant is treated by fabric filtration systems and discharged to atmosphere at the height of the silos or buildings.

Emissions

Emissions to air. The exhaust gases from the kiln process are abated and then released to atmosphere through the single chimney (clearly visible at the top of the pre-heater tower). Abatement plant includes an electro-static precipitator which provides abatement for dust laden air. Emissions released from this stack include particulates; oxides of nitrogen (NOx), sulphur dioxide (SO_2), carbon dioxide (CO2) and carbon monoxide (CO), total organic carbons (TOC), hydrogen chloride (HCl) and ammonia (NH_3). Particulates (PM) are also released from other processes on site (including the cement mills) and abated and discharged from lower level stacks.

Emissions to Water. Surface water runoff and other site drainage passes through the main site oil interceptor, prior to being gravity fed to the on-site Shale Lake. Overflow water from this lake may be discharged into the River Hamps. There are no releases to public sewer.

Process waste materials are sent off site for further recovery/recycling. The works does not produce excess dusts, such as cement kiln dust (CKD) or bypass dust (BPD).

There are a number of sensitive ecological receptors close to the installation, with two Special Areas of Conservation (SAC) and one Special Protection Area (SPA) within 10km, and 6 Sites of Special Scientific Interest (SSSI) within 2km.

The installation operates a documented Environmental Management System, which is certified as conforming to ISO14001.

The cement kilns are deemed waste co-incineration plants under chapter IV of the Industrial Emission Directive (IED) due to the use of waste-derived fuels. IED requirements are applied through this permit.

The schedules specify the changes made to the permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Application BJ9509	Received 24/4/01	Dated 23/4/01
Response to Schedule 4 Notices issued 13/07/01, 26/07/01 and 22/08/01	Received 28/09/01	Partial
IPC Variation application to increase tyre chip use	Received 29/10/01 and 21/01/02	IPC regime
Response to Schedule 4 Notice issued 04/01/02	08/01/02	Re-formatted application BJ9509
IPC Variation application to trial sewage sludge pellets as substitute fuel	Received 27/05/02, 31/07/02 and 09/09/02	
Response to Schedule 4 Notices issued 13/07/01, 26/07/01 and 22/08/01	25/07/02	Partial
Response to Schedule 4 Notices issued 13/07/01, 26/07/01 and 22/08/01	13/02/03	Complete
Request to extend sewage sludge trial and further information for application	Received 13/03/03	
Request to include IPC Variation applications within PPC permit application	Received 17/03/03	
Permit BJ9509	Determined 31/03/03	
Application BW9131 for partial surrender and variation to store and permanently use Processed Sewage Pellets (PSP).	Duly made 22/12/03	
Variation BW9131	Determined 29/03/04	

Status log of the permit		
Description	**Date**	**Comments**
Application for WID variation VP3234SF	Received 14/03/05	
Response to schedule 4 notice issued 23/05/05	Received 26/07/05	
Variation VP3234SF	Determined 05/12/05	
Application to conduct a limited trial using Recovered Fuel oil (RFO) variation ZP3237SY	Received 05/10/05	
Variation ZP3237SY	Determined 23/04/07	
Application for Solid Recovered Fuels (SRF) variation HP3038XX	Duly made 19/02/08	
Further information	Received 25/03/08	
Variation HP3038XX	Determined 25/04/08	
Application for Waste Liquid Fuels (WLF) variation EPR/BJ9509IC/V008 (WP3038KK PAS reference)	Duly made 10/09/09	
Variation EPR/BJ9509IC/V008	Determined 24/03/10	
Variation EPR/BJ9509IC/V009 (RP3234TK PAS reference)	Determined 02/09/10	Environment Agency initiated variation to cover Cement and Lime sector review.
Application for variation EPR/BJ9509IC/V010 to use shredded rubber conveyor belts as a waste derived fuel	Duly made 19/09/11	
Variation EPR/BJ9509IC/V010	Determined 24/10/11	
Application for variation EPR/BJ9509IC/V011 to change of company name and registered office address	Duly made 19/09/13	Name changed to Lafarge Tarmac Cement and Lime Limited
Variation issued EPR/BJ9509IC/V011	18/11/13	Varied permit issued to Lafarge Tarmac Cement and Lime Limited.
Variation EPR/BJ9509IC/V012 (Billing Ref: GP3537VF)	Determined 30/06/14	Environment Agency variation to implement chapter IV of the Industrial Emissions Directive.
Variation EPR/BJ9509IC/V013	Determined 06/10/14	Environment Agency initiated variation to add an HCL limit in Table S3.1.
Application EPR/BJ9509IC/V014 (Variation and consolidation)	Duly Made 03/10/14	MPA Code of Practice: Application to add list of waste codes suitable in principle, remove Group iii metals specification in

Status log of the permit		
Description	**Date**	**Comments**
		fuels and consolidate waste derived fuels naming.
Variation determined. EPR/BJ9509IC	19/12/14	Varied and consolidated permit issued
Application EPR/TP3334AW/T001 (full transfer of permit EPR/BJ9509IC)	Duly made 06/05/15	Application to transfer the permit in full to Lafarge Cauldon Limited.
Transfer determined EPR/TP3334AW	22/05/15	Full transfer of permit complete.
Variation EPR/TP3334AW/V002 returned to customer	23/06/15	
Notified of change of company name	Duly made 07/08/15	Company name changed to Lafarge Cauldon Limited, and registered office address changed to Bardon Hall, Copt Oak Road, Markfield, Leicestershire, LE67 9PJ.
Variation issued EPR/TP3334AW/V003	11/08/15	Varied permit issued to Lafarge Cauldon Limited
Variation application EPR/TP3334AW/V004	Duly made 21/07/15	Application to vary carbon monoxide limit in permit.
Variation determined EPR/TP3334AW/V004	21/09/15	Varied permit issued.
Regulation 60 Notice	Issued 02/02/16	Notice issued to Lafarge Cauldon Limited
Regulation 60 Notice response	Received 01/04/16	Additional information received 29/04/16 and 28/07/16.
Environment Agency Variation EPR/TP3334AW/V005 determined (PAS billing reference TP3334AW)	Effective Xx/xx/xx	Environment Agency initiated variation following the Cement and Lime Sector permit review

End of introductory note

Draft Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

Permit number

EPR/TP3334AW

Issued to

Lafarge Cauldon Limited ("the operator")

whose registered office is

Bardon Hall
Copt Oak Road
Markfield
Leicestershire
LE67 9PJ

company registration number 09326237

to operate a regulated facility

Cauldon Cement Works
Yelsway Lane
Waterhouses
Stoke-on-Trent
ST10 3EQ

to the extent set out in the schedules.

The notice shall take effect from [DD/MM/YYYY]

Name	Date
[name of authorised person] **Type name, signature not needed**	**[DD/MM/YYYY]**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/TP3334AW

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/TP3334AW/V005 authorising,

Lafarge Cauldon Limited ("the operator"),

whose registered office is

Bardon Hall
Copt Oak Road
Markfield
Leicestershire
LE67 9PJ

company registration number 09326237

to operate an installation at

Cauldon Cement Works
Yelsway Lane
Waterhouses
Stoke-on-Trent
ST10 3EQ

to the extent authorised by and subject to the conditions of this permit.

Name	Date
[name of authorised person]	**[DD/MM/YYYY]**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.1.4 The operator shall comply with the MPA Code of Practice dated October 2014

1.2 Energy efficiency

1.2.1 The operator shall:

(a) take appropriate measures to ensure that energy is recovered with a high level of energy efficiency and energy is used efficiently in the activities.

(b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in red on the site plan at schedule 7 to this permit.

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.4 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2 table S2.1;

(b) it conforms to the description in the documentation supplied by the producer and holder; and

(c) it having been separately collected for recycling, it is subsequently unsuitable for recovery by recycling.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

(a) the nature of the process producing the waste;

(b) the composition of the waste;

(c) the handling requirements of the waste;

(d) the hazardous property associated with the waste, if applicable; and

(e) the waste code of the waste.

2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.3.7 All waste derived fuels used at the installation are subject to the following conditions:

(a) No radioactive materials or radioactive wastes (as defined by sections 1 and 2 of the Radioactive Substances Act 1993) shall be included.

(b) No substances with PCB concentrations greater than 10mg/kg shall be included.

(c) No substances with PCP concentrations greater than 100mg/kg shall be included.

(d) No pharmaceutical products, pesticide products, biocide products and iodine compounds shall be included except as constituents of other materials and at levels that are minimised as far as reasonably practicable.

(e) No dioxins or furans shall be included except as constituents of other materials and at levels that are minimised as far as reasonably practicable.

(f) No medical/clinical waste shall be included

2.3.8 The operator shall obtain prior written approval from the Environment Agency for each feasibility trial of a Waste Derived Fuel (WDF) not listed in table S2.1. Any such feasibility trials will be limited to a maximum of 100 tonnes of the fuel and a maximum duration of 14 days

2.3.9 Waste materials, not listed in table S2.1, shall not be used as raw materials in the process except with the prior written approval of the Environment Agency, and shall be subject to the specification in table S2.1 of schedule 2 or otherwise agreed in writing with the Environment Agency.

2.3.10 The operator shall ensure that prior to accepting waste derived fuels subject to condition 2.3.3 at the site, it has obtained sufficient information about the wastes to be burned as fuel to demonstrate compliance with the characteristics described in condition 2.3.3.

2.3.11 The operator shall take representative samples of all waste derived fuels delivered to the site unless otherwise agreed in writing with the Environment Agency and test a representative selection of these samples to verify conformity with the information obtained as required by condition 2.3.10. These samples shall be retained for inspection by the Environment Agency for a period of at least 1 month after the material is burned and results of any analysis made of such samples will be retained for at least 2 years after the material is burned.

2.3.12 Waste derived fuels shall not be burned, or shall cease to be burned, if:

(a) the kiln is in start up (as agreed in writing with the Environment Agency); or

(b) the kiln is in the process of shutting down (as agreed in writing with the Environment Agency); or

(c) raw meal feed rate is less than 120 tonnes/hr; or

(d) the temperature in the gas exit duct from the stage 4 cyclone post-calciner vessel is below or falls below 850^{o}C when using non-hazardous waste or hazardous waste where the content of halogenated organic substances (as chlorine) does not exceed 1%; or

(e) the temperature in the kiln combustion chamber is below or falls below 1100^{o}C when using hazardous waste where the content of halogenated organic substances (as chlorine) exceeds 1%;

(f) any continuous emission limit value in schedule 3 table S3.1 is exceeded due to disturbances or failures of the abatement systems, other than under “Chapter IV abnormal operating conditions”; or

(g) monitoring results required to demonstrate compliance with any continuous emission limit value in schedule 3, table S3.1 are unavailable other than under “Chapter IV abnormal operating conditions”.

2.3.13 The operator shall record the beginning and end of each period of “Chapter IV abnormal operating conditions”, and shall restore normal operation of the failed equipment or replace the failed equipment as rapidly as possible.

2.3.14 Where, during “Chapter IV abnormal operating conditions”, any of the following situations arise, the operator shall, as soon as is practicable, cease the burning of waste derived fuels until normal operation can be restored:

(a) continuous measurement shows that an emission exceeds any emission limit value in schedule 3 table S3.1 due to disturbances or failures of the abatement systems, or continuous emission monitor(s) for a total of four hours uninterrupted duration;

(b) the cumulative duration of “Chapter IV abnormal operating conditions” periods over one calendar year exceeds 60 hours on each kiln.

2.3.15 The operator shall interpret the end of the period of “Chapter IV abnormal operating conditions” as the earliest of the following:

(a) when the failed equipment is repaired and brought back into normal operation;

(b) when the operator initiates a shut down of the waste derived fuels, as described in the application or as agreed in writing with the Environment Agency;

(c) when a period of four hours has elapsed from the start of the “Chapter IV abnormal operating conditions”;

(d) when, in any calendar year, an aggregated period of 60 hours “Chapter IV abnormal operating conditions” has been reached for a given kiln.

2.3.16 Hazardous waste derived fuels (where the content of halogenated organic substances (as chlorine) exceeds 1%) shall only be burned in the main burner of the kiln.

Hazardous waste storage and treatment

2.3.17 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3,. S3.4

3.1.2 The limits given in schedule 3 shall not be exceeded.

3.1.3 Where a substance is specified in schedule 3 table S3.3 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.

3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(a) point source emissions specified in tables S3.1and S3.2

(b) Surface water or groundwater specified in table S3.3

(c) Process monitoring specified in table S3.4

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in schedule 3 table S3.1. The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2 unless otherwise agreed in writing by the Environment Agency.

3.5.5 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1; the Continuous Emission Monitors shall be used such that;

(a) the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed the following percentages:

- Ammonia 40%
- Carbon monoxide 10%
- Sulphur dioxide 20%
- Oxides of nitrogen (NO & NO2 expressed as NO2) 20%
- Particulate matter 30%
- Total organic carbon (TOC) 30%
- Hydrogen chloride 40%

(b) valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted the value of the confidence intervals in condition 3.5.5 (a);

(c) where it is necessary to calibrate or maintain the monitor and this means that data are not available for a complete half-hour period, the half-hourly average shall in any case be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. The number of half-hourly averages so validated shall not exceed 5 per day;

(d) daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value shall be considered valid if no more than five half-hourly average values in any day have been determined not to be valid;

(e) no more than ten daily average values per year shall be determined not to be valid.

3.5.6 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1:

(a) a QAL2 test as specified in BS EN 14181 shall be performed at least every three years or whenever there are significant changes to either the process, the fuel used or to the CEMs themselves;

(b) an Annual Surveillance Test (AST) shall be performed at least annually, as specified within BS EN 14181;

(c) the operator shall have a procedure to apply the QAL3 requirements of BS EN 14181

3.6 Fire prevention

3.6.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.6.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;

(b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

(i) off-site environmental effects; and

(ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;

(b) the annual production /treatment data set out in schedule 4 table S4.2; and

(c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

(d) the functioning and monitoring of the plant involved with the burning of waste derived fuels, in a format agreed with the Environment Agency. The report shall, as a minimum requirement (as required by Chapter IV of the Industrial Emissions Directive) give an account of the running of the process and the emissions into air and water compared with the emission standards in the IED

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

(a) in respect of the parameters and emission points specified in schedule 4 table S4.1;

(b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.2.6 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency, using the form specified by the Environment Agency for the purpose, the information specified on the form, relating to the types of waste Alternative Raw Materials and waste-derived fuels that the Operator has used in that quarter

4.3 Notifications

4.3.1 In the event:

(a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform the Environment Agency,

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents;

(b) of a breach of any permit condition the operator must immediately—

(i) inform the Environment Agency, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

(c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

(a) any change in the operator's trading name, registered name or registered office address; and

(b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

(a) a decision by the Secretary of State not to re-certify the agreement;

(b) a decision by either the operator or the Secretary of State to terminate the agreement; and

(c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR1	Section 3.1 Part A(1)(a)	Producing cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or in other kilns with a production capacity exceeding 50 tonnes per day.	Kiln From the transport of raw materials and fuels from bulk storage, the preparation (including blending of raw materials listed in table S2.1, in order to produce raw meal) and feeding of all materials into the kiln system, through to discharge of cooled clinker to the clinker store. Includes emissions to air from the main stack and other process vents.
AR2	Section 3.1 Part A(2)(a)	Grinding cement clinker	The transport of clinker, including imported clinker, from clinker storage and handling of raw materials from bulk storage, through milling and blending to storage of cement, including emissions to air from the mill stacks and other process vents.
AR3	Section 3.1 part B (a)	Storing, loading or unloading cement or cement clinker in bulk prior to further transportation in bulk.	Storage and dispatch of cement clinker and cement in bulk by road or rail.
AR4	Section 3.1 part B (b)	Blending cement in bulk or using cement in bulk other than at a construction site, including the bagging of cement and cement mixtures, the batching of ready-mixed concrete and the manufacture of concrete blocks and other cement products.	Blending and bagging of cement products.
	Directly Associated Activity		
AR5	Raw materials storage and handling	Raw materials receipt, transport, preliminary preparation and bulk storage	From the recovery of raw materials from the quarry floors and crushing, and the receipt on site of other raw materials, including alternative raw materials, through to bulk storage.
AR6	Fuels storage and handling	Delivery and bulk storage of fuels	Offloading of waste-derived and fossil fuels, and transfer to bulk storage
AR7	Clinker import	Bulk import of cement clinker by road and rail	Offloading of cement clinker imported to site by road and rail and transfer to the clinker stores.

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR8	Waste storage and handling	Waste storage and handling	From waste generation, storage and monitoring through to dispatch off site.
AR9	Water discharge to controlled water	Management of site drainage and process water.	From collection of surface water drainage including reuse within site activities through to discharge to controlled waters

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
PPC Application BJ9509	All management and control techniques described in the application	24/4/01
Partial response to Schedule 4 Notices issued 13/07/01, 26/07/01 and 22/08/01	All management and control techniques described in the response	28/09/01
IPC Variation application to increase tyre chip use	All management and control techniques described in the application	29/10/01 and 21/01/02
Response to Schedule 4 Notice issued 04/01/02	All management and control techniques described in the response	08/01/02
IPC Variation application to trial sewage sludge pellets as substitute fuel	All management and control techniques described in the application	27/05/02, 31/07/02 and 09/09/02
Partial response to Schedule 4 Notices issued 13/07/01, 26/07/01 and 22/08/01	All management and control techniques described in the response	25/07/02
Final response to Schedule 4 Notices issued 13/07/01, 26/07/01 and 22/08/01	All management and control techniques described in the response	13/02/02
Request to extend sewage sludge trial and further information for application	All management and control techniques described in the further information	13/03/03
Amendment to tyre chipper details	All management and control techniques described in the further information	28/03/03
Application BW9131 for partial surrender and variation to store and permanently use PSP.	All management and control techniques described in the application	27/11/03
Application for WID variation VP3234SF	All management and control techniques described in the application	14/03/05
Response to schedule 4 notice issued 23/05/05	All management and control techniques described in the response	26/07/05

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application to conduct a limited trial using RFO variation ZP3237SY	All management and control techniques described in the application	05/10/05
Application for SRF variation HP3038XX	All management and control techniques described in the application	25/01/08
Further information	All management and control techniques described in the further information	25/03/08
Application for WLF variation EPR/BJ9509IC/V008	All management and control techniques described in the application	18/08/09
Application for variation EPR/BJ9509IC/V010 to use shredded rubber conveyor belts as a waste derived fuel.	All management and control techniques described in the application	19/09/11
Application EPR/BJ9509IC/V014 Code of Practice variation application	All, including Changes to Environment Management System for the introduction of Alternative Raw Materials and waste derived fuels.	07/07/14
Response to Regulation 60(1) Notice dated 02/02/16 requiring information	In relation to the IED Best Available techniques, the details submitted against BAT conclusion numbers 1 – 29	29/04/16
	In relation to the IED Best Available techniques, the details submitted against BAT conclusion numbers 1, 2, 7, 15, 17, 20, 25.	28/07/16

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC09	The operator shall submit an updated report on ammonia emissions (considering both ammonia slip and background ammonia) from the Installation. The report shall include the following:- • An updated impact assessment for Ammonia. The assessment shall consider the default environmental standard of 1µg/m3 unless appropriate justification can be provided for using the less stringent value of 3µg/m^3 (according to features present within such conservation site). The report shall confirm that the current ELV for ammonia (stated within table S3.1) remains appropriate (considering the revised impact assessment, ambient ammonia and slippage levels), or shall propose an alternative ELV (complying with all BAT-AELs) for approval in writing by the Environment Agency.	30/09/17

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Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels			
Raw materials and fuel description			
Alternative Raw Materials			
Wastes used as raw materials (not as fuels)	Minimum Mineral Content	At least 80% dry weight (w/w)	
	Organic Materials	Organic Materials as measured by net CV should be <10MJ/kg dry (w/w)	
	Mercury	≤2 ppm	
	TOC/VOC	≤5000 mg/kg as organic hydrocarbon	
	No materials which are defined as carcinogens for the purposes of the COSHH Regulations 2002 (as amended) shall be used.		
EWC Numbers (excluding domestic municipal wastes)			
01 Wastes resulting from exploration, mining, quarrying, physical and chemical treatment of minerals	wastes from mineral metalliferous excavation		01 01 01
	wastes from mineral non-metalliferous excavation		01 01 02
	waste gravel and crushed rocks other than those mentioned in 01 04 07		01 04 08
	waste sand and clays		01 04 09
	wastes from stone cutting and sawing other than those mentioned in 01 04 07		01 04 13
02 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	soil from cleaning and washing beet		02 04 01
	off-specification calcium carbonate		02 04 02
03 Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard	lime mud waste		03 03 09
04 Wastes from the leather, fur and textile industries	liming waste		04 01 02
05 Wastes from Petroleum refining, natural gas purification and pyrolytic treatment of coal	Spent filter clays		05 01 15*
06 Wastes from inorganic chemical processes	Solid salts and solutions other than those mentioned in 06 03 11 and 06 09 13		06 03 14
	calcium-based reaction wastes other than those mentioned in 06 09 03		06 09 04

Table S2.1 Raw materials and fuels		
Raw materials and fuel description		
	calcium-based reaction wastes from titanium dioxide production	06 11 01
10 Wastes from thermal processes	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)	10 01 01
	Coal fly ash	10 01 02
	fly ash from peat and untreated wood	10 01 03
	calcium-based reaction wastes from flue-gas desulphurisation in solid form	10 01 05
	calcium-based reaction wastes from flue-gas desulphurisation in sludge form	10 01 07
	bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14	10 01 15
	fly ash from co-incineration containing hazardous substances	10 01 16*
	Fly ash from co-incineration other than those mentioned in 10 01 16	10 01 17
	Mill scales	10 02 10
	sludges and filter cakes from gas treatment containing hazardous substances.	10 02 13*
	casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05	10 09 06
	Casting cores and moulds which have undergone pouring other than those mentioned in 10 09 07	10 09 08
	casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05	10 10 06
	casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07	10 10 08
	Waste glass-based fibrous materials	10 11 03
	Discarded moulds	10 12 06
	waste ceramics, bricks, tiles and construction products (after thermal processing)	10 12 08
	waste preparation mixture before thermal processing	10 13 01

Table S2.1 Raw materials and fuels		
Raw materials and fuel description		
	wastes from calcination and hydration of lime	10 13 04
	Particulates and dust (except 10 13 12 and 10 13 13)	10 13 06
	Wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10	10 13 11
	Solid wastes from gas treatment containing hazardous substances	10 13 12*
	Solid wastes from gas treatment other than those mentioned in 10 13 12	10 13 13
	Waste concrete and concrete sludge	10 13 14
16 Wastes not otherwise specified in the list	Spent catalysts containing transition metals or transition metal compounds not otherwise specified	16 08 03
	Spent fluid catalytic cracking catalysts (except 16 08 07)	16 08 04
	spent catalysts contaminated with hazardous substances	16 08 07*
17 Construction and demolition wastes (including excavated soil from contaminated sites)	concrete	17 01 01
	bricks	17 01 02
	tiles and ceramics	17 01 03
	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06*.	17 01 07
	soil and stones other than those mentioned in 17 05 03	17 05 04
	dredging spoil other than those mentioned in 17 05 05	17 05 06
	track ballast other than those mentioned in 17 05 07	17 05 08
	Gypsum-based construction materials other than those mentioned in 17 08 01	17 08 02
19 Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use	Aqueous liquid wastes from gas treatment and other aqueous liquid wastes	19 01 06*
	Fly ash containing hazardous substances	19 01 13*
	Premixed wastes composed only of non-hazardous wastes	19 02 03

Table S2.1 Raw materials and fuels		
Raw materials and fuel description		
	Premixed wastes composed of at least one hazardous waste	19 02 04*
	Sludges from treatment of urban waste water	19 08 05
	Sludges from water clarification	19 09 02
	minerals (for example sand, stones)	19 12 09
	Other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances	19 12 11*
	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	19 12 12
Fuels (including Waste Derived Fuels)		
Distillate Fuel oil	0.1% Sulphur Content (w/w(max))	
Waste generated on-site in connection with the handling and storing of waste derived fuels	Burnt with chipped tyres at a rate that constitutes less than 1.0% by mass of the chipped tyre feed rate.	
New waste derived fuel for feasibility trials	Specification to be agreed in writing with the Environment Agency.	
Chipped Tyres	EWC Number	16 01 03
	Gross CV	15 – 40 MJ/kg
	Sulphur	≤2.0%
Meat & Bone Meal (MBM)	EWC Number	02 02 03
	Gross CV	10 – 40 MJ/kg
	Sulphur	≤2.0%
	Chlorine	≤2.0%
Solid Recovered Fuel (SRF)	Gross CV	10 – 40 MJ/kg
	Sulphur	≤2.0%
	Chlorine	≤2.0%
	Total Fluorine, Bromine & Iodine	≤1.5%
	Mercury	≤10 mg/kg
	Total Group II Metals (Cd + Tl)	≤30 mg/kg

Table S2.1 Raw materials and fuels		
Raw materials and fuel description		
Waste Liquid Fuels (WLF)	Gross CV	10 – 42 MJ/kg
	Sulphur	≤2.0%
	Chlorine	≤2.0%
	Total Fluorine, Bromine & Iodine	≤1.5%
	Mercury	≤20 mg/kg
	Total Group II Metals (Cd + Tl)	≤40 mg/kg
Processed Sewage Pellets (PSP)	Gross CV	10 – 40 MJ/kg
	Sulphur	≤2.0%
	Chlorine	≤2.0%
	Mercury	≤10 mg/kg
	Total Group II Metals (Cd + Tl)	≤30 mg/kg
Recovered Fuel Oil (RFO)	Gross CV	30 – 48 MJ/kg
	Sulphur	≤2.0%
	Chlorine	≤2.0%
	Mercury	≤10 mg/kg
	Total Group II Metals (Cd + Tl)	≤40 mg/kg
Wood	Gross CV	10 – 40 MJ/kg
	Sulphur	≤2.0%
	Chlorine	≤2.0%
	Total Fluorine, Bromine & Iodine	≤1.5%
	Mercury	≤10 mg/kg
	Total Group II Metals (Cd + Tl)	≤30 mg/kg
EWC Numbers (excluding domestic municipal wastes)		
02 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	Waste plastics (except packaging)	02 01 04
	Wastes from forestry	02 01 07

Table S2.1 Raw materials and fuels		
Raw materials and fuel description		
	materials unsuitable for consumption or processing	02 02 03
03 Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard	Waste bark and cork	03 01 01
	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04	03 01 05
	Waste bark and wood	03 03 01
	De-inking sludges from paper recycling	03 03 05
	Mechanically separated rejects from pulping of waste paper and cardboard	03 03 07
	Wastes from sorting of paper and cardboard destined for recycling	03 03 08
	Fibre rejects, fibre-, filler- and coating-sludges from mechanical separation	03 03 10
04 Wastes from the leather, fur and textile industries	Wastes from dressing and finishing	04 01 09
	Wastes from composite materials (impregnated textile, elastomer, plastomer)	04 02 09
	Wastes from unprocessed textile fibers	04 02 21
	Wastes from processed textile fibers	04 02 22
05 Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal	other tars	05 06 03*
07 Wastes from organic chemical processes	Waste plastic.	07 02 13
09 Wastes from the photographic industry	Photographic film and paper free of silver or silver compounds	09 01 08
12 Wastes from shaping and physical and mechanical surface treatment of metals and plastics	Plastic shavings and turnings	12 01 05
13 Oil wastes and wastes of liquid fuels (except edible oils, 05 and 12)	Fuel oil and diesel	13 07 01*
15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified	Paper and cardboard packaging	15 01 01
	Plastic packaging	15 01 02
	Wooden packaging	15 01 03
	Composite packaging	15 01 05

Table S2.1 Raw materials and fuels		
Raw materials and fuel description		
	Mixed packaging	15 01 06
	Textile packaging	15 01 09
16 Wastes not otherwise specified in the list	End-of-Life Tyres	16 01 03
	Plastic	16 01 19
17 Construction and demolition wastes (including excavated soil from contaminated sites)	Wood	17 02 01
	Plastic	17 02 03
19 Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use	Liquid combustible waste containing hazardous substances	19 02 08*
	Combustible waste other than those in 19 02 08* and 19 02 09*	19 02 10
	Sludges from treatment of urban waste water	19 08 05
	Paper and cardboard	19 12 01
	Plastic and rubber	19 12 04
	Wood other than mentioned in 19 12 06	19 12 07
	Textiles	19 12 08
	Combustible waste (refuse-derived fuel)	19 12 10
	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	19 12 12
20 Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions	Paper and cardboard	20 01 01
	Clothes	20 01 10
	Textiles	20 01 11
	Wood other than that mentioned in 20 01 37	20 01 38
	Plastics	20 01 39

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements for kiln exhaust(s)						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A31	Main Stack on pre-heater tower	Particulate matter	30 mg/Nm^3	Daily average	Continuous measurement	BS EN 14181
		Oxides of nitrogen (NO and NO_2 expressed as NO_2)	500 mg/Nm^3			
			From 9/4/2017 450 mg/Nm^3			
		Sulphur dioxide	400 mg/Nm^3 or 600 mg/Nm^3 up to 5 times each year if raw mill is stopped.			
			From 9/4/2017 400 mg/Nm^3			
		Ammonia	No limit			
			From 9/4/2017 120 mg/Nm^3			
		Carbon monoxide	5,000 mg/Nm^3			
		Total Organic Carbon (TOC)	150 mg/Nm^3			
		Hydrogen chloride	10 mg/Nm^3			
		Hydrogen fluoride	1 mg/Nm^3	Periodic over minimum 1-hour period	Six monthly periodic monitoring	ISO 15713
		Cadmium & thallium and their compounds (total)	0.05 mg/Nm^3	Periodic over minimum 30 minute, maximum 8 hour period	Six monthly periodic monitoring	BS EN 14385
		Mercury and its compounds	0.05 mg/Nm^3			BS EN 13211
		Group III metals and their compounds (total)	0.5 mg/Nm^3			BS EN 14385
		Dioxins / furans (I-TEQ)	0.1 ng/m^3	Periodic average value over sample period of between 6 and 8 hours	Six monthly periodic monitoring	BS EN 1948 Parts 1, 2 & 3
		Dioxins / furans (WHO-TEQ Humans / Mammals /fish / birds)	No limit set			BS EN 1948 Parts 1, 2 & 3
		PCBs	No limit set			BS EN/TS 1948 part 4

Table S3.1 Point source emissions to air – emission limits and monitoring requirements for kiln exhaust(s)						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
		[Dioxin-like PCBs (WHO-TEQ Humans / Mammals / fish / birds)]				
		PAHs Specific individual poly-cyclic aromatic hydrocarbons	No limit set			BS ISO 11338 part 1 and 2

Table S3.2 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
A32	Cooler stack	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	6 monthly	BS EN 13284-1
A33	Cement mill 1	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	Annual	BS EN 13284-1
A34	Cement mill 2	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	Annual	BS EN 13284-1
A35	Cement mill 3	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	Annual	BS EN 13284-1
A37	Cement mill 4 vent	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	6 Monthly	BS EN 13284-1
A38	Cement mill 4 main stack	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	6 monthly	BS EN 13284-1
A76	Cement Mill 6 main stack	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	6 monthly	BS EN 13284-1
A77	Cement mill 6 Aux	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	6 Monthly	BS EN 13284-1

Table S3.2 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
A36	Clinker import	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	Annually	BS EN 13284-1
A39	Roto pack II Bagging plant	Particulate	30 mg/Nm^3 From 9/4/2017 10 mg/Nm^3	Periodic over minimum ½ hour period	Annually	BS EN 13284-1
All other channelled dust emissions abated by fabric filters if less than 10,000 Nm^3/hr	Dusty operations such as crushing, conveyors, material handling, silos	Particulate matter	From 9/4/2017 10 mg/Nm^3	-	In accordance with maintenance management system	Permanent sampling access not required
Vents on ammonia system	Ammonia storage	Ammonia	No limit set	-	-	Permanent sampling access not required
Vents on liquid fuels storage tanks	Liquid fuels storage	Ammonia	No limit set	-	-	Permanent sampling access not required

Table S3.3 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
W1 Release to River Hamps via shale lake	Suspended Solids	Cooling water and site drainage	30 mg/l	Spot	Monthly	BS EN 872
	Oil or Grease		None Visible			Visual check
	pH		6 – 9			BS6068-2.50
W2 Release to River Hamps via settlement lagoons	Suspended Solids	Shale quarry drainage	30 mg/l	Spot	Monthly	BS EN 872
	Oil or Grease		None Visible			Visible check
	pH		6 – 9			BS6068-2.50
W3 Release to River Hamps	Suspended Solids	Reed bed	30 mg/l	Spot	Weekly	BS EN 872
	Oil or Grease		None Visible			Visual check
	pH		5 – 9			BS6068-2.50
	Ammoniacal nitrogen		15 mg/l as N			BS EN ISO 11732
	BOD		5 mg/l		Annual	BS EN 1899-2

Table S3.4 Process monitoring requirements			
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**
Cement Kiln Dust and / or By-pass dust.	Group I, Group II and Group II metals, Zinc and their compounds	6 Monthly (1)	Sampling in accordance with a protocol agreed in writing with the Agency.
Cement Kiln Dust and / or By-pass dust.	Dioxins/furans and dioxin-like PCBs	6 Monthly(1)	
Cement Kiln Dust and / or By-pass dust.	Halides (Chloride, Bromide and Fluoride)	6 Monthly(1)	
Cement Kiln Dust and / or By-pass dust.	Total soluble fraction for Group I, Group II and Group II metals, Zinc and their compounds)	6 Monthly(1)	
Kiln A1	Fuels usage	Quarterly	As agreed in writing with the EA
	Waste-derived fuels usage		
	Relative thermal input of Waste-derived fuels		
	Ammonia usage		
	Cyclone 4 inlet duct temperature (°C)	Continuous	
	Raw meal feed rate (t/hr)		
	Temperature	Continuous	
	Pressure		
	Oxygen content		
	Water vapour content		
A32, A33, A34, A35, A36, A37, A38, A76, and A77	Particulates	Continuous	Indicative

(1) Additional sample required before the use of a new disposal or recovery route.

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Emissions to air Parameters as required by condition 3.5.1.	A31	Monthly summary of continuous monitoring reported quarterly	1 January, 1 April, 1 July, 1 October
	A31, A37, A38, A77, A32, A76	6 monthly periodic monitoring reported every 6 months	1 January, 1 July
	A33, A34, A35, A36	12 monthly periodic monitoring reported annually	1 January
Emissions to water Parameters as required by condition 3.5.1	W1, W2, W3.	Every 6 months	1 January, 1 July
Functioning and monitoring of the plant involved in the burning of waste derived fuels, as required by condition 4.2.2.	A31	Every 12 months	1 January
Fuel Usage, Alternative raw materials, and Waste Derived Fuel usage as required by condition 4.2.6		Every 12 months	1 January
Process monitoring Parameters as required by condition 3.5.1	Cement Kiln Dust and / or By-pass dust composition Fuels usage Waste-derived fuels usage Relative thermal input of Waste-derived fuels Ammonia usage	Quarterly	1 January

Table S4.2: Annual production/treatment	
Parameter	**Units**
No Parameters	

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Mass of CKD/BPD sent off-site for landfill	Quarterly	Tonnes
Mass of CKD/BPD sent off-site for recovery	Quarterly	Tonnes

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Form Air 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Water and Land	Form Water 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Fuels usage summary and relative thermal input	Form Fuel Usage or other form as agreed in writing by the Environment Agency	DD/MM/YY
Alternative Raw Materials usage	Form ARM Usage1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Waste Derived fuels usage	Form WDF Usage1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Annual WID report	Form WID1 or other form as agreed in writing by the Environment Agency	DD/MM/YY

Schedule 5 – Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“abatement equipment” means that equipment dedicated to the removal of polluting substances from releases from the installation to air or water media.

“accident” means an accident that may result in pollution.

“annual average” means the average of all daily averages in a calendar year.

"annually” means once every year.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“background concentration” means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“*CEM”* means Continuous Emission Monitor.

“Chapter IV abnormal operating conditions” means any technically unavoidable stoppages, disturbances, or failures of the abatement plant or the measurement devices, during which the concentrations in the discharges into air or waste water of the regulated substances may exceed the normal emission limit values.

“*Climate Change Agreement*” means an agreement made between the Secretary of State and the operator, either directly or through the offices of any association of which he is a member, in which he agrees to secure energy efficiency improvements as set out in a plan agreed with the Secretary of State in that agreement in return for a discount from the amount he would otherwise pay as a Climate Change Levy.

“*Chipped tyres*” means both chipped and granulated tyre and rubber conveyor belt derived material.

“*daily*” means a 24 hour period commencing at either midnight or midday.

“*daily average”* for releases of substances to air means the average of valid half-hourly averages over consecutive discrete period of 24 hours commencing at a time agreed in writing with the Environment Agency during normal operation.

“*dioxin and furans” means polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.*

“disposal”. Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste

“ELV” means emission limit value.

“emissions to land” includes emissions to groundwater.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“*EWC code”* means the code number from the European Waste Catalogue.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"*Group I metals*" means mercury (Hg).

"Group II Metals" means Cadmium (Cd) and Thallium (Tl).

"Group III Metals" means Antimony (Sb), Arsenic (As), Chromium (Cr), Cobalt (Co), Copper (Cu), Lead (Pb), Manganese (Mn), Nickel (Ni), & Vanadium (V).

"*half-hour or half-hourly*" means a 30 minute period commencing on the hour or at half past the hour.

"Hazardous property" has the meaning in Annex lll of the Waste Framework Directive.

"Hazardous waste" has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

"*hourly*" means a 60 minute period commencing on the hour.

"Industrial Emissions Directive" or "*IED*" means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

"ISO" means International Standards Organisation.

Kiln shut down"

Cement

Shutdown is defined as when the plant is being returned to a non-operational state and no waste is being burned, or as otherwise agreed in writing with the Environment Agency. Emission limit values do not apply during shutdown once the feed rate is below 120 tonne per hour.

'Kiln Start Up'

Cement

This means, from the time when raw meal is introduced into the kiln to the time the feed rate has reached 120 tonne per hour and the kiln is stable. Or as otherwise agreed in writing by the Agency.

On commencing kiln operation, the first continuous monitoring daily average can be calculated from the 24 hour period starting from the time that kiln start up has completed. Subsequent daily averages will be based on a 24 hour period commencing 12 noon.

"List of Wastes" means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

"MBM" means Meat and Bone Meal. MBM is classified as a non-hazardous waste by the EWC Code 02 02 03, defined as "Wastes from the preparation and processing of meat, fish and other foods of animal origin" and the sub-clause "Materials unsuitable for consumption or processing". MBM cannot contain raw or unprocessed meat, bones or animal parts, or any other waste of agricultural, horticultural or industrial origin.

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

"monitoring" includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

"*MPA Code of Practice*" means the MPA Code of Practice for the use of waste materials in Cement and Dolomitic Lime Manufacture – dated October 2014

"*oxides of nitrogen (NO_x)*" means nitric oxide (NO) plus nitrogen dioxide (NO_2) expressed as NO_2

"PAH" means Poly-cyclic aromatic hydrocarbon, and comprises Anthanthrene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[b]naph(2,1-d)thiophene, Benzo[c]phenanthrene, Benzo[ghi]perylene, Benzo[a]pyrene, Cholanthrene, Chrysene, Cyclopenta[c,d]pyrene, Dibenzo[ah]anthracene, Dibenzo[a,i]pyrene, Fluoranthene, Indo[1,2,3-cd]pyrene, Naphthalene

"PCB" means Polychlorinated Biphenyl. Dioxin-like PCBs are the non-ortho and mono-ortho PCBs listed in the table below,

"PCP" means Pentachlorophenol,

"permitted installation" means the activities and the limits to those activities described in Table S1.1 of this Permit.

"quarter" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

"quarterly periodic monitoring" for reporting/sampling means after/during each 3 month period, January to March; April to June; July to September and October to December and, when sampling, with at least 2 months between each sampling date.

"recovery" means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

"six monthly periodic monitoring" means periodic monitoring in each 6 month period (January-June & July – December) with at least 4 months between sampling dates.

"*SSSI*" means a site of special scientific interest designated under the Wildlife and Countryside Act 1981 being a site in the UK which is of particular importance because of its geology, topography, or ecology.

"*thermal input"* refers to the combined pre-calciner and main kiln burner inputs. Maximum thermal substitution of hazardous waste shall not exceed 40% to comply with IED co-incineration requirements. Hazardous waste may be substituted only as a main kiln burner input due to IED minimum thermal operating requirements.

"TOC" means Total Organic Carbon. In respect of releases to air, this means the gaseous and vaporous organic substances, expressed as TOC.

"Waste code" means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

"Waste Framework Directive" or "WFD" means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste

"year" means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

(a) in relation to emissions from cement kilns, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 10% dry for all fuels;

(b) in relation to emissions from combustion processes from other sources, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels; and

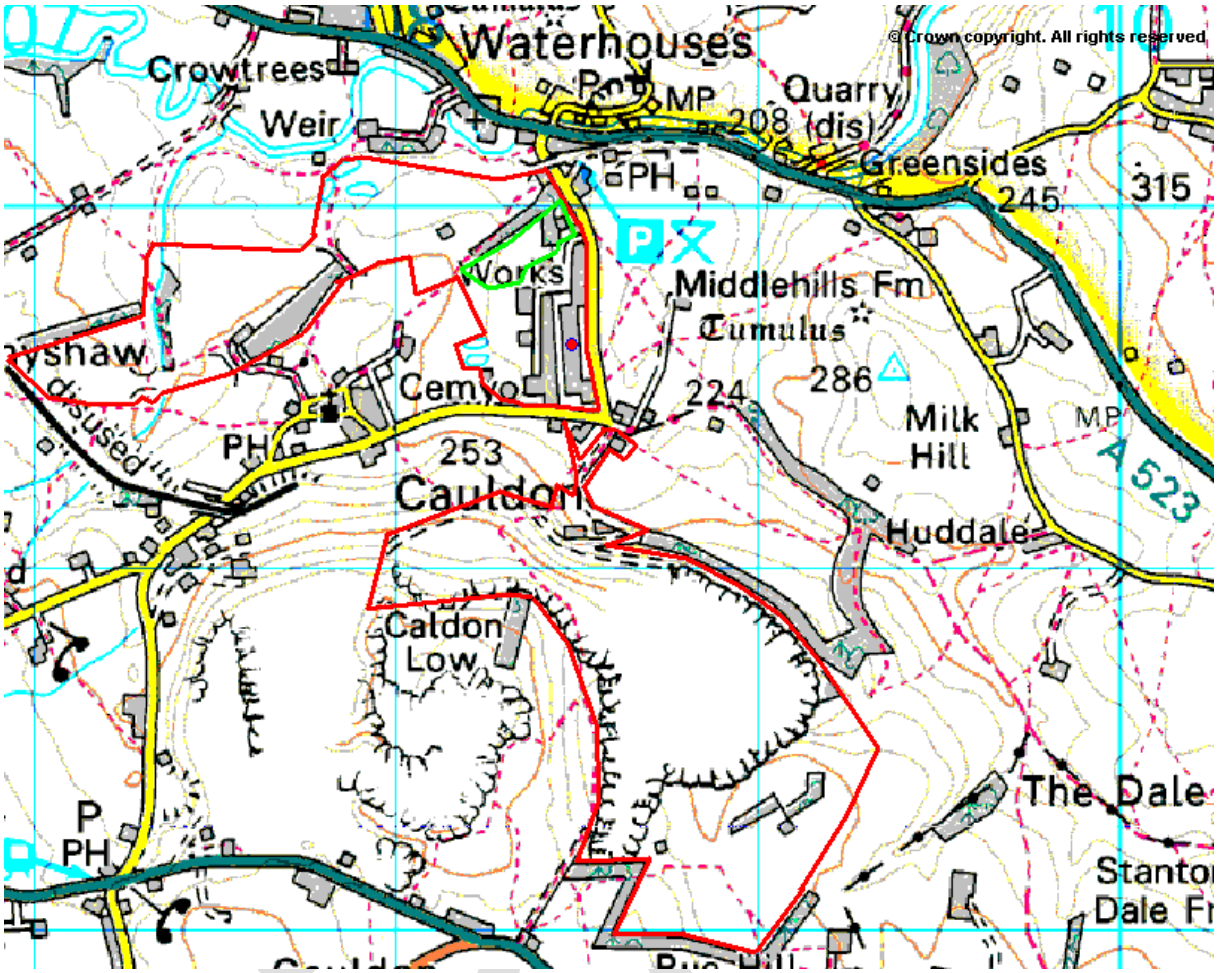
(c) in relation to emissions from non-combustion sources, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with no correction required for oxygen.

For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their respective toxic equivalence factors before summing.

TEF schemes for dioxins and furans				
Congener	***I-TEF(1990)***	***WHO-TEF (1997/8)***		
		Humans / Mammals	***Fish***	***Birds***
Dioxins				
2,3,7,8-TCDD	*1*	*1*	*1*	*1*
1,2,3,7,8-PeCDD	*0.5*	*1*	*1*	*1*
1,2,3,4,7,8-HxCDD	*0.1*	*0.1*	*0.5*	*0.05*
1,2,3,6,7,8-HxCDD	*0.1*	*0.1*	*0.01*	*0.01*
1,2,3,7,8,9-HxCDD	*0.1*	*0.1*	*0.01*	*0.1*
1,2,3,4,6,7,8-HpCDD	*0.01*	*0.01*	*0.001*	*<0.001*
OCDD	*0.001*	*0.0001*	*-*	*-*
Furans				
2,3,7,8-TCDF	*0.1*	*0.1*	*0.05*	*1*
1,2,3,7,8-PeCDF	*0.05*	*0.05*	*0.05*	*0.1*
2,3,4,7,8-PeCDF	*0.5*	*0.5*	*0.5*	*1*
1,2,3,4,7,8-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
1,2,3,7,8,9-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
1,2,3,6,7,8-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
2,3,4,6,7,8-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
1,2,3,4,6,7,8_HpCDF	*0.01*	*0.01*	*0.01*	*0.01*
1,2,3,4,7,8,9-HpCDF	*0.01*	*0.01*	*0.01*	*0.01*
OCDF	*0.001*	*0.0001*	*0.0001*	*0.0001*

TEF schemes for dioxin-like PCBs			
Congener	***WHO-TEF (1997/8)***		
	Humans / mammals	***Fish***	***Birds***
Non-ortho PCBs			
3,4,4',5-TCB (81)	*0.0001*	*0.0005*	*0.1*
3,3',4,4'-TCB (77)	*0.0001*	*0.0001*	*0.05*
3,3',4,4',5 - PeCB (126)	*0.1*	*0.005*	*0.1*
3,3',4,4',5,5'-HxCB(169)	*0.01*	*0.00005*	*0.001*
Mono-ortho PCBs			
2,3,3',4,4'-PeCB (105)	*0.0001*	*<0.000005*	*0.0001*
2,3,4,4',5-PeCB (114)	*0.0005*	*<0.000005*	*0.0001*
2,3',4,4',5-PeCB (118)	*0.0001*	*<0.000005*	*0.00001*
2',3,4,4',5-PeCB (123)	*0.0001*	*<0.000005*	*0.00001*
2,3,3',4,4',5-HxCB (156)	*0.0005*	*<0.000005*	*0.0001*
2,3,3',4,4',5'-HxCB (157)	*0.0005*	*<0.000005*	*0.0001*
2,3',4,4',5,5'-HxCB (167)	*0.00001*	*<0.000005*	*0.00001*
2,3,3',4,4',5,5'-HpCB (189)	*0.0001*	*<0.000005*	*0.00001*

Schedule 7 – Site plan



END OF PERMIT

Annex to conditions – Derogation under Industrial Emissions Directive

Derogation under Article 15(4) of Industrial Emissions Directive

DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

Operating techniques	The Operator requested a long term derogation from BAT 17, "Dust emissions from kiln firing processes" as described in the BAT conclusions for the "Production of Cement, lime and magnesium oxide published April 9th 2013. The derogation request was made on the basis of the technical characteristics of the plant, specifically the lack of available space. The Operator's application considered four options for meeting the BAT-AEL. They have proposed to continue using the existing Electrostatic Precipitator (ESP) and Emission limit values (ELV) of 30Mg/Nm^3 and reject the other options including replacing the ESP with a bag filtration system or upgrading the existing ESP as these options were considered disproportionately costly compared to the environmental benefits gained. The Environment Agency has reviewed the application and concluded • The operator has supplied a valid derogation request against the BAT conclusions 17. The derogation request is based on technical characteristics specifically the plant configuration and the impacts of the lack of space on equipment replacement and selection. The operator has described 4 relevant options for achieving the BAT-AEL and justified the screening out the use of hybrid filters. Four options were taken forward to conduct a cost benefit analysis. The operator proposed the retention of the existing ELV of 30mg/Nm^3 as opposed to the BAT-AEL of 20mg/Nm^3 until the next permit review or the existing ESP is replaced or significantly upgraded. • That the operator has provided a credible argument that the increased costs linked to the technical characteristics are disproportionate for achieving the BAT AEL. The operator has supplied sufficient evidence to support the assertion that the additional costs due to plant configuration are significantly above those compared to a typical site. The evidence, as described in the application and derived from the CBA analysis, was reviewed and considered to be applicable and correct and should be considered as part of the derogation request. The basis for the cost assumptions were challenged and considered within reasonable levels of uncertainty. • That the operator has demonstrated that the costs of achieving the BAT-AEL by April 2017 are disproportionate to the environmental benefits. There are considered to be no significant environmental risks by allowing the derogation as requested. The current permitted ELVs mean that the impact on the environment is not significant. Achieving the BAT-AEL by replacement of the ESP with a bag filter would result in a lower particulate release but the impact would remain insignificant. • The derogation would allow continuation of existing ELV's of 30mg/Nm^3 and the requirement to monitor continuously. These are considered appropriate measures to maintain a high degree of environmental protection. There are no

	additional factors that are significant enough to include any extra justifications for improvement conditions or tighter limits. The Environment Agency is therefore minded to allow this derogation.