

Notice of variation with introductory note

Environmental Permitting (England & Wales) Regulations 2016

Castle Cement Limited

Padeswood Cement Works
Padeswood
Mold
Flintshire
CH7 4HB

Variation number

EPR/BL1096IB/V019

Permit number

EPR/BL1096IB

Padeswood Cement Works

Permit number EPR/BL1096IB

Introductory note

This introductory note does not form a part of the notice

The following notice gives notice of the variation of an environmental permit.

This permit variation adds a new Solid Recovered Fuel (SRF) feed installation for transporting SRF into the existing kiln burner (Kiln 4), including reception docking stations, transport equipment, screening and wind-sifting, oversized collection, bag filter unit and dosing unit.

The operators registered address has also been updated as part of this variation.

The schedules specify the changes made to the original 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 BL1096	Received 29/08/01	
Notice requiring further information	Request sent 17/12/01	Consolidated application incorporating response received 05/06/02
Notice requiring further information	Request sent 11/04/03	Response received 06/06/03
Notice requiring further information	Request sent 17/07/03	Response dated 11/08/03
Additional information from Applicant: revised site plan and confirmation that landfill is not part of the installation	Received 24/10/03	
Additional information from applicant	Received 10/05/04	
Permit Determined BL1096	17/12/04	
Application for landfill variation	Received 15/04/05	
Notice requiring further information	Request sent 21/07/05	Response received 23/09/05 Response received 09/01/06
Notice requiring further information	Request sent 02/06/06	Response received 03/08/06 Response received 14/08/06 Response received 19/09/06
Variation Determined YP3438	08/11/07	
Application for MBM variation	Duly made 30/03/07	
Notice requiring further information	Request sent 27/06/07	Response received 20/07/07
Additional information from applicant	Received 20/12/07	
Request to amend fuel specification to Standard Waste Derived Fuel Specification for the Cement Sector	Received 21/02/07	
Additional information from applicant	Received 20/02/08	
Variation Determined KP3338UC	03/04/08	
Application for SRF variation	Received 03/07/07	
Notice requiring further information	Request sent 31/07/07	Response received 28/08/07
Additional information from applicant	Received 10/03/08	
Variation Determined AP3134UN	17/04/08	

Application for landfill variation	Duly made 27/05/08	
Additional information from applicant	Received 21/08/08	
Variation Determined EA/EPR/BL1096IB/V005	09/10/08	
Partial surrender application	Received 18/12/09	
Variation Determined EA/EPR/BL1096IB/S007	06/04/10	Partial surrender of permit to remove the operation of a hazardous waste landfill from permit
Environment Agency Cement and Lime Sector Review Variation EPR/BL1096IB/V009	04/08/10	
Environment Agency Variation correcting errors EPR/BL1096IB/V010	15/12/10	
Variation Application EPR/BL1096IB/V011 received	03/05/13	Variation to reduce monitoring requirements following results of a public health study.
Variation Application EPR/BL1096IB/V011 issued	06/09/2013	Variation issued
Regulation 60(1) Notice of request for more information	06/03/14	Regarding Implementation of BAT conclusions under IED
Regulation 60(1) response received	30/01/15	Regarding Implementation of BAT conclusions under IED
Variation Application EPR/BL1096IB/V012	Duly made 23/02/15	Variation to add in 2 docking stations and pneumatic conveyer
Variation Application EPR/BL1096IB/V012 issued	09/06/15	Variation issued
Request for additional information to support Regulation 60(1) response	26/06/15	
Response to request for additional information received	29/07/15	Clarification on techniques employed in respect of the following BAT conclusions: 2, 5(g), 8, 9, 14, 15, 16, 19 and 20.
Additional information received	02/03/16	Updated site plan
Additional information received	14/03/16	Assessment of background ammonia emissions
Natural Resources Wales Cement Sector Review 2015 Permit EPR/BL1096IB Variation issued EPR/BL1096IB/V013	19/07/16	Varied and consolidated permit issued in modern IED condition format.
Application PAN- 001655 (EPR/BL1096IB/V014)	Duly made 16/06/17	Substantial variation application to add Cement Mill 5 and rail loading facility.

Additional information received	03/11/17	Response to Schedule 5 Notice sent 11th October 2017
Variation of permit determined	08/01/18	Consolidated Permit issued to Castle Cement Limited
Application PAN- 002355 (EPR/BL1096IB/V015)	Duly Made 12/02/18	Duly Made 12/02/18
Variation and consolidation determined (EPR/BL1096IB/V015)	15/05/18	Variation and consolidation issued
Variation EPR/BL1096IB/V016	10/09/18	NRW led variation and consolidation
Application PAN-013925 (EPR/BL1096IB/V017)	Duly Made 16/09/21	Minor technical variation to make replacements on the bypass system
Variation determined (EPR/BL1096IB/V017)	22/10/21	Variation and consolidation permit issued
Variation application EPR/BL1096IB/V018 (PAN-019052)	22/08/2022	Variation to include use of Aluminium Oxide
Additional information received	Duly made 15/02/2023	Further information on the storage areas, extractive testing and odour assessment received.
Variation determined EPR/BL1096IB/V018	22/05/2023	Variation notice and consolidated permit issued
Variation application EPR/BL1096IB/V019(PAN-019893)	Received 14/11/22 Duly made 05/01/23	Minor technical variation to install a new SRF facility for transporting SRF into Kiln 4.
Additional information received EPR/BL1096IB/V019 (PAN-019893)	15/02/23 08/03/23	Response to Schedule 5 Notice information request (Noise Impact Assessment)
Additional information received EPR/BL1096IB/V019 (PAN-019893)	15/05/2023	Response to Schedule 5 Notice information request (dust bag filter emission point)
Additional information received EPR/BL1096IB/V019 (PAN-019893)	31/05/2023	Response to Schedule 5 Notice information request (addendum to BAT assessment)
Variation determined EPR/BL1096IB/V019	06/06/2023	Variation notice issued and operators registered address updated.

End of introductory note.

Notice of variation

Environmental Permitting (England and Wales) Regulations 2016

The Natural Resources Body for Wales (“Natural Resources Wales”) in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number
EPR/BL1096IB

issued to:
Castle Cement Limited (“the operator”)

whose registered office is

**Hanson UK
Second Floor
Arena Court
Crown Lane
Maidenhead
Berkshire
SL6 8QZ**

company registration number **02182762**

to operate an installation at

**Padeswood Cement Works
Padeswood
Mold
Flintshire
CH7 4HB**

to the extent set out in the schedules.

The notice shall take effect from 06/06/2023

Signed

Date

Holly Noble	06/06/2023
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Authorised on behalf of Natural Resources Wales

Schedule 1 – conditions to be deleted

None

Schedule 2 – conditions to be amended

Table S1.2 will be updated to add the documents containing the operating techniques for the new SRF feed installation and will read as follows:

Table S1.2 Operating techniques		
Description	Parts	Date Received
Consolidated response to Information Notice dated 17/12/01	Sections 2.1 to 2.11	05/06/02
Response to Information Notice dated 11/04/03	The response given to questions 6 to 18, 23, 25 to 29 & 39	06/06/03
Additional Information May 2004	Sections 3,4, 7 to 18	10/05/04
Variation Application KP3338UC	C2.1 to C2.9, C2.10 (except 2.10.17 to 2.10.20, 2.10.23 and table 2.10.2), C2.11	30/03/07
Response to Information Notice dated 27/06/07	The response given to questions 1,2 and 3	20/07/07
Variation Application AP3134UN	C2.1 to C2.9, C2.10 (except 2.10.18 to 2.10.21, 2.10.24 and table 2.10.2), C2.11	03/07/07
Response to information Notice dated 31/06/07	The response given to questions 1 & 4 to 7	28/08/07
Additional Information August 2008	Use of SNCR (selective non-catalytic reduction)	21/08/08
Supporting information to variation application EA/EPR/BL1096IB/V012, document reference Pad1-2015	All	23/02/15
Information received in support of Natural Resources Wales Cement Sector Permit Review 2014	All parts of operator response to Regulation 60 (1) notice sent 06/03/14	30/01/15
Information received in support of Natural Resources Wales Cement Sector Permit Review 2014	All parts of operator response to Regulation 60 (1) notice sent 26/06/15	29/07/15
Application	Table 3a – technical standards , Part C3 of the application form Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for the production of cement, lime and magnesium oxide	16/06/17
Application	Application for variation to Padeswood Works Permit Document Ref CM5	16/06/17
Response to Schedule 5 Notice dated 11/10/17	Response to question regarding BAT for Noise control at CM5	03/11/17
Mineral Products Association Code of Practice for the Use of Waste Materials in Cement and Dolomitic Lime Manufacture	All	06/03/18
Application PAN-013925 (EPR/BL1096IB/V017)	Application supporting document: 'Installation of a replacement Bypass system'. Responses to application form Part C2 and Part C3.	20/04/21

Table S1.2 Operating techniques

Description	Parts	Date Received
Application PAN-019052 (EPR/BL1096IB/V018)	Application supporting document 'Aluminium oxide and GBFS Variation Appendix 6 BFS Trial Procedure'	22/08/2022
Application PAN-019893 (EPR/BL1096IB/V019)	Application supporting document '5426- CAU-XX-XX-RP-V-0301.A0.C1 Op Tech & BAT (final)'	14/11/22
Response to Schedule 5 Notice	'5426-CAU-XX-XX-RP-V-0304.A0.C1 Operating Techniques & BAT Review Report – Addendum'	31/05/2023

Table S1.3 will be amended to add a new improvement program requirement (IC 9) and will read as follows:

Table S1.3 Improvement programme requirements

Reference	Requirement	Due Date
IC1	<p>Particulate emission data (Continuous Emissions Monitors) for emission points A3, A4, A5, A6 & A9 shall be corrected to standard reference conditions (as detailed in Schedule 6) from 09/04/17 onwards.</p> <p>Pre-determined correction factors for each emission point may be acceptable as an alternative to upgraded CEMS where the operator can demonstrate that these parameters are stable and consistent, providing historical data as evidence.</p> <p>In line with BS EN 15259, historic moisture and temperature measurements would need to be shown to not vary above or below 10%, (as a guide value), of the statistical mean from available data derived from periodic measurements. The Operator shall provide a report to Natural Resources Wales confirming (for agreement) how particulate emissions data will be corrected.</p>	<p>31/10/16</p> <p>Complete</p>
IC2	<p>The Operator shall provide a written report detailing the proposed monitoring technique to be employed to demonstrate compliance with the particulate matter ELV of 10 mg/Nm³ at emission points A11 & A12.</p> <p>If the Operator proposes the use of an alternative technique (i.e. not extractive or continuous measurement in accordance with recognised standards), then evidence must be provided to prove the technique will demonstrate compliance with the ELV to an equivalent level of certainty.</p>	<p>31/10/16</p> <p>Complete</p>

Table S1.3 Improvement programme requirements

Reference	Requirement	Due Date
IC3	<p>In order for Natural Resources Wales to set the appropriate emission limit values, the Operator shall submit a report detailing the operational capability (expressed as mg/Nm³ of particulate released) of each bag filter plant associated with emission points A3, A4, A5, A6, A7 & A9. The report shall include:</p> <ol style="list-style-type: none"> I. A statistical analysis of at least two years of particulate monitoring data for each emission point with supporting graphs demonstrating individual values, averages and standard deviations. II. Design specification of each bag plant. III. Details on all maintenance (including filter bag changes) carried out for each bag filter plant during the monitoring period, including dates and times of each maintenance 	<p>30/11/16</p> <p>Complete</p>
IC4	<p>If storing Priority Hazardous Substances on site, the Operator must carry out the following assessments with reference to the Environment Agency's guidance "How to carry out a risk assessment if you're applying for a bespoke permit that includes discharging hazardous pollutants to surface water":</p> <p>Phase 1 Part A screening tests for mercury, cadmium, nickel, lead, benzene, polyaromatic hydrocarbons and any other relevant priority hazardous substances. Phase 1 Part B screening tests for mercury, cadmium, polyaromatic hydrocarbons and any other relevant priority hazardous substances.</p> <p>For any substance which is not screened out by the Phase 1 Part A or Part B screening tests the Operator will also need to carry out Phase 2 modelling, as described in "How to carry out a risk assessment if you're applying for a bespoke permit that includes discharging hazardous pollutants to surface water".</p> <p>The Operator must provide Natural Resources Wales with the results of the emissions monitoring, the results from the screening tests and the results from any Phase 2 modelling. The Operator may use the Environment Agency's H1 electronic screening tool to present the emissions data and to carry out the Phase 1 screening tests.</p> <p>Note: With regard to the Phase 1 Part A screening - a full list of priority hazardous substances is provided in the Environment Agency guidance "How to carry out a risk assessment if you're applying for a bespoke permit that includes discharging hazardous pollutants to surface water" under the section entitled "Screening test: priority hazardous pollutants". The Operator must review the list and carry out the screening for any substances, in addition to those specified above, that may be present in the installations discharges to surface water. With regard to the Phase 1 Part B screening for priority hazardous pollutants, the section entitled "Screening test: priority hazardous pollutants" provides a full list of relevant priority hazardous substances and their associated annual significant loads.</p>	<p>28/02/18</p>

Table S1.3 Improvement programme requirements

Reference	Requirement	Due Date
IC5	The Operator shall submit a report on the baseline conditions of soil and groundwater at the installation. The report shall contain the information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities provided for in Article 22(3) of the IED. The report shall contain information, supplementary to that already provided in the application Site Condition Report, needed to meet the information requirements of Article 22(2) of the IED.	31/03/18 Complete
IC6	The Operator shall submit the written protocol referenced in condition 3.1.3 for the monitoring of soil and groundwater for approval by Natural Resources Wales. The protocol shall demonstrate how the Operator will meet the requirements of Articles 14(1) (b), 14(1) (e) and 16(2) of the IED. The procedure shall be implemented in accordance with the written approval from Natural Resources Wales.	31/03/18 Complete
IC7	Given the difficulties of applying the BS 4142 assessment methodology to this specific situation as there are existing sources due to be removed which may be contributing to the background levels. A monitoring study should be carried out once Mill 5 is operational to validate the noise source assumptions and implementation of proposed mitigation measures. A report shall be submitted to Natural Resources Wales demonstrating the results of the monitoring exercise.	After 12 months of Mill 5 operating. Complete
IC8	The operator shall provide a report to Natural Resources Wales detailing the results of spot sampling of CO, NOx and SO2 emissions of the hot gas generator. The results shall be used to verify that the emissions are as predicted.	After 12 months of Mill 5 operating. Complete
IC9a	Following successful commissioning and establishment of routine steady operation, the Operator shall undertake a noise impact assessment following BS4142:2014 and guidance set out in Noise and Vibration Management: Environmental Permits . The assessment should include an objective assessment of narrow band (FFT) measurements to identify any tonal elements from on-site sources and off-site at sensitive receptors. The assessment should include consideration of the Welsh Government's Noise and soundscape action plan 2018-2023. Upon completion of the work, a written report shall be submitted to Natural Resources Wales for approval.	Within 9 months of commissioning the new SRF feed or as otherwise agreed by Natural Resources Wales
IC9b	Following completion of IC9a, should the written report indicate it is required, a Noise Management Plan shall be submitted to Natural Resources Wales detailing any required noise controls. This shall be completed in line with guidance set out in Noise and Vibration Management: Environmental Permits .	Within 3 months of completion of IC9a (if applicable) or as otherwise agreed by Natural Resources Wales

Following this variation, the pre-operational measure for future development has been satisfied. PO1 in Table S1.4 will be marked as complete and will read as follows:

Table S1.4 Pre-operational measures for future development

Reference	Operation	Pre-operational measures
PO1 (completed 06/06/2023)	Use of SRF & Profuel® as alternative fuels on the main kiln burner	The Operator shall provide details of the transport system to the main burner and monitoring programmes for agreement by Natural Resources Wales.

Table S3.2 will be amended to add a new non-kiln point source emission point (A16) and will read as follows:

Table S3.2 Non-kiln 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
A3 on site plan in schedule 7 ^{Note 2}	Cement Mill 1	Particulate matter	10 mg/Nm ³	Daily average	Continuous measurement	BS EN 14181 ^{Note 1}
A4 on site plan in schedule 7 ^{Note 2}	Cement Mill 2	Particulate matter	10 mg/Nm ³			
A5 on site plan in schedule 7 ^{Note 2}	Cement Mill 3	Particulate matter	20 mg/Nm ³			
A6 on site plan in schedule 7 ^{Note 2}	Cement Mill 4	Particulate matter	10 mg/Nm ³			
A7 on site plan in schedule 7 ^{Note 2}	Cement Mill 4 Classifier	Particulate matter	20 mg/Nm ³			
A9 on site plan in schedule 7	Kiln 4 cooler Exhaust	Particulate matter	20 mg/Nm ³			
A10 on site plan in schedule 7	MBM Storage Vessel Bag Filter	Particulate matter	10 mg/Nm ³	The frequency of measurements or performance checks shall be based on a maintenance management system.		
A11 on site plan in schedule 7	Clinker Dome Filter	Particulate matter	10 mg/Nm ³	Indicative Monitoring	Continuous Measurement	Triboelectric probe
A12 on site plan in schedule 7	Arodo Packer Filter	Particulate matter	10 mg/Nm ³			
A13 on site plan in schedule 7	Ammonia Storage Tank Scrubber	No Parameters set	None Set	-	-	-
A14 on site plan in schedule 7	Cemfuel tanks carbon adsorbers.	No Parameters set	None Set	-	-	-
A15 on site plan in schedule 7	Cement Mill 5	Particulate matter	10 mg/Nm ³	Periodic over a minimum 30 minute period	Quarterly for the first year, 6 monthly thereafter.	BS EN 13284-1
		Carbon monoxide	None Set	-	-	-
		Oxides of Sulphur expressed as SO ₂				
		Oxides of nitrogen (NO and NO ₂ Expressed as NO ₂)				

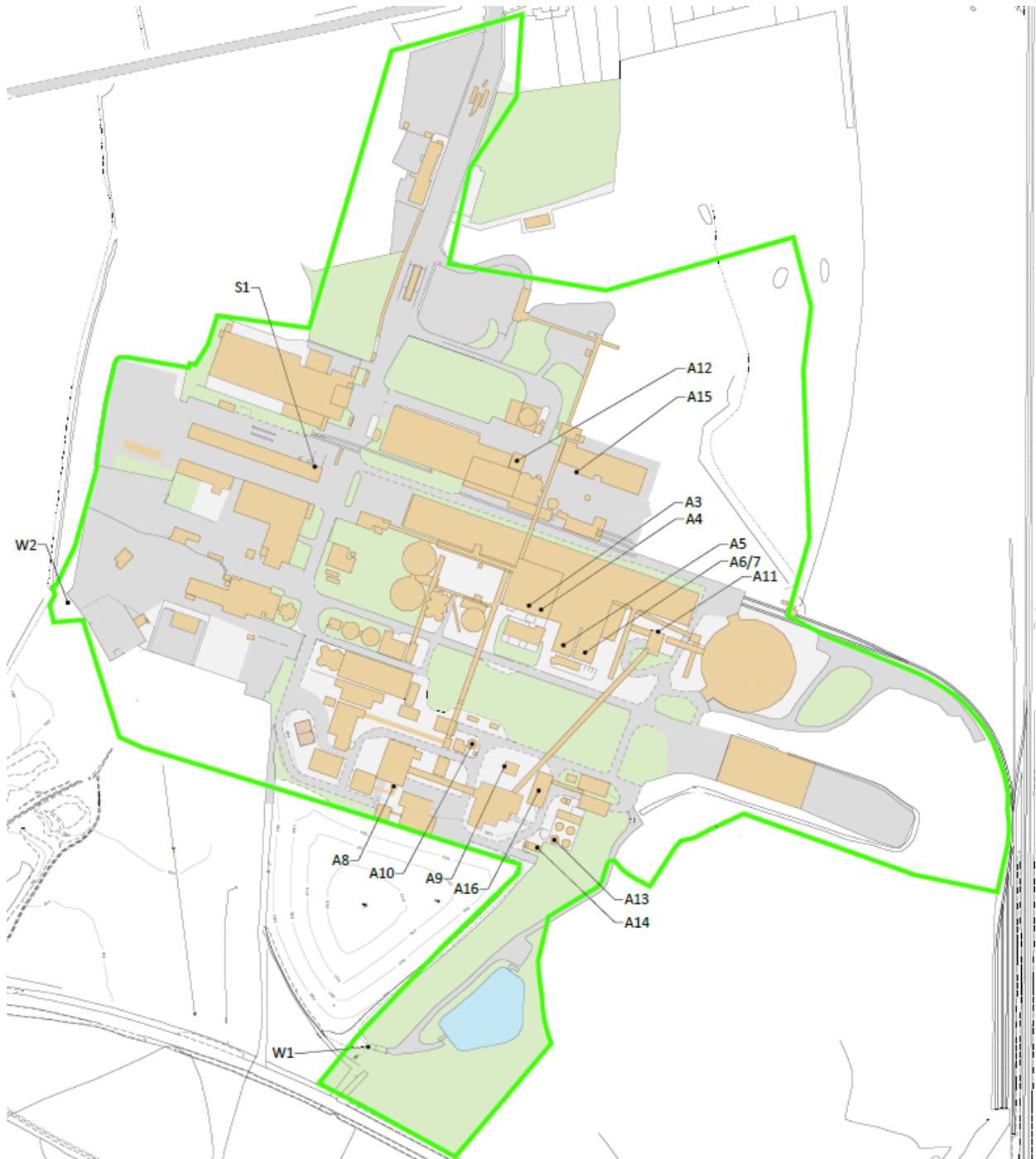
Table S3.2 Non-kiln point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A16 on site plan in schedule 7	Kiln 4 SRF Feed Bag Filter	Particulate matter	10 mg/Nm ³			The frequency of measurements or performance checks shall be based on a maintenance management system.
Vents including but not limited to those listed in document reference: Hanson Cement Padeswood Works Regulation 60 BAT Conclusions notice 2 Response.	Small sources of particulate matter <10,000 Nm ³ /hr) from dusty operations other than cooling and the main milling processes e.g. silo vents and conveyer lines.	Particulate matter	10 mg/Nm ³			The frequency of measurements or performance checks shall be based on a maintenance management system.

Note 1 The principles of EN 14181 shall be applied (subject to agreement with Natural Resources Wales). See NRW Guidance Note “Application of BS EN 14181 to CEMs on non-IED Installations” for further information.

Note 2 For A3 – A7, Temperature shall be corrected automatically to 273K using in situ thermocouples. Correction to standard reference pressure (101.3 kPa) shall be calculated using the rolling mean of the pressure recorded during the last 5 periodic (extractive) samples. Correction to dry gas shall be calculated using the rolling mean of the moisture content recorded during the last 5 periodic (extractive) samples.

The site plan in Schedule 7 will be amended to show the new non-kiln point source emission point (A16) as follows:



Schedule 3 – conditions to be added

None