

# Surrender notice with introductory note

Environmental Permitting (England & Wales) Regulations 2010

---

Padeswood Cement Works

Castle Cement Limited  
Padeswood Works  
Padeswood  
Mold  
Flintshire  
CH7 4HB

Surrender notice number  
EPR/BL1096IB/S007

Permit number  
EPR/BL1096IB

# **Padeswood Works Landfill Site Permit number EPR/BL1096IB**

## **Introductory note**

### ***This introductory note does not form a part of the permit***

The following notice is issued in accordance with regulation 25 and Part 1 of Schedule 5 of The Environmental Permitting (England and Wales) Regulations 2010 (S.I.2010 No. 675 ) (the Regulations) to surrender part of a permit issued under the Regulations to operate the regulated facilities.

The permit has been partially surrendered and subsequently varied to remove the operation of a Hazardous Waste Landfill from the permit. All conditions relating to the operation of the Hazardous Waste Landfill have been removed from the permit or varied to remove those parts of conditions relating to the Hazardous Waste Landfill.

As part of this partial surrender, the condition relating to the site plan has been varied to reflect that the site plan is now edged in green and the site plan has been amended to show the new site boundary.

Schedule 1 of this notice lists any deleted conditions, Schedule 2 lists any amended conditions, Schedule 3 lists any conditions that have been added and Schedule 4 shows any changes to the plan.

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

## Status Log of the permit

Detail	Date	Response Date
Application BL 1096	Received 29/08/01 Duly made 31/08/01	
First Schedule 4 Information Notice	Notice dated 17/12/01	Consolidated application incorporating response received 05/06/02
2 <sup>nd</sup> Sch 4 Notice	Notice dated 11/04/03	Response dated 06/06/03
3 <sup>rd</sup> Sch 4 Notice	Notice dated 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 BL1096	Determined 17/12/04	
Application for landfill variation	Received 15/04/05	
First Schedule 7 Information Notice	Notice dated 21/07/05	Response dated 23/09/05 Response dated 09/01/06
Second Schedule 7 Information Notice	Notice dated 02/06/06	Response dated 03/08/06 Response dated 14/08/06 Response dated 15/09/06
Variation Notice YP3438	Determined 08/11/07	Consolidated Permit
Application for MBM variation	Duly made 30/03/07	
Schedule 7 Information Notice	Notice dated 27/06/07	Response dated 19/07/07 (received 20/07/07)
Additional Information from Applicant	Received 20/12/07	
Request from Applicant to amend fuel specifications to the Standard Waste Derived Fuel Specifications for the Cement Sector	Received 21/12/07	
Additional Information from Applicant	Received 20/02/08	
Variation Notice KP3338UC	Determined 03/04/08	
Application for SRF variation	Received 03/07/07	
Schedule 7 Information Notice	Notice dated 31/07/07	Response dated 24/08/07 (received 28/08/07)
Additional Information from Applicant	Received 10/03/08	
Variation Notice AP3134UN	Determined 17/04/08	
Application for Landfill Variation	Duly made	

	27/05/08
Additional Information from Applicant	Received 21/08/08
Variation Notice EA/EPR/BL1096IB/V005	Determined 09/10/08
Partial Surrender Application EA/EPR/BL1096IB/S007	18/12/09
Application Determined EA/EPR/BL1096IB/S007	06/04/2010

End of Introductory Note

## Surrender

Environmental Permitting (England and Wales) Regulations 2010

# Surrender notice

**Permit number**

**EPR/BL1096IB**

**Surrender number**

**EPR/BL1096IB/S007**

**Operator**

Castle Cement Limited

**Registered office**

Hanson House  
14 Castle Hill  
Maidenhead  
Berkshire  
SL6 4JJ

**Company registration number/Limited Liability Partnership number** 2182762

**Regulated Facility**

Padeswood Works  
Padeswood  
Mold  
Flintshire  
CH7 4HB

The Environment Agency in exercise of its powers under Regulation 25 and Part 1 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations 2010 (SI 2010 No 675) accepts the partial surrender of this permit to the extent set out in schedules 1 to 4 of this notice. This notice shall take effect from 06/04/2010

Name	Date
<i>M A Bischer</i>	06/04/10

M. Bischer, Principal Permitting Team Leader

Authorised on behalf of the Environment Agency

## **Schedule 1 – conditions to be deleted**

The following conditions are deleted

### **1.8 Finance**

1.8.1 The financial provision for the landfill for meeting the obligations under this permit set out in agreement made between the operator and the Agency dated 08/011/2007 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Agency

1.8.2 The operator shall ensure that the changes it makes for the disposal of waste in the landfill cover the cost of operating the landfill, as far as possible the cost of the financial provision required by condition 1.8.1 and the estimated costs for the closure and aftercare of the landfill

2.4.1 (a) surface water specified in table S4.5

### **2.7 Landfill Engineering**

2.7.1 No construction of any new cell shall commence until the operator has submitted construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.

2.7.2 The construction of a new cell shall take place only in accordance with the approved construction proposals unless:

- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
- (b) a change has otherwise been agreed in writing by the Agency.

2.7.3 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Agency has confirmed that it is satisfied with the CQA Validation Report.

2.7.4 No construction of landfill infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.

2.7.5 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:

- (a) any change to the approved construction proposals would have not impact on the performance of any element of the design; or
- (b) a change has otherwise been agreed in writing by the Agency.

- 2.7.6 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill infrastructure.
- 2.7.7 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.7.4 and 2.7.5 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Agency as soon as practicable.
- 2.7.8 For the purposes of conditions 2.7.1, 2.7.3 and 2.7.4, the Agency shall be deemed to be satisfied where it has not, within the period of 4 weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
- (a) confirmed whether or not it is satisfied; or
  - (b) informed the operator that it requires further information.
- 2.8.4 Waste shall only be accepted for disposal by the landfill if:
- (a) they are listed in schedule 3, table S3.3; and
  - (b) they are hazardous waste, and
  - (c) they are not liquid waste (including waste waters but excluding sludge), and
  - (d) they are not waste which in the conditions of landfill is explosive, corrosive, oxidising, highly flammable or flammable, and
  - (e) they are not hospital and other clinical infectious wastes from medical or veterinary establishments, and
  - (f) they are not chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown, and
  - (g) all the relevant waste acceptance procedures set out in schedule 1 of the Landfill Regulations have been completed, and
  - (h) they fulfil the relevant waste acceptance criteria, and
  - (i) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
  - (j) they are wastes which have been treated, except for where treatment would not reduce its quantity or the hazards which it poses to human health or the environment.
- 2.8.5 The operator shall visually inspect:
- (a) without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill or at the point of dispatch; and

(b) waste at the point of deposit in the landfill;  
and shall satisfy itself that it conforms to the basic characterisation documentation submitted by the holder.

- 2.8.6 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.
- 2.8.7 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing ESID5.
- 2.8.8 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.

## **2.9 Leachate Levels**

- 2.9.1 The limits for the level of leachate listed in schedule 4 table S4.2 shall not be exceeded.
- 3.2.3 The concentration levels in groundwater for the perimeter(s) and monitoring point(s) set out in schedule 4 table S4.9 shall not be exceeded.
- 3.2.4 The operator shall submit to the Agency a review of the Hydrological Risk Assessment:
- (a) between 9 and 6 months prior to the fourth anniversary of the granting of variation YP3438 dated 08/11/2007, and
  - (b) between 9 and 6 months prior to every subsequent 4 years after the fourth anniversary of the granting of variation YP3438 dated 08/11/2007.
- 3.3.3 The limits for landfill gas set out in schedule 4, tables S4.10 and S4.11, shall not be exceeded.
- 3.6.1 (b) leachate specified in tables S4.2 and S4.12;  
(c) surface water specified in table S4.5;  
(g) groundwater specified in tables S4.9 and S4.13;  
(h) landfill gas specified in tables S4.10 and S4.11;
- 3.6.3 A topographical survey of the landfill referenced to ordinance datum shall be carried out:
- (a) annually, and
  - (b) prior to the disposal of waste in any new cell or new development area of the landfill, and

- (c) following closure of the landfill or part of the landfill.

#### 4.1.1

- (d)
  - (iv) sub-surface landfill gas monitoring;
  - (v) landfill leachate levels, quality and quantities;
  - (vi) waste types and quantities;
  - (vii) topographical surveys of the landfill; and
  - (viii) the specification and as built drawings of the basal, sidewall and capping engineering systems of the landfill

#### 4.2.1

- (f) the topographical surveys of the landfill required by condition 3.6.3 other than those submitted as part of a CQA validation report;
- (g) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
- (h) an assessment of the settlement behaviour of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between surveys;
- (i) a calculation of the remaining capacity of the landfill (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
- (j) the compliance testing for the landfill undertaken in the period;

#### 4.3.3

- (b) as soon as practicable prior to the cessation of the landfill disposal activities, for a period likely to exceed 1 month; and
- (c) at least 7 days prior to the resumption of the landfill disposal activities after a cessation notified under (b) above.

## Schedule 1: Table S1.5

Table S1.5 Annual waste inputs to the landfill	
Category	Limit Tonnes/ Year
Hazardous Waste	10,000
Inert Waste for engineering including cover	100

## Schedule 3: Table 3.3

Table S3.3 Permitted Waste Types and quantities for the landfill	
Maximum Quantity	10,000 tonnes per annum
EWC Code	Description
10 13 12*	Solid wastes from gas treatment containing dangerous substances (cement kiln dust)
01 01 02	Waste from mineral non-metalliferous excavation (for capping and restoration only)
01 04 08	Waste gravel and crushed rocks (not containing dangerous substances) (for capping and restoration only)
01 04 09	Waste sand and clays (for capping and restoration only)
17 05 04	Soil and stones (not containing dangerous substances) (for capping and restoration only)
20 02 02	Soil and stones (not containing dangerous substances) (for capping and restoration only)

## Schedule 4: Table S4.2

Table S4.2 Leachate level limits and monitoring requirements			
Monitoring point reference/Description	Limit	Monitoring frequency	Monitoring method
LM1, LM2, LM3, LM4 and LM5 identified on Plan ESID7A, revision A dated 10.08.05 and other monitoring points to be agreed in writing	0.5 m above cell base	Monthly	As per Variation Application, Volume 3, Appendix 2 and the Schedule 7 response of 23 September 2005, answers to questions A19, A20 and A81

## Schedule 4: Table 4.5

**Table S4.5 Surface water monitoring requirements**

Location or description or point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
--	-----------	-------------------------	-------------------------------------	----------------------

**Table S4.5 Surface water monitoring requirements**

<b>Location or description or point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	BOD	Quarterly	As per Variation Application, Volume 3, Appendix 3	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	COD	Quarterly	As per Variation Application, Volume 3, Appendix 3	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	Chloride	Quarterly	Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface water' (LFTGN02), unless otherwise agreed in writing with the Agency	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	Suspended solids	Quarterly	As per Variation Application, Volume 3 Appendix 3 and the Schedule 7 response of 23 September 2005, answer to question A23	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	pH	Quarterly	As per Variation Application, Volume 3, Appendix 3	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	Electrical conductivity	Quarterly	As per Variation Application, Volume 3, Appendix 3	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	Potassium	Quarterly	As per Variation Application, Volume 3, Appendix 3	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	Cadmium	Quarterly	As per Variation Application, Volume 3, Appendix 3	

**Table S4.5 Surface water monitoring requirements**

<b>Location or description or point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	Mercury	Quarterly	As per Variation Application, Volume 3, Appendix 3	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	Copper	Quarterly	As per Variation Application, Volume 3, Appendix 3	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	Lead	Quarterly	As per Variation Application, Volume 3, Appendix 3	
SW1, SW2, SW3 and SW4 as indicated on plan ESID 11r1	Selenium	Quarterly	As per Variation Application, Volume 3, Appendix 3	

## Schedule 4: Table 4.9

**Table S4.9 Groundwater concentration limits and monitoring requirements**

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
----------------------------	-----------	------------------------	------------------	----------------------	-------------------------------

**Table S4.9 Groundwater concentration limits and monitoring requirements**

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
GA01, GA02, GA03, GA05, GA06, and GA07 identified on drawing HRA1, revision A dated 10.08.05 and other monitoring points to be agreed in writing	Cadmium	0.0004 mg/l	Spot Sample	Quarterly	As per Variation Application, Volume 3, Appendix 1
GA01, GA02, GA03, GA05, GA06, and GA07 identified on drawing HRA1, revision A dated 10.08.05 and other monitoring points to be agreed in writing	Copper	2.0 mg/l	Spot Sample	Quarterly	As per Variation Application, Volume 3, Appendix 1
GA01, GA02, GA03, GA05, GA06, and GA07 identified on drawing HRA1, revision A dated 10.08.05 and other monitoring points to be agreed in writing	Lead	0.01 mg/l	Spot Sample	Quarterly	As per Variation Application, Volume 3, Appendix 1
GA01, GA02, GA03, GA05, GA06, and GA07 identified on drawing HRA1, revision A dated 10.08.05 and other monitoring points to be agreed in writing	Potassium	12.0 mg/l	Spot Sample	Quarterly	As per Variation Application, Volume 3, Appendix 1 and the Schedule 7 responses of 23 September 2005, answer to question A66, and 3 August 2006, answers to questions B21 and B23

**Table S4.9 Groundwater concentration limits and monitoring requirements**

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
GA01, GA02, GA03, GA05, GA06, and GA07 identified on drawing HRA1, revision A dated 10.08.05 and other monitoring points to be agreed in writing	Selenium	0.01 mg/l	Spot Sample	Quarterly	As per Variation Application, Volume 3, Appendix 1

## Schedule 4: Table S4.10

**Table S4.10 Landfill gas in external monitoring boreholes – limits and monitoring requirements**

Monitoring point Ref. /description	Parameter	Limit (including units)*	Monitoring frequency	Monitoring standard or method
GA01, GA02, GA03, GA05, GA06 and GA07 identified on drawing HRA1, revision A dated 10.08.05	Methane	To be agreed	Two monthly	As per Variation Application, Volume 3, Appendix 4 and the Schedule 7 response of 23 September 2005, answer to question A79
	Carbon Dioxide	To be agreed		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential Pressure	no limit		
	Temperature			
	Meteorological data			

## Schedule 4: Table S4.11

**Table S4.11 Landfill gas – other monitoring requirements**

Description point reference or source description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
In waste monitoring boreholes 1 to 5 as indicated on Plan ESID8	Methane	Two Monthly	As per Variation Application Volume 3, Appendix 4 and the Schedule 7 response of 23 September 2005, answer to question A79	Assessment and compliance limits to be agreed in writing
	Carbon Dioxide	Two Monthly		
	Oxygen	Two Monthly		
	Carbon Monoxide	Two Monthly		
	Atmospheric pressure	Two Monthly		
	Differential Pressure	Two Monthly		
	Temperature			
	Meteorological data			

## Schedule 4: Table S4.12

**Table S4.12 Leachate – other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
---	-----------	----------------------	-------------------------------	----------------------

**Table S4.12 Leachate – other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LM1, LM2, LM3, LM4 and LM5 identified on Plan ESID7A, revision A dated 10.08.05 and other monitoring points to be agreed in writing	PH (ph units), EC ( $\mu\text{S}/\text{CM}$ ), Alkalinity ( $\text{OH}^-$ ) + ( $\text{CO}_3^{2-}$ ), $\text{NH}_4\text{-N}$ , TOC, BOD, COD, Al, Ca, Cl, Fe, Mn, Mg, $\text{NO}_3^-$ , $\text{NO}_2^-$ , K, Na, $\text{SO}_4^{2-}$ , Cd, Hg, As, Cr, Cu, Pb, Ni, Se and Zn	Quarterly	As per Variation Application, Volume 3, Appendix 2 and the Schedule 7 response of 23 September 2005, answer to question A81	Reporting units mg/l unless otherwise specified
LM1, LM2, LM3, LM4 and LM5 identified on Plan ESID7A, revision A dated 10.08.05 and other monitoring points to be agreed in writing	List I and II substances	Annually	In accordance with appendix 6, LFTGN01 Hydrological risk assessment for landfills, Environment Agency, March 2003	Any substances detected in the annual List I and II screen shall be incorporated into the monitoring regime for surface water and groundwater at a frequency agreed in writing with the Agency.

**Schedule 4: Table S4.13****Table S4.13 Groundwater – other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
GA01, GA02, GA03, GA05, GA06 and GA07 identified on drawing HRA1, revision A dated 10.08.05 and other monitoring points to be agreed in writing	List I and II substances	Annually	In accordance with appendix 6, LFTGN01 Hydrological risk assessment for landfills, Environment Agency, March 2003	

## **Schedule 2 – conditions to be amended**

The following conditions are amended

### **2.2 The Site**

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 2 to this permit.

### **Schedule 1: Table S1.1**

**Table S1.1 Activities**

<b>Activity listed in Schedule 1 of the PPC Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
Section 3.1, Part A(1)(a), The production of cement clinker or the production and grinding of cement clinker	All raw materials storage, handling and preparation.	Receive raw materials from suppliers, including checking for suitability for use in line with the Integrated Management System ("IMS"). Preparation and storage of raw materials or process feedstock's, including crushing, blending, other processing and feeding materials to kiln 4
	All fuel handling, storage and preparation.	Coal, petcoke, gas oil, kerosene, Profuel®, Cemfuel® Tyres, MBM and SFR including receipt on site though storage, handling, crushing, blending, other processing and feeding materials to the kiln system. This includes the use of gas oil or kerosene as a start-up fuel.
	Cement kiln No 4 and associated cooler.	Operation of cement kiln systems including feed of all materials and fuels into the kiln system through to discharge of clinker from the cooler and discharges to air from the stacks.
	All cement clinker storage and associated milling	Clinker handling, storage and milling, including feed of clinker from clinker coolers or import facility, receipt of grinding aids and reducing agents, all storage, transport, milling and blending activities through to discharge from cement milling area to export facilities.
	All cement storage, blending packing and loading	Cement handling, storage, packing and dispatch, including all transport, bulk storage through to bulk discharge to road transport or bagging, storage and loading to road transport.,
<b>Directly Associated Activity</b>		
Water discharges to controlled waters.	Discharges of site drainage	From surface water management system to point of entry to controlled waters.
All waste storage and handling	Waste storage and handling	From the site generation of waste through to dispatch for recovery or disposal

**Schedule 1: Table S1.2**

**Table S1.2 Operating techniques**

<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
The Consolidated Response to the Sch-4 Notice Issued 17 December 2001	Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11	05/06/2002
The response to the Sch 4 Notice Issued 11 April 2003	The response given to questions 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 23, 25, 26, 27, 28, 29, & 39	06/06/2003
The additional information May 2004	Sections 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18	10/05/2004
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
The response to the Sch 7 notice issued 27 June 2007	The response to questions 1, 2 and 4	20/07/07
The additional information Feb 2008	Alternative fuel maximum tonnage per hour amendments	20/02/08
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
The response to the Sch 7 Notice issued 31 July 2007	The response to questions 1, 4, 5, 6, 7	28/08/07
The additional Information March 2008	SRF maximum tonnage per hour amendment	10/03/08

### Schedule 1: Table S1.3

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
S1.3.1	The operator shall carry out tests to verify the temperature, residence time and oxygen content of the combustion gas in the Kiln 4 and calciner under the most unfavourable normal operating conditions. The results shall be submitted in writing to the Agency.	6 months after re-commissioning of the substitute fuel feed to the calciner
S1.3.2	The Operator shall review the techniques for continuous measurements for heavy metals, dioxins/furans, and dioxin-like PCBs, including cost, availability, accuracy, detection limits and submit a written report to the Agency.	30/09/10 and every three years thereafter
S1.3.3	A noise survey shall be carried out to measure the impact of the installation at sensitive locations, following the guidance in Agency Guidance H3. A written report shall be submitted to the Agency. The report shall include a programme of work to address any measures highlighted from the monitoring.	30/03/08
S1.3.5	The operator shall carry out a study to identify those techniques which can be applied to reduce the emissions of particulate matter from the existing cement mills to 10 mg/m <sup>3</sup> . A report, including a timetable for implementation, if appropriate, shall be submitted to the Agency	31/12/07
S1.3.6	The Operator shall carry out a programme of monitoring of the exhaust gas from the calciner and in the pre-heater to establish the concentrations and proportions of VOCs, CO, and SO <sub>2</sub> measured at emission point A8, which results from the burning of substitute fuel.	6 months after re-commissioning of the substitute fuel feed to the calciner

### Schedule 1: Table S1.4

**Table S1.4 Pre-operational measures for future development**

Reference	Operation	Pre-operational Measures
S1.4.2	Use of MBM as an alternative fuel	The Operator shall ensure that the MBM HAZOP study is validated by a competent 3 <sup>rd</sup> party (ie independent of the Heidelberg organisation and to be agreed with the Environment Agency).
S1.4.3	Use of SRF as an alternative fuel on the calciner	The Operator shall ensure that all feed-system HAZOP recommendations have been implemented.
S1.4.4	Use of SRF & Profuel® as alternative fuels on the main kiln burner	The operator shall provide details of the transport system to eth main burner and monitoring programmes for agreement by the Environment Agency.

**Schedule 5: Table S5.1****Table S5.1 Reporting of monitoring data**

Parameter	Emission or monitoring point/reference	Reporting Period	Period begins
-----------	--	------------------	---------------

**Table S5.1 Reporting of monitoring data**

Parameter	Emission or monitoring point/reference	Reporting Period	Period begins
Emissions to air Particulates	A3, A4, A5, A6, A7 and A9	Every 12 months	01/01/08
Emissions to air Particulates, oxides of nitrogen as NO <sub>2</sub> , SO <sub>2</sub> , VOCs as TOC, carbon monoxide and hydrogen chloride	A8	Monthly	01/01/08
Emissions to air Hydrogen fluoride, cadmium and thallium and their compounds (total), mercury and its compounds, zinc and its compounds, Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total), dioxins / furans (I-TEQ) and (WHO-TEQ), dioxin like PCBs (WHO-TEQ), dioxins like PCBs (WHO-TEQ), PAHs, Benzene and 1,3 Butadiene	A8	Every 6 months	01/01/08
Process monitoring Parameters as required by condition 3.6.1	A8	Every 6 months	01/01/08
Waste sampling and analysis Parameters as required by condition 3.6.1	Kiln 4 cement kiln dust for disposal	Every 6 months	01/01/08
Emissions to water Parameters as required by condition 3.6.1	W1	Every 3 months	01/01/08
Ambient air monitoring Parameters as required by condition 3.6.1	Penyffordd and Penymynydd Bowling Club, Park Crescent, off Abbots Lane, Penyffordd, NGR SJ302 612	Every 3 months	01/01/08

**Schedule 5: Table S5.2****Table S5.2: Annual production/treatment**

Cement	Tonnes/year
--------	-------------

## Schedule 5: Table S5.4

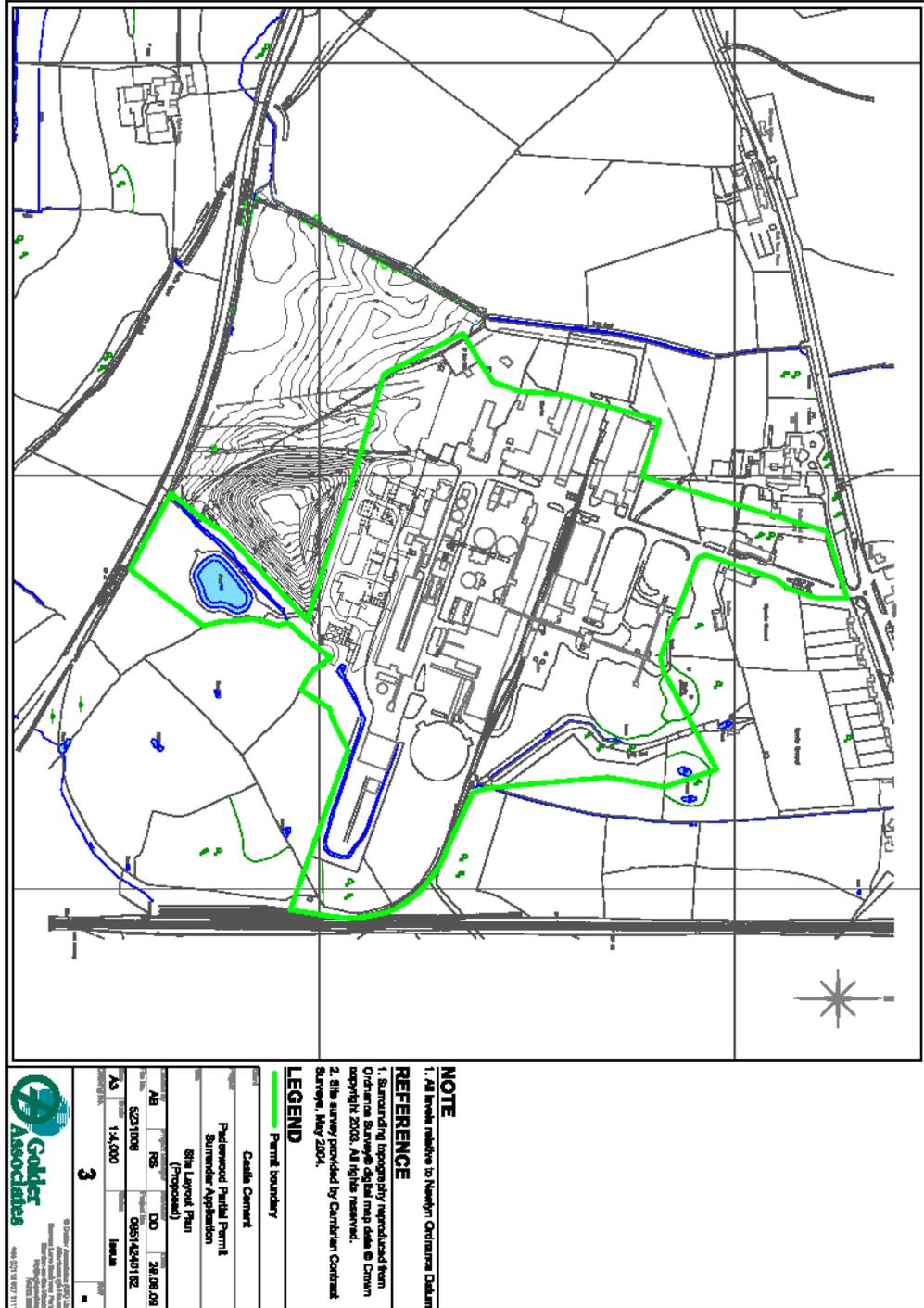
<b>Table S5.4 Reporting Forms</b>		
<b>Media</b>	<b>Reporting Format</b>	<b>Date of Form</b>
Air	Forms M/A5, M/A6 and M/A7 or other reporting format to be agreed in writing with the Agency	
Controlled water	Form M/W1 or other reporting format to be agreed in writing with the Agency	
Sewer	Form Sewer 1 or other reporting format to be agreed in writing with the Agency	
Waste Return	Waste Return Form WMS1	
Waste sampling and analysis	Form M/WA1 or other reporting format to be agreed in writing with the Agency	
Water usage	Form water usage 1 or other form as agreed in writing by the Agency	
Other performance indicators	Form performance 1 or other form as agreed in writing by the Agency	

## Schedule 3 – conditions to be added

None

## Schedule 4 – amended plan

Amended plan attached



**NOTE**  
1. All levels relative to Newlyn Ordnance Datum.

**REFERENCE**  
1. Surrounding topography reproduced from Ordnance Survey's digital map data © Crown copyright 2003. All rights reserved.  
2. Site survey provided by Cambrian Contract Survey, May 2004.

**LEGEND**  
— Permit boundary  
— Castle Cement

Client	Castle Cement
Project	Padeswood Partial Permit Surrender Application
Site	Site Layout Plan (Proposed)
Drawn by	RS
Checked by	DD
Date	28/09/09
Scale	AS 1:4,000
Sheet	1 of 1

**Golder Associates**  
 10000 170th Avenue, Suite 1000  
 Denver, Colorado 80231, USA  
 Tel: +1 303 751 6700  
 Fax: +1 303 751 6711