

# **Variation Notice with introductory note**

Pollution Prevention and Control (England & Wales) Regulations 2000

---

Whitehall Landfill

CEMEX UK Materials Limited  
Old Port Road  
Wenvoe  
Cardiff  
CF5 6AW

Variation Notice Number

LP3630MR

Permit number

MP3036SS

# Whitehall Landfill

## Permit Number LP3630MR

### Introductory note

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

The following notice is issued under regulation 17 of The Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I.2000 No. 1973 (as amended) (the Regulations) to vary the conditions of a permit issued under the Regulations to operate an installation. The notice comprises schedule 1 containing conditions to be deleted, schedule 2 conditions to be amended and schedule 3 conditions to be added.

The variation is Agency initiated and has been undertaken as part of a review of the Landfill Permit Template. The original technical decisions made during determination of the application have not been revisited.

The varied permit is now based on our standard Landfill PPC Permit template (version 4). We developed these conditions in consultation with the waste management industry having regard to the legal requirements of the PPC Regulations, the Landfill Regulations and other relevant legislation.

A non-technical description of the installation is given in the Application, but the main features of the installation are as follows

Whitehall Landfill (ST117 734) is located on the northern edge of the village of Wenvoe, near Barry, in the Vale of Glamorgan. The permit is for continued operation of an existing installation to dispose inert waste by landfilling. The Site is up to 30 metres deep and covers an area of 5.2Ha. The site has a capacity of approximately 1.1 million tonnes. The installation lies within a quarry void, which has been formed by excavating limestone. The surrounding land is predominately for grazing and arable farmland. The site is bounded by fields to the north, west and immediately south, and a wooded area to the east. At the southern eastern corner of the site there is a residential property. There are no European Sites within 5km and no SSSIs within 2km of the site. Further details are available in Part B and WHL IPPC Volume 1 of the application.

| Status Log of the permit                             |                |  |
|--|----------------|--|
| Detail   | Date           | Response Date  |
| MP3036SS   | 9 May 2005     | Considered Duly Made   |
| Correspondence from applicant regarding company name | 20 July 2005   | RMC Materials Limited<br>company name changed to<br>CEMEX UK Materials Limited |
| Response to request for information                  | 31 August 2005 | Response dated - 16<br>September 2005  |
| Permit determined                                    | 17 March 2006  |  |
| Variation notice LP3630MR issued                     | 22 June 2007   |  |

| Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation |                  |               |                               |
|---|------------------|---------------|-------------------------------|
| Holder  | Reference Number | Date of Issue | Fully or Partially Superseded |
| Waste Management Licence  | Wml30189         | 31/03/1996    | Fully superseded              |

End of Introductory Note

Variation Number LP3630MR

## Variation Notice

Pollution Prevention and Control (England and Wales) Regulations 2000  
Landfill (England and Wales) Regulations 2002

## Variation Notice

Permit number

**MP3036SS**

Variation number

**LP3630MR**

The Environment Agency (the Agency) in exercise of its powers under Regulation 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973) hereby varies the permit held by you

**CEMEX UK Materials Limited**

whose registered office is

**CEMEX UK Materials Limited**  
**Cemex House**  
**Coldharbour Lane**  
**Thorpe Egham**  
**Surrey**  
**TW20 8TD**


company registration number **4895833**

to operate an installation at

**Whitehall Landfill**  
**Old Port Road**  
**Wenvoe**  
**Cardiff**  
**Glamorgan**  
**CF5 6AW**

to the extent set out in schedules 1 to 3 of this variation notice .

**The notice shall take effect from 22 June 2007**

| Signed  | Date    |
|---|---------|
|  | 22.6.07 |

Gavin Bown

Authorised to sign on behalf of the Agency

Variation Number LP3630MR

**SCHEDULE 1 – CONDITIONS TO BE DELETED**

1. All conditions and schedules are deleted

**SCHEDULE 2 – CONDITIONS TO BE AMENDED**

2. None

**SCHEDULE 3 – CONDITIONS TO BE ADDED**

3. The following conditions and schedules are added to the permit

# Conditions

## 1. Management

### 1.1 General management

- 1.1.1 The Activities shall be managed and operated:
- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the operator as a result of complaints; and
  - (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the Activities.
- 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.

### 1.2 Accidents that may cause pollution

- 1.2.1 The operator shall:
- (a) maintain and implement an accident management plan;
  - (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
  - (c) make any appropriate changes to the plan identified by a review.

### 1.3 Finance

- 1.3.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Agency dated 17.03.2006 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.
- 1.3.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
  - (b) the costs of the financial provision required by condition 1.3.1; and
  - (c) the estimated costs for the closure and aftercare of the landfill.

### 1.4 Site security

- 1.5.1 Site security measures shall prevent unauthorised access to the site, as far as practicable.

## **2. Operations**

### **2.1 Permitted activities**

- 2.1.1 The operator is 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 2 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 Agency.

#### **2.4 Off-site conditions**

There are no conditions in this permit to which Regulation 12(12) of the PPC Regulations apply.

### **2.5 Improvement programme**

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

### **2.6 Pre-operational conditions**

There are no pre-operational conditions in this permit.

### **2.7 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 no impact on the performance of any element of the design; or
  - (b) a change has otherwise been agreed in writing by the Agency.
- 2.7.6 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 Waste acceptance**

- 2.8.1 Wastes shall only be accepted for disposal if:
- (a) they are listed in schedule 3, and
  - (b) they are inert waste, and
  - (c) from 30<sup>th</sup> October 2007 they are not liquid waste (including waste waters but excluding sludge), and
  - (d) all the relevant waste acceptance procedures set out in schedule 1 of the Landfill Regulations have been completed, and
  - (e) they fulfil the relevant waste acceptance criteria, and
  - (f) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
  - (g) from 30<sup>th</sup> October 2007 they are wastes which have been treated, except for wastes for which treatment is not technically feasible.
- 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; and

(b) waste at the point of deposit;

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 operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.8.8 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing ESID 5 dated 03/05/05.
- 2.8.9 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.4.
- 2.8.10 The operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of multiple collection vehicles, of the collector of such waste. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.

## **2.9 Closure, aftercare and decommissioning**

- 2.9.1 The operator shall maintain and operate the Activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.
- 2.9.2 The operator shall maintain a site closure plan, which demonstrates how the activities can be decommissioned to avoid any pollution risk and return the site of operation to a satisfactory state.
- 2.9.3 The operator shall carry out and record a review of the site closure plan at least every 4 years.
- 2.9.4 The site closure plan (or relevant part thereof) shall be implemented on final cessation or decommissioning of the activities or part thereof.

## **2.10 Site protection and monitoring programme**

- 2.10.1 The operator shall, within 2 months of the issue of this permit, submit a Site Protection and Monitoring Programme.
- 2.10.2 The operator shall implement and maintain the Site Protection and Monitoring Programme in relation to all areas which will not comprise permanent deposits of waste and shall carry out and record a review of it at least every 4 years commencing from the date the Site Protection and Monitoring Programme was received.

# **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.

## **3.2 Emissions to groundwater**

- 3.2.1 There shall be no emission from the activities into groundwater of any substance in List I (as defined by the Groundwater Regulations) contrary to those Regulations.
- 3.2.2 There shall be no emission from the activities into groundwater of any substance in List II (as defined in the Groundwater Regulations) so as to cause pollution (as defined in those Regulations).
- 3.2.3 The trigger levels for emissions into groundwater for the parameter(s) and monitoring point(s) set out in schedule 4 table S4.1 shall not be exceeded.
- 3.2.4 The operator shall submit to the Agency a review of the Hydrogeological Risk Assessment:
  - (a) between 9 and 6 months prior to the fourth anniversary of the granting of the permit, and
  - (b) between 9 and 6 months prior to every subsequent 4 years after the fourth anniversary of the granting of the permit.

## **3.3 Fugitive emissions of substances**

- 3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 Litter or mud arising from the activities shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures have been used to prevent or where that is not practicable to minimise, the litter and mud.
- 3.3.3 Litter or mud arising from the activities shall be cleared from affected areas outside the Site as soon as practicable.
- 3.3.4 All liquids, 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.
- 3.3.5 The limits for landfill gas set out in schedule 4, table S4.2 shall not be exceeded.

## **3.4 Odour**

- 3.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the Site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the odour.

## **3.5 Noise and vibration**

- 3.5.1 Emissions from the Activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the noise and vibration.

## **3.6 Monitoring**

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring for the parameters, specified in the following tables in schedule 4 to this permit:
- (a) Groundwater specified in tables S4.1 and S4.4
  - (b) Landfill gas specified in tables S4.2 and S4.3
- 3.6.2 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.
- 3.6.3 A topographical survey of the site referenced to Ordnance 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.
- The topographical survey shall be used to produce a plan of a scale adequate to show the surveyed features of the site.
- 3.6.4 Within 6 months of the issue of this permit (unless otherwise agreed in writing by the Agency) the site reference data identified in the Site Protection and Monitoring Programme shall be collected and submitted to the Agency.

## **3.7 Transfers off-site**

- 3.7.1 Records of all the wastes sent off site from the activities, for either disposal or recovery, shall be maintained.

# **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 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) the results of groundwater monitoring;
  - (ii) the Site Protection and Monitoring Programme;
  - (iii) sub-surface landfill gas monitoring;
  - (iv) waste types and quantities;
  - (v) topographical surveys;
  - (vi) the specification and as built drawings of the basal, sidewall and capping engineering systems leave
- 4.1.2. Any records required to be made by this permit shall be supplied to the Agency within 14 days where the records have been requested in writing by the Agency.
- 4.1.3. All records required to be held by this permit shall be available for inspection by the Agency at any reasonable time.

## 4.2 Reporting

- 4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the 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 this permit against the relevant assumptions, parameters and results in the risk assessments submitted with the Application;
  - (b) where the operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
  - (c) the annual production/treatment set out in schedule 5 table S5.2.
  - (d) details of any contamination or decontamination of the site which has occurred;
  - (e) the topographical surveys required by condition 3.6.3 other than those submitted as part of a CQA validation report;
  - (f) 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;
  - (g) an assessment of the settlement behavior 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 the surveys;
  - (h) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
  - (i) the compliance testing undertaken in the period;

- 4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the 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 5 table S5.1;
  - (b) for the reporting periods specified in schedule 5 table S5.1 and using the forms specified in schedule 5 table S5.3; and
  - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.3 A summary report of the waste types and quantities accepted and removed from the site shall be made for each quarter. It shall be submitted to the Agency within one month of the end of the quarter and shall be in the format required by the Agency.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 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 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency
- 4.2.5 The results of reviews and any changes made to the Site Protection and Monitoring Programme shall be reported to the Agency, within 1 month of the review or change.

## **4.3 Notifications**

- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
  - (b) the breach of a limit specified in the permit;
  - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.
- 4.3.3. Prior written notification shall be given to the Agency of the following events and in the specified timescales:
- (a) as soon as practicable prior to the permanent cessation of any of the permitted activities;
  - (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.
- 4.3.4 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan in respect of any activities other than the disposal of waste in the landfill

- 4.3.5 Where the 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 Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.6 The Agency shall be notified within 7 days of any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence.
- 4.3.7 The Agency shall be provided, within 14 days of the operator or any relevant person being convicted of a relevant offence, (unless such information has already been notified to the Agency), with details of the nature of the offence, the place and date of conviction, and the sentence imposed.
- 4.3.8 The Agency shall be notified within 14 days of the operator and/or any relevant person lodging an appeal against a conviction for any relevant offence and of the outcome when the appeal is decided.
- 4.3.9 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- (a) any change in the operator's trading name, registered name or registered office address;
  - (b) any change to particulars of the operator's ultimate holding company (including details of an ultimate holding company where an operator has become a subsidiary); and
  - (c) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

## **4.4 Interpretation**

- 4.4.1 In this permit the expressions listed in schedule 7 shall have the meaning given in that schedule.

# Schedule 1 - Operations

**Table S1.1 Activities**

| Activity listed in schedule 1 of the PPC Regulations        | Description of specified activity   | Limits of specified activity   |
|---|---|--|
| Section 5.2Part A(1) (b)The disposal of waste in a landfill | Landfill for <i>inert</i> waste (landfill classification under the Landfill Regulations 2002) | Receipt handling, storage and disposal of inert wastes, consisting of the types and quantities specified in condition 2.8.1, 2.8.8 and 2.8.9 as an integral part of landfilling. |
| <b>Directly Associated Activity</b>                         |   |  |
| Fuel Storage  | Storage of fuel for operation of plant and equipment  | fuel storage tank  |

**Table S1.2 Operating techniques**

| Description                              | Parts  | Date Received |
|--|--|---------------|
| Application                              | The response to questions, 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application Form    | 6 May         |
| Site Protection and Monitoring Programme | Site Protection and Monitoring Plan submitted in response to condition 2.8 of this permit. |               |

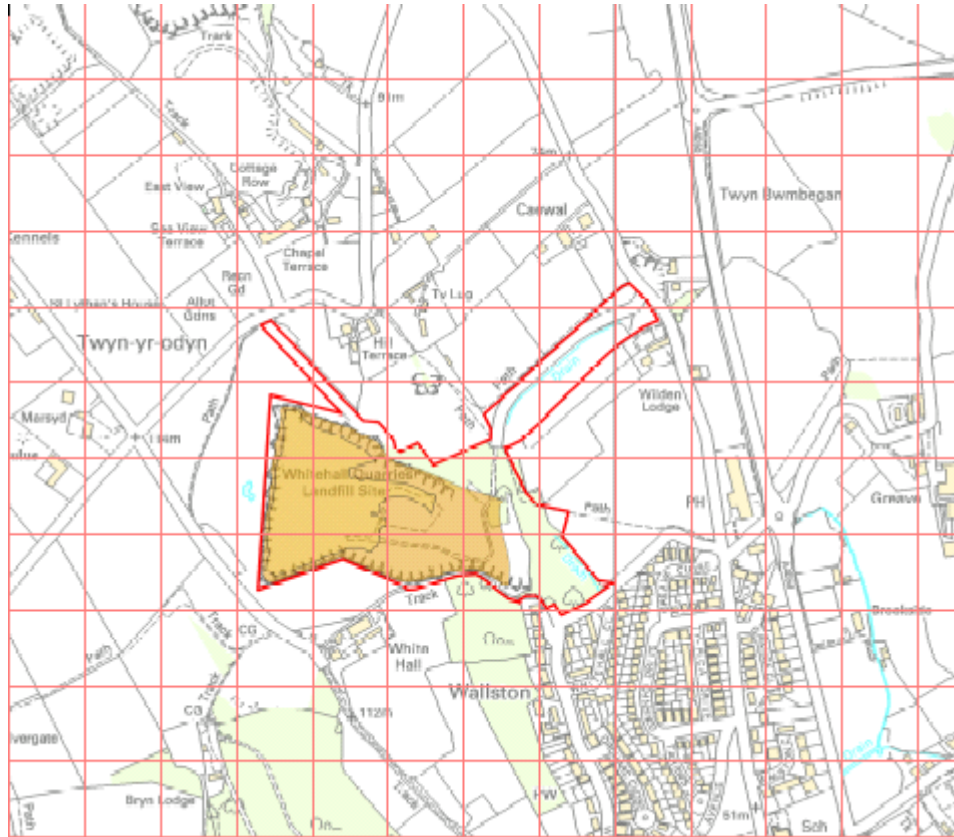
**Table S1.3 Improvement programme requirements**

| Reference | Requirement   | Date       |
|-----------|---|------------|
| 1         | The Operator shall derive control and trigger levels for groundwater for all substances listed in Table S4.1 where a trigger level has not been included. These shall be submitted to the Environment Agency in writing for approval. Once approved, Table S4.1 shall be read as if it contained the approved trigger levels.   | 31/07/2007 |
| 2         | The Operator shall review and where necessary revise the trigger levels set for groundwater for all substances listed in Table S4.1 and submit them in writing to the Environment Agency for approval. The methodology used to derive the revised trigger levels shall exclude statistical outliers where appropriate. It shall also include a review of the spatial variation in groundwater quality so that borehole-specific trigger levels can be determined. Once approved, Table S4.1 shall be read as if it contained the approved trigger levels and the monitoring frequency shall be reduced from monthly to quarterly. | 30/03/2008 |
| 3         | The operator shall install additional groundwater monitoring boreholes as detailed in the Report Ref WHL IPPC Volume 5, paragraph 3.1.2 dated 03/05/05 submitted as part of the application.  | 30/08/2007 |
| 4         | Once the boreholes required by improvement condition 3 have been installed, the Operator shall derive trigger levels for groundwater for all substances listed in Table S4.1 These shall be submitted to the Environment Agency in writing for approval. Once approved, Table S4.1 shall be read as if is contained the approved trigger levels.  | 30/10/2007 |
| 5         | The operator shall install in waste gas monitoring boreholes in accordance with Report Ref WHL IPPC Volume 1, Paragraph 2.4.3.  | 30/07/2007 |

**Table S1.4 Annual waste input limits**

| Category    | Limit Tonnes/ Year |
|-------------|--------------------|
| Inert Waste | 200,000            |

## Schedule 2 - Site plan



Drawing No. ESID 4 – Site Layout and Waste Deposition

Key

— Installation Boundary

## Schedule 3 – List of permitted wastes

| EWC Code | Description                                      |
|----------|--|
| 10 11 03 | Waste glass based fibrous materials              |
| 15 01 07 | Glass packaging                                  |
| 17 01 01 | Concrete   |
| 17 01 02 | Bricks   |
| 17 01 03 | Tiles and ceramics                               |
| 17 01 07 | Mixtures of concrete, bricks, tiles and ceramics |
| 17 02 02 | Glass  |
| 17 05 04 | Soil and stones                                  |
| 19 12 05 | Glass  |
| 20 01 02 | Glass  |
| 20 02 02 | Soil and stones                                  |

## Schedule 4 – Emissions and monitoring

**Table S4.1 Trigger levels for emissions into groundwater and monitoring requirements**

| Monitoring point reference | Parameter           | Limit (mg/l) | Reference Period | Monitoring frequency | Monitoring standard or method  |
|----------------------------|---------------------|--------------|------------------|----------------------|--|
| BH13                       | Ammoniacal-N (mg/l) | 4.0          | Spot Sample      | Monthly              | Unless otherwise agreed in writing with the agency monitoring methods used shall be in accordance with Agency guidance document 'guidance on monitoring of landfill leachate, groundwater and surface water (LFTGN02 |
|                            | Chloride (mg/l)     | 250          |                  |                      |  |
|                            | Potassium (mg/l)    | *            |                  |                      |  |
|                            | Iron (mg/l)         | *            |                  |                      |  |
|                            | Naphthalene (mg/l)  | *            |                  |                      |  |
| BH12                       | Ammoniacal-N (mg/l) | 4.0          |                  |                      |  |
|                            | Chloride (mg/l)     | 250          |                  |                      |  |
|                            | Potassium (mg/l)    | *            |                  |                      |  |
|                            | Iron (mg/l)         | *            |                  |                      |  |
|                            | Naphthalene (mg/l)  | *            |                  |                      |  |
| BH1                        | Ammoniacal-N (mg/l) | 4.8          |                  |                      |  |
|                            | Chloride (mg/l)     | 57           |                  |                      |  |
|                            | Potassium (mg/l)    | *            |                  |                      |  |
|                            | Iron (mg/l)         | *            |                  |                      |  |
|                            | Naphthalene (mg/l)  | *            |                  |                      |  |
| BH14                       | Ammoniacal-N (mg/l) | 4.0          |                  |                      |  |
|                            | Chloride (mg/l)     | 250          |                  |                      |  |
|                            | Potassium (mg/l)    | *            |                  |                      |  |
|                            | Iron (mg/l)         | *            |                  |                      |  |
|                            | Naphthalene (mg/l)  | *            |                  |                      |  |

Note: \* - to be confirmed in accordance with improvement condition Table S1.3 IC (1 and 2)

**Table S4.2 Landfill gas in external monitoring boreholes – limits and monitoring requirements**

| Monitoring point Ref. /description  | Parameter      | Limit (including units) | Monitoring frequency | Monitoring standard or method       |
|-------------------------------------|----------------|-------------------------|----------------------|-------------------------------------|
| GM2, GM4, GM5, GM7, GM8, GM10, GM11 | Methane        | 1 %v/v                  | Monthly              | Environment Agency Guidance LFGTN03 |
|                                     | Carbon Dioxide | 6 %v/v                  |                      |                                     |

\* - The limits specified take account of the agreed background concentrations as detailed in Annex A of the Landfill Gas Risk Assessment.

**Table S4.3 Landfill gas – other monitoring requirements**

| Emission point reference or source or description of point of measurement | Parameter                 | Monitoring frequency | Monitoring standard or method       | Other specifications |
|---|---------------------------|----------------------|-------------------------------------|----------------------|
| In waste monitoring boreholes GF1, GF2                                    | Methane (%v/v)            | Monthly              | Environment Agency Guidance LFGTN03 |                      |
|   | Carbon Dioxide (%v/v)     |                      |                                     |                      |
|   | Oxygen (%v/v)             |                      |                                     |                      |
|   | Atmospheric pressure (mb) |                      |                                     |                      |

**Table S4.4 Groundwater – other monitoring requirements**

| Emission point reference or source or description of point of measurement | Parameter   | Monitoring frequency | Monitoring standard or method  | Other specifications |
|---|---|----------------------|--|----------------------|
| BH 15, BH6, BH9, BH3A, BH3, BH13, BH12, BH1, BH14                         | Water level, pH, EC, NH <sub>4</sub> -N, Cl, SO <sub>4</sub> , Alk, TON, TOC, Na, K, Ca, Mg, Fe | Monthly              | Unless otherwise agreed in writing with the agency monitoring methods used shall be in accordance with Agency guidance document 'guidance on monitoring of landfill leachate, groundwater and surface water (LFTGN02 |                      |
|   | Mn, Cd, Cr, Cu, Ni, Pb, Zn, Naphthalene.  | Annually             |  |                      |

## Schedule 5 - Reporting

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

| Table S5.1 Reporting of monitoring data                                    |   |                     |               |
|--|---|---------------------|---------------|
| Parameter  | Emission or monitoring point/reference              | Reporting period    | Period begins |
| Groundwater<br>Parameters as required by condition 3.6.1                   | Monitoring points specified in Table S4.4 and S4.1. | Monthly             | 17.03.2006    |
| Other Landfill gas monitoring<br>Parameters as required by condition 3.6.1 | Monitoring points specified in Table S4.3 and S4.2  | e.g. Every 3 months | 17.03.2006    |

| Table S5.2: Annual production/treatment |   |
|---|---|
| none                                    | - |

| Table S5.3 Reporting forms |  |              |
|----------------------------|--|--------------|
| Media/parameter            | Reporting Format   | Date of Form |
| Groundwater                | Form groundwater 1 or other reporting format to be agreed in writing with the Agency |              |
| Landfill gas               | Form Gas 1 or other reporting format to be agreed in writing with the Agency         |              |
| Waste Return               | Waste Return Form RATS2E   |              |

## Schedule 6 - Notification

This page outlines 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 PPC Regulations.

### Part A

|                                |   |
|--------------------------------|---|
| Permit Number                  | LP3630MR  |
| Name of operator               | CEMEX UK Materials Limited  |
| Location of Installation       | Whitehall Landfill, Old Port Road, Wenvoe,<br>Cardiff, Glamorgan, CF5 6AW |
|                                |   |
| Time and date of the detection |   |

#### **(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution**

| <b>To be notified within 24 hours of detection</b>               |  |
|--|--|
| 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**

| <b>To be notified within 24 hours of detection unless otherwise specified below</b> |  |
|---|--|
| Emission point reference/ source  |  |
| Parameter(s)  |  |
| Limit   |  |
| Measured value and uncertainty  |  |
| Date and time of monitoring   |  |
| 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 |
| None   | -                   |

| (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 supplied 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 installation in the preceding 24 months.  |  |

|           |  |
|-----------|--|
| Name*     |  |
| Post      |  |
| Signature |  |
| Date      |  |

\* authorised to sign on behalf of Cemex UK Materials Limited

## Schedule 7 - Interpretation

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

*“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 4 to the PPC Regulations

*“Authorised Officer”* means any person authorised by the 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.
- For emissions of landfill gas, the ground or air outside the site and not attributable to the site

*“Construction Proposals”* means written information, at a level of detail appropriate to the complexity and pollution risk, on the design, specifications of materials selected, stability assessment (where relevant) and the construction quality assurance (CQA) programme in relation to the new cell or Landfill Infrastructure.

*“CQA Validation Report”* means the final “as built” construction and engineering details of the new cell or of the Landfill Infrastructure. It must provide a comprehensive record of the construction and must include, where relevant:

- The results of all testing required by the CQA programme - this must include the records of any failed tests with a written explanation, details of the remedial action taken, referenced to the appropriate secondary testing;
- Plans showing the location of all tests;
- “As-built” plans and sections of the works;
- Copies of the site engineer’s daily records;
- Records of any problems or non-compliances and the solution applied;
- Any other site specific information considered relevant to proving the integrity of the new cell or Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the construction proposals.

*“Fugitive emission”* means an emission to air, water or land from the Activities which is not controlled by an emission or background concentration limit.

*“Groundwater Regulations”* means the Groundwater Regulations SI 1998 No. 2746, and words and expressions used in this permit which are also used in the Regulations shall have the same meanings as in those Regulations.

*“Landfill Infrastructure”* means any specified element of the:

- permanent capping;
- temporary capping (i.e. engineered temporary caps not cover materials);
- leachate abstraction systems;
- leachate transfer, treatment and storage systems;
- surface water drainage systems;
- leachate monitoring wells;
- groundwater monitoring boreholes;
- landfill gas monitoring boreholes;
- landfill gas management systems;

within the Site.

*“Landfill Regulations”* means the Landfill (England and Wales) Regulations SI 2002 No. 1559, and words and expressions used in this permit which are also used in the Regulations shall have the same meanings as in those Regulations.

*“Land Protection Guidance”* means Agency guidance “H7 - Guidance on the protection of land under the PPC Regime: Application site report and site protection monitoring programme”.

*“Liquids”* means any liquid other than leachate within the engineered landfill containment system.

*“LFTGN 05”* means Environment Agency Guidance for monitoring enclosed landfill gas flares, September 2004.

*“LFTGN 08”* means Environment Agency Guidance for monitoring landfill gas engines, September 2004.

*“New Cell”* means any new cell, part of a cell or other similar new area of the Site where waste deposit is to commence after issue of this permit and can comprise:

- groundwater under-drainage system;
- permanent geophysical leak location system;
- leak detection layer;
- sub-grade;
- barriers;

- liners;
- leachate collection system;
- leachate abstraction system;
- separation bund/layer;
- cell or area surface water drainage system;
- side wall subgrade and containment systems;

for the new cell.

"No impact" means that the change made to the construction process will not alter the agreed design criteria, specification or performance.

"notify without delay" or "notified without delay" means that a telephone call can be used, whereas all other reports and notifications must be supplied in writing, either electronically or on paper.

"PPC Regulations" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

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

"Relevant person" and "relevant conviction" shall have the meanings given to them in the Environmental Protection Act 1990

"Review of the Hydrogeological Risk Assessment" means a written review of the hydrogeological risk assessment included in the Application, together with any other parts of the Application that addressed the requirements of the Groundwater Regulations. The review shall assess whether the activities of disposal or tipping for the purpose of disposal of waste authorised by the permit continue to meet the requirements of the Groundwater Regulations

"Site Protection and Monitoring Programme" means a document which meets the requirements for Site Protection and Monitoring Programmes described in the Land Protection Guidance.

"Technically competent management" and "technical competence" shall have the meanings given to them in the Environmental Protection Act 1990.

"Waste code" means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

"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.

END OF PERMIT