



**Datchet Quarry**

**Environmental Permit Application**

**Operating Techniques**

**May 2019**

Prepared on behalf of CEMEX Materials UK Limited





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## 1.0 Introduction

### 1.1 Report Context

1.1.1 This section of the Environmental Permit application corresponds to Section 3 of Part B4 of the Environmental Permit application forms and specifically details the operating and management procedures that will be in place at the site.

1.1.2 This Environmental Permit application has been prepared by WYG on behalf of the Operator, CEMEX UK Materials Limited (CEMEX).



## 2.0 Operating Procedures

### 2.1 Operating Hours

2.1.1 The hours of operation will be as follows:-

- Monday to Friday: 07:00 – 18:00; and
- Saturdays: 07:00 – 13:00.

2.1.2 No works will be undertaken on Sundays and Public Holidays.

### 2.2 Permitted Activities

2.2.1 The proposal entails the importation of inert waste for infilling of the quarry void that will be created following the mineral extraction activities. The works will be completed in accordance with the final ground contours and restoration scheme (Drawing Number P1/869/6) as approved under Planning Permission reference 13/01667.

2.2.2 It is considered that the proposed activities on the site will fall under the following R/D codes:-

**Table 1: Proposed Permitted R/D Codes**

R/D Code	Description of Activity
R5	Recycling/reclamation of other inorganic materials.
R13	Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where the waste is produced).

### 2.3 Waste Types

2.3.1 Waste is defined as 'Any substance or object the holder discards, intends to discard or is required to discard' under the Waste Framework Directive (European Directive 2006/12/EC), which repeals the European Directive 75/442/EC as amended.

2.3.2 Permitted wastes accepted at the site will be strictly inert as classified under the Landfill Directive (1999/31/EC) and Council Decision (2003/33/EC) of 19 December 2002 'establishing criteria and procedures for the acceptance of waste landfills'.

2.3.3 Inert waste is defined in Article 2 of the Landfill Directive 1999/31/EC as follows:-

*'Inert waste' means waste that does not undergo any significant physical, chemical or biological*



*transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm to human health. The total leachability and pollutant content and the ecotoxicity of its leachate are insignificant and, in particular, do not endanger the quality of any surface water and/or groundwater.*

2.3.4 Table 2 lists those wastes that may be accepted at the site which do not require Waste Acceptance Criteria (WAC) testing under Council Decision (2003/33/EC), provided that they are inert and from a single source only (mixed loads from more than one site cannot be accepted without testing).

**Table 2: Permitted Waste Types**

EWC Code	Description	Restriction
<b>01</b>	<b>Waste resulting from exploration, mining, quarrying and physical and chemical treatment of minerals</b>	
<b>01 01</b>	<b>Wastes from mineral excavation</b>	
01 01 02	Waste glass-based fibrous materials	Restricted to waste overburden and interburden only
<b>01 04</b>	<b>Wastes from physical and chemical processing of non-metalliferous minerals</b>	
01 04 08	Waste gravel and crushed rocks other than those mentioned in 04 04 06	
01 04 09	Waste sand and clay	
<b>10</b>	<b>WASTES FROM THERMAL PROCESSES</b>	
<b>10 12</b>	<b>Wastes from manufacture of ceramic goods, bricks, tiles and construction products</b>	
10 12 08	Waste ceramics, brick, tiles and construction products (after thermal processing)	
<b>10 13</b>	<b>Wastes from manufacture of cement, lime and plaster and articles and products made from them</b>	
10 13 014	Waste concrete	
<b>17</b>	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>	
<b>17 01</b>	<b>Concrete, bricks, tiles and ceramics</b>	
17 01 01	Concrete	Selected C&D waste only
17 01 02	Bricks	Selected C&D waste only
17 01 03	Tiles and ceramics	Selected C&D waste only
17 01 07	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	Selected C&D waste only. Metal from reinforced concrete must have been removed.
<b>17 05</b>	<b>Soil (including excavated soil from contaminated sites), stones and dredging spoil</b>	
17 05 04	Soil and stones other than those mentioned in 17 05 03	Excluding topsoil, peat; excluding soil and stones from contaminated sites
<b>19</b>	<b>WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER</b>	



	<b>INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE</b>	
<b>19 12</b>	<b>Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>	
19 12 09	Minerals only	Wastes from the treatment of waste aggregates that are otherwise naturally occurring minerals. Does not include fines from treatment of any non-hazardous waste or gypsum from recovered plasterboard.
19 12 12	Other wastes from mechanical treatment of wastes other than those mentioned in 19 12 12	Restricted to crushed bricks, tiles, concrete and ceramics only. Metal from reinforced concrete must be removed. Does not include fines from treatment of any non-hazardous waste or gypsum from recovered plasterboard.
<b>20</b>	<b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b>	
<b>20 02</b>	<b>Garden and park wastes (including cemetery waste)</b>	
20 02 02	Soil and stones	Only from garden and parks waste; excluding topsoil, peat.

2.3.5 Waste types for the construction of the Artificial Geological Barrier will be restricted to the following waste codes in Table 3:-

**Table 3: Permitted Waste Types Permitted in AEGB Only**

<b>EWC Code</b>	<b>Description</b>
<b>17</b>	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOILS FROM CONTAMINATED SITES)</b>
<b>17 05</b>	<b>Soil (including excavated soil from contaminated sites) soil and dredging spoil</b>
17 05 04	Soil and stones other than those mentioned in 17 05 03*
<b>20</b>	<b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES INCLUDING SEPARATELY COLLECTED FRACTIONS)</b>
<b>20 02</b>	<b>Garden and park wastes</b>
20 02 02	Soil and stones

\* This specifically excludes excavated soil from contaminated sites.

## 2.4 Waste Quantities

2.4.1 It is envisaged that approximately 1,120,850m<sup>3</sup> of inert material will be required in total to achieve the final restoration profiles. When using a bulk conversion factor of 2 tonnes/m<sup>3</sup> this equates to approximately 2,241,700 tonnes.

2.4.2 The site will accept up to 500,000 tonnes per annum of inert waste materials.

## 2.5 Waste Acceptance Procedures



### Pre-acceptance Procedures

2.5.1 Before the waste is delivered to the site, basic characterisation will be undertaken to ensure that the waste is suitable for acceptance at the facility. This will require the waste producer or holder to provide the following information of the waste to CEMEX:-

- Original source of the waste;
- The identity of the waste producer;
- All reasonably identifiable previous uses of the site and any site generating excavation or demolition waste;
- Information on the process producing the waste;
- Appearance of the waste, including colour and texture e.g. physical form;
- The quantity of the waste to be imported;
- The List of wastes (England) Regulations 2005 code;
- Details of any treatment used to remove unsuitable waste; and
- Results of waste tests.

2.5.2 The wastes listed in Table 2 may be accepted at the site without testing provided that there is confirmation that they are single stream loads from known reliable sources and that they are accompanied by the required information.

2.5.3 Loads that contain wastes from multiple waste streams may be accepted together, provided they are from the same source, comply with the waste types specified in the environmental permit and are accompanied by the required information.

2.5.4 Testing of materials to be used for the construction of the artificial geological barrier, discussed within section 4.1 of the Environmental Setting and Site design Document and restricted to those waste codes in Table 3, will be undertaken as per 2.5.1 above. In addition, Waste Acceptance Criteria testing for these materials will be undertaken as per Table 4 below. This testing will be against the limits for inert waste landfill waste acceptance criteria (WAC) with the exception of priority hazardous substances whereby a reduced concentration has been proposed. If the material is likely to come from a single source, one sample per 1,000m<sup>3</sup> of the waste will be taken and sent to a laboratory for analysis. The laboratory results will be





reviewed and only used as AEGB if all parameters are met. A record will be kept of all WAC testing that is undertaken.

**Table 4: Waste Acceptance Criteria Thresholds for Inert Wastes Acting as AEGB**

Determinand	Symbol	L/S = 10l/kg Mg/kg dry substance
Arsenic	As	0.5
Barium	Ba	20
Cadmium	Cd	0.04
Total Chromium	Cr total	0.5
Copper	Cu	2
Mercury	Hg	0.01
Molybdenum	Mo	0.5
Nickel	Ni	0.4
Lead	Pb	0.5
Antimony	Sb	0.06
Selenium	Se	0.1
Zinc	Zn	4
Chloride	Cl-	800
Fluoride	F-	10
Sulphate(a)	SO <sub>4</sub> <sup>2-</sup>	3,000
Phenol index	PI	1
Dissolved Organic Carbon(b)	DO	500
Total Dissolved Solids	TDS	12,000
(a) The limit value for sulphate may be increased to 6,000 mg/kg, provided that the value of CO (the first eluate of a percolation test at L/S = 0.1 l/kg) does not exceed 1,500 mg/l. It will be necessary to use a percolation test to determine the limit value at L/S = 0.1 l/kg under initial equilibrium conditions.		
(b) If the waste does not meet this value for Dissolved Organic Carbon (DOC) at its own pH value, it may alternatively be tested at L/S = 10 l/kg and a pH between 7.5 and 8.0. The waste may be considered as complying with the acceptance criteria for DOC, if the result of this determination does not exceed 500 mg/kg.		
(c) The value for Total Dissolved Solids can be used alternatively to the values for Sulphate and Chloride.		

2.5.5 If the information provided demonstrates that the waste is acceptable, arrangements will be made to deliver the waste to the site.

Waste Acceptance Procedures

2.5.6 All vehicles delivering waste to the site will be licensed waste carriers and each delivery must be accompanied by a Waste Transfer Note, consistent with fulfilling the company's responsibilities under the provisions of the Duty of Care.

On site verification



- 2.5.7 Each load of waste will be delivered to the site shall be, where possible, visually inspected before unloading. Each load will be inspected after unloading. These inspections will ensure that the wastes comply with the environmental permit and conform to the description provided in the Waste Transfer Note.
- 2.5.8 If there is uncertainty regarding the acceptance of wastes at the site, testing may be required. No wastes will be accepted on to the site if there is uncertainty as to its source, conformance with the conditions of the environmental permit and/or its suitability for the intended use.
- 2.5.9 Routine testing will be undertaken to confirm that the above procedures are adequate for controlling that nature of the incoming waste streams. It is proposed that waste Duty of Care testing will be undertaken on random vehicle deliveries of waste to the site at a frequency of approximately one sample per 200 deliveries.
- 2.5.10 Duty of Care testing will be undertaken in accordance with Council Directive (2003/33/EC), the requirements of which are detailed in Table 4 below.

**Table 5: Waste Acceptance Criteria Thresholds for Inert Wastes That Require Testing**

Determinand	Symbol	L/S = 10l/kg Mg/kg dry substance
Arsenic	As	0.5
Barium	Ba	20
Cadmium	Cd	0.04
Total Chromium	Cr total	0.5
Copper	Cu	2
Mercury	Hg	0.01
Molybdenum	Mo	0.5
Nickel	Ni	0.4
Lead	Pb	0.5
Antimony	Sb	0.06
Selenium	Se	0.1
Zinc	Zn	4
Chloride	Cl-	800
Fluoride	F-	10
Sulphate(a)	SO42-	3,000
Phenol index	PI	1
Dissolved Organic Carbon(b)	DO	500
Total Dissolved Solids	TDS	12,000
<p>(a) The limit value for sulphate may be increased to 6,000 mg/kg, provided that the value of CO (the first eluate of a percolation test at L/S = 0.1 l/kg) does not exceed 1,500 mg/l. It will be necessary to use a percolation test to determine the limit value at L/S = 0.1 l/kg under initial equilibrium conditions.</p> <p>(b) If the waste does not meet this value for Dissolved Organic Carbon (DOC) at its own pH value, it may alternatively be tested at L/S = 10 l/kg and a pH between 7.5 and 8.0. The waste may be considered as complying with the acceptance criteria for DOC, if the result of this determination does not exceed 500 mg/kg.</p>		



(c) The value for Total Dissolved Solids can be used alternatively to the values for Sulphate and Chloride.

2.5.11 In addition, the leaching limit values for organic parameters specified in Table 5 will be applied to wastes received at the site that require WAC testing.

**Table 6: Additional Waste Acceptance Criteria Thresholds (Organic Parameters)**

Parameter	Value mg/kg
Total Organic Carbon (TOC)(a)	30,000
BTEX compounds (benzene, toluene, ethyl benzene & xylenes)	6
Polychlorinated biphenyls (PCBs) (7 congeners)	1
Mineral oil (C10 to C40)	500
PAHs (polycyclic aromatic hydrocarbons)	100
(a) In the case of soils, a higher limit value may be permitted by SEPA, provided a Dissolved Organic Carbon value of 500 mg/kg is achieved at L/S 10 l/kg at the pH of the soil or at a pH value of between 7.5 and 8.0.	

2.5.12 CEMEX will not accept any waste onto the site unless the above information is established by the waste producer or holder.

2.5.13 All site staff will be made aware of the waste acceptance procedures and will be trained in the procedures with dealing with non-conformances. The Site Manager will be responsible for ensuring that the procedures are implemented appropriately.

## 2.6 Unauthorised and Rejected Wastes

2.6.1 In the event that a load is identified as unacceptable upon discharge of the load, the waste shall be reloaded into the container if possible and isolated.

2.6.2 In the event that any load is identified as unacceptable upon discharge of the load when the haulier has exited the site, the waste shall be isolated or quarantined on the site.

2.6.3 If necessary, the Environment Agency will be contacted to agree the most appropriate course of action.

2.6.4 If a load is rejected, the following information shall be recorded;

- Time and date of incident;
- Haulier and the vehicle registration number;
- Producer of the waste;
- Waste type; and

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- Reason for rejection.

2.6.5 Records will be kept of all rejected loads and these will be made available to the Environment Agency.



### 3.0 Site Infrastructure

#### 3.1 Site Access

3.1.1 The site will be accessed via a short access road, which will be constructed from Riding Court Road as approved under Planning Permission 13/01667.

#### 3.2 Waste Reception Area

3.2.1 All vehicles delivering loads to the site are required to report to the site office upon arrival and before departure from the site. Wastes will be delivered to the site via the access road.

#### 3.3 Weighbridge and Wheel Cleaner

3.3.1 A weighbridge will be provided on site and will be maintained in accordance with the manufacturer's specifications.

3.3.2 A wheel wash will be provided for vehicles exiting the site, together with a spray system for dust suppression. The wheel wash and spray system will be checked on a monthly basis and any necessary repair work will be undertaken as soon as practicable. In the event of a breakdown, additional road cleaning equipment will be provided.

#### 3.4 Site Security

3.4.1 The site is screened by trees and vegetation on its boundaries and a draining ditch which runs along Riding Court Road between the road and the site boundary. This will act as a barrier to casual access from the road.

3.4.2 The site is secured from public access by lockable gates at the site entrance.

3.4.3 The access road to the Riding Court Farm business complex is fenced, as are its boundaries. An electronic gate at the bottom of this access road prevents access to the site via the farm access.

3.4.4 All vehicles delivered to the site will be required to report to the site office. Upon request, drivers may be required to provide evidence to show that they are licensed waste carriers. All other visitors will be required to sign the Site Diary before proceeding onto the site and upon departure.



## 4.0 Emissions Control

### 4.1 Point Source Emissions to Air

4.1.1 There will be no point source emissions to air as a result of this application.

### 4.2 Point Source Emissions to Water

4.2.1 There will be no point source emissions to water as a result of this application.

### 4.3 Point Source Emissions to Groundwater

4.3.1 There will be no point source emissions to groundwater as a result of this application.

### 4.4 Point Source Emissions to Surface Water and Sewers

4.4.1 There will be no point source emissions to surface water or sewers as a result of this application.

### 4.5 Fugitive Emissions

4.5.1 Fugitive emissions have been identified as a potential environmental risk resulting from the proposal, as detailed in the Environmental Risk Assessment that accompanies this application.

#### Particulate Matter (Dust)

4.5.2 The Site Manager will monitor dust levels and all site operatives will be vigilant and report any problems to the Site Manager. The following operational procedures may be implemented to reduce the risk of dust:-

- Enforcement of a speed limit on site to prevent re-suspension and entrainment;
- Use of water sprays to dampen site roads and operational area as necessary;
- All HGVs will pass through the wheel wash when exiting the site;
- Utilisation of a road sweeper to maintain site roads as necessary; and
- Operations will be halted if necessary.

4.5.3 The Site Manager will be responsible for monitoring wind strength and direction and implementing any necessary preventive measures.



### **Contaminated Surface Water Runoff**

- 4.5.4 The potential fugitive emissions of contaminated surface water runoff resulting from the proposed activities must be considered. However, the proposed waste types are inert and therefore should not pose a risk to surface water.
- 4.5.5 There will be strict waste acceptance procedures in place at the site to prevent the acceptance of non-conforming waste types.

### **Mud**

- 4.5.6 HGV movements could result in the tracking of mud on to the access road and local highways.
- 4.5.7 The amount of mud on these roads will be monitored and in the event that mud is deposited, a road sweeper will be utilised as necessary.



## 5.0 Accident Management

5.0.1 All necessary measures will be taken to prevent the occurrence of accidents. The types of accidents and the potential environmental consequences associated with them have been identified in the Environmental Risk Assessment that accompanies this application.

5.0.2 It is considered that the most significant risk associated with the site is the unauthorised acceptance of non-compliant waste types. The waste acceptance procedures listed in Section 2 of this document aim to control and minimise this risk.

### 5.1 Fire Control

5.1.1 Fires from the acceptance of inert waste are considered unlikely due to the nature of the waste material. However, the operation and/or maintenance of mobile plant do pose a potential fire hazard, if precautions are not taken.

5.1.2 Fire fighting equipment of a suitable type shall be kept at appropriate locations as advised by the Health and Safety Manager or the local Fire Service. Where appropriate, mobile plant will be fitted with fire fighting equipment. All fire fighting equipment shall be kept in good condition, unobstructed and be serviced at least once a year by a competent person. The site will be designated as a “no smoking area” and signed accordingly.

5.1.3 Any fire on the site will be treated as an emergency and will be extinguished at the earliest opportunity. If necessary, the Fire Service will be summoned. Any incidents of fire will be reported to the Environment Agency and recorded in the Site Diary.

### 5.2 Spillage Procedure

5.2.1 Material accepted at the site will be inert. The most likely source for spillages will be from fuel tanks or spillages of fuel or oil associated with plant and machinery.

5.2.2 In the event of a spillage of fuel/oil from site machinery or vehicles, the following procedure will be implemented:-

- Clear the area straight away;
- Lay absorbent granules over the spill to soak up the spillage;
- Use Personal Protective Equipment (PPE) provided on site if required;
- Once the liquid has all been absorbed use a shovel to clear up the waste, put it in a plastic





sack and then place it in the container for non-compliant waste for disposal at a suitably permitted facility; and

- A record of the spill incident and remedial action taken will be recorded in the Site Diary.

5.2.3 Spillage kits will be maintained on site in order to respond to any spillage incident. The spillage kits will be kept securely in the site office.

### **5.3 Maintenance Procedures**

5.3.1 A planned preventative maintenance programme (PPM) will be put in place to minimise the risk to safety, health and the environment by ensuring that all appropriate items and elements within the site are serviced and inspected on a regular basis or to the manufacturers' maintenance schedules.

5.3.2 Details of faults, breakdowns and repairs are documented and records are maintained at the site office. Faults and breakdowns will be investigated and the service schedule revised if necessary.



### 6.0 Site Management

#### 6.1 Technical Competence

6.1.1 The Site Manager possesses the required level of technical competence (see Appendix A for the Certificate of Technical Competence).

#### 6.2 Management System

6.2.1 The operator, CEMEX, has an accredited Management System in place which is compliant with the requirements of ISO 14001. It is anticipated that an internal audit of this system will be undertaken within one year from the issue of the Environmental Permit and regularly thereafter. A copy of the company's ISO 14001 Certificate is provided as Appendix B.

6.2.2 All site operatives will be adequately trained in health, safety and environmental issues. Staff will only be permitted to undertake activities that they have been trained for. They will be made aware of the procedures they must follow in the event of an accident or incident and will be able to access any relevant documentation that they may require. All training, experience and qualifications of staff will be noted and these records will be maintained and kept up to date.



## 7.0 Management of Documentation and Records

### 7.1 Record Keeping

- 7.1.1 CEMEX have a Management System which is compliant with ISO 14001 and this includes procedures for the management of documentation.
- 7.1.2 A record will be kept that provides details on all wastes deposited at the site. This will include details on waste types, quantities and the date of deposition. This will be provided to the Environment Agency at three-monthly intervals, within one month of the end of each period. A record of basic waste characterisation and any compliance testing or on-site verification will be maintained in the site office.
- 7.1.3 A site diary will be kept in the site office, and this will be updated daily. The diary will be used to record any accidents, spillages, vandalism, complaints etc. This will provide an ongoing record throughout the period of operation at the site, and this will enable any investigative or corrective action that may be required.
- 7.1.4 The Environmental Permit and other documents containing information regarding the operation of the site will be kept in a convenient location, allowing access for any person that may be working at or visiting the site.



### 8.0 Incidents and Non-Conformance

8.0.1 CEMEX have procedures for investigating and recording any incidents and non-conformances at the site, and for taking any corrective action. CEMEX has a Management System which is compliant with ISO 14001 and this includes procedures for handling incidents and non-conformances.

8.0.2 The following types of incidents will require investigation:-

- Malfunction, breakdown or failure of plant and equipment;
- Deviation from site procedures and operating techniques;
- Near misses; and
- Complaints from external parties.

8.0.3 All staff will be trained to detect and report any such occurrences. Procedures will be taken to allow operations to resume and preventative measures may be put in place to ensure that the incident does not reoccur.



## Drawings

A097237/LOC/01 – Location Plan

P1/869/8A – Final Restoration Plan



## Appendices



## **Appendix A – Certificate of Technical Competence**



## Appendix B – ISO 14001 Certificate