

# Draft notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

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Lafarge Aggregates Limited

Walleys Quarry Landfill Site  
Cemetery Road  
Silverdale  
Newcastle-under-Lyme  
Staffordshire  
ST5 6DH

Variation application number  
EPR/BR9677IT/V007

Permit number  
EPR/BR9677IT

# Walleys Quarry Landfill Site

## Permit number EPR/BR9677IT

### Introductory note

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

This variation authorises the following changes to the site.

A new leachate treatment plant will be built at the installation to increase the capacity of leachate treatment to 100 tonnes per day. Following treatment in the leachate treatment plant, the leachate will be discharged to sewer in accordance with a Severn Trent Water trade effluent consent. The sewer directs the leachate to Strongford Sewage Treatment Works for further treatment. The emission point to sewer has been added to the permit through table S4.4.

A third landfill gas engine with a thermal input of 3MW will be installed at the landfill to increase the landfill gas combustion capacity. The aggregated thermal input for the 3 engines will be approximately 9MW (approximately 3MW aggregated electrical output).

Amendments to a number of groundwater compliance limits in table S4.5 (previously S4.4) following the completion of improvement condition 3.

The requirement to monitor Non Methane Volatile Organic Compounds (NMVOCs) from the fixed and mobile landfill gas flares has been removed from the permit in line with current Environment Agency guidance on the monitoring of flares LFTGN05.

The frequency for the requirement for hydrogeological risk assessments has been amended from 4 years to 6 years.

No additional land is being added to the installation to facilitate these changes.

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

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application received BR9677	07/05/02	EPR reference EPR/BR9677IT/A001
Additional information received	31/10/02	Response to Schedule 4 notice dated 31/07/02
	22/12/03	Response to Schedule 4 notice dated 28/10/03
	29/09/04	Response to Schedule 4 notice dated 05/08/04
Lafarge Aggregates Limited informed the Environment Agency of a registered office change	06/01/04	
Permit determined BR9677	09/06/05	EPR reference EPR/BR9677IT

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Agency initiated variation AP3534LZ	Initiated April 06	EPR reference EPR/BR9677IT/V002
Application for variation received ZP3134LX	13/04/06	EPR reference EPR/BR9677IT/V003 Application withdrawn. Agency-initiated application already in progress, incorporating requests made in this application.
Change of registered office address	02/01/07	
Variation determined AP3534LZ	31/01/07	EPR reference EPR/BR9677IT/V002
Application for variation EPR/BR9677IT/V004	Duly made 05/05/11	Application to include additional gas engine and increase leachate levels.
Variation determined EPR/BR9677IT/V004	04/11/11	Varied permit issued
Application for variation EPR/BR9677IT/V005 to change company registered office address	Duly made 10/09/13	
Variation issued EPR/BR9677IT/V005	18/11/13	Varied permit issued to Lafarge Aggregates Limited.
Agency variation determined EPR/BR9677IT/V006	10/01/14	Agency variation to implement the changes introduced by IED.
Variation application EPR/BR9677IT/V007	Duly made 28/01/14	Variation application for leachate treatment plant, additional gas engine and revision of groundwater trigger levels.
Variation application EPR/BR9677IT/V007 additional information	09/05/14	Details of leachate treatment plant biofilter.
Variation application EPR/BR9677IT/V007 additional information	19/05/14	Confirmation of stack height of 3 <sup>rd</sup> engine and Construction Quality Assurance proposal.
Draft variation and consolidation EPR/BR9677IT/V007 made available for consultation	04/06/14	
Variation determined EPR/BR9677IT/V007	XX/XX/XX	Variation and consolidated permit issued.

End of introductory note

## Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

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

**Permit number**

**EPR/BR9677IT**

**issued to**

**Lafarge Aggregates Limited** (“the operator”)

whose registered office is

**Portland House**

**Bickenhill Lane**

**Solihull**

**Birmingham**

**B37 7BQ**

company registration number **00297905**

to operate an installation at

**Walleys Quarry Landfill Site**

**Cemetery Road**

**Silverdale**

**Newcastle-under-Lyme**

**Staffordshire**

**ST5 6DH**

to the extent set out in the schedules.

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

Name	Date
<b>[name of authorised person]</b>	<b>[DD/MM/YYYY]</b>

Authorised on behalf of the Environment Agency

**Schedule 1**

All conditions have been varied by the consolidated permit as a result of an application by the operator.

**Schedule 2 – consolidated permit**

Consolidated permit issued as a separate document.

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# Permit

The Environmental Permitting (England and Wales) Regulations 2010

**Permit number**  
**EPR/BR3977IT**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BR3977IT/V007 authorising,

**Lafarge Aggregates Limited** (“the operator”),

whose registered office is

**Portland House**  
**Bickenhill Lane**  
**Solihull**  
**Birmingham**  
**B37 7BQ**

company registration number **00297905**

to operate an installation at

**Walleys Quarry Landfill Site**  
**Cemetery Road**  
**Silverdale**  
**Newcastle-under-Lyme**  
**Staffordshire**  
**ST5 6DH**

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

Name	Date
<b>[name of authorised person]</b>	<b>[DD/MM/YYYY]</b>

Authorised on behalf of the Environment Agency

# 1 Conditions

## 1. Management

### 1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
  - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this Permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

### 1.2 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 Environment Agency dated 9<sup>th</sup> June 2005 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 Environment 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 Energy efficiency

- 1.4.1 The Operator shall:
- (a) Review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the Activities; and
  - (b) Implement any appropriate measures identified by a review.

## **1.5 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 Improvement Programme**

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

2.4.2 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.

### **2.5 Pre-operational conditions**

2.5.1 The operations specified in Schedule 1 Table S1.4 shall not commence until the measures specified in that table have been completed.

### **2.6 Engineering**

2.6.1 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.

2.6.2 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.



- 2.6.3 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.
- 2.6.4 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.
- 2.6.5 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.
- 2.6.6 The Operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant Landfill Infrastructure.
- 2.6.7 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.6.4 and 2.6.5 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.
- 2.6.8 For the purposes of conditions 2.6.1, 2.6.3 and 2.6.4, 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.

## **2.7 Waste acceptance**

- 2.7.1 Wastes shall only be accepted for disposal if:
- (a) they are listed in Schedule 3, and
  - (b) they are non-hazardous waste or asbestos and construction materials containing asbestos or stable, non-reactive hazardous wastes, and
  - (c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm), and
  - (d) they are not shredded used tyres, and
  - (e) they are not liquid waste (including waste waters but excluding sludge) 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 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: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment.
  - (k) any code beginning with 07 05 and 16 03 shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture.

- 2.7.2 Stable non-reactive hazardous waste shall not be deposited in cells used or intended to be used for the disposal of biodegradable non-hazardous waste. Stable non-reactive hazardous waste and non-hazardous waste that is landfilled in the same cell must meet the relevant waste acceptance criteria.
- 2.7.3 Gypsum and other high sulphate bearing waste shall only be disposed of in cells where no biodegradable waste is accepted. Wastes disposed of in a cell with gypsum and other high sulphate bearing waste must meet the relevant waste acceptance criteria.
- 2.7.4 Asbestos waste and construction material containing asbestos shall only be disposed of in cells dedicated to those wastes. Asbestos waste and construction material containing asbestos must meet the relevant waste acceptance criteria and must be covered daily and before each compaction operation with appropriate material. No other waste shall be disposed of in the self-contained cell.
- 2.7.5 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.
- 2.7.6 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.
- 2.7.7 The Operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.7.8 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing LAF/WY/12-01/9957 (figure 6b in the working plan).
- 2.7.9 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in Schedule 1 Table S1.5.
- 2.7.10 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 municipal waste and 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.
- 2.7.11 The Operator shall maintain and implement a system to record the disposal location of any hazardous waste.

## **2.8 Leachate levels**

- 2.8.1 The limits for the level of leachate listed in Table S4.1 of Schedule 4 shall not be exceeded.

## **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.

## **3. Emissions and monitoring**

### **3.1 Emissions to water, air or land**

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in Tables S4.2, S4.3 and S4.4 of Schedule 4.
- 3.1.2 The limits given in that Schedule shall not be exceeded, save that compliance with an emission limit shall include incorporation of the uncertainty allowance stated in Agency guidance LFTGN 05 and LFTGN 08.
- 3.1.3 Where a substance is specified in schedule 4 table S4.3 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.

### **3.2 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 Table S4.5 of Schedule 4 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 6 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 S4.6 and S4.7 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 monitoring specified in the following tables in Schedule 4 to this Permit:

- (a) Leachate specified in Tables S4.1 and S4.9;
- (b) Point source emissions specified in Tables S4.2, S4.3 and S4.4;
- (c) Groundwater specified in Tables S4.5 and S4.11;
- (d) Landfill gas specified in Tables S4.6, S4.7, S4.8
- (e) Surface water specified in Table S4.10.

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.

### **3.7 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) sub-surface landfill gas monitoring;
  - (iii) leachate levels, quality and quantities;
  - (iv) landfill gas generation and collection;
  - (v) waste types and quantities;
  - (vi) topographical surveys;
  - (vii) the location of hazardous waste deposits; and
  - (viii) the specification and as built drawings of the basal, sidewall and capping engineering systems

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 held on site and 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 energy consumed at the Site, reported in the format set out in Schedule 5 Table S5.3
- (d) the annual production/treatment set out in Schedule 5 Table S5.2.
- (e) details of any contamination or decontamination of the Site which has occurred;
- (f) the topographical surveys 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 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;
  - (i) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
  - (j) 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 Table S5.1 of Schedule 5;
  - (b) for the reporting periods specified in Table S5.1 of Schedule 5 and using the forms specified in Table S5.4 of Schedule 5; 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.

## 4.3 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 implementing 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

<b>Table S1.1 activities</b>		
<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity and WFD Annex I and II operations</b>	<b>Limits of specified activity and waste types</b>
S5.2 A(1) (a)	The disposal of waste in a landfill.  Landfill for non hazardous waste and stable non-reactive hazardous waste (to incorporate asbestos and gypsum wastes).	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7.1, 2.7.2, 2.7.3, 2.7.4, 2.7.8 and 2.7.9 as an integral part of landfilling. Wastes as specified in schedule 3.
S5.4 A(1) (a) (i)	The disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving biological treatment.	Storage and treatment of leachate arising from the landfill in a biological treatment plant.
<b>Directly Associated Activity</b>		
Burning of waste as a fuel	Combustion of landfill gas for the purpose of electricity generation in three engines with an aggregated thermal input of approximately 9MW.	Landfill gas arising from the landfill.
Landfill gas management, flaring	Flaring of landfill gas.	Landfill gas arising from the landfill.
Water discharges to controlled waters	Discharges of site surface drainage from the landfill and of pumped groundwater from the groundwater drainage system.	From surface water and groundwater management system to point of entry to controlled waters.
Storage of fuel	Storage of fuel in bunded tanks.	Fuel for use in landfill operations on site only.
Leachate discharges to foul sewer	Discharge of leachate from the installation.	From leachate management system to point of entry to sewer.

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application LAF/WY/TD/113801	Document 2 of report LAF/WY/TD/1138/01 sections B2.1, B2.2, B2.3, B2.4, B2.5, B2.6, B2.7, B2.8, B2.10, B2.11 Document 3 of report LAF/WY/TD/1138/01 sections 2.1, 2.9, 2.10, 2.11, 2.12, 2.13,2.17, 2.18, 2.19, 2.20, 2.21, 2.22, 2.24, 2.25, 2.26, 2.27, 2.28, 2.29, 2.31, 2.38, 2.39, 2.40, 2.41, 2.42, 2.43, 2.44, 2.45, 2.47, 2.48, 2.49, 2.53, 2.54, 2.55, 2.56, 2.57, 2.58, 2.59, 2.60, 2.61,2.62, 3.1, 3.2, 4.1, 4.2, 4.3,4.10, 4.11, 4.12, 4.13, 4.14, 4.15, 4.16, 4.18, 4.19, 4.20, 4.21, 4.22, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 5.13 (except for reference to figure 14), 5.14, 5.15 5.16, 5.17, 5.18, 5.19, 5.20, 5.21, 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, and figures 5, 8, 9, 10, 11, 12, 13 and 14 document 4: Appendices I and K, documents 5 and 6	12/04/02
Response to schedule 4 notice	Response to questions 3, 4, 5, 8, 9, 10, 13,14, 15,16, 17, 18,19, 20, 21, 22, 23, 24, 29, 37, 41, 42, 55, 58, 59,	31/10/2002
Response to schedule 4 notice	Response to questions 2, 3, 4, 7, 16, 17,18, 19, 20, 21, 22	22/12/2003



**Table S1.2 Operating techniques**

<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Response to schedule 4 notice	Response to questions 1,2, 4, 6, 7, 8, 9, 11, 12. 13, 14(ii)	29/09/2004
Letter reference LAF/WY/TD/1138/01 dated 13th January 2004	Tables 1, 2 , 3, 4, 5	14/01/2005
Letter reference LAF/WY/PW/3099/01 dated 3rd March 2005	The entire letter and the attached plan reference LAF/WY/11-01/9878revB	04/03/2005
Letter reference LAF/WY/TD/1138/01 dated 2nd March 2005	The entire letter	03/03/2005
Noise report R05.2867/20/GN	The report	08/04/2005
Dust Monitoring Plan 3rd November 2006	The entire plan	03/11/2006
Waste Emplacement Procedure 3rd October 2006	The entire procedure	06/10/2006
Letter reference LAF.WY/PW/3099/01 dated 2 June 2005	The entire letter	06/06/2005
Application EPR/BR9677IT/V004	'Activities and Operating Techniques Report' (Document Ref. 1184.02.LAF.AS.SR.A) in response to section 3a – Technical standards, Part C3 of the application form.	29/03/2011
	'Amenity and Accident Risk Assessment' (Document Ref. 1184.04.LAL.AS.SR) of the Application in response to section 6 – Environmental Risk Assessment, Part C2 of the application form.	
Application EPR/BR9677IT/V007	Parts C2 and C3 of the application and referenced supporting documentation.	23/12/2013
Application EPR/BR9677IT/V007 additional information	Details of leachate treatment plant biofilter.	09/05/2014
Application EPR/BR9677IT/V007 additional information	Confirmation of third engine stack height and Construction Quality Assurance proposal	19/05/2014

**Table S1.3 Improvement programme requirements**

<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
1	<p>Submit a written report to the Environment Agency for approval.</p> <p>The report must contain:</p> <p>(a) a review of the leachate management plan including plans to bring about a staged reduction in leachate heads to below 83m AOD in Cell 1 and Cell 2 over a consecutive 12 month period and a commitment to subsequently maintain leachate heads below this level in these cells</p> <p>(b) confirmation that the revised leachate management plan will be implemented immediately following Environment Agency written approval</p> <p>(c) confirmation that written monthly reports, on the progress made in reducing leachate heads during the previous month, will be submitted to the Environment Agency.</p> <p>The notification requirements of condition 2.4.2 will be deemed to have been complied with on approval of the report by the Environment Agency.</p>	Complete
2	<p>Submit a written report to the Environment Agency for approval.</p> <p>The report must contain a revised landfill gas management plan that takes into account the increase in the leachate level limit in Cells 1 and 2.</p> <p>As a minimum the report must contain:</p> <p>(a) Details on how changes to the gas management system are managed to ensure that there is no loss of control of landfill gas and how gas migration, hydrogen sulphide generation and odour will be prevented.</p> <p>(b) Confirmation that the landfill gas perimeter monitoring regime can detect potential increases in lateral migration of landfill gas caused by fluctuating leachate head levels.</p> <p>(c) Details on how any changes envisaged for the gas management system will influence the rate and production of landfill gas specifically reduction (or increase) in overall collection and treatment efficiency.</p> <p>(d) A review of the impact on the landfill gas management system of capping the landfill and a commitment to place temporary capping on Cells 1 and 2 within 6 months of the issue of this variation notice.</p> <p>The notification requirements of condition 2.4.2 will be deemed to have been complied with on submission of the report.</p>	Complete

**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
3	<p>Submit a written report, as part of the report required under Condition 4.2.1, to the Environment Agency for approval.</p> <p>The report must contain:</p> <ul style="list-style-type: none"> <li>(a) a review of groundwater compliance limits</li> <li>(b) a review of the hydrogeological flow regime and specification of which monitoring boreholes are effectively upgradient and which are downgradient</li> <li>(c) limits for the abstracted groundwater at the point of discharge</li> <li>(d) presentation of all groundwater monitoring results for each monitoring point as time series graphs</li> <li>(e) presentation of all leachate monitoring results for each monitoring point as time series graphs</li> <li>(f) justification for the basis for establishing compliance limits.</li> </ul> <p>The notification requirements of condition 2.4.2 will be deemed to have been complied with on approval of the report by the Environment Agency.</p>	Complete
4	<p>Submit a written report to the Environment Agency for approval.</p> <p>The report must contain:</p> <ul style="list-style-type: none"> <li>(a) a review of the leachate management plan including plans to bring about a staged reduction in leachate heads to below 83m AOD in Cell 1 and Cell 2 over a consecutive 12 month period and a commitment to subsequently maintain leachate heads below this level in these cells</li> <li>(b) confirmation that the revised leachate management plan will be implemented immediately following Environment Agency written approval</li> <li>(c) confirmation that written monthly reports, on the progress made in reducing leachate heads during the previous month, will be submitted to the Environment Agency.</li> </ul> <p>The notification requirements of condition 2.4.2 will be deemed to have been complied with on approval of the report by the Environment Agency.</p>	Within 6 months of commencement of the operation of leachate treatment plant
5	<p>Submit a written report to the Environment Agency for approval.</p> <p>The report must contain a revised landfill gas management plan. As a minimum the report must contain:</p> <ul style="list-style-type: none"> <li>(a) Consideration of the impacts that the third gas engine and leachate treatment plant will have on gas management.</li> </ul> <p>The notification requirements of condition 2.4.2 will be deemed to have been complied with on submission of the report.</p>	Within 6 months of commencement of the operation of both the third engine and leachate treatment plant

**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
6	<p>The Operator shall:</p> <p>(a) Submit to the Environment Agency for approval written proposals for carrying out a noise survey to assess the impact of the Installation when both the leachate treatment plant and third gas engine fully operational. The proposals shall contain details of the methods to be used for the assessment of noise at sensitive receptors and a proposed timeframe within which the survey will be undertaken;</p> <p>(b) Carry out the noise survey in accordance with the Environment Agency's written approval;</p> <p>(c) Submit a written report of the findings of the noise survey to the Environment Agency for approval; and</p> <p>(d) Submit to the Environment Agency for approval a written report which assesses whether any improvements or modifications are required to noise mitigation measures. Where such measures are required, the Operator shall provide a programme for their implementation including timescales.</p>	<p>(a) Within 6 months of commencement of the operation of both the additional engine and leachate treatment plant</p> <p>(b) In accordance with the Environment Agency's approval</p> <p>(c) One month following noise survey</p> <p>(d) 2 months after completion of noise survey</p>
7	<p>The Operator shall carry out an assessment study to quantify the operational performance of the biofilter against the design criteria outlined in the application. The study shall also propose a monitoring and maintenance programme that will demonstrate how acceptable levels of performance will be maintained. The Operator shall submit the findings of the assessment and the detail of the monitoring programme to the Environment Agency in writing for approval.</p>	<p>Within 6 months of commencement of operation of leachate treatment plant</p>

**Table S1.4 Pre-operational Measures for Future Development**

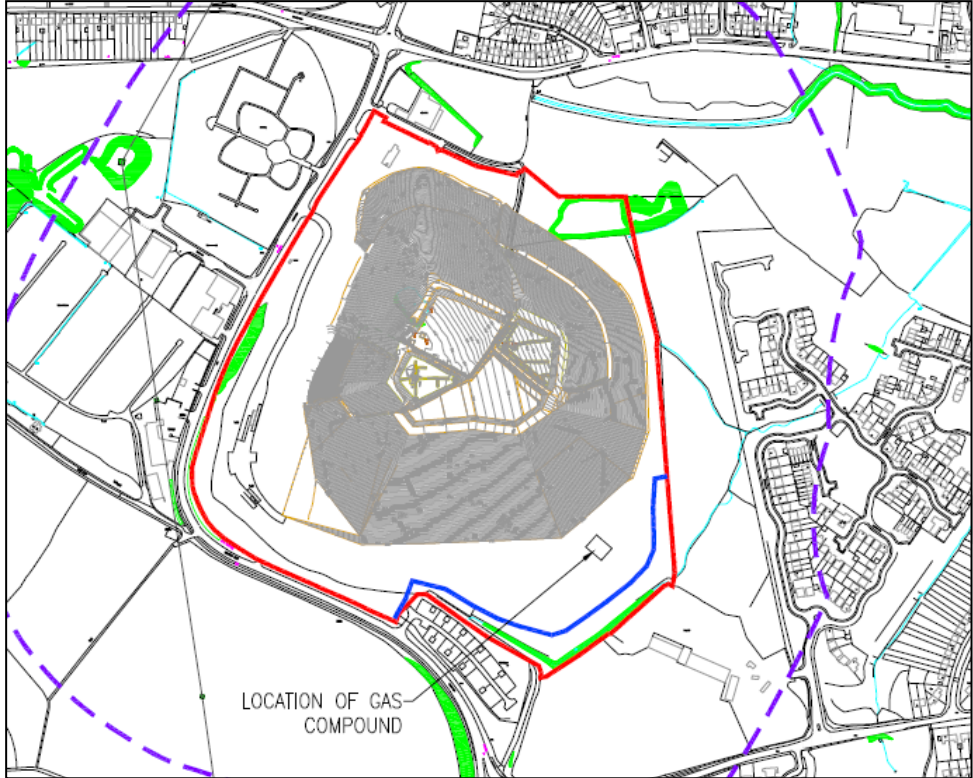
Reference	Operation	Pre-operational Measures
-	-	-

**Table S1.5 Annual Waste Input Limits**

Category	Limit Tonnes/ Year
<b>Total quantity of waste received at the site</b>	250,000
<b>Non-hazardous Waste</b>	250,000
<b>Inert Waste</b>	250,000
<b>Stable, non-reactive hazardous waste</b>	250,000

# Schedule 2 - Site plan

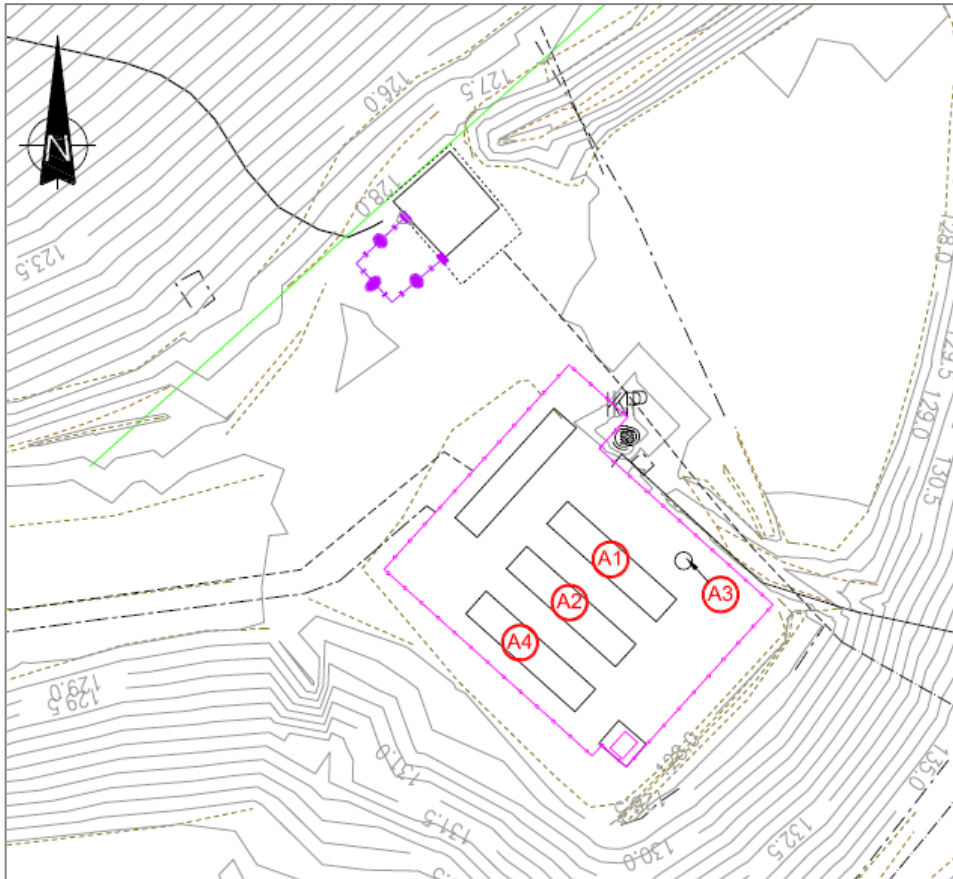
Installation boundary plan



Leachate treatment plant location plan



Gas management compound layout plan



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## Schedule 3 - List of permitted wastes

Waste code	Description
<b>01</b>	<b>Wastes resulting from exploration, mining, quarrying and physical and chemical treatment of minerals</b>
<i>0101</i>	<i>wastes from mineral excavation</i>
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
<i>0103</i>	<i>wastes from physical and chemical processing of metalliferous minerals</i>
01 03 06	tailings other than those mentioned in 010304 and 010305
01 03 08	dusty and powdery wastes other than those mentioned in 010307
01 03 09	red mud from alumina production other than the wastes mentioned in 010307
<i>0104</i>	<i>wastes from physical and chemical processing of non-metalliferous minerals</i>
01 04 08	waste gravel and crushed rocks other than those mentioned in 010407
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 010407
01 04 11	wastes from potash and rock salt processing other than those mentioned in 010407
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 010407 and 010411
01 04 13	waste from stone cutting and sawing other than those mentioned in 010407
<i>0105</i>	<i>drilling muds and other drilling wastes</i>
01 05 04	freshwater drilling muds and wastes
01 05 07	barite containing drilling muds and wastes other than those mentioned in 010505 and 010506
01 05 08	chloride containing drilling muds and wastes other than those mentioned in 010505 and 010506
<b>02</b>	<b>wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing</b>
<i>0201</i>	<i>wastes from agriculture horticulture, aquaculture, forestry, hunting and fishing</i>
02 01 01	sludges from washing and cleaning
02 01 02	animal-tissue waste
02 01 03	plant tissue waste
02 01 04	waste plastics (except packaging)
02 01 06	animal faeces, urine and manure (including spoiled straw), effluent collected separately and treated off site
02 01 07	wastes from forestry
02 01 09	agrochemical waste other than those mentioned in 020108
02 01 10	waste metal
<i>0202</i>	<i>wastes from the preparation and processing of meat, fish and other foods of animal origin</i>
02 02 01	sludges from washing and cleaning
02 02 02	animal -tissue waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
<i>0203</i>	<i>wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing, conserve production, yeast and yeast extract production, molasses preparation and fermentation</i>
02 03 01	sludges from washing , cleaning, peeling, centrifuging and separation
02 03 02	wastes from preserving agents
02 03 03	wastes from solvent extraction
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges form on-site effluent treatment
<i>0204</i>	<i>wastes from sugar processing</i>
02 04 01	soil from cleaning and washing beat
02 04 02	off-specification calcium carbonate
02 04 03	sludges from on-site effluent treatment
<i>0205</i>	<i>wastes from the dairy products industry</i>
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on site effluent treatment
<i>0206</i>	<i>wastes from the baking and confectionery industry</i>
02 06 01	materials unsuitable for consumption and processing
02 06 02	wastes from preserving agents
02 06 03	sludges from on site effluent treatment
<i>0207</i>	<i>wastes from the production of alcoholic and non-alcoholic beverages (except tea, coffee and</i>

	<i>cocoa</i>
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 03	wastes from chemical treatment
02 07 04	materials unsuitable for consumption or processing
02 07 05	sludges from on site effluent treatment
<b>03</b>	<b>Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard</b>
<i>0301</i>	<i>wastes from wood processing and the production of panels and furniture</i>
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 030104
<i>0303</i>	<i>wastes from pulp, paper and cardboard production and processing</i>
03 03 01	waste bark and wood
03 03 02	green liquor sludge (from recovery of cooking liquor)
03 03 05	deinking sludges from paper recycling
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and card destined for recycling
03 03 09	lime mud waste
03 03 10	fibre rejects, fibre, filler and coating sludges from mechanical separation
03 03 11	sludges from on-site effluent treatment
<b>04</b>	<b>wastes from the leather fur and textile industries</b>
<i>04 01</i>	<i>wastes from the leather and fur industry</i>
04 01 01	fleshings and lime split wastes
04 01 02	liming waste
04 01 06	sludges, in particular from on site effluent treatment, containing chromium
04 01 07	sludges, in particular from on site effluent treatment, free of chromium
04 01 08	waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
04 01 09	wastes from dressing and finishing
<i>0402</i>	<i>wastes from the textile industry</i>
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10	organic matter from natural products (for example grease, wax)
04 02 15	wastes from finishing other than those mentioned in 040214
04 02 17	dye-stuffs and pigments other than those mentioned in 040216
04 02 20	sludges from on site effluent treatment other than those mentioned in 040219
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
<b>05</b>	<b>wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal</b>
<i>0501</i>	<i>wastes from petroleum refining</i>
05 01 10	sludges from on site effluent treatment other than those mentioned in 050109
05 01 13	boiler feedwater sludges
05 01 14	wastes from cooling columns
05 01 16	sulphur-containing wastes from petroleum desulphurisation
05 01 17	bitumen
<i>0506</i>	<i>wastes from the pyrolytic treatment of coal</i>
05 06 04	wastes from cooling columns
<i>05 07</i>	<i>wastes from natural gas purification and transportation</i>
05 07 02	wastes containing sulphur
<b>06</b>	<b>Wastes from inorganic chemical processes</b>
<i>0603</i>	<i>wastes from the MFSU of salts and their solutions and metallic oxides</i>
06 03 14	solid salts and solutions other than those mentioned in 060311 and 060313
06 03 16	metallic oxides other than those mentioned in 060315
<i>0605</i>	<i>sludges from on site effluent treatment</i>
06 05 03	sludges from on site effluent treatment other than those mentioned in 060502
<i>0606</i>	<i>wastes from the MFSU of sulphur chemicals, sulphur chemicals processes and desulphurisation processes</i>
06 06 03	wastes containing sulphides other than those mentioned in 060602
<i>0609</i>	<i>wastes from the MFSU of phosphorous chemicals and phosphorous chemical processes</i>
06 09 02	phosphorous slag
06 09 04	calcium-based reaction wastes other than those mentioned in 060903
<i>0611</i>	<i>wastes from the manufacture of inorganic pigments and opacifiers</i>
06 11 01	calcium-based reaction waste from titanium dioxide production
<i>0613</i>	<i>wastes from inorganic processes not otherwise specified</i>



06 13 03	carbon black
<b>07</b>	<b>Wastes from organic chemical processes</b>
<i>0701</i>	<i>Wastes from the manufacture supply and use (MFSU) of basic organic chemicals</i>
07 01 12	sludges from on site effluent treatment other than those mentioned in 070111
<i>07 02</i>	<i>wastes from the MFSU of plastics, synthetic rubber and man-made fibres</i>
07 02 12	sludges from on site effluent treatment other than those mentioned in 070211
07 02 13	waste plastic
07 02 15	wastes from additives other than those mentioned in 07 02 14
07 02 17	wastes containing silicones other than those mentioned in 07 02 16
0703	wastes from the MFSU of organic dyes and pigments (except 06 11)
07 03 12	sludges from on site effluent treatment other than those mentioned in 07 02 11
<i>0704</i>	<i>wastes from the MFSU of organic plant protection products (except 020108 and 020109), wood preserving agents (except 03 02) and other biocides</i>
07 04 12	sludges from on-site effluent treatment other than those mentioned in 070411
<i>0705</i>	<i>wastes from the MFSU of pharmaceuticals excluding waste medicinal products and pharmaceutically active waste materials arising from their manufacture</i>
07 05 12	sludges from on site effluent treatment other than those mentioned in 070511
07 05 14	solid wastes other than those mentioned in 070513
<i>0706</i>	<i>wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics</i>
07 06 12	sludges from on-site effluent treatment other than those mentioned in 070611
<i>0707</i>	<i>wastes from the MFSU of fine chemicals and chemical products not otherwise specified</i>
07 07 12	sludges from on-site effluent treatment other than those mentioned in 070711
<b>08</b>	<b>Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks</b>
<i>0801</i>	<i>wastes from the MFSU and removal of paint and varnish</i>
08 01 12	waste paint and varnish other than those mentioned in 08 01 11
08 01 14	sludges from paint or varnish other than those mentioned in 08 01 13
08 01 16	aqueous sludges containing paint or varnish other than those mentioned in 08 01 15
08 01 18	wastes from paint or varnish removal other than those mentioned in 08 01 17
<i>08 02</i>	<i>wastes from MFSU of other coatings (including ceramic materials)</i>
08 02 01	waste coating powders
08 02 02	aqueous sludges containing ceramic materials
<i>08 03</i>	<i>wastes from MFSU of printing inks</i>
08 03 07	aqueous sludges containing ink
08 03 13	waste inks other than those mentioned in 08 03 12
08 03 15	ink sludges other than those mentioned in 08 03 14
08 03 18	waste printing toner other than those mentioned in 08 03 17
<i>08 04</i>	<i>wastes from the MFSU of adhesives and sealants (including waterproofing products)</i>
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09
08 04 12	adhesive and sealant sludges other than those mentioned in 08 04 11
08 04 14	aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13
<b>09</b>	<b>Wastes from the photographic industry</b>
<i>09 01</i>	<i>wastes from the photographic industry</i>
09 01 07	photographic film and paper containing silver or silver compounds
09 01 08	photographic film and paper free of silver or silver compounds
09 01 10	single-use cameras without batteries
09 01 12	single-use cameras containing batteries other than those mentioned in 09 01 11
<b>10</b>	<b>Wastes from the thermal processes</b>
<i>10 01</i>	<i>wastes from power stations and other combustion plants (except 19)</i>
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	coal fly ash
10 01 03	fly ash from peat and untreated wood
10 01 05	calcium-based reaction wastes from flue-gas desulphurisation in solid form
10 01 07	calcium-based reaction wastes from flue-gas desulphurisation in sludge form
10 01 15	bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14
10 01 17	fly ash from co-incineration other than those mentioned in 10 01 16
10 01 19	wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18
10 01 21	sludges from on site effluent treatment other than those mentioned in 10 01 20
10 01.23	aqueous sludges from boiler cleansing other than those mentioned in 10 01.22
10 0124	sands from fluidised beds
10 01 25	wastes from fuel storage and preparation of coal-fired power plants
10 01 26	wastes from cooling water treatment
<i>10 02</i>	<i>wastes from the iron and steel industry</i>
10 02 01	wastes from the processing of slag

10 02 02	unprocessed slag
10 02 08	solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 10	mill scales
10 02 12	wastes from cooling water treatment other than those mentioned in 10 02 11
10 02 14	sludges and filter cakes from gas treatment other than those mentioned in 10 02.13
10 02 15	other sludges and filter cakes
<i>10 03</i>	<i>wastes from aluminium thermal metallurgy</i>
10 03 02	anode scraps
10 03 05	waste alumina
10 03 16	skimmings other than those mentioned in 10 03 15
<i>10 03</i>	<i>wastes from aluminium thermal metallurgy</i>
10 03 02	anode scraps
10 03 05	waste alumina
10 03 16	skimmings other than those mentioned in 10 03 15
10 03 18	carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17
10 03 20	flue -gas dust other than those mentioned in 10 03 19
10 03 22	other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21
10 03 24	solid wastes from gas treatment other than those mentioned in 10 03 23
10 03 26	sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 28	wastes from cooling-water treatment other than those mentioned in 10 03 27
10 03 30	wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29
<i>10 04</i>	<i>wastes from lead thermal metallurgy</i>
10 04 10	wastes from cooling-water treatment other than those mentioned in 10 04 09
<i>10 05</i>	<i>wastes from zinc thermal metallurgy</i>
10 05 01	slags from primary and secondary production
10 05 04	other particulates and dust
10 05 09	wastes from cooling-water treatment other than those mentioned in 10 05 08
10 05 11	dross and skimmings other than those mentioned in 10 05 10
<i>10 06</i>	<i>wastes from copper thermal metallurgy</i>
10 06 01	slags from primary and secondary production
10 06 02	dross and skimmings from primary and secondary production
10 06 04	other particulates and dust
10 06 10	wastes from cooling water treatment other than those mentioned in 10 06 09
<i>10 07</i>	<i>wastes from silver, gold and platinum thermal metallurgy</i>
10 07 01	slags from primary and secondary production
10 07 02	dross and skimmings from primary and secondary production
10 07 03	solid wastes from gas treatment
10 07 04	other particulates and dust
10 07 05	sludges and filter cakes from gas treatment
10 07 08	wastes from cooling-water treatment other than those mentioned in 10 07 07
<i>10 08</i>	<i>wastes from other non-ferrous thermal metallurgy</i>
10 08 04	particulates and dust
10 08 09	other slags
10 08 11	dross and skimmings other than those mentioned in 10 08 10
10 08 13	carbon-containing wastes from anode manufacture other than those mentioned in 10 08.12
10 08 14	anode scrap
10 08 16	glue-gas dust other than those mentioned in 10 08 15
10 08 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17
10 08 20	wastes from cooling-water treatment other than those mentioned in 10 08 19
<i>10 09</i>	<i>wastes from casting of ferrous pieces</i>
10 09 03	furnace slag
10 09 06	casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05
10 09 08	casting cores and moulds which have undergone pouring other than those mentioned in 10 09 07
10 09 10	flue-gas dust other than those mentioned in 10 09 09
10 09 12	other particulates other than those mentioned in 10 09 11
10 09 14	waste binders other than those mentioned in 10 09 13
10 09 16	waste crack-indicating agent other than those mentioned in 10 09 15
<i>10 10</i>	<i>wastes from casting of non-ferrous pieces</i>
10 10 03	furnace slag
10 10 06	casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05

10 10 08	casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07
10 10 10	flue gas dust other than those mentioned in 10 10 09
10 10 12	other particulates other than those mentioned in 10 10 11
10 10 14	waste binders other than those mentioned in 10 10.13
10 10 16	waste crack-indicating agent other than those mentioned in 10 10 15
<b>10 11</b>	<b>wastes from manufacture of glass and glass products</b>
10 11 03	waste glass-based fibrous materials
10 11 05	particulates and dust
10 11 10	waste preparation mixture before thermal processing, other than those mentioned in 10.11
10 11 12	waste glass other than those mentioned in 10 11 11
10 11 14	glass-polishing and -grinding sludge other than those mentioned in 10 11 13
10 11 16	solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 11 20	solid wastes from on site effluent treatment other than those mentioned in 10 11 19
<b>10.12</b>	<b>wastes from manufacture of ceramic goods, bricks, tiles and construction products</b>
10 12 01	waste preparation mixture before thermal processing
10 12 03	particulates and dust
10 12 05	sludges and filter cakes from gas treatment
10 12 06	discarded moulds
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 10	solid wastes from gas treatment other than those mentioned in 10.12 09
10 12 12	wastes from glazing other than those mentioned in 10.12.11
10 12 13	sludge form on site effluent treatment
<b>10 13</b>	<b>wastes from manufacture of cement, lime and plaster and articles and products made from</b>
10 13 01	waste preparation mixture before thermal processing
10 13 04	wastes from calcination and hydration of lime
10 13 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 07	sludges and filter cakes from gas treatment
10 13 09*	wastes from asbestos-cement manufacture containing asbestos
10 13 10	wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 11	wastes from cement-based composite materials other than those mentioned in 1013 09 and 10 13 10
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 14	waste concrete and concrete sludge
<b>11</b>	<b>WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO METALLURGY</b>
<b>11 01</b>	<b>wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)</b>
11 01 10	sludges and filter cakes other than those mentioned in 11 01 09
11 01 14	degreasing wastes other than those mentioned in 11 01 13
<b>11 02</b>	<b>wastes from non-ferrous hydrometallurgical processes</b>
11 02 03	wastes from the production of anodes for aqueous electrolytical processes
11 02 06	wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
<b>11 05</b>	<b>wastes from hot galvanising processes</b>
11 05 01	hard zinc
11 05 02	zinc ash
<b>12</b>	<b>WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS</b>
<b>12 01</b>	<b>wastes from shaping and physical and mechanical surface treatment of metals and plastics</b>
12 01 01	ferrous metal filings and turnings
12 01 02	ferrous metal dust and particles
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles
12 01 05	plastics shavings and turnings
12 01 13	welding wastes
12 10 15	machining sludges other than those mentioned in 12 01 14
12 01 17	waste blasting material other than those mentioned in 12 01 16
12 01 21	spent grinding bodies and grinding materials other than those mentioned in 12 01 20
<b>15</b>	<b>WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED</b>

15 01	<i>packaging (including separately collected municipal packaging waste)</i>
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
15 02	<i>absorbents, filter materials, wiping cloths and protective clothing</i>
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
<b>16</b>	<b>WASTES NOT OTHERWISE SPECIFIED IN THE LIST</b>
16 01	<i>end-of-life vehicles from different means of transport [including off-road machinery] and wastes from</i>
16 01 03	end-of-life tyres (from bicycles or with an outside diameter greater than 1400mm)
16 01 06	end-of-life vehicles containing neither liquids nor other hazardous components
16 01 11*	brake pads containing asbestos
16 01 12	brake pads other than those mentioned in 16 01 11
16 01 16	tanks for liquified gas
16 01 17	ferrous metal
16 01 18	non ferrous metal
16 01 19	plastic
16 01 20	glass
16 01 22	components not otherwise specified
16 02	<i>wastes from electrical and electronic equipment</i>
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02.13
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15
16 03	<i>off-specification batches and unused products excluding waste medicinal products and pharmaceutically active waste materials arising from their manufacture</i>
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 03 06	organic wastes other than those mentioned in 16 03 05
16 05	<i>gases in pressure containers and discarded chemicals</i>
16 05 05	gases in pressure containers other than those mentioned in 16 05 04
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
16 06	<i>batteries and accumulators</i>
16 06 04	alkaline batteries (except 16 06 03)
16 06 05	other batteries and accumulators
16 08	<i>spent catalysts</i>
06 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
16 08 03	spent catalysts containing transition metals or transition metal compounds not otherwise specified
16 11	<i>waste linings and refractories</i>
16 11 02	carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
16 11 06	linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05
<b>17</b>	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>
17 01	<i>concrete, bricks, tiles and ceramics</i>
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	<i>wood, glass and plastic</i>
17 02 01	wood
17 02 02	glass
17 02 03	plastic

17 03	<i>bituminous mixtures, coal tar and tarred products</i>
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 04	<i>metals (including their alloys)</i>
17 04 01	copper, bronze, brass
17 04 02	aluminium
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
17 05	<i>soil (including excavated soil from contaminated sites), stones and dredging spoil</i>
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	<i>insulation materials and asbestos-containing construction materials</i>
17 06 01*	insulation materials containing asbestos
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 06 05*	construction materials containing asbestos
17 08	<i>gypsum-based construction material</i>
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
17 09	<i>other construction and demolition wastes</i>
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
<b>18</b>	<b>WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH</b>
18 01	<i>wastes from natal care, diagnosis, treatment or prevention of disease in humans</i>
18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
18 01 07	chemicals other than those mentioned in 18 01 06
18 02	<i>wastes from research, diagnosis, treatment or prevention of disease in animals</i>
18 02 06	chemicals other than those mentioned in 18 02 05
18 02 03	wastes whose collection and disposal is not subject to special requirements in order to prevent infection
<b>19</b>	<b>WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE</b>
19 01	<i>wastes from incineration or pyrolysis of waste</i>
19 01 02	ferrous materials removed from bottom ash
19 01 12	bottom ash and slag other than those mentioned in 19 01.11
19 01 14	fly ash other than those mentioned in 19 01 13
19 01 16	boiler dust other than those mentioned in 19 01 15
19 01 17*	pyrolysis wastes containing dangerous substances
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17
19 01 19	sands from fluidised beds
19 02	<i>wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)</i>
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 04	premixed wastes composed of at least one hazardous waste
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 02 11*	other wastes containing dangerous substances
19 03	<i>stabilised/solidified wastes</i>
19 03 05	stabilised wastes other than those mentioned in 19 03 04
19 03 06*	wastes marked as hazardous, solidified.
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 04	<i>vitrified waste and wastes from vitrification</i>
19 04 01	vitrified waste
19 05	<i>wastes from aerobic treatment of solid wastes</i>
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
19 05 03	off-specification compost
19 06	<i>wastes from anaerobic treatment of waste</i>
19 06 04	digestate from anaerobic treatment of municipal waste

19 06 06	digestate from anaerobic treatment of animal and vegetable waste
<b>19 08</b>	<b>wastes from waste water treatment plants not otherwise specified</b>
19 08 01	screenings
19 08 02	waste from desanding
19 08 05	sludges from treatment of urban waste water
19 08 06*	saturated or spent ion exchange resins
19 08 09	grease and oil mixture from oil/water separation containing only edible oil and fats
19 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
<b>19 09</b>	<b>wastes from the preparation of water intended for human consumption or water for industrial use</b>
19 09 01	solid waste from, primary filtration and screenings
19 09 02	sludges from water clarification
19 09 03	sludges from decarbonation
19 09 04	spent activated carbon
19 09 05	saturated or spent ion exchange resins
19 09 06	solutions and sludges from regeneration of ion exchangers
<b>19 10</b>	<b>wastes from shredding of metal containing wastes</b>
19 10 01	iron and steel waste
19 10 02	non-ferrous waste
19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 06	other fractions other than those mentioned in 19 10 05
<b>19 11</b>	<b>wastes from oil regeneration</b>
19 11 06	sludges from on site effluent treatment other than those mentioned in 19 11 05
<b>19 12</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 09	minerals (for example sand, stones)
19 12 10	combustible waste (refuse derived fuel)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
<b>19 13</b>	<b>wastes from soil and groundwater remediation</b>
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
19 13 06	sludges from groundwater remediation other than those mentioned in 19 13 05
<b>20</b>	<b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b>
<b>20 01</b>	<b>separately collected fractions (except 15 01)</b>
20 01 01	paper and cardboard
20 01 02	glass
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 25	edible oil and fat
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 30	detergents other than those mentioned in 20 01 29
20 01 32	medicines other than those mentioned in 20 01 31
20 01 34	batteries and accumulators other than those mentioned in 20 01 33
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
<b>20 02</b>	<b>garden and park wastes (including cemetery waste)</b>
20 02 01	biodegradable waste

20 02 02	soil and stones
20 02 03	other non-biodegradable wastes
<i>20 03</i>	<i>other municipal wastes</i>
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 04	septic tank sludge
20 03 06	waste from sewage cleaning
20 03 07	bulky waste

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## Schedule 4 – Emissions and monitoring

**Table S4.1 Leachate level limits and monitoring requirements**

Monitoring point reference/ Description	Limit	Monitoring frequency	Monitoring method
Leachate monitoring wells in Cells 1 and 2 as shown on drawing number 1184.06 (dated 16/09/11).	83 m AOD  2m below the level of the surrounding groundwater during the post-closure period	Monthly	Dip meter or otherwise agreed with the Agency.
Leachate monitoring wells in Cells 3 and 4 as shown on drawing number 1184.06 (dated 16/09/11).	1m above the surface of the basal seal during the operational phase  2m below the level of the surrounding groundwater during the post-closure period		

**Table S4.2 Point source emissions to air – emission limits and monitoring requirements**

Emission Point Ref and Location	Parameter	Source	Limit (including limit)	Reference Period	Monitoring Frequency	Monitoring standard or method
Landfill gas engines A1, A2 and A4 as shown on Drawing 1695.VAR.06 (dated 12/12/2013)	Oxides of Nitrogen	Gas utilisation plant	500 mg/m <sup>3</sup>	Hourly mean	Annually	In accordance with M2, version 10, October 2013
	CO		1400mg/m <sup>3</sup>			
	Total VOCs		1000 mg/m <sup>3</sup>			
Fixed gas flare A3 as shown on Drawing 1695.VAR.06 (dated 12/12/2013)	Oxides of Nitrogen	Landfill Gas Flares	150 mg/m <sup>3</sup>	Hourly mean	Annually	ISO 10849
	CO		50 mg/m <sup>3</sup>			ISO 12039
	Total VOCs		10 mg/m <sup>3</sup>			BS EN 12619 or BS EN 13526
Mobile gas flare or flares at a location to be agreed with the Agency.	Oxides of Nitrogen	Landfill Gas Flares	150 mg/m <sup>3</sup>	Hourly mean	Annually	ISO 10849
	CO		50 mg/m <sup>3</sup>			ISO 12039
	Total VOCs		10 mg/m <sup>3</sup>			BS EN 12619 or BS EN 13526



**Table S4.3 Point Source Emissions to Water (Other than Sewer) – emission limits and monitoring requirements**

<b>Emission point Ref. &amp; Location</b>	<b>Parameter</b>	<b>Source</b>	<b>Limit (incl unit)</b>	<b>Reference Period</b>	<b>Monitoring Frequency</b>	<b>Monitoring Standard or Method</b>
Discharge1 to the Silverdale Brook as shown in figure 12 of the working plan	Suspended Solids	surface water and groundwater drainage	50 mg/l		Monthly	Laboratory testing
	Visible oil		none visible		Daily	
	Turbidity (expressed in Nephelometric Turbidity Units)		60		Monthly	
	pH		6-9		Monthly	
	Maximum daily volume *		4,000 cubic metres per day		Daily	
	Maximum rate of discharge*		50 litres per second 25 litres a second during flood warnings		Daily	
	Ammoniacal Nitrogen expressed as N		No limit set		Weekly	
Discharge 2 to an un-named tributary of the Silverdale Brook as shown in figure 12 of the working plan	Suspended Solids	Surface water and groundwater drainage	50 mg/l		Monthly	Laboratory testing
	Visible oil		None visible		Daily	
	Turbidity (expressed in Nephelometric Turbidity Units)		60		Monthly	
	pH		6-9		Monthly	
	Maximum daily volume *		4,000 cubic metres per day		Daily	

**Table S4.3 Point Source Emissions to Water (Other than Sewer) – emission limits and monitoring requirements**

Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
	Maximum rate of discharge*		50 litres per second 25 litres a second during flood warnings		Daily	
	Ammoniacal Nitrogen expressed as N		No limit set		Weekly	

\* rates of discharge to apply to either discharge point or, where both are used simultaneously, the combined total discharge shall not exceed 4,000 cubic metres a day and 50 litres a second (25 litres a second during flood warnings)

**Table S4.4 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements**

Emission point ref. & location	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
Emission point to sewer S1 shown in site layout plan 1695.VAR.03 submitted with application EPR/BR9677IT/V007	Temperature	Site leachate treatment plant	No limit set	-	-	-
	pH					
	Suspended solids					
	Chemical oxygen demand					
	Mecoprop					
	Chromium					
	Copper					
	Lead					
	Nickel					
	Zinc					
	Ammoniacal Nitrogen expressed as N					
	Sulphides					
	Soluble sulphates					
Soluble methane						

**Table S4.5 Trigger levels for emissions into groundwater and monitoring requirements**

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
Downstream groundwater monitoring point labelled as 'Pumped groundwater discharge in lagoon – groundwater compliance point' on drawing number 1184.06 (dated 16/09/11)	Ammoniacal nitrogen	0.5mg/l	Spot Sample	Quarterly	
	Chloride	250mg/l			
	Mercury	0.0001mg/l			
	Nickel	0.05mg/l			
	Phenol	0.03mg/l			
	Mecoprop	0.0016mg/l		Annually if detected in leachate	
	Tributyltin	0.00002mg/l			
	Xylene	0.003mg/l			

**Table S4.6 Landfill gas in external monitoring boreholes – limits and monitoring requirements**

<b>Monitoring point Ref. /description</b>	<b>Parameter</b>	<b>Limit (including units)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
Landfill gas monitoring points shown in figure 14 of the working plan.	Methane	1% *	Monthly	
	Carbon Dioxide	7% *	Monthly	
	Oxygen		Monthly	
	Atmospheric pressure		Monthly	
	Differential Pressure		Monthly	

\*The limits specified may need to be altered to take account of the background concentrations agreed in writing with the Environment Agency as a result of improvement condition 1.

**Table S4.7 Landfill gas from capped surfaces - limits and monitoring requirements**

Monitoring point Ref. /description	Parameter	Monitoring frequency	Other specifications	Monitoring Standard or Method
Permanently capped zone	Average Methane flux	Annually	where a rate of 0.001 mg/m <sup>2</sup> /second is exceeded appropriate measures must be taken to reduce the rate	Flame ionisation detector walk over, flux Box or as otherwise agreed in writing with the Agency*
Temporarily capped zone	Average Methane flux	Annually	where a rate of 0.1 mg/m <sup>2</sup> /second is exceeded appropriate measures must be taken to reduce the rate	Flame ionisation detector walk over, flux Box or a or as otherwise agreed in writing with the Agency*
<p>* If a cap has previously been shown compliant and there have been no significant physical changes in gas management during the year, a detailed walkover survey with a FID can be used to demonstrate that the surface emissions are under control. If this survey shows no change in the pattern of methane emissions, it may be used as the annual survey. The values for flux and total methane emissions measured in the previous year may be reported and a fresh flux box survey is not necessary. If the zone remains stable, the results of a full walkover survey may be accepted as the site report for a period of four years before a further quantitative flux box survey is required.</p>				

**Table S4.8 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
Landfill gas extraction wells shown on figure 8 of the Working Plan.	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Differential pressure	Monthly		
Landfill gas engine emission points A1, A2 and A4 as shown on Drawing 1695.VAR.06 (dated 12/12/2013)	NO <sub>x</sub> CO	Quarterly	In accordance with Appendix C of LFTGN08 v2 2010.	Where monitoring indicates an exceedance of the emissions standards specified in Table S4.2 the operator shall investigate the cause and take appropriate measures to reduce emissions to below the relevant emission standard.

**Table S4.9 Leachate– other monitoring requirements**

<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
Leachate monitoring wells as shown on drawing number 1184.06 (dated 16/09/11).	pH, electrical conductivity, temperature	Monthly		
Leachate monitoring wells as shown on drawing number 1184.06 (dated 16/09/11).	Sulphate, chloride, chemical oxygen demand, total alkalinity, biochemical oxygen demand, total oxidised nitrogen, total organic carbon, sodium, nitrate, potassium, calcium, manganese, volatile fatty acids	Quarterly		
Leachate monitoring wells as shown on drawing number 1184.06 (dated 16/09/11).	List I and II screening as described in note 4 of table 7 in document 3 of report LAF/WY/TD/1138/01	Annually		
Leachate monitoring wells as shown on drawing number 1184.06 (dated 16/09/11).	Iron, cadmium, chromium, copper, nickel, lead, zinc, magnesium	Annually		

**Table S4.10 Surface water – other monitoring requirements**

<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
Monitoring points as shown in figure 12 of the working plan.	Dissolved oxygen, pH, electrical conductivity, ammoniacal nitrogen, chloride, chemical oxygen demand, temperature	monthly		
Monitoring points as shown in figure 12 of the working plan.	Alkalinity, sulphate, sodium, potassium, calcium, magnesium, iron, manganese, nitrate, phosphate,	quarterly		

**Table S4.10 Surface water – other monitoring requirements**

<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
	Nickel, phenol, mercury, and, where leachate contamination is suspected, volatile fatty acids			
Monitoring points as shown in figure 12 of the working plan.	If detected in leachate then mecoprop, tributyltin and the xylenes	annually		

**Table S4.11 Groundwater – other monitoring requirements**

<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
Groundwater monitoring points as shown in figure 4 of the Controlled Waters Risk Assessment	Groundwater level, pH, electrical conductivity	monthly		
Groundwater monitoring points as shown in figure 4 of the Controlled Waters Risk Assessment	Chloride, ammoniacal nitrogen, total alkalinity, total oxidised nitrogen, total organic carbon, sulphate, sodium, potassium, calcium, magnesium, iron, manganese, cadmium, chromium, copper, lead, zinc, mercury, nickel, phenol, and where leachate contamination is suspected volatile fatty acids.	quarterly		
Groundwater monitoring points as shown in figure 4 of the Controlled Waters Risk Assessment	Mecoprop, tributyltin, xylene	annually if detected in leachate		

## Schedule 5 - Reporting

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

<b>Table S5.1 Reporting of monitoring data</b>			
<b>Parameter</b>	<b>Emission or monitoring point/reference</b>	<b>Reporting period</b>	<b>Period begins</b>
Leachate levels As required by condition 3.6.1	Leachate monitoring wells as shown on drawing number 1184.06 (dated 16/09/11)	Quarterly	3 months from first receipt of waste in the relevant phase
Emissions to air Parameters as required by condition 3.6.1	A1, A2, A3 and A4	Annually	XX/XX/XX
NO <sub>x</sub> and CO	A1, A2 and A4 as shown on Drawing 1695.VAR.06 (dated 12/12/2013)	Quarterly	XX/XX/XX
Emissions to water Parameters as required by condition 3.6.1	Discharge 1 and Discharge 2	Quarterly	07/11/05
Groundwater Parameters as required by condition 3.6.1	Groundwater monitoring points as shown in figure 4 of the controlled waters risk assessment	Quarterly	21/07/05
		Annually	6 weeks from parameters being detected in leachate.
Landfill gas surface emissions Parameters as required by condition 3.6.1	Phases 1 to 7	Annually	12 months from installation of temporary or permanent cap
Landfill gas lateral migration Parameters as required by condition 3.6.1	Landfill gas monitoring points shown in figure 14 of the working plan	Quarterly	21/07/05
Other Landfill gas monitoring Parameters as required by condition 3.6.1	Landfill gas extraction wells shown in figure 8 of the working plan	Quarterly	3 months from installation of internal gas boreholes
	Gas samples from stacks A1, A2 and A4		XX/XX/XX
Other leachate monitoring Parameters as required by condition 3.6.1	Leachate monitoring wells as shown on drawing number 1184.06 (dated 16/09/11)	Quarterly (for monthly and quarterly measurements)	3 months from first receipt of waste in the relevant phase
		Annually (for annual measurements)	12 months from first receipt of waste in the relevant phase
Other surface water monitoring Parameters as required by condition 3.6.1	Monitoring points as shown in figure 12 of the working plan.	Quarterly (for monthly and quarterly measurements)	07/11/05



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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
		Annually (for annual measurements)	08/01/06 if necessary

**Table S5.2: Annual Production/Treatment**

Leachate: Disposed of off site; Disposed of to any onsite effluent treatment plant; Recirculated into the waste mass.	Cubic metres/year
Surface water and/ or groundwater: Disposed of off site; Disposed of to any onsite effluent treatment plant.	Cubic metres/year
Landfill gas: combustion in flares; combustion in gas engines; Other methods of gas utilisation.	Normalised cubic metres/year

**Table S5.3 Performance Parameters**

Parameter	Frequency of assessment	Annual total	Unit
Energy used (including for leachate treatment)	Annually		MWh of electricity

**Table S5.4 Reporting Forms**

Media/parameter	Reporting Format	Date of Form
Leachate	Form leachate 1 or other reporting format to be agreed in writing with the Agency/	
Air	Form Air 1 or other reporting format to be agreed in writing with the Agency/	
Controlled Water	Form Water 1 or other reporting format to be agreed in writing with the Agency/	
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Agency/	
Landfill Gas	Form LFG 1 or other reporting format to be agreed in writing with the Agency/	
Waste Return	Waste Return Form RATS2E	
Landfill Topographical surveys and interpretation	Reporting format to be agreed in writing with the Agency.	

## 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 EP Regulations.

### Part A

Permit Number	<b>EPR/BR9677IT</b>
Name of operator	<b>Lafarge Aggregates Limited</b>
Location of Facility	<b>Walleys Quarry Landfill Site Cemetery Road Silverdale Newcastle-under-Lyme Staffordshire ST5 6DH</b>
Time and date of the detection	

**(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution**

**To be notified within 24 hours of detection**

Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

<b>(b) Notification requirements for the breach of a limit</b>	
<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	

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

<b>(c) Notification requirements for the detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</b>	
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 facility in the preceding 24 months.	

<b>Name*</b>	
<b>Post</b>	
<b>Signature</b>	
<b>Date</b>	

\* authorised to sign on behalf of the operator

## 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 5 to the EP 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; or
- 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.

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

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

“*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.

“*Land Protection Guidance*” means Agency guidance “H7 - Guidance on the protection of land: 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.

"M2" means Environment Agency Guidance Monitoring of stack emissions to air.

"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 in a way that has a negative effect.

"notify without delay" and "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.

"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 6 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.

Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means the standards included in Environment Agency Guidance for Monitoring Enclosed Landfill Gas Flares LFTGN 05 or Guidance for Monitoring Landfill Gas Engine Emissions LFTGN 08.