

# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Biffa Waste Services Limited

Ufton Landfill Site Ufton Nr Southam Leamington Spa Warwickshire CV33 9PP

Variation application number EPR/NP3435PX/V007

Permit number EPR/NP3435PX

# Ufton Landfill Site Permit number EPR/NP3435PX

## Introductory note

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

The following gives notice of the variation and consolidation of your environmental permit. We have issued this variation to consolidate the original permit and subsequent variations and to update some of the conditions following a statutory review of permits in the landfill sector. We have also converted the permit into the current EPR permit format using modern conditions.

This Environment Agency has a duty, under the Environmental Permitting (England and Wales) Regulations 2010, regulation 34(1), to periodically review permits. As a result of that review we have identified a number of necessary changes we must make to your permit to reflect current legislation and best practice. These changes principally relate to:

- The addition of a standard condition for landfill gas management at landfills;
- A change to the hydrogeological risk assessment condition so that reviews are undertaken every 6 years rather than every 4 years;
- Standard leachate and groundwater quality monitoring tables (schedule 3); and
- A standard reporting table (schedule 4).

Schedule 1 to this notice summarises the changes we have made to this permit.

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

Status Log of the permit		
Detail	Date	Comments
Application NP3435PX	Application received 29/04/2004	Application for non- hazardous waste landfill with asbestos mono-cell
Response to request for information Agency letter 08/10/2004	10/12/2004	-
Further information received	23/02/2005	-
Permit NP3435PX determined	29/03/2005	-
Agency initiated Variation VP3436LC (EPR/NP3435PX/V002) issued	16/06/2008	To vary and update the permit to modern conditions
Variation application EPR/NP3435PX/V003	01/07/2010	Addition of waste code for low grade clinical waste
Variation EPR/NP3435PX/V003 issued	15/07/2010	_

Status Log of the permit		
Detail	Date	Comments
Variation application EPR/NP3435PX/V004	10/12/2010	To use geosynthetic capping system and modify restoration profile
Notice requiring further information	10/12/2010	Response received 14/01/2011
Variation EPR/NP3435PX/V004 issued	10/03/2011	-
Variation application EPR/NP3435PX/V005	26/08/2011	To remove some boreholes, amend site boundary and change grid ref of surface water discharge point
Variation EPR/NP3435PX/V005 issued	20/10/2011	-
Variation application EPR/NP3435PX/V006	24/07/2014	Application to make changes to annual throughput tonnages and removed the storage limit for leachate
Variation EPR/NP3435PX/V006 issued	08/09/2014	-
Environment Agency Landfill Sector Review 2013 Variation determined EPR/NP3435PX/V007 Permit EPR/NP3435PX	23/12/2014	Varied and consolidated permit issued in modern condition format
(Billing reference RP3739WG)		

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/NP3435PX

issued to

Biffa Waste Services Limited ("the operator")

whose registered office is

Coronation Road Cressex High Wycombe Buckinghamshire HP12 3TZ

company registration number 00946107

to operate a regulated facility at

Ufton Landfill Site Ufton Nr Southam Leamington Spa Warwickshire CV33 9PP

to the extent set out in the schedules.

The notice shall take effect from 23/12/2014.

Name	Date
Anne Nightingale	23/12/2014

Authorised on behalf of the Environment Agency

#### Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation. The following table summarises the latest changes to the landfill permit template, however your permit may contain more changes than this where your permit has not been varied to recent template conditions.

Condition	Description of change	
1.5	Generic condition to reflect the requirements of the Waste Framework Directive.	
2.6.1(a)	Added reference to a specific table to clarify what wastes are permitted by which	
	permitted activity.	
2.6.2	Added to separately identify the waste types and quantities that can be accepted	
	for restoration.	
2.9	Revised gas management condition imposed for all landfills.	
3.1.1	Generic condition imposed on all activities to simplify sub-conditions	
3.1.5 to	Revised conditions to reflect the terminology used by the Groundwater Directive	
3.1.6	for 'hazardous substances' and to require hydrogeological risk assessment	
	reviews are submitted every 6 years rather than every 4 years.	
	Sub-condition that referred to emission of 'non-hazardous pollutants' deleted.	
	Such emissions are regulated by condition 3.2.	
	Two sub-conditions that referred to limits in specific tables in schedule 3 deleted	
	as they are now covered by 3.1.1.	
3.6	Revised generic pests condition imposed on all activities.	
4.2.2	Amended to ensure that information on 'annual production/treatment' (Schedule	
	4, Table S4.2) is provided in February each year where annual reports may be	
	submitted at other times of the year.	
4.2.2(a)	Text expanded to clarify the details we require in an annual report.	
4.2.2(h)	New condition requiring annual submission of a plan of monitoring and	
	extraction locations with reference to monitoring tables in schedule 3.	
4.3.1	Generic notifications condition added.	
Schedules		
Table S1.1	Amended description of the landfill activity to clarify that this includes restoration.	
	Activity references amended to reflect changes introduced by Industrial	
	Emissions Directive (2010/75/EU).	
Table S1.4	Amended to clarify that restoration is a separate part of the activity unrelated to	
	landfill cover.	
Schedule 2	Standard list of wastes added.	
Schedule 3	Monitoring and compliance tables have been re-ordered so that those with	
	compliance limits appear first.	
	Standard monitoring frequency and parameters have been included for certain	
	routine monitoring requirements.	
Table S3.6	Specific requirements for monitoring asbestos fibres added, where necessary.	
Table S4.1	Amended to only require regular reports of information that relate to compliance limits.	
Table S4.2	Additional details of landfill gas extracted required to improve climate change	
	data quality.	
Table S4.3	Amended to include natural gas as an energy source for consistency with other	
	sectors.	

Condition	Description of change
Schedule 6	Definitions added to clarify meaning of:
	Inert waste
	Exceeded
	Hazardous substance
	Medicinal product
	Previous year
	Waste acceptance criteria
	Waste acceptance procedure

#### Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

## **Permit**

The Environmental Permitting (England and Wales) Regulations 2010

## Permit number EPR/NP3435PX

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/NP3435PX/V006 authorising,

Biffa Waste Services Limited ("the operator"),

whose registered office is

Coronation Road Cressex High Wycombe Buckinghamshire HP12 3TZ

company registration number 00946107

to operate an installation at

Ufton Landfill Site Ufton Nr Southam Leamington Spa Warwickshire CV33 9PP

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

Name	Date
Anne Nightingale	23/12/2014

Authorised on behalf of the Environment Agency

## 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, nonconformances, 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.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

#### 1.2 Finance

- 1.2.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Environment Agency dated 29<sup>th</sup> March 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.
- 1.2.2 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 1.2.1; and
  - (c) the estimated costs for the closure and aftercare of the landfill.

## 1.3 Energy efficiency

- 1.3.1 The operator shall:
  - (a) take appropriate measures to ensure that energy is used efficiently in the activities;
  - (b) Review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
  - (c) Implement any appropriate measures identified by a review.

#### 1.4 Efficient use of raw materials

#### 1.4.1 The operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities:
- (b) maintain records of raw materials and water used in the activities;
- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

# 1.5 Avoidance, recovery and disposal of wastes produced by the activities

#### 1.5.1 The operator shall:

- take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every four years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

## 2 Operations

#### 2.1 Permitted activities

2.1.1 The operator is only 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 7 to this permit.

## 2.3 Operating techniques

- 2.3.1 (a) 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 Environment Agency.
  - (b) If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ('plan') specified in schedule 1, table S1.2 or otherwise required under this permit, which identifies and minimises the risks of pollution relevant to that plan and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment 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 by the Environment Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within14 days of completion of each improvement.

### 2.5 Landfill Engineering

- 2.5.1 No construction of any new cell of the landfill shall commence until the operator has submitted construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.5.2 Where the operator proposes to construct any new cell other than the first cell, but proposes no change from the design of the most recently approved cell which could have any impact on the performance of any element of the design, no construction of the new cell shall commence until the operator has submitted a cell layout drawing and the Environment Agency has confirmed that it is satisfied with the cell layout drawing.
- 2.5.3 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 Environment Agency.
- 2.5.4 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Environment Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.5.5 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 Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.5.6 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 Environment Agency.
- 2.5.7 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill infrastructure.
- 2.5.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.5.5 and 2.5.6 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Environment Agency as soon as practicable.
- 2.5.9 For the purposes of conditions 2.5.1, 2.5.2, 2.5.4 and 2.5.5, the Environment Agency shall be deemed to be satisfied where it has not, within the period of four 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.

- 2.5.10 Where the Environment Agency has required further information under condition 2.4.9(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:
  - (a) confirmed whether or not it is satisfied; or
  - (b) informed the operator that it requires further information.

#### 2.6 Waste acceptance

- 2.6.1 Wastes shall only be accepted for disposal if:
  - (a) they are listed in schedule 2, tables S2.1, S2.2, and
  - (b) they are non-hazardous waste or asbestos and construction materials containing asbestos, and
  - (c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400 mm), 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 waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment, and
  - (k) they are wastes with a code beginning with 07 05 and 16 03, but excluding waste medicinal products and pharmaceutically active waste materials arising from their manufacture.
- 2.6.2 Wastes shall only be accepted for restoration where:
  - (a) they are listed in schedule 2, table S2.3 and
  - (b) they are accepted in accordance with a restoration plan approved in writing by the Environment Agency.
- 2.6.3 Asbestos containing wastes and construction materials containing asbestos shall only be disposed of with other suitable wastes and not in cells containing biodegradable non-hazardous waste. 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.
- 2.6.4 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.

- 2.6.5 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.
- 2.6.6 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.6.7 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing number 4, dated 27.07.2010.
- 2.6.8 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.4.
- 2.6.9 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.
- 2.6.10 The operator shall maintain and implement a system to record the disposal location of any hazardous waste.

#### 2.7 Leachate levels

2.7.1 The limits for the level of leachate listed in schedule 3, table S3.1 shall not be exceeded.

#### 2.8 Closure and aftercare

2.8.1 The operator shall maintain a closure and aftercare management plan.

## 2.9 Landfill gas management

- 2.9.1 The operator shall take appropriate measures, including, but not limited to, those specified in any approved landfill gas management plan, to:
  - (a) collect landfill gas; and
  - (b) control the migration of landfill gas.
- 2.9.2 The operator shall use the collected landfill gas to produce energy. If the collected landfill gas cannot be used to produce energy, the operator shall use appropriate measures to flare or treat the gas in accordance with an approved landfill gas management plan.
- 2.9.3 The operator shall:
  - (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a revised landfill gas management plan;
  - (b) implement the revised landfill gas management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## 3 Emissions and monitoring

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

- 3.1.1 The limits in schedule 3 shall not be exceeded.
- 3.1.2 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.2 and S3.3.
- 3.1.3 Compliance with an emission limit in table S3.2 shall include incorporation of the uncertainty allowance stated in Environment Agency guidance LFTGN 05 and LFTGN 08.
- 3.1.4 The operator shall prevent the input of any hazardous substances from the activities into groundwater.
- 3.1.5 The operator shall submit to the Environment Agency a review of the Hydrogeological Risk Assessment:
  - (a) between nine and six months prior to the fourth anniversary of the granting of the permit, and
  - (b) between nine and six months prior to every subsequent six years after the fourth anniversary of the granting of the permit.

# 3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
  - (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
  - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, 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 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

- 3.3.2 The operator shall:
  - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
  - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

#### 3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
  - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
  - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

#### 3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring and any other actions specified in the following tables in schedule 3 to this permit:
  - (a) Leachate specified in tables S3.1 and S310;
  - (b) Point source emissions specified in tables S3.2 and S3.3;
  - (c) Groundwater specified in tables S3.4 and S3.8;
  - (d) Landfill gas specified in tables S3.5, S3.7 and S3.9;
  - (e) Surface water specified in table 3.11; and
  - (f) Particulate matter specified in table S3.6.
- 3.5.2 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.
- 3.5.3 A topographical survey of the site referenced to ordnance datum shall be carried out:
  - (a) annually, and
  - (b) prior to the disposal of waste in any new cell or new development area of the landfill, and
  - (c) following closure of the landfill or part of the landfill.

The topographical survey shall be used to produce a plan of a scale adequate to show the surveyed features of the site.

#### 3.6 Pests

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.6.2 The operator shall:
  - (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution hazard or annoyance from pests;
  - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

#### 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 Environment 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. the location of hazardous waste deposits; and
    - vii. the specification and as built drawings of the basal, sidewall and capping engineering systems.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

### 4.2 Reporting

- 4.2.1 The operator shall send reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year ('the annual report') shall be submitted to the Environment Agency by 31<sup>st</sup> January each year or such other date as may be agreed in writing by the Agency, with the exception of 4.2.2(c) that must be provided by the end of February 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 in relation to this installation and any agreed amendments thereto. The review will include written descriptions of the improvements made to operational performance during the year, action plans developed and planned improvements for the coming year;
  - (b) the energy consumed at the site, reported in the format set out in schedule 4 table S4.3;
  - (c) the annual production/treatment set out in schedule 4, table S4.2;
  - (d) the topographical surveys required by condition 3.5.3 other than those submitted as part of a CQA validation report;
  - (e) 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;
  - (f) an assessment of the settlement behaviour of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;
  - (g) a calculation of the remaining capacity (reported in cubic metres) derived from the presettlement contours and the most recent topographical survey;
  - (h) a plan(s) ('the monitoring and extraction point plan MEPP') showing the locations of leachate and landfill gas extraction and all monitoring points.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
  - (a) in respect of the parameters and emission points specified in schedule 4, table S4.1;
  - (b) using the forms specified in schedule 4, table S4.4 or other reporting format as agreed in writing with the Environment Agency; and
  - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.
- 4.2.5 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six 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.

#### 4.3 Notifications

- 4.3.1 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately;
  - (i) inform the Environment Agency,
  - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
  - (iii) take the measures necessary to prevent further possible incidents or accidents;
  - (b) in the event of a breach of any permit condition the operator must immediately—
    - (i) inform the Environment Agency, and
    - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
  - (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.4 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
  - (a) the Environment Agency shall be notified at least 14 days before making the change; and
  - (b) the notification shall contain a description of the proposed change in operation.

## 4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

## **Schedule 1 - Operations**

Table S1.1	activities			
Activity Reference	WFD Annex I and II operations (where applicable)	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A1	D5 – Specially engineered landfill and R10 – Land treatment resulting in benefit to agriculture or ecology	Section 5.2 Part A(1) (a), The disposal of waste in a landfill.	Landfill for non-hazardous waste and landfill restoration	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.6, as an integral part of landfilling.
A2	D5 – Specially engineered landfill	Section 5.2 Part A(1) (a), The disposal of waste in a landfill.	Landfill for hazardous waste	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.6, as an integral part of landfilling.
Directly As	sociated Activities			
A3	R1 – Use principally as a fuel to generate energy	-	Utilisation of landfill gas for energy recovery in an appliance with a rated thermal input <50 MW	Landfill gas arising from the landfill.
A4	N/A	-	Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the landfill.
A5	N/A	-	Temporary storage of waste	Leachate arising from the landfill.
A6	D6 – release to water body except seas/oceans	-	Discharge of site drainage from the landfill.	From surface water management system to point of entry to controlled waters.
A7	N/A	-	Storage of fuel for operation of plant and equipment.	From fuel storage tank.

Description	Parts	Date Received
Permit Application	The response to questions 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application Form	29/04/2004
Response to request for information Agency letter 08/10/2004	Further information received on Hydrogeological Risk Assessment, Stability Risk Assessment, Gas Risk Assessment and Habitats including attached Appendices to above	10/12/2004
Post Permit Issue		
	Site Protection and Monitoring Plan	
	Report received on Investigation into Groundwater Borehole 87900017, in compliance with Improvement Condition 3a of permit NP3435PX	05/01/2006
	Letter and CQA report Installation of new Groundwater Boreholes 87900009, 87900012 and 87900013, in compliance with Improvement Condition 4a of permit NP3435PX	31/12/2006
	Letter received on Review of Minimum Reporting Values for Mecoprop and Benzene, in compliance with Improvement Condition 5a of permit NP3435PX	23/10/2006
	Letter received on Review of Groundwater Monitoring Data, revised control and trigger levels for boreholes 87900009, 87900012 and 87900013, in compliance with Improvement Condition 6a of permit NP3435PX	23/10/2006
	Report on review of perimeter landfill gas control and trigger levels, in accordance with Improvement Condition 7a of permit NP3435PX	25/08/2005
	Report received 21/12/2006 Asbestos Fibres Monitoring Plan, in accordance with Improvement Condition 8b of permit NP3435PX	21/12/2006
	Report received 21/12/2006 Particulate Management Monitoring Plan, in compliance with Improvement Condition 9 of permit NP3435PX	21/12/2006
Application to vary EPR/NP3435PX/V004 (UP3234HQ)	The responses to Questions 2b, 2d, 5c and 6 of Part C2, all parts of C3 including associated appendices and Drawing No.3 dated 23.06.10 titled 'Post Settlement Contours'	10/12/2010
Response to Notice for further information dated 10 <sup>th</sup> December 2010	All parts	14/01/2011
Variation application EPR/NP3435PX/V005	Revised drawings	14/10/2011
e-mail dated 14/10/2011	ESID1, ESID2, ESID3, ESID4, ESID5, ESID6A, ESID7A, ESID8, ESID9, ESID10, ESID13	
Response to Enforcement Notice dated 13/06/2012	Revised Asbestos Management Plan	19/06/2012
	Leachate Management Plan January 2013	31/01/2013
	Leachate Management Plan Stage 2 July to December 2013	22/07/2013
	Ufton Leachate Management Plan Review April 2014	23/04/2014

Table S1.2 Operating techniques		
Description	Parts	Date Received
Variation application EPR/NP3435PX/V006	Parts C2 and C3 of the application documents and all associated documents	24/07/2014

Table S1.3 In	nprovement programme requirements			
Reference	eference Requirement Date			
IC1	The operator shall submit to the Environment Agency in writing for approval a restoration plan for the site which includes waste	31/03/2015		
	quantities, waste types and waste acceptance criteria for wastes for restoration.			

Table S1.4 Annual waste input limits	
Category	Limit Tonnes/Year
Non-hazardous waste	125,000
Inert waste	50,000
Asbestos waste and construction material containing asbestos	50,000
Waste for restoration	250,000
Total	475,000

## **Schedule 2 - List of permitted wastes**

Waste code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 01	wastes from mineral excavation
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
01 03	wastes from physical and chemical processing of metalliferous minerals
01 03 06	tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 08	dusty and powdery wastes other than those mentioned in 01 03 07
01 03 09	red mud from alumina production other than the wastes mentioned in 01 03 07
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 01 04 07
01 04 11	wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
01 05	drilling muds and other drilling wastes
01 05 04	freshwater drilling muds and wastes
01 05 07	barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01	sludges from washing and cleaning
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 02 01 08

Variation number EPR/NP3435PX/V007

Waste code	Description
02 01 10	waste metal
02 02	wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01	sludges from washing and cleaning
02 02 03	materials unsuitable for consumption or processing
02 03	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
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 from on-site effluent treatment
02 04	wastes from sugar processing
02 04 01	soil from cleaning and washing beet
02 04 02	off-specification calcium carbonate
02 04 03	sludges from on-site effluent treatment
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
02 06 03	sludges from on-site effluent treatment
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
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

Waste code	Description
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03	wastes from pulp, paper and cardboard production and processing
03 03 01	waste bark and wood
3 03 05	de-inking 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 cardboard destined for recycling
03 03 09	lime mud waste
3 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10
)4	WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES
04 01	wastes from the leather and fur industry
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
04 02	wastes from the textile industry
14 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
4 02 10	organic matter from natural products (for example grease, wax)
4 02 17	dyestuffs and pigments other than those mentioned in 04 02 16
710217	
	sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 20 04 02 21	sludges from on-site effluent treatment other than those mentioned in 04 02 19 wastes from unprocessed textile fibres

Waste code	Description
05	WASTES FROM PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL
05 01	wastes from petroleum refining
05 01 10	sludges from on-site effluent treatment other than those mentioned in 05 01 09
05 01 13	boiler feedwater sludges
05 01 14	wastes from cooling columns
05 01 17	bitumen
05 06	wastes from the pyrolytic treatment of coal
05 06 04	waste from cooling columns
06	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 03	wastes from the MFSU of salts and their solutions and metallic oxides
06 03 14	solid salts other than those mentioned in 06 03 11 and 06 03 13
06 03 16	metallic oxides other than those mentioned in 06 03 15
06 05	sludges from on-site effluent treatment
06 05 03	sludges from on-site effluent treatment other than those mentioned in 06 05 02
06 06	wastes from the MFSU of sulphur chemicals, sulphur chemical processes and desulphurisation processes
06 06 03	wastes containing sulphides other than those mentioned in 06 06 02
06 09	wastes from the MFSU of phosphorous chemicals and phosphorous chemical processes
06 09 02	phosphorous slag
06 09 04	calcium-based reaction wastes other than those mentioned in 06 09 03
06 11	wastes from the manufacture of inorganic pigments and opacificiers
06 11 01	calcium-based reaction wastes from titanium dioxide production
06 13	wastes from inorganic chemical processes not otherwise specified
06 13 03	carbon black
07	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 01	wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals
07 01 12	sludges from on-site effluent treatment other than those mentioned in 07 01 11
07 02	wastes from the MFSU of plastics, synthetic rubber and man-made fibres
07 02 12	sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 02 13	waste plastic

Table 52.1 Pe	ermitted waste types for disposal at a landfill for non-hazardous waste
Waste code	Description
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
07 03	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 03 11
07 04	wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides
07 04 12	sludges from on-site effluent treatment other than those mentioned in 07 04 11
07 05	wastes from the MFSU of pharmaceuticals
07 05 12	sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 05 14	solid wastes other than those mentioned in 07 05 13
07 06	wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 07	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
08	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01	wastes from MFSU and removal of paint and varnish
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
08 02	wastes from MFSU of other coatings (including ceramic materials)
08 02 01	waste coating powders
08 02 02	aqueous sludges containing ceramic materials
08 03	wastes from MFSU of printing inks
<b>08 03</b> 08 03 07	wastes from MFSU of printing inks aqueous sludges containing ink
08 03 07	aqueous sludges containing ink

Waste code	Description
08 04	wastes from MFSU of adhesives and sealants (including waterproofing products)
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
09	WASTES FROM THE PHOTOGRAPHIC INDUSTRY
09 01	wastes from the photographic industry
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
10	WASTES FROM THERMAL PROCESSES
10 01	wastes from power stations and other combustion plants (except 19)
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 01 24	sands from fluidised beds
10 01 26	wastes from cooling-water treatment
10 02	wastes from the iron and steel industry
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

Waste code	Description
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
10 03	wastes from aluminium thermal metallurgy
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
10 04	wastes from lead thermal metallurgy
10 04 10	wastes from cooling-water treatment other than those mentioned in 10 04 09
10 05	wastes from zinc thermal metallurgy
10 05 01	slags from primary and secondary production
10 05 04	other particulates and dust
10 05 11	dross and skimmings other than those mentioned in 10 05 10
10 06	wastes from copper thermal metallurgy
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
10 07	wastes from silver, gold and platinum thermal metallurgy
<b>10 07</b> 10 07 01	slags from primary and secondary production
	· · · · · · · · · · · · · · · · · · ·
10 07 01	slags from primary and secondary production

Waste code	Description
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
10 08	wastes from other non-ferrous thermal metallurgy
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	flue-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
10 09	wastes from casting of ferrous pieces
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 10	wastes from casting of non-ferrous pieces
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 11	wastes from manufacture of glass and glass products
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 09

Table S2.1 Pe	ermitted waste types for disposal at a landfill for non-hazardous waste
Waste code	Description
10 11 12	waste glass other than those mentioned in 10 11 11
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
10 12	wastes from manufacture of ceramic goods, bricks, tiles and construction products
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 from on-site effluent treatment
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
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 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 06 10 13 07	particulates and dust (except 10 13 12 and 10 13 13) sludges and filter cakes from gas treatment
10 13 06 10 13 07 10 13 10	particulates and dust (except 10 13 12 and 10 13 13) sludges and filter cakes from gas treatment wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 06 10 13 07 10 13 10 10 13 11 10 13 13 10 13 14	particulates and dust (except 10 13 12 and 10 13 13) sludges and filter cakes from gas treatment wastes from asbestos-cement manufacture other than those mentioned in 10 13 09 wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10 solid wastes from gas treatment other than those mentioned in 10 13 12 waste concrete and concrete sludge
10 13 06 10 13 07 10 13 10 10 13 11 10 13 13	particulates and dust (except 10 13 12 and 10 13 13) sludges and filter cakes from gas treatment wastes from asbestos-cement manufacture other than those mentioned in 10 13 09 wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10 solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 06 10 13 07 10 13 10 10 13 11 10 13 13 10 13 14	particulates and dust (except 10 13 12 and 10 13 13) sludges and filter cakes from gas treatment wastes from asbestos-cement manufacture other than those mentioned in 10 13 09 wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10 solid wastes from gas treatment other than those mentioned in 10 13 12 waste concrete and concrete sludge WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes,
10 13 06 10 13 07 10 13 10 10 13 11 10 13 13 10 13 14 11 11 01	particulates and dust (except 10 13 12 and 10 13 13) sludges and filter cakes from gas treatment wastes from asbestos-cement manufacture other than those mentioned in 10 13 09 wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10 solid wastes from gas treatment other than those mentioned in 10 13 12 waste concrete and concrete sludge WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising)
10 13 06 10 13 07 10 13 10 10 13 11 10 13 13 10 13 14 11 11 01	particulates and dust (except 10 13 12 and 10 13 13) sludges and filter cakes from gas treatment wastes from asbestos-cement manufacture other than those mentioned in 10 13 09 wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10 solid wastes from gas treatment other than those mentioned in 10 13 12 waste concrete and concrete sludge WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising) sludges and filter cakes other than those mentioned in 11 01 09
10 13 06 10 13 07 10 13 10 10 13 11 10 13 13 10 13 14 11 11 01 11 01 10 11 01 14	particulates and dust (except 10 13 12 and 10 13 13)  sludges and filter cakes from gas treatment  wastes from asbestos-cement manufacture other than those mentioned in 10 13 09  wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10  solid wastes from gas treatment other than those mentioned in 10 13 12  waste concrete and concrete sludge  WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY  wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising)  sludges and filter cakes other than those mentioned in 11 01 09  degreasing wastes other than those mentioned in 11 01 13
10 13 06 10 13 07 10 13 10 10 13 11 10 13 13 10 13 14 11 11 01	particulates and dust (except 10 13 12 and 10 13 13) sludges and filter cakes from gas treatment wastes from asbestos-cement manufacture other than those mentioned in 10 13 09 wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10 solid wastes from gas treatment other than those mentioned in 10 13 12 waste concrete and concrete sludge WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising) sludges and filter cakes other than those mentioned in 11 01 09

Table 32.1 F	ermitted waste types for disposal at a landfill for non-hazardous waste
Waste code	Description
11 02 06	wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
11 05	wastes from hot galvanising processes
11 05 01	hard zinc
11 05 02	zinc ash
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
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 01 15	machining sludges other than those mentioned in 12 01 14
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
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	absorbents, filter materials, wiping cloths and protective clothing
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle
	maintenance (except 13, 14, 16 06 and 16 08)

Table S2.1 Pe	ermitted waste types for disposal at a landfill for non-hazardous waste
Waste code	Description
16 01 12	brake pads other than those mentioned in 16 01 11
16 01 17	ferrous metal
16 01 18	non-ferrous metal
16 01 19	plastic
16 01 20	glass
16 02	wastes from electrical and electronic equipment
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	off-specification batches and unused products
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 08	spent catalysts
16 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	waste linings and refractories
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
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 01	concrete, bricks, tiles and ceramics
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	wood, glass and plastic
17 02 01	wood
17 02 02	glass
17 02 03	plastic

Waste code	Description
17 03	bituminous mixtures, coal tar and tarred products
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 04	metals (including their alloys)
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	soil (including excavated soil from contaminated sites), stones and dredging spoil
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	insulation materials and asbestos-containing construction materials
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 09	other construction and demolition wastes
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
18	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)
18 01	wastes from natal care, diagnosis, treatment or prevention of disease in humans
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	wastes from research, diagnosis, treatment or prevention of disease involving animals
18 02 03	wastes whose collection and disposal is not subject to special requirements in order to prevent infection

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 01	wastes from incineration or pyrolysis of waste
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 18	pyrolysis wastes other than those mentioned in 19 01 17
19 01 19	sands from fluidised beds
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	premixed wastes composed only of non-hazardous wastes
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 03	stabilised/solidified wastes <sup>1</sup>
19 03 05	stabilised wastes other than those mentioned in 19 03 04
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 04	vitrified waste and wastes from vitrification
19 04 01	vitrified waste
19 05	wastes from aerobic treatment of solid wastes
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	wastes from anaerobic treatment of waste
19 06 04	digestate from anaerobic treatment of municipal waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste

<sup>&</sup>lt;sup>1</sup> Stabilisation processes change the dangerousness of the constituents in the waste and thus transform hazardous waste into non-hazardous waste. Solidification processes only change the physical state of the waste (e.g. liquid into solid) by using additives without changing the chemical properties of the waste.

wastes from waste water treatment plants not otherwise specified  1 screenings  2 waste from desanding  3 sludges from treatment of urban waste water  9 grease and oil mixture from oil/water separation containing only edible oil and fats  12 sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11  14 sludges from other treatment of industrial waste water other than those mentioned in 19 08 13  Wastes from the preparation of water intended for human consumption or water for industrial use  10 solid waste from primary filtration and screenings  2 sludges from water clarification  3 sludges from decarbonation  4 spent activated carbon  5 saturated or spent ion exchange resins  6 sludges from shredding of metal-containing wastes  Wastes from shredding of metal-containing wastes  1 iron and steel waste  10 non-ferrous waste  4 fluff-light fraction and dust other than those mentioned in 19 10 03  6 other fractions other than those mentioned in 19 10 05  Wastes from oil regeneration  6 sludges from on-site effluent treatment other than those mentioned in 19 11 05  Wastes from oil regeneration  6 paper and cardboard  6 paper and cardboard  7 paper and cardboard  8 paper and cardboard  9 plastic and rubber  9 glass  9 wood other than that mentioned in 19 12 06	Table S2.1 Pe	mitted waste types for disposal at a landfill for non-hazardous waste
01     screenings       02     waste from desanding       05     sludges from treatment of urban waste water       09     grease and oil mixture from oil/water separation containing only edible oil and fats       12     sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11       14     sludges from other treatment of industrial waste water other than those mentioned in 19 08 13       wastes from the preparation of water intended for human consumption or water for industrial use       01     solid waste from primary filtration and screenings       02     sludges from water clarification       03     sludges from decarbonation       04     spent activated carbon       05     saturated or spent ion exchange resins       06     sludges from regeneration of ion exchangers       wastes from shredding of metal-containing wastes       01     iron and steel waste       02     non-ferrous waste       04     fluff-light fraction and dust other than those mentioned in 19 10 03       06     other fractions other than those mentioned in 19 10 05       wastes from oil regeneration     wastes from oil regeneration       05     sludges from on-site effluent treatment other than those mentioned in 19 11 05       wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifies       01     <	Waste code	Description
waste from desanding  5 sludges from treatment of urban waste water  6 grease and oil mixture from oil/water separation containing only edible oil and fats  5 sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11  14 sludges from other treatment of industrial waste water other than those mentioned in 19 08 13	19 08	wastes from waste water treatment plants not otherwise specified
sludges from treatment of urban waste water grease and oil mixture from oil/water separation containing only edible oil and fats sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11 sludges from other treatment of industrial waste water other than those mentioned in 19 08 13 wastes from the preparation of water intended for human consumption or water for industrial use solid waste from primary filtration and screenings sludges from water clarification sludges from decarbonation spent activated carbon saturated or spent ion exchange resins sludges from regeneration of ion exchangers wastes from shredding of metal-containing wastes iron and steel waste non-ferrous waste fluff-light fraction and dust other than those mentioned in 19 10 03 other fractions other than those mentioned in 19 10 03 other fractions other than those mentioned in 19 11 05 wastes from oil regeneration sludges from on-site effluent treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specific paper and cardboard ferrous metal non-ferrous metal slussic and rubber plastic and rubber	19 08 01	screenings
grease and oil mixture from oil/water separation containing only edible oil and fats sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11 sludges from their treatment of industrial waste water other than those mentioned in 19 08 13 wastes from the preparation of water intended for human consumption or water for industrial use solid waste from primary filtration and screenings sludges from water clarification sludges from decarbonation spent activated carbon saturated or spent ion exchange resins sludges from regeneration of ion exchangers wastes from shredding of metal-containing wastes iron and steel waste non-ferrous waste fluff-light fraction and dust other than those mentioned in 19 10 03 fluff-light fraction and dust other than those mentioned in 19 10 05 wastes from oil regeneration sludges from on-site effluent treatment other than those mentioned in 19 11 05 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifies paper and cardboard ferrous metal non-ferrous metal plastic and rubber slass glass vood other than that mentioned in 19 12 06	9 08 02	waste from desanding
sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11  sludges from other treatment of industrial waste water other than those mentioned in 19 08 13  wastes from the preparation of water intended for human consumption or water for industrial use  solid waste from primary filtration and screenings  sludges from water clarification  sludges from decarbonation  spent activated carbon  saturated or spent ion exchange resins  sludges from regeneration of ion exchangers  wastes from shredding of metal-containing wastes  iron and steel waste  non-ferrous waste  fluff-light fraction and dust other than those mentioned in 19 10 03  other fractions other than those mentioned in 19 10 05  wastes from oil regeneration  sludges from on-site effluent treatment other than those mentioned in 19 11 05  wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifie  paper and cardboard  ferrous metal  plastic and rubber  sludges  yasses  wood other than that mentioned in 19 12 06	9 08 05	sludges from treatment of urban waste water
sludges from other treatment of industrial waste water other than those mentioned in 19 08 13  wastes from the preparation of water intended for human consumption or water for industrial use  solid waste from primary filtration and screenings  ludges from water clarification  sludges from water clarification  spent activated carbon  saturated or spent ion exchange resins  sludges from regeneration of ion exchangers  wastes from shredding of metal-containing wastes  iron and steel waste  non-ferrous waste  fluff-light fraction and dust other than those mentioned in 19 10 03  other fractions other than those mentioned in 19 10 05  wastes from oil regeneration  sludges from on-site effluent treatment other than those mentioned in 19 11 05  wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifie  paper and cardboard  paper and cardboard  plastic and rubber  slass  wood other than that mentioned in 19 12 06	9 08 09	grease and oil mixture from oil/water separation containing only edible oil and fats
wastes from the preparation of water intended for human consumption or water for industrial use  1 solid waste from primary filtration and screenings  2 sludges from water clarification  3 sludges from decarbonation  4 spent activated carbon  5 saturated or spent ion exchange resins  6 sludges from shredding of metal-containing wastes  10 iron and steel waste  2 non-ferrous waste  4 fluff-light fraction and dust other than those mentioned in 19 10 03  5 other fractions other than those mentioned in 19 10 05  2 wastes from oil regeneration  6 sludges from on-site effluent treatment other than those mentioned in 19 11 05  2 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specification on-ferrous metal  4 plastic and rubber  5 glass  6 wood other than that mentioned in 19 12 06	9 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
solid waste from primary filtration and screenings sludges from water clarification sludges from decarbonation spent activated carbon saturated or spent ion exchange resins sludges from regeneration of ion exchangers wastes from shredding of metal-containing wastes iron and steel waste fluff-light fraction and dust other than those mentioned in 19 10 03 other fractions other than those mentioned in 19 10 05 wastes from oil regeneration sludges from on-site effluent treatment other than those mentioned in 19 11 05 wastes from on-site effluent treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specification on-ferrous metal paper and cardboard ferrous metal slass non-ferrous metal slass vood other than that mentioned in 19 12 06	08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
sludges from water clarification sludges from decarbonation spent activated carbon saturated or spent ion exchange resins sludges from regeneration of ion exchangers wastes from shredding of metal-containing wastes  iron and steel waste non-ferrous waste fluff-light fraction and dust other than those mentioned in 19 10 03 other fractions other than those mentioned in 19 10 05 wastes from oil regeneration sludges from on-site effluent treatment other than those mentioned in 19 11 05 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specification on-ferrous metal ferrous metal non-ferrous metal sludges from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specification on-ferrous metal sludges from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specification on-ferrous metal sludges from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specification on-ferrous metal sludges from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specification on-ferrous metal sludges from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specification on-ferrous metal	9 09	wastes from the preparation of water intended for human consumption or water for industrial use
sludges from decarbonation spent activated carbon saturated or spent ion exchange resins sludges from regeneration of ion exchangers wastes from shredding of metal-containing wastes iron and steel waste non-ferrous waste fluff-light fraction and dust other than those mentioned in 19 10 03 other fractions other than those mentioned in 19 10 05 wastes from oil regeneration sludges from on-site effluent treatment other than those mentioned in 19 11 05 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifie paper and cardboard ferrous metal non-ferrous metal plastic and rubber glass wood other than that mentioned in 19 12 06	9 09 01	solid waste from primary filtration and screenings
spent activated carbon saturated or spent ion exchange resins sludges from regeneration of ion exchangers wastes from shredding of metal-containing wastes iron and steel waste non-ferrous waste fluff-light fraction and dust other than those mentioned in 19 10 03 other fractions other than those mentioned in 19 10 05 wastes from oil regeneration sludges from on-site effluent treatment other than those mentioned in 19 11 05 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specific paper and cardboard ferrous metal non-ferrous metal plastic and rubber glass wood other than that mentioned in 19 12 06	9 09 02	sludges from water clarification
saturated or spent ion exchange resins  sludges from regeneration of ion exchangers  wastes from shredding of metal-containing wastes  iron and steel waste  non-ferrous waste  fluff-light fraction and dust other than those mentioned in 19 10 03  other fractions other than those mentioned in 19 10 05  wastes from oil regeneration  sludges from on-site effluent treatment other than those mentioned in 19 11 05  wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifie  paper and cardboard  ferrous metal  non-ferrous metal  plastic and rubber  glass  wood other than that mentioned in 19 12 06	9 09 03	sludges from decarbonation
wastes from shredding of metal-containing wastes  iron and steel waste  non-ferrous waste  fluff-light fraction and dust other than those mentioned in 19 10 03  other fractions other than those mentioned in 19 10 05  wastes from oil regeneration  sludges from on-site effluent treatment other than those mentioned in 19 11 05  wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifie  paper and cardboard  ferrous metal  non-ferrous metal  plastic and rubber  glass  wood other than that mentioned in 19 12 06	09 04	spent activated carbon
wastes from shredding of metal-containing wastes  1 iron and steel waste 1 non-ferrous waste 2 non-ferrous waste 3 fluff-light fraction and dust other than those mentioned in 19 10 03 4 other fractions other than those mentioned in 19 10 05	09 05	saturated or spent ion exchange resins
or iron and steel waste non-ferrous waste fluff-light fraction and dust other than those mentioned in 19 10 03 other fractions other than those mentioned in 19 10 05  wastes from oil regeneration sludges from on-site effluent treatment other than those mentioned in 19 11 05  wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifies paper and cardboard ferrous metal non-ferrous metal plastic and rubber glass wood other than that mentioned in 19 12 06	09 06	sludges from regeneration of ion exchangers
102 non-ferrous waste 104 fluff-light fraction and dust other than those mentioned in 19 10 03 105 other fractions other than those mentioned in 19 10 05 106 wastes from oil regeneration 106 sludges from on-site effluent treatment other than those mentioned in 19 11 05 107 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified paper and cardboard 108 ferrous metal 109 non-ferrous metal 100 plastic and rubber 100 glass 100 wood other than that mentioned in 19 12 06	10	wastes from shredding of metal-containing wastes
fluff-light fraction and dust other than those mentioned in 19 10 03 other fractions other than those mentioned in 19 10 05 wastes from oil regeneration osludges from on-site effluent treatment other than those mentioned in 19 11 05 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specific paper and cardboard offerrous metal	10 01	iron and steel waste
other fractions other than those mentioned in 19 10 05  wastes from oil regeneration  sludges from on-site effluent treatment other than those mentioned in 19 11 05  wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifies paper and cardboard  ferrous metal  non-ferrous metal  plastic and rubber  glass  wood other than that mentioned in 19 12 06	10 02	non-ferrous waste
wastes from oil regeneration  sludges from on-site effluent treatment other than those mentioned in 19 11 05  wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specific paper and cardboard  ferrous metal  non-ferrous metal  plastic and rubber  glass  wood other than that mentioned in 19 12 06	10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
sludges from on-site effluent treatment other than those mentioned in 19 11 05  wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specifies paper and cardboard  ferrous metal  non-ferrous metal  plastic and rubber  glass  wood other than that mentioned in 19 12 06	0 06	other fractions other than those mentioned in 19 10 05
wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified paper and cardboard  paper and cardboard  ferrous metal  non-ferrous metal  plastic and rubber  glass  wood other than that mentioned in 19 12 06	11	wastes from oil regeneration
01paper and cardboard02ferrous metal03non-ferrous metal04plastic and rubber05glass07wood other than that mentioned in 19 12 06	11 06	sludges from on-site effluent treatment other than those mentioned in 19 11 05
ferrous metal 03 non-ferrous metal 04 plastic and rubber 05 glass 07 wood other than that mentioned in 19 12 06	12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
03non-ferrous metal04plastic and rubber05glass07wood other than that mentioned in 19 12 06	12 01	paper and cardboard
04plastic and rubber05glass07wood other than that mentioned in 19 12 06	12 02	ferrous metal
05 glass 07 wood other than that mentioned in 19 12 06	2 03	non-ferrous metal
07 wood other than that mentioned in 19 12 06	12 04	plastic and rubber
	12 05	glass
08 textiles	12 07	wood other than that mentioned in 19 12 06
	12 08	textiles

Waste code 19 12 09 r 19 12 10 c 20 r 2	mitted waste types for disposal at a landfill for non-hazardous waste  Description  minerals (for example sand, stones)  combustible waste (refuse derived fuel)  other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11  MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY  COLLECTED FRACTIONS  separately collected fractions (except 15 01)
19 12 10 co	combustible waste (refuse derived fuel) other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
19 12 12 C	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 M	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
	COLLECTED FRACTIONS
20.01	separately collected fractions (except 15 01)
2001 8	,
20 01 01 p	paper and cardboard
20 01 02 g	glass
20 01 08 b	biodegradable kitchen and canteen waste
20 01 10 c	clothes
20 01 11 t	textiles
20 01 25 e	edible oil and fat
20 01 28 p	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 30 c	detergents other than those mentioned in 20 01 29
20 01 36 c	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38 v	wood other than that mentioned in 20 01 37
20 01 39 p	plastics
20 01 40 r	metals
20 01 41 v	wastes from chimney sweeping
r	Other fractions not otherwise specified (comprising only of non-clinical human and animal offensive/hygiene waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is not subject to special requirements in order to prevent infection.
20 02	garden and park wastes (including cemetery waste)
20 02 01 b	biodegradable waste
20 02 02 s	soil and stones
20 02 03 c	other non-biodegradable wastes
20 03	other municipal wastes
20 03 01 r	mixed municipal waste
20 03 02 v	waste from markets
20 03 03 s	street-cleaning residues

Table S2.1 Pe	Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste					
Waste code	Description					
20 03 04	septic tank sludge					
20 03 06	waste from sewage cleaning					
20 03 07	bulky waste					

Table S2.2 Po	ermitted waste types for disposal in the asbestos cells
Waste code	Description
06	Wastes from Inorganic Chemical Processes
06 13	wastes from inorganic chemical processes not otherwise specified
06 13 04*	wastes from asbestos processing
10	Wastes from Thermal Processes
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 09*	wastes from asbestos-cement manufacture containing asbestos
16	Wastes not otherwise specified in the list
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 11*	brake pads containing asbestos
16 02	wastes from electrical and electronic equipment
16 02 12*	discarded equipment containing free asbestos
17	Construction and Demolition Wastes (including excavated soil from contaminated sites)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03*	soil and stones containing dangerous substances (asbestos)
17 06	insulation materials and asbestos-containing construction materials
17 06 01*	insulation materials containing asbestos
17 06 05*	construction materials containing asbestos

Table S2.2 De	rmitted waste types accepted for restoration
Waste code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 01	wastes from mineral excavation
01 01 01	wastes from mineral metalliferous excavation NOTE1
01 01 02	wastes from mineral non-metalliferous excavation NOTE1
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
10	WASTES FROM THERMAL PROCESSES
10 12	wastes from manufacture of ceramic goods, bricks, tiles and construction products
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing) NOTE1
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 01	concrete, bricks, tiles and ceramics
17 01 01	concrete NOTE1
17 01 02	bricks NOTE1
17 01 03	tiles and ceramics NOTE1
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06 NOTE1
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
17 09	other construction and demolition wastes
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 NOTE1
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 05	wastes from aerobic treatment of solid wastes
19 05 03	off-specification compost
19 08	wastes from waste water treatment plants not otherwise specified
19 08 05	sludges from treatment of urban waste water NOTE1
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 09	minerals (for example sand, stones)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 NOTE1

Table S2.3 Pe	Table S2.3 Permitted waste types accepted for restoration						
Waste code	Description						
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS						
20 02	garden and park wastes (including cemetery waste)						
20 02 02	soil and stones						

**NOTE1**: To be accepted only in accordance with a restoration plan agreed under IC1.

# Schedule 3 – Emissions and monitoring

Monitoring point reference/ Description - as shown on Drawing ESID 7a	Limit	Monitoring frequency	Monitoring standard and method
<b>Operational Cells or Phases</b> (Any cells or phases that do no cap agreed in accordance with the existing 'landfill engineering			
Phase 6B: 87903050	1 m above cell base	Monthly	As specified in Environment Agency Guidance TGN02 (February
Phase 7: 87903072			2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with
Phase 8: 87903081, 87903082			the Agency as part of a leachate monitoring plan.
Phase 9: 87903091, 87903093	_		
Phase 10: 87903103			
Phase 12: 87903123			
Phase 13A: 87903133, 87903134			
Phase 13D: 87903140, 87903141			
Phases 11, 13B, 14 (haz cells - no leachate infrastructure)	n/a	n/a	n/a
			II/a
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' co	have a final engineered ca ondition)	р	
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' co.  Phase 1A: 87900068, 87900070	have a final engineered ca		As specified in Environment Agency Guidance TGN02 (February
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' co	have a final engineered ca ondition)	р	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' compared to the control of the contr	have a final engineered ca ondition)	р	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' compase 1A: 87900068, 87900070  Phase 1B: 87900063, 87900064, 87900065, 87900066, 87900067	have a final engineered ca ondition)	р	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' compared in accordance with the existing 'landfill engineering' compar	have a final engineered ca ondition)	р	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' compared in accordance with the existing 'landfill engineering' compar	have a final engineered calondition)  2 m above cell base	р	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' compared in accordance with the existing 'landfill engineering' compar	have a final engineered calondition)  2 m above cell base	р	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' compared in accordance in	have a final engineered calondition)  2 m above cell base	р	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with
Non Operational Cells or Phases (Any cells or phases that agreed in accordance with the existing 'landfill engineering' compared in accordance in	have a final engineered calondition)  2 m above cell base	р	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with

Table S3.2 Point sou	rce emissions to	air – emission limits	s and monitoring re	quirements		
Emission point Ref. & Location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Engine 1 as shown on Drawing	Oxides of Nitrogen	Gas utilisation plant	650 mg/m <sup>3</sup>	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Reference ESID6A	СО	<u> </u>	1500 mg/m <sup>3</sup>	_		
	Total VOCs		1750 mg/m <sup>3</sup>	_		
Flare 1 as shown on Drawing Reference	Oxides of Nitrogen	Landfill gas flare	150 mg/m <sup>3</sup>	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency.
ESID6A	СО		100 mg/m <sup>3</sup>	_		Monitoring is unnecessary where the flare is active for
	Total VOCs		10 mg/m <sup>3</sup>	_		<10% of the year.

Table S3.3 Point source	e emissions to water (other t	han sewer) –	emission limits and	monitoring red	<b>Juirements</b>	
Emission point Ref. & Location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Unnamed tributary	Ammoniacal Nitrogen as N	Landfill	2.4 mg/l	Spot Sample	Quarterly	Monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
(ditch) of the River	BOD	Runoff	10 mg/l			
Itchen OS National Grid Reference SP	Suspended Solids		50 mg/l			
39540 61153 as shown	Oil and Grease		None visible			
on Drawing No.	рН		6 - 8			
ESID6a	Effluent Discharge Volume		260 m <sup>3</sup> /24 hrs			
	Chloride		250 mg/l			
	Nickel		0.05 mg/l			
	Phenol	-	0.03 mg/l			
	Naphthalene	<u></u>	0.0005 mg/l	_		
	Mecoprop	-	0.0005 mg/l	_		

Monitoring point reference	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
As shown on Drawing No. ESID6a dated 01/04/2004					
87900005, 87900009,	Chloride	250 mg/l	Spot sample	Monthly	As specified in Environment Agency
87900012, 87900013,	Ammoniacal nitrogen	2 mg/l		Monthly	Guidance TGN02 'Monitoring of Landfill
87900019, 87900021,	Nickel	0.02 mg/l		Quarterly	Leachate, Groundwater and Surface Water'
87900031, 87900035,	Cadmium	0.0005 mg/l		Quarterly	<ul> <li>(February 2003), Horizontal Guidance Note</li> <li>H1 – Environmental Risk Assessment for</li> </ul>
87900046, 87900047	Mecoprop	0.0005 mg/l		Annually	permits, Annex J3, version 2.1, Dec 2011) or
	Benzene	0.001 mg/l		Annually	such other subsequent guidance as may
87900004, 87900025	Chloride	250 mg/l	_	Monthly	agreed in writing with the Environment
	Ammoniacal nitrogen	2 mg/l		Monthly	Agency.
	Nickel	0.02 mg/l		Quarterly	
	Cadmium	0.0005 mg/l	-	Quarterly	
	Mecoprop	0.026 mg/l	_	Annually	
	Benzene	0.008 mg/l	-	Annually	

Monitoring point Ref. /description  Peripheral landfill gas monitoring boreholes as shown on Drawing	Parameter	Limit (incl. units)	Monitoring frequency	Monitoring standard or method	
ESID8 87900001, 87900002, 87900003, 87900004, 87900005,	Methane	1.0% v/v	Monthly	As per LFTGN03 (Sept 2004) or	
87900001, 87900002, 87900003, 87900004, 87900003, 879000017, 879000018,		No Limit	Worlding	such other subsequent guidance	
87900019, 87900020, 87900021, 87900022, 87900028,	Oxygen			as may be agreed in writing with	
87900031, 87900035, 87900038, 87900039, 87900040, 87900041, 87900042	900035, 87900038, 87900039, 87900040, Atmospheric No Limit Pressure	NO LIMIT		the Environment Agency.	
87900001	Carbon Dioxide	5.0% v/v	<u></u>	Record whether the ground is:	
87900002	_	1.5% v/v		<ul> <li>waterlogged</li> </ul>	
87900003	_	2.2% v/v		• frozen	
87900004	_	4.0% v/v		<ul> <li>snow covered</li> </ul>	
87900005	_	4.8% v/v			
87900006	_	1.5% v/v			
87900007	_	2.2% v/v			
87900016	_	5.3% v/v			
87900017	_	2.8% v/v			
87900018		9.1% v/v	_		
87900019	_	7.5% v/v			
87900020	_	2.1% v/v			
87900021	_	3.0% v/v			
87900022	_	6.0% v/v			
87900028	_	1.5% v/v	<u></u>		
87900031	_	1.5% v/v			
87900035	_	2.1% v/v	<u>—</u>		
87900038	_	1.5% v/v	<u>—</u>		
87900039	_	7.9% v/v	<u>—</u>		
87900040	_	8.9% v/v			
87900041	_	4.9% v/v			
87900042	_	5.1% v/v	<del></del>		

Monitoring Point Ref. /Description	Parameter	Limit	Reference Period	Monitoring Frequency	Monitoring Standard or Method
20 m downwind of asbestos disposal cell	Asbestos Fibres	Where total fibre concentration exceeds 0.01 fibres/ml in any	2 hours	Twice per year or every 5000 tonnes asbestos deposited, whichever is greater	While asbestos is being deposited.  • Pumped sampling  • 1 m above ground level
50 m upwind of asbestos disposal cell	Asbestos Fibres	<ul> <li>sample, that sample must be submitted for electron microscopy to confirm the concentration of asbestos fibres present</li> </ul>	2 hours	During all downwind monitoring	<ul> <li>Flow rate = 4 litres/minute</li> <li>Minimum sample volume = 480 litres</li> </ul>
Site boundary downwind of asbestos disposal cell	Asbestos Fibres		on of asbestos fibres 2 hours Minimum twice per year	Minimum twice per year	<ul> <li>Filter pore size = 1.2   µm     Asbestos fibre limit of detection = 0.001 fibres/ml</li> </ul>
EMP1, EMP2, EMP3, EMP4 as shown on drawing ESID8	Total Inhaleable dust	250 μg/m <sup>3</sup>	8 hour mean	Six monthly	To be agreed with the Environment Agency relevant technical guidance for monitoring particulates

Table S3.7 Landfill gas en	Table S3.7 Landfill gas emissions from capped surfaces – monitoring requirements					
Monitoring point Ref. /description	Parameter	Monitoring frequency	Monitoring Standard or method			
Permanently capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.			
Temporarily capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.			
Whole site	Total methane emission	As agreed with the Environment Agency	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.			
Uncapped areas	Methane concentration	Every 12 months	As agreed with the Environment Agency based on the wording of revised LFTGN 07 or landfill sector guidance or such other subsequent guidance as may be agreed in writing with the Environment Agency.			

Monitoring Point Ref.	Parameter	Monitoring	Monitoring standard or method		
/Description		frequency			
<b>Up gradient</b> MEPP	Water level, electrical conductivity, chloride, ammoniacal nitrogen, pH,	Quarterly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), Horizontal		
	Total alkalinity, magnesium, potassium, total sulphates, calcium, sodium, chromium, copper, iron, lead, nickel,	Annually	<ul> <li>Guidance Note H1 – Environmental Risk Assessment for permits, Annex J, version 2, April 2010), or such other subsequent guidance as may be agree in writing with the Environment Agency.</li> </ul>		
	zinc, manganese		_		
	Hazardous substances	Annually for first six years of operation			
<b>Down or cross gradient</b> MEPP	Water level, electrical conductivity, chloride, ammoniacal nitrogen, pH,	Quarterly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), Horizontal		
	Total alkalinity, magnesium, potassium, total sulphates, calcium, sodium, chromium, copper, iron, lead, nickel, zinc, manganese	Annually	Guidance Note H1 – Environmental Risk Assessment for permits, Annex J, version 2, April 2010), or such other subsequent guidance as may be agreed in writing with the Environment Agency.		
	Hazardous substances detected in leachate	Annually for first six years of operation then every two years	After the initial 6 year monitoring period for hazardous substances, if the results of quarterly or annual monitoring suggest an increase in contamination, the operator shall also undertake a full leachate hazardous substances screen.		
MEPP	Base of monitoring point (mAoD)	Annually			

Monitoring Point Ref.	Parameter	Monitoring	Monitoring standard or method	Other specifications
/Description		frequency		
In waste gas monitoring boreholes or sealed leachate wells or sacrificial gas extraction system	Methane Carbon Dioxide Oxygen	Monthly until gas extraction commences	Calibrated handheld monitoring instrument	For cells or phases which have no active gas extraction.
	Carbon Monoxide Differential pressure Atmospheric pressure			Gas extraction system shall be installed and extraction commenced once monitoring shows onset of methane production in waste at a rate that can be sustainably extracted.
				Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring.
	Hydrogen sulphide	Quarterly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 or other	For cells or phases which have no active gas extraction.
			such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring.
				Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans.
	Hydrogen sulphide Hydrogen	Quarterly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans.

Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Gas collection system at well control valve, manifolds (if applicable) and strategic points on gas system	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Gas flow rate or suction % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Monthly or at such other frequency as may be agreed in writing with the Environment Agency.	Calibrated handheld monitoring instrument	Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.  Where the concentration of carbon monoxide exceeds 100 ppm then further investigation shall be undertake Record the ambient air temperature and whether the ground is:  • waterlogged • frozen • snow covered
Gas collection system at well control valve	Hydrogen sulphide	Six monthly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans
Input to flare or LFG Utilisation Compound	Trace gas	Annually	Trace gas analysis in accordance with LFTGN04 or such other subsequent guidance as may be agreed in writing with the Environment Agency.	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.

Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Input to flare or LFG Utilisation Compound	Methane Carbon Dioxide Oxygen Gas flow rate Suction % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Weekly		Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.
Flare 1 as shown on Drawing Reference ESID6A	Temperature	As per LFTGN05 or such other subsequent guidance as may be agreed in writing with the Environment Agency.	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency.	
Engine 1 as shown on Drawing Reference ESID6A, post turbo	NOx and CO	Quarterly	In accordance with Appendix C of LFTGN08, version 2: 2010 or such other subsequent guidance as may be agreed in writing with the Environment Agency.	Where monitoring using hand-held, electrochemical equipment indicates an exceedence of the emissions standards specified in Table S3.2, these shall be used as action levels and the operator shall investigate the cause and take appropriate measures to reduce emissions.

Table S3.10 Leachate – other mon	itoring requirements			
Monitoring point reference or description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Operational Cells or Phases			At leachate compliance point as listed in table	
(Any cell or phases that do not have a fin	nal engineered cap agreed in accordance with cor	ndition 2.4)	S3.1.	
		Quarterly	As specified in Environment Agency Guidance TGN02 (February 2003) and Horizontal Guidance Note H1 – Environmental Risk Assessment for permits, Annex J3, version 2.1, Dec 2011) with one sampling point per cell/phase or such other	None
MEPP	Hazardous substances	Annually	<ul><li>subsequent guidance as may be agreed in</li><li>writing with the Environment Agency.</li></ul>	None
MEPP	Depth to base (mAoD)	Annually	— witting with the Environment Agency.	None
Non Operational Cells or Phases				
(Any cell or phases that have a final engi	neered cap agreed in accordance with condition 2	2.4)		
MEPP	pH, EC, total alkalinity, ammoniacal nitrogen, chloride, COD, BOD, cadmium, chromium, copper, lead, nickel, iron, arsenic, magnesium, potassium, total sulphates, calcium, sodium, zinc, manganese,	Annually		None
MEPP	Hazardous substances	Once every four years	_	None
MEPP	Depth to base (mAoD)	Annually		None

Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
MEPP	Ammoniacal nitrogen Chloride Suspended Solids Visual Oil and Grease pH electrical conductivity	Monthly	Spot sample	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003) and Horizontal Guidance Note H1 – Environmental Risk Assessment for permits, Annex J3, version 2.1, Dec 2011) or such other subsequent guidance as may be agreed in writing with the Environment Agency.

## **Schedule 4 - Reporting**

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

Parameter	Reporting period *	Period ends
Leachate level	Every 3 months	31 March, 30 June, 30
As specified by schedule 3, table S3.1		September, 31 December
Point source emission to air	Every 12 months	31 December
As specified by schedule 3, table S3.2		
Point source emission to water (other	Every 3 months	31 March, 30 June, 30
than sewer)		September, 31 December
As specified by schedule 3, table S3.3		
Emission to groundwater	Every 3 months	31 March, 30 June, 30
As specified by schedule 3, table S3.4		September, 31 December
Landfill gas in external monitoring	Every 3 months	31 March, 30 June, 30
boreholes		September, 31 December
As specified by schedule 3, table S3.5		
Particulate matter in ambient air.	Every 6 months	30 June, 31 December
As required by schedule 3, table S3.6		
Emission of landfill gas from capped	Every 12 months	31 December
surfaces		
As specified by schedule 3, table S3.7		
Other groundwater monitoring	Every 3 months	31 March, 30 June, 30
As specified by schedule 3, table S3.8		September, 31 December
Other Landfill gas monitoring	Every 3 months	31 March, 30 June, 30 September, 31 December
As specified by schedule 3, table S3.9		September, 31 December
<ul> <li>Trace gas monitoring</li> </ul>	Every 12 months	31 December
Other leachate monitoring	Every 12 months	31 December
As specified by schedule 3, table S3.10		
<ul> <li>Hazardous substances</li> </ul>	Every 12 months	31 December
Other surface water monitoring	Every 12 months	31 December
As specified by schedule 3, table S3.11		
Meteorological data	Every 12 months	31 December
Landfill Directive, annex III, section 2		

<sup>\* -</sup> where the reporting period is 12 months, you may submit this information as part of the 'annual report' required by condition 4.2.2.

Table S4.2 Annual production/treatment	
Leachate:	Cubic metres/year
Disposed of off site;	
Disposed of to any onsite effluent treatment plant;	
Recirculated into the waste mass.	
Accepted from offsite for treatment at any onsite	
effluent treatment plant.	
Landfill gas:	Normalised cubic metres/year
combustion in flares;	
combustion in gas engines;	
Other methods of gas utilisation.	
Average methane content entering the landfill gas	% methane v/v
utilisation or treatment compound (based on the	
annual average of Table S3.10 monitoring)	
Methane generation rate (50%ile from a	m³/hr
representative model)	

Table S4.3 Performance Parameters				
Parameter	Frequency of assessment	Annual total	Unit	
Energy used (including for leachate treatment)	Annually		MWh of electricity or natural gas	

Table S4.4 Reporting F	Forms	
Media/parameter	Reporting Format	Date of Form
Leachate	Form leachate 1 or other reporting format to be agreed in writing with the Environment Agency	Relevant at permit variation
Air	Form Air 1 or other reporting format to be agreed in writing with the Environment Agency	Relevant at permit variation
Controlled water	Form Water 1 or other reporting format to be agreed in writing with the Environment Agency	Relevant at permit variation
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Environment Agency	Relevant at permit variation
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Environment Agency	Relevant at permit variation
Particulate matter	Form Particulate 1 or other reporting format to be agreed in writing with the Environment Agency	Relevant at permit variation
Waste Return	Waste Return Form RATS2E	
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Environment Agency	Relevant at permit variation

### **Schedule 5 - 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	
Name of operator	
Location of Facility	
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) Notification requirements for the breach of a limit					
To be notified within 24 hours of detection unless otherwise specified below					
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					
	I				
Time periods for notification follo	wing detection (	of a breach of a limit			
Parameter	wing detection (	or a breach of a mint	Notification period		
			Troumour portou		
(c) Notification requirements for t	he detection of	any significant advorse on	vironmontal offact		
• • • • • • • • • • • • • • • • • • • •		24 hours of detection	VIIOIIIIeillai eilect		
	e notined within	24 Hours of detection			
Description of where the effect on the environment was detected					
Substances(s) detected  Concentrations of substances					
detected					
Date of monitoring/sampling					
Date of monitoring/sampling					
Part B to be supplied a		practicable			
Any more accurate information on the	he matters for				
notification under Part A.					
Measures taken, or intended to be t					
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.					
, , , , , , , , , , , , , , , , , , , ,		1			
Name*					
Post					
Signature					

Date

<sup>\*</sup> authorised to sign on behalf of the operator

### **Schedule 6 - 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 Environment 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.

"Cell layout drawing" means:

- (a) A drawing or drawings of the proposed new cell that illustrate(s) in sufficient detail:
  - i. the location of the new cell on the site;
  - ii. the proposed level (Above Ordnance Datum) of the base of the excavation;
  - iii. the proposed finished levels of all containment and leachate drainage layers;
  - iv. the positions of leachate management infrastructure; and
  - v. the positions of landfill gas infrastructure (if appropriate).
- (b) A detailed written explanation of any minor design changes from the most recently approved cell that result from the new cell layout. This would include, for example:
  - changes to slope length and gradient within the cell;
  - ii. new leachate or landfill gas infrastructure construction design;
  - iii. slope stability issues such as new basal excavation level; and/or
  - iv. depth of waste.

"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 2010, SI 2010 No. 675. Words and expressions used in this permit which are also used in those Regulations have the same meanings as in those Regulations.

"emissions of substances not controlled by emission limits" means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

"exceeded" means that a value is above a permitted limit, or where a range of values or a minimum value is set as a permitted limit it means a value outside that range or below the minimum value, whichever is applicable.

"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.

"Hazardous substances" as defined by the Environmental Permitting (England and Wales) Regulations 2010, SI 2010 No. 675, schedule 22 and listed in our Hydrogeological risk assessment guidance, annex J to our H1 risk assessment guidance.

"inert waste" means waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.

"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;
- lining within the installation.

within the site.

"LFTGN 05" means Environment Agency Guidance for monitoring enclosed landfill gas flares.

"LFTGN 07" means Environment Agency Guidance on monitoring landfill gas surface emissions.

"LFTGN 08" means Environment Agency Guidance for monitoring landfill gas engines.

"Liquids" means any liquid other than leachate within the engineered landfill containment system.

"Medicinal product" means any medicine licensed by the Medicines and Healthcare products Regulatory Agency (MHRA) or their predecessors under the Medicines Act 1968, section 130.

"MEPP" Monitoring and extraction point plan, required by condition 4.2.2(h) to specify extraction points and routine monitoring locations.

"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 affect the agreed design criteria, specification or performance in a way that has a negative effect.

"Pests" means Birds, Vermin and Insects.

"Previous year" means the 12 month period preceding the month the annual report is submitted in.

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

"Relevant waste acceptance criteria" means the waste acceptance criteria and the associated sampling and test methods specified in the Council Decision Annex (2003/33/EC, European Council of 19 December 2002).

"Relevant waste acceptance procedures" means the procedure for the acceptance of waste at landfills and the associated sampling and test methods specified in the Council Decision Annex (2003/33/EC, European Council of 19 December 2002).

"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 EP 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 EP Regulations.

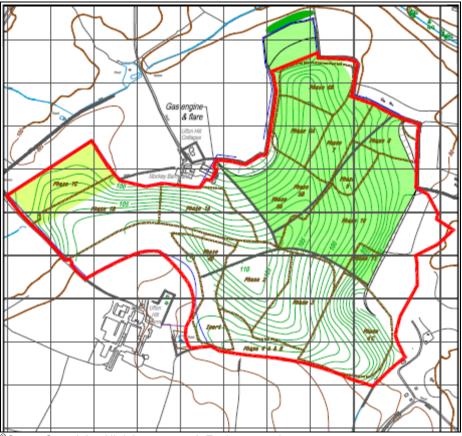
"Sustainably extracted" means where suction can be applied to the extraction wells such that a flow rate of landfill gas, with a methane content capable of either being combusted, or treated by bio-oxidation, can be extracted without increasing the risk of air ingress to the waste or inducing aerobic degradation within the waste.

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

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.

## Schedule 7 – Site Plan



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END OF PERMIT.