



Variation notice with introductory note

Environmental Permitting (England & Wales) Regulations 2007

Lyme & Wood Pits Integrated Waste
Management Facility

Cory Environmental (Central) Ltd
Land off Vista Road
Haydock
St Helens
Merseyside
WA11 0RN

Variation notice number
EA/EPR/BX7886IJ/V002

Permit number
EPR/BX7886IJ

**Lyme & Wood Pits Integrated Waste
Management Facility
Permit Number EPR/BX7886IJ
Variation Notice Number
EA/EPR/BX7886IJ/V002**

Introductory note

This introductory note does not form a part of the permit

The following notice, which is issued pursuant to regulation 20 and Part 1 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations S.I.2007 No. 3538 (the Regulations), gives notice of the variation of an environmental permit to operate a regulated facility.

The effect of this variation is to delete all the existing conditions attached to the Permit and replace these with an entire new set of conditions. The new conditions are in line with the new Permit Template for landfill (version 5) which has been developed in consultation with the waste management industry having regard to the legal requirements of the Regulations and other relevant legislation.

This variation does constitute a substantial change because the application to add two additional landfill gas engines in itself meets the thresholds set out in Part 2 of Schedule 1 of the EPR.

The Schedules have been amended to reflect the potential impact of the site as a result of:

- Changes to the permit template since the original permit issue;
- further monitoring results having being made available which has enabled a more accurate assessment of emissions to be made;
- agreement of the conditions, following detailed consultation with the Operator; and
- compliance with improvement conditions (2004 PPC Permit).

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

Status Log of the permit

| Detail | Date | Response Date |
|--|--|---|
| Application BL7523. | Received 21/12/01 | - |
| Response to request for information. | Request dated 15/04/02 | Responses dated 02/05/02, 07/05/02, 16/05/02, 29/05/02 and 25/06/02 and 26/06/02. |
| Revised documents LWP2/1 LWP2/2, LWP2/11, LWP2/16 and LWP2/17 submitted. | Received 05/07/02 | Incorporating revisions due to Schedule 4 Notice for clarity. |
| Revised document LWP2/1 submitted. | Received 29/07/02 | - |
| Permit BL 7523. | Determined 05/08/02 | - |
| Application to vary permit. | Validated 13 th August 2003 | To vary the permit. Schemes 1 to 4. |
| Revised documents. | Dated 10 th December 2003 | Incorporating response to the schedule 7 notice dated 17 th November 2003 and incorporating information dated 24 th October 2003. |
| Permit varied. | 30 January 2004 | Schemes 1 and 2 only. Consolidated permit issued. |
| Application to transfer permit to Cory Environmental (Central) Limited BX7886 (defunct number BX7100). | Received 24 th March 2004 | To transfer permit to Cory Environmental (Central) Limited. |
| Environment Agency initiated standard variation BX7878. | 14 th April 2004 at 16:00 hours | Minor amendment of several conditions. |
| Transfer to Cory Environmental (Central) Limited. | 14 th April 2004 at 17:00 hours | New permit number BX7886IJ. |
| Application to vary the permit (EPR/ BX7886IJ/V002) | Duly Made 1 st May 2009 | To install Siloxane Pre-treatment system including low capacity flare and additional Landfill Gas Engines. |
| Permit Varied Variation Notice Number EPR/BX7886IJ/V002. | 03/11/09 | Consolidated Permit Issued. |

Superseded Licences/Authorisations/Consents relating to this installation

| Holder | Reference Number | Date of Issue |
|---|-------------------------|----------------------|
| H J Banks & Co Ltd (Consent to Discharge to Controlled Waters). | 016993124 | 24/05/96 |
| H J Banks & Co Ltd (Consent to Discharge to Controlled Waters). | 016993125 | 24/05/96 |

End of Introductory Note.

Notice of variation

Environmental Permitting
(England and Wales) Regulations 2007

Permit number

EPR/BX7886IJ

Variation Notice Number

EA/EPR/BX7886IJ/V002

The Environment Agency in exercise of its powers under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2007 (SI 2007 No 3538) varies the permit as set out below.

Cory Environmental (Central) Ltd ("the Operator"),

whose Registered Office is

**2 COLDBATH SQUARE
LONDON
EC1R 5HL**

Company registration number 02773558

to operate an installation at

**Lyme and Wood Pits Integrated Waste Management Facility
Land off Vista Rd
Haydock
St Helens
Merseyside
WA11 0RN**

and that permit is varied to the extent set out in Schedules 1 to 3 of this notice.

The notice shall take effect from 03/11/2009.

| Name | Date |
|---|-----------------|
|  | 3 November 2009 |

Anne Nightingale

Authorised on behalf of the Agency.

Schedule 1 TO EA/EPR/BX7886IJ/V002– conditions to be deleted

All the conditions and schedules in permit BX7886IJ (formerly BX 7878; formerly BL 7523) are deleted.

Schedule 2 TO EA/EPR/BX7886IJ/V002– conditions to be amended

No conditions in permit BX7886IJ (formerly BX 7878; formerly BL 7523) are amended.

Schedule 3 TO EA/EPR/BX7886IJ/V002– conditions to be added

The following conditions are added to the permit BX7886IJ (formerly BX 7878; formerly BL 7523).

Conditions

1. Management

1.1 General management

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

1.2 Accidents that may cause pollution

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

1.3 Finance

- 1.3.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Agency set out in the documents referenced LWP2/15 and 01/209/L&WfinProv-1 IPPC dated June 02, shall be maintained by the Operator throughout the subsistence of this Permit and the operator shall produce evidence of such provision whenever required by the Agency.
- 1.3.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover the cost of operating the landfill, as far as possible the cost of the financial provision required by condition 1.3.1 and the estimated costs for the closure and aftercare of the landfill.

1.4 Energy efficiency

1.4.1 The operator shall:

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

1.5 Site security

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

2. Operations

2.1 Permitted activities

2.1.1 The operator is authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

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

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1 table S1.2, unless otherwise agreed in writing by the Agency.

2.3.2 In addition to the numerical emission limits given in Table S4.2 for engine, the following apply:

- Discharges must be vertically upwards and unimpeded by cowls or any other fixture on top of the stack;
- Sampling sockets must be fitted to all new installations;
- Crankcase emissions must be managed to minimise their release to the environment.

2.3.3 The Operator shall submit for approval annually revised List II compliance and assessment limits for groundwater together with data interpretation to establish and predict trends to justify the annually specified compliance and assessment limits.

2.4 Off-site conditions

There are no conditions in this permit to which regulation 15 of the EP Regulations apply.

2.5 Improvement programme

- 2.5.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Agency.
- 2.5.2 Except in the case of an improvement which consists only of a submission to the Agency, the operator shall notify the Agency within 14 days of completion of each improvement.

2.6 Pre-operational conditions

- 2.6.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

2.7 Engineering

- 2.7.1 No construction of any new cell shall commence until the operator has submitted construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.
- 2.7.2 The construction of a new cell shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Agency.
- 2.7.3 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.7.4 No construction of landfill Infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.
- 2.7.5 The construction of the landfill Infrastructure shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Agency.
- 2.7.6 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill Infrastructure.
- 2.7.7 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.7.4 and 2.7.5 do not apply and the relevant landfill Infrastructure may be constructed, provided that the construction proposals are submitted to the Agency as soon as practicable.
- 2.7.8 For the purposes of conditions 2.7.1, 2.7.3 and 2.7.4, the Agency shall be deemed to be satisfied where it has not, within the period of 4 weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
- (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.

2.8 Waste acceptance

2.8.1 Wastes shall only be accepted for disposal if:

- (a) they are listed in schedule 3, and
- (b) they are non-hazardous waste, and
- (c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm), and
- (d) they are not shredded used tyres, and
- (e) they are not liquid waste (including waste waters but excluding sludge), and
- (f) they are not chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown, and
- (g) all the relevant waste acceptance procedures have been completed, and
- (h) they fulfil the relevant waste acceptance criteria, and
- (i) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
- (j) they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment, and
- (k) where they are wastes with a code beginning with 07 05 and 16 03 they shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture.

2.8.2 The operator shall visually inspect:

- (a) without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill; and
- (b) waste at the point of deposit;

and shall satisfy itself that it conforms to the basic characterisation documentation submitted by the holder.

2.8.3 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.

2.8.4 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.

2.8.5 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.

2.8.6 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.

2.9 Leachate levels

2.9.1 The limits for the level of leachate listed in schedule 4 table S4.1 shall not be exceeded.

2.10 Closure, aftercare and decommissioning

2.10.1 The operator shall maintain and operate the activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.

2.10.2 The operator shall maintain a site closure plan which demonstrates how the activities can be decommissioned to avoid any pollution risk and return the site of operation to a satisfactory state.

2.10.3 The operator shall carry out and record a review of the site closure plan at least every 4 years.

2.10.4 The site closure plan (or relevant part thereof) shall be implemented on final cessation or decommissioning of the activities or part thereof.

3. Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 4 tables S4.2, S4.3 and S4.4.

3.1.2 The limits given in that schedule shall not be exceeded, save that compliance with an emission limit shall include incorporation of the uncertainty allowance stated in Agency guidance LFTGN 05 and LFTGN 08.

3.2 Emissions to groundwater

3.2.1 There shall be no emission from the activities into groundwater of any substance in List I (as defined by the Groundwater Regulations) contrary to those regulations.

3.2.2 There shall be no emission from the activities into groundwater of any substance in List II (as defined in the Groundwater Regulations) so as to cause pollution (as defined in those regulations).

3.2.3 The limits for emissions into groundwater for the parameter(s) and monitoring point(s) set out in schedule 4 Table S4.5 shall not be exceeded.

3.2.4 The operator shall submit to the Agency a review of the Hydrogeological Risk Assessment:

- (a) between 9 and 6 months prior to the fourth anniversary of the granting of the permit, and
- (b) between 9 and 6 months prior to every subsequent 4 years after the fourth anniversary of the granting of the permit.

3.3 Fugitive emissions of substances

- 3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 Litter or mud arising from the activities shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures have been used to prevent or where that is not practicable to minimise, the litter and mud.
- 3.3.3 Litter or mud arising from the activities shall be cleared from affected areas outside the site as soon as practicable.
- 3.3.4 All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.
- 3.3.5 The limits for landfill gas arising from the installation set out in schedule 4, tables S4.6 and S4.7, shall not be exceeded.
- 3.3.6 The limits for particulate matter arising from the installation set out in schedule 4, table S4.12, shall not be exceeded.

3.4 Odour

- 3.4.1 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 Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in an approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.5 Noise and vibration

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

3.6 Monitoring

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring and any other actions specified in the following tables in schedule 4 to this permit:
 - (a) Leachate specified in tables S4.1 and S4.9;
 - (b) Point source emissions specified in tables S4.2, S4.3 and S4.4;
 - (c) Groundwater specified in tables S4.5 and S4.11;
 - (d) Landfill gas specified in tables S4.6, S4.7 and S4.8;
 - (e) Surface water specified in table S4.10

3.6.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.6.3 A topographical survey of the site referenced to ordnance datum shall be carried out:

- (a) annually, and
- (b) prior to the disposal of waste in any new cell or new development area of the landfill, and
- (c) following closure of the landfill or part of the landfill.

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

4. Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) the results of groundwater monitoring;
 - (ii) the Site Protection and Monitoring Programme;
 - (iii) sub-surface landfill gas monitoring;
 - (iv) leachate levels, quality and quantities;
 - (v) landfill gas generation and collection;
 - (vi) waste types and quantities;
 - (vii) the specification and as built drawings of the basal, sidewall and capping engineering systems.

4.1.2 Any records required to be made by this permit shall be supplied to the Agency within 14 days where the records have been requested in writing by the Agency.

4.1.3 All records plans and the management system required to be maintained held by this permit shall be held on site and shall be available for inspection by the Agency at any reasonable time.

4.2 Reporting

- 4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this installation and any agreed amendments thereto;
 - (b) where the operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
 - (c) the energy consumed at the site, reported in the format set out in schedule 5 table S5.3;
 - (d) the annual production/treatment set out in schedule 5 table S5.2;
 - (e) details of any contamination or decontamination of the site which has occurred;
 - (f) the topographical surveys required by condition 3.6.3 other than those submitted as part of a CQA validation report;
 - (g) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
 - (h) an assessment of the settlement behavior of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;
 - (i) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey.
- 4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 5 Table S5.1;
 - (b) for the reporting periods specified in schedule 5 Table S5.1 and using the forms specified in schedule 5 Table S5.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.3 A summary report of the waste types and quantities accepted and removed from the site shall be made for each quarter. It shall be submitted to the Agency within one month of the end of the quarter and shall be in the format required by the Agency.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency.

4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit;
 - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.
- 4.3.3 Prior written notification shall be given to the Agency of the following events and in the specified timescales:
- (a) as soon as practicable prior to the permanent cessation of any of the permitted activities;
 - (b) as soon as practicable prior to the cessation of the landfill disposal activities, for a period likely to exceed 1 month; and
 - (c) at least 7 days prior to the resumption of the landfill disposal activities after a cessation notified under (b) above.
- 4.3.4 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan in respect of any activities other than the disposal of waste in the landfill.
- 4.3.5 Where the Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.6 The Agency shall be notified within 7 days of any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence.
- 4.3.7 The Agency shall be provided, within 14 days of the operator or any relevant person being convicted of a relevant offence, (unless such information has already been notified to the Agency), with details of the nature of the offence, the place and date of conviction, and the sentence imposed.
- 4.3.8 The Agency shall be notified within 14 days of the operator and/or any relevant person lodging an appeal against a conviction for any relevant offence and of the outcome when the appeal is decided.
- 4.3.9 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- (a) any change in the operator's trading name, registered name or registered office address;
 - (b) any change to particulars of the operator's ultimate holding company (including details of an ultimate holding company where an operator has become a subsidiary); and
 - (c) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

4.4 Interpretation

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

Schedule 1 - Operations

Table S1.1 Activities

| Activity listed in Schedule 1 of the EP Regulations | Description of specified activity | Limits of specified activity |
|--|--|--|
| Section 5.2 Part A(1)(a), The disposal of waste in a landfill. | Landfill for non-hazardous waste landfill classification under the Landfill Directive 1999. | Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.8, as an integral part of landfilling. |
| Section 5.3, Part A(1)(c)(i), Biological treatment. | Storage and treatment of non-hazardous liquid wastes in a facility with a capacity of >50 tonnes/ day. | Leachate arising from the landfill and other permitted liquid wastes listed in schedule 3. |
| Section 1.1, Part A(1)(b)(iii), Burning of waste as a fuel. | Utilisation of landfill gas for energy recovery in an appliance with a rated thermal input of ≥ 3 MW, but <50 MW. | Landfill gas arising from the landfill. |
| Directly Associated Activity | | |
| Landfill leachate management. | Collection, handling, storage and discharge of leachate. | Storage, handling and recirculation or disposal by tanker or to sewer up to point of discharge of leachate arising from the Permitted landfill. |
| Landfill gas management. | Control of landfill gas. | Collection and Flaring of landfill gas from the Permitted landfill. |
| Landfill gas pre-treatment. | Siloxane Removal system. | Within the gas compound only. |
| Water discharges to controlled waters. | Storage, handling and discharge of site drainage from installation, surrounding land and restored areas of landfill. | From surface management systems to point of entry to controlled waters or by tanker from the Permitted landfill. |
| R5 Recycling/reclamation of other inorganic materials. | Recovery of soils and hardcore from waste arriving at the site for onsite construction and restoration purposes. | Within the footprint of the landfill earthworks. |

Table S1.2 Operating techniques

| Description | Parts | Date Received |
|---|---|---------------|
| EMS Management Structure | and Sections 10 of Lyme and Wood Pits Operational Plan v2.0 October 2009 | 21/10/09 |
| Waste Acceptance | Section 2 of Lyme and Wood Pits Operational Plan v2.0 October 2009 | 21/10/09 |
| Leachate Management | Section 4 of Lyme and Wood Pits Operational Plan v2.0 October 2009 | 21/10/09 |
| Engineered containment systems | Section 3 of Lyme and Wood Pits Operational Plan v2.0 October 2009 | 21/10/09 |
| Variation Application – Landfill Gas | Section 3 of EPR Variation Application and Supporting Information to EPR Form C dated April 2009 produced by Entec UK Ltd | 06/04/09 |
| Surface Water Management | Section 5 of Lyme and Wood Pits Operational Plan v2.0 October 2009 | 21/10/09 |
| Control of emissions of dusts and aerosols to air | Section 8.4 of Lyme and Wood Pits Operational Plan v2.0 October 2009 | 21/10/09 |
| Odour Management | Section 8.1 and Appendix 11 of Lyme and Wood Pits Operational Plan v2.0 October 2009 | 21/12/01 |
| Control of Birds, pests vermin & Insects | Section 8.3 of Lyme and Wood Pits Operational Plan v2.0 October 2009 | 21/12/01 |
| Control of windblown materials including litter | Section 8.5 of Lyme and Wood Pits Operational Plan v2.0 October 2009 | 21/12/01 |

Table S1.3 Improvement programme

| Reference | Requirement | Date |
|-----------|---|------------|
| IC1 | Review the acceptability of the condensate collection system located in the Siloxane Compound as indicated on Figure 1.3 of EPR Variation Application and Supporting Information to EPR Form C dated April 2009 produced by Entec UK Ltd. The review shall consider whether the condensate collection system complies with BAT. Should the review indicate that improvements are required to comply with BAT, then the report shall propose a reasonable timescale to implement the improvements which must be agreed in writing with the Agency. | 31/03/2010 |
| | The notification requirements of condition 2.5.1 shall be deemed to have been complied with on submission of the review. | |

| | | |
|-----|---|------------|
| IC2 | <p>The operator shall provide a report to the Agency verifying that the ELV's used to model Emissions and Impacts in the Substantial Variation Application (2009) were appropriate. The report shall demonstrate this by using actual emission data from the emission points A6, A7 and A8. The report must contain a human health impact assessment using actual emissions data.</p> <p>The report shall propose a timetable for ongoing assessment to be incorporated into the site's monitoring programme.</p> <p>Should the ELV's used in the H1 assessment require modification the model shall be re-run and details provided to the Agency.</p> <p>The notification requirements of condition 2.5.1 shall be deemed to have been complied with on submission of the report.</p> | 31/07/2010 |
| IC3 | <p>The operator shall submit a written report for approval on landfill gas monitoring requirements for external landfill gas monitoring boreholes detailed in table S4.6. The report shall include:</p> <ol style="list-style-type: none"> 1. An investigation into the source of elevated Carbon Dioxide concentrations detected in perimeter landfill gas monitoring boreholes; 2. If appropriate, recommendations for improvements to the landfill gas management system and modifications to the landfill gas monitoring regime at the installation; 3. Propose trigger levels for Carbon Dioxide, or other alternative measures for all external landfill gas monitoring boreholes. Proposed trigger levels (or other alternative measures) shall be based on pre-filling monitoring data where available and any other relevant monitoring data; 4. Timescales for the implementation of any recommendations made or targets set. | 30/04/2010 |
| IC4 | <p>The operator shall submit a written report that details control and trigger levels for all external Groundwater Monitoring points.</p> <p>The control and trigger levels shall only be implemented upon agreement from the Agency.</p> | 31/01/2010 |
| IC5 | <p>The operator shall provide details of the site's current financial provision arrangements to be agreed in writing with the Agency. This information shall be included in Appendix 21 of the site's operational plan.</p> | 31/03/2010 |

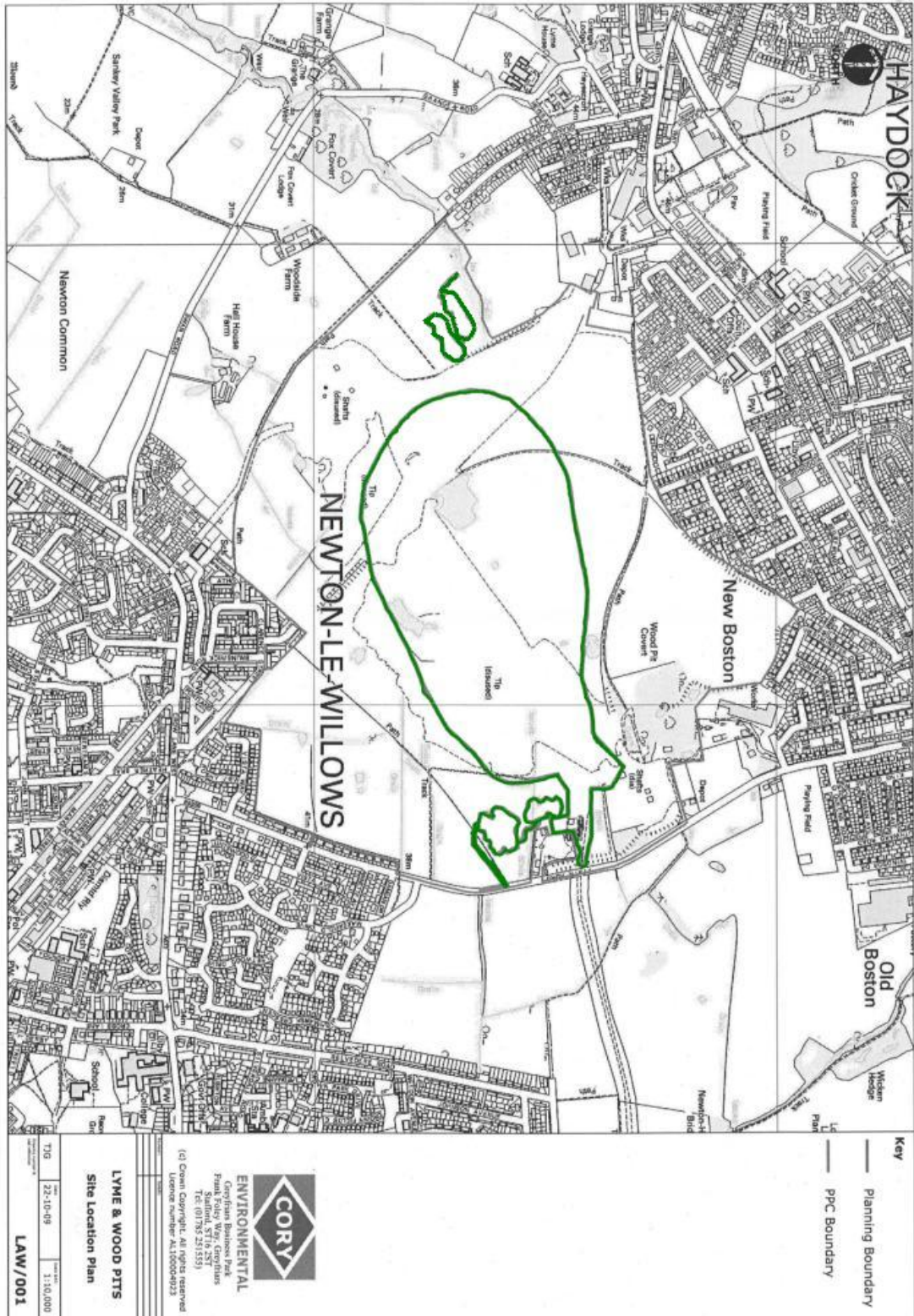
Table S1.4 Pre-operational measures for future development

| Reference | Operation | Pre-operational Measures |
|------------------|---|--|
| 1 | Prior to the operation of the Landfill Gas Engines (A6 and A7). | Prior to the operation of the additional Landfill Gas Engines allowed by the Variation Application Duly Made on 01 May 2009 an 'as built' drawing shall be submitted to the Environment Agency detailing the landfill gas infrastructure in the Gas compound including but not limited to all emission points to air (A1-7) from the installation. |

Table S1.5 Annual waste input limits

| Category | Limit Tonnes/ Year |
|----------------------------|---------------------------|
| Non-hazardous waste | 900 000 |
| Inert waste | 900 000 |
| Total | 900 000 |

Schedule 2 - Site plan



Schedule 3 - List of permitted wastes

| Table S3.1 Non-hazardous waste for landfill | |
|--|---|
| 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 |
| 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 02 04 | sludges from on-site effluent treatment |
| 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 |

| Table S3.1 Non-hazardous waste for landfill | |
|--|---|
| Waste code | Description |
| 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 |
| 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 |
| 03 03 02 | green liquor sludge (from recovery of cooking liquor) |
| 03 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 |
| 03 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 |
| 04 | 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 |
| 04 02 09 | wastes from composite materials (impregnated textile, elastomer, plastomer) |
| 04 02 10 | organic matter from natural products (for example grease, wax) |
| 04 02 17 | dyestuffs and pigments other than those mentioned in 04 02 16 |
| 04 02 20 | sludges from on-site effluent treatment other than those mentioned in 04 02 19 |
| 04 02 21 | wastes from unprocessed textile fibres |
| 04 02 22 | wastes from processed textile fibres |

| Table S3.1 Non-hazardous waste for landfill | |
|--|---|
| 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 16 | sulphur-containing wastes from petroleum desulphurisation |
| 05 01 17 | bitumen |
| 05 06 | wastes from the pyrolytic treatment of coal |
| 05 06 04 | waste from cooling columns |
| 05 07 | wastes from natural gas purification and transportation |
| 05 07 02 | wastes containing sulphur |
| 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 and solutions 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 09 | wastes from the MSFU 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 opacifiers |
| 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 |
| 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 |

| Table S3.1 Non-hazardous waste for landfill | |
|--|--|
| Waste code | Description |
| 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 |
| 08 03 07 | aqueous sludges containing ink |
| 08 03 13 | waste ink other than those mentioned in 08 03 12 |
| 08 03 15 | ink sludges other than those mentioned in 08 03 14 |
| 08 03 18 | waste printing toner other than those mentioned in 08 03 17 |
| 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 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 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 |
| 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 |

| Table S3.1 Non-hazardous waste for landfill | |
|--|--|
| Waste code | Description |
| 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 |
| 10 07 01 | slags from primary and secondary production |
| 10 07 02 | dross and skimmings from primary and secondary production |
| 10 07 03 | solid wastes from gas treatment |
| 10 07 04 | other particulates and dust |
| 10 07 05 | sludges and filter cakes from gas treatment |
| 10 07 08 | wastes from cooling-water treatment other than those mentioned in 10 07 07 |
| 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 |

| Table S3.1 Non-hazardous waste for landfill | |
|--|--|
| Waste code | Description |
| 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 |
| 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 07 | sludges and filter cakes from gas treatment |
| 10 13 10 | wastes from asbestos-cement manufacture other than those mentioned in 10 13 09 |
| 10 13 11 | wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10 |
| 10 13 13 | solid wastes from gas treatment other than those mentioned in 10 13 12 |
| 10 13 14 | waste concrete and concrete sludge |
| 11 | WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY |
| 11 01 | 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) |
| 11 01 10 | sludges and filter cakes other than those mentioned in 11 01 09 |
| 11 01 14 | degreasing wastes other than those mentioned in 11 01 13 |
| 11 02 | wastes from non-ferrous hydrometallurgical processes |
| 11 02 03 | wastes from the production of anodes for aqueous electrolytical processes |
| 11 02 06 | wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05 |

| Table S3.1 Non-hazardous waste for landfill | |
|--|---|
| Waste code | Description |
| 11 05 | wastes from hot galvanising processes |
| 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 02 | ferrous metal dust and particles |
| 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 05 | composite packaging |
| 15 01 06 | mixed 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) |
| 16 01 12 | brake pads other than those mentioned in 16 01 11 |
| 16 01 19 | plastic |
| 16 01 20 | glass |
| 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 05 | gases in pressure containers and discarded chemicals |
| 16 05 09 | discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08 |
| 16 06 | batteries and accumulators |
| 16 06 04 | alkaline batteries (except 16 06 03) |
| 16 06 05 | other batteries and accumulators |
| 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 |

| Table S3.1 Non-hazardous waste for landfill | |
|--|--|
| Waste code | Description |
| 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 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 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 |
| 18 02 06 | chemicals other than those mentioned in 18 02 05 |
| 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 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 wastes¹ |
| 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 |

¹ 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.

| Table S3.1 Non-hazardous waste for landfill | |
|--|--|
| Waste code | Description |
| 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 |
| 19 08 | wastes from waste water treatment plants not otherwise specified |
| 19 08 01 | screenings |
| 19 08 02 | waste from desanding |
| 19 08 05 | sludges from treatment of urban waste water |
| 19 08 09 | grease and oil mixture from oil/water separation containing only edible oil and fats |
| 19 08 12 | sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11 |
| 19 08 14 | sludges from other treatment of industrial waste water other than those mentioned in 19 08 13 |
| 19 09 | wastes from the preparation of water intended for human consumption or water for industrial use |
| 19 09 01 | solid waste from primary filtration and screenings |
| 19 09 02 | sludges from water clarification |
| 19 09 03 | sludges from decarbonation |
| 19 09 04 | spent activated carbon |
| 19 09 05 | saturated or spent ion exchange resins |
| 19 09 06 | sludges from regeneration of ion exchangers |
| 19 10 | wastes from shredding of metal-containing wastes |
| 19 10 04 | fluff-light fraction and dust other than those mentioned in 19 10 03 |
| 19 10 06 | other fractions other than those mentioned in 19 10 05 |
| 19 11 | wastes from oil regeneration |
| 19 11 06 | sludges from on-site effluent treatment other than those mentioned in 19 11 05 |
| 19 12 | wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified |
| 19 12 04 | plastic and rubber |
| 19 12 07 | wood other than that mentioned in 19 12 06 |
| 19 12 08 | textiles |
| 19 12 09 | minerals (for example sand, stones) |
| 19 12 10 | combustible waste (refuse derived fuel) |
| 19 12 12 | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 |
| 20 | MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS |
| 20 01 | separately collected fractions (except 15 01) |
| 20 01 08 | biodegradable kitchen and canteen waste |
| 20 01 10 | clothes |
| 20 01 11 | textiles |
| 20 01 25 | edible oil and fat |
| 20 01 28 | paint, inks, adhesives and resins other than those mentioned in 20 01 27 |
| 20 01 30 | detergents other than those mentioned in 20 01 29 |
| 20 01 34 | batteries and accumulators other than those mentioned in 20 01 33 |
| 20 01 38 | wood other than that mentioned in 20 01 37 |

| Table S3.1 Non-hazardous waste for landfill | |
|--|--|
| Waste code | Description |
| 20 01 39 | plastics |
| 20 01 41 | wastes from chimney sweeping |
| 20 02 | garden and park wastes (including cemetery waste) |
| 20 02 01 | biodegradable waste |
| 20 02 02 | soil and stones |
| 20 02 03 | other non-biodegradable wastes |
| 20 03 | other municipal wastes |
| 20 03 01 | mixed municipal waste |
| 20 03 02 | waste from markets |
| 20 03 03 | street-cleaning residues |
| 20 03 04 | septic tank sludge |
| 20 03 06 | waste from sewage cleaning |
| 20 03 07 | bulky waste |

Schedule 4 – Emissions and monitoring

Table S4.1 Leachate level limits and monitoring requirements

| Monitoring point reference | Limit | Monitoring frequency | Monitoring method |
|--|---|---|---|
| Leachate Monitoring Points: MP1a, MP1b, MP2a, MP2b, MP3a, MP3b, MP4a, MP4b, MP5a, MP5b, MP6a, MP6b and any other leachate monitoring points agreed in writing with the Agency. | 1.0 metre above lowest level of the base | Weekly, or as agreed in writing with the Agency. | Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency. |

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

| Emission point Ref. & Location | Parameter | Source | Limit (including unit) | Reference Period | Monitoring Frequency | Monitoring Standard or Method |
|---|---|--|------------------------|------------------|----------------------|--|
| A3 Engine exhausts Located within the generation/flare compound as detailed on drawing number 01/209/2/002 in document ref. LWP3 received on 21/12/01. | Oxides of Nitrogen (NOx) | Landfill gas engines commissioned before 31 December 2005 | 650 mg/m ³ | Hourly mean | Annually | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air" unless otherwise agreed in writing with the Agency. |
| | Carbon Monoxide (CO) | | 1500 mg/m ³ | | | |
| | Total Volatile Organic Compounds (VOCs) | | 1750 mg/m ³ | | | |
| | Non Methane Volatile Organic Compounds (NMVOCs) | | 150 mg/m ³ | | | |
| | Hydrogen Chloride | | No limit set | | | |
| | Oxides of Sulphur | | No limit set | | Annually (2) | |
| A4 Engine exhausts Located within the generation/flare compound as detailed on drawing LAW003 | Oxides of Nitrogen (NOx) | Landfill gas engines commissioned after 31 December 2005 | 500 mg/m ³ | Hourly mean | Annually | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air". |
| | Carbon Monoxide (CO) | | 1400 mg/m ³ | | | |
| | Total Volatile Organic Compounds (VOCs) | | 1000 mg/m ³ | | | |
| | Non Methane Volatile Organic Compounds (NMVOCs) | | 75 mg/m ³ | | | |
| | Hydrogen Chloride | | No limit set | | | |
| | Oxides of Sulphur | | No limit set | | Annually (2) | |
| A5 Engine exhausts | Oxides of Nitrogen (NOx) | Landfill gas | 500 mg/m ³ | Hourly mean | Annually | In accordance with that described |

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

| Emission point Ref. & Location | Parameter | Source | Limit (including unit) | Reference Period | Monitoring Frequency | Monitoring Standard or Method |
|--|---|--|-------------------------------|-------------------------|-----------------------------|--|
| Located within the generation/flare compound as detailed on drawing LAW003 | Carbon Monoxide (CO) | engines commissioned after 31 December 2005 | 1400 mg/m ³ | | | in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air". |
| | Total Volatile Organic Compounds (VOCs) | | 1000 mg/m ³ | | | |
| | Non Methane Volatile Organic Compounds (NMVOCs) | | 75 mg/m ³ | | | |
| | Hydrogen Chloride | | No limit set | | | |
| | Oxides of Sulphur | | No limit set | | Annually (2) | |
| A6 Engine exhausts Location Plan required by pre-operational condition 1. | Oxides of Nitrogen (NOx) | Landfill gas engines commissioned after 31 December 2005 | 500 mg/m ³ | Hourly mean | Annually | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air". |
| | Carbon Monoxide (CO) | | 1400 mg/m ³ | | | |
| | Total Volatile Organic Compounds (VOCs) | | 1000 mg/m ³ | | | |
| | Non Methane Volatile Organic Compounds (NMVOCs) | | 75 mg/m ³ | | | |
| | Hydrogen Chloride | | No limit set | | | |
| | Oxides of Sulphur | | No limit set | | Annually (2) | |
| A7 Engine exhausts Location Plan required by pre-operational condition 1. | Oxides of Nitrogen (NOx) | Landfill gas engines commissioned after 31 December 2005 | 500 mg/m ³ | Hourly mean | Annually | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air". |
| | Carbon Monoxide (CO) | | 1400 mg/m ³ | | | |
| | Total Volatile Organic Compounds (VOCs) | | 1000 mg/m ³ | | | |
| | Non Methane Volatile Organic Compounds (NMVOCs) | | 75 mg/m ³ | | | |
| | Hydrogen Chloride | | No limit set | | | |
| | Oxides of Sulphur | | No limit set | | Annually (2) | |

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

| Emission point Ref. & Location | Parameter | Source | Limit (including unit) | Reference Period | Monitoring Frequency | Monitoring Standard or Method |
|---|---|--------------------|--------------------------------|-------------------------|-----------------------------|--|
| A1 Flare stack Located in engine and flare compound on plan ESID6 in response to Schedule 4 Notice dated 22 nd December 2004. | Oxides of Nitrogen (NOx) | Landfill Gas Flare | 150 mg/m ³ | Hourly mean | Annually (1) | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air". |
| | Carbon Monoxide (CO) | | 100 mg/m ³ | | | |
| | Total Volatile Organic Compounds (VOCs) | | 10 mg/m ³ | | | |
| | Non Methane Volatile Organic Compounds (NMVOCs) | | 5 mg/m ³ | | | |
| | Operational Temperature | >1000°C | Weekly while flare operational | | | |
| A2 Flare stack Located in engine and flare compound on plan ESID6 in response to Schedule 4 Notice dated 22 nd December 2004. | Oxides of Nitrogen (NOx) | Landfill Gas Flare | 150 mg/m ³ | Hourly mean | Annually (1) | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air". |
| | Carbon Monoxide (CO) | | 100 mg/m ³ | | | |
| | Total Volatile Organic Compounds (VOCs) | | 10 mg/m ³ | | | |
| | Non Methane Volatile Organic Compounds (NMVOCs) | | 5 mg/m ³ | | | |
| | Operational Temperature | >1000°C | Weekly while flare operational | | | |
| A8 Flare stack (Siloxane) Located in engine and flare compound as indicated on Figure 1.3 of EPR Variation Application and Supporting Information to EPR Form C dated April 2009 produced by Entec UK Ltd. | Oxides of Nitrogen (NOx) | Siloxane Removal | 150 mg/m ³ | Hourly mean | Annually (1) | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air". |
| | Carbon Monoxide (CO) | | 100 mg/m ³ | | | |
| | Total Volatile Organic Compounds (VOCs) | Landfill Gas Flare | 10 mg/m ³ | | | |
| | Non Methane Volatile Organic Compounds (NMVOCs) | | 5 mg/m ³ | | | |
| | Operational Temperature | >1000°C | Weekly while flare operational | | | |

(1) Annual monitoring is only required when flares operate in excess of 10% of the time, taken on an annual assessment period.

(2) Unless agreed otherwise in writing with the Agency.

Table S4.3 Point source emissions to water (other than sewer) – emission limits and monitoring requirements

| Emission point Ref. & Location | Parameter | Source | Limit (incl. unit) | Reference Period | Monitoring Frequency | Monitoring Standard or Method |
|---|---------------------|---|--|-------------------------|-----------------------------|--|
| S1 located on plan LAW004 | Ammoniacal nitrogen | Surface water management system as detailed on drawing LAW004 | 2 mg/l | Spot Sample | Monthly | Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency. |
| | BOD | | 10 mg/l | | | |
| | Iron | | 2 mg/l | | | |
| | Suspended solids | | 30 mg/l | | | |
| | pH | | Minimum 6 pH units Maximum 9 pH units | | | |
| | Visible Oil | | No visible trace | | | |
| S2 located on plan LAW004 | Ammoniacal nitrogen | Surface water management system as detailed on drawing LAW004 | 1 mg/l | Spot Sample | Monthly | Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency. |
| | BOD | | 5 mg/l | | | |
| | Iron | | 1 mg/l | | | |
| | Suspended solids | | 20 mg/l | | | |
| | pH | | Minimum 6 pH units Maximum 9 pH units | | | |
| | Visible Oil | | No visible trace | | | |

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

| Emission point Ref. & Location | Parameter | Source | Limit (incl. unit) | Reference Period | Monitoring Frequency | Monitoring Standard or Method |
|---|-------------------------------|------------------------------|---------------------------|-------------------------|-----------------------------|--|
| S3 located on plan LAW004 | Ammonia | Leachate collection tank. | 250 mg/l | Spot Sample | Monthly | Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency. |
| | pH range | | >6 and <10 | | | |
| | COD kg/day | | 1000 | | | |
| | Flow rate m ³ /day | | 300 | | | |

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

| Monitoring point reference | Parameter | Limit (including unit) | Reference Period | Monitoring frequency | Monitoring standard or method |
|---|--------------|------------------------|------------------|----------------------|---|
| GW01, GW03, GW04, GW05, GW07, GW08, GW09, WG2, WG4, WG5, WG7, WG8 locations shown on drawing LAW004 | Chloride | 250 mg/l | Spot Sample | Quarterly | Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02)', unless otherwise agreed in writing with the Agency. |
| | Mercury | 0.001 mg/l | | | |
| | Phenols | 0.003 mg/l | | | |
| | Cadmium | 0.006 mg/l | | | |
| WG3 | Chloride | 250 mg/l | | | |
| | Mercury | 0.001 mg/l | | | |
| | Phenols | 0.002 mg/l | | | |
| | Cadmium | 0.006 mg/l | | | |
| GW1 | Ammoniacal-N | 3.0 mg/l | | | |
| GW3 | Ammoniacal-N | 1.2 mg/l | | | |
| GW4 | Ammoniacal-N | 0.7 mg/l | | | |
| GW5 | Ammoniacal-N | 5.4 mg/l | | | |
| GW7 | Ammoniacal-N | 0.7 mg/l | | | |
| GW8 | Ammoniacal-N | 1.4 mg/l | | | |
| GW9 | Ammoniacal-N | 4.9 mg/l | | | |
| WG2 | Ammoniacal-N | 0.7 mg/l | | | |
| WG3 | Ammoniacal-N | 0.7 mg/l | | | |
| WG4 | Ammoniacal-N | 0.6 mg/l | | | |
| WG5 | Ammoniacal-N | 5.6 mg/l | | | |
| WG7 | Ammoniacal-N | 0.5 mg/l | | | |
| WG8 | Ammoniacal-N | 0.5 mg/l | | | |

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

| Monitoring point Ref. /description | Parameter | Limit (including units) | Monitoring frequency | Monitoring standard or method |
|--|-----------------------------|--|---|---|
| External gas monitoring boreholes: LAWGMP01, LAWGMP02, LAWGMP03, LAWGMP04, LAWGMP05, LAWGMP06, LAWGMP07, LAWGMP08, LAWGMP09, LAWGMP10, LAWGMP11, LAWGMP12, LAWGMP13, LAWGMP14, LAWGMP15, LAWGMP16, LAWGMP17, LAWGMP18, LAWGMP19, LAWGMP20, LAWGMP21, LAWGMP22, LAWGMP23, LAWGMP24, LAWGMP25, LAWGMP26, LAWGMP27, LAWGMP28, LAWGMP29, LAWGMP30, LAWGMP31, LAWGMP32, LAWGMP33, LAWGMP34, locations shown on drawing LAW004. | Oxygen | no limit | Weekly, In the event of the gas extraction system becoming inactive the frequency of monitoring shall increase to daily, or otherwise as agreed in writing with the Agency. | Monitoring to be carried out in accordance with Environment Agency - Landfill Technical Guidance Note (LFGTN) 03: 'Guidance on the management of landfill gas,' unless otherwise agreed in writing with the Agency. |
| | Atmospheric pressure | no limit | | |
| | Differential Pressure | no limit | | |
| | Temperature | no limit | | |
| | Meteorological data | no limit | | |
| External gas monitoring boreholes: LAWGMP01, LAWGMP02, LAWGMP03, LAWGMP04, LAWGMP05, LAWGMP06, LAWGMP07, LAWGMP08, LAWGMP09, LAWGMP10, LAWGMP11, LAWGMP12, LAWGMP13, LAWGMP14, LAWGMP15, LAWGMP16, LAWGMP17, LAWGMP18, LAWGMP19, LAWGMP20, LAWGMP21, LAWGMP22, LAWGMP23, LAWGMP24, LAWGMP25, LAWGMP26, LAWGMP27, LAWGMP28, LAWGMP29, LAWGMP30, LAWGMP31, LAWGMP32, LAWGMP33, LAWGMP34, locations shown on drawing LAW004. | Methane. Carbon Dioxide. | 1% v/v >1.5% vol above agreed background levels in accordance with IC3. | Weekly, In the event of the gas extraction system becoming inactive the frequency of monitoring shall increase to daily, or otherwise as agreed in writing with the Agency. | Monitoring to be carried out in accordance with Environment Agency - Landfill Technical Guidance Note (LFGTN) 03: 'Guidance on the management of landfill gas,' unless otherwise agreed in writing with the Agency. |

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

| Monitoring point Ref. /description | Parameter | Monitoring frequency | Other specifications | Monitoring Standard or method |
|---|---|-----------------------------|--|--|
| Permanently capped zone | Average methane flux and total methane emission | Annually* | Where the average zone emission rate of 0.001 mg/m ² /second is exceeded appropriate measures must be taken to reduce the rate. | As per LFTGN 07 or as otherwise agreed in writing by the Agency. |
| Temporarily capped zone | Average methane flux and total methane emission | Annually* | Where the average zone emission rate of 0.1 mg/m ² /second is exceeded appropriate measures must be taken to reduce the rate. | As per LFTGN 07 or as otherwise agreed in writing by the Agency. |

Footnote * If a cap has previously been shown compliant and there have been no significant physical changes in the gas management during the year, a detailed walkover survey can be used to demonstrate that the surface emissions are under control. If this survey shows no change in the pattern of methane emission, it may be used as the annual survey and the values for average methane flux and total methane emissions measured in the previous year may be reported. A quantitative survey is not necessary. If the zone remains stable, the results of a detailed walkover survey will be acceptable for the annual report for a period of four years before a further quantitative survey is required.

Table S4.8 Landfill gas – other monitoring requirements

| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
|--|--|---|---|--|
| Manifolds on gas system | Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Differential pressure Suction | Fortnightly. | Monitoring to be carried out in accordance with Environment Agency - Landfill Technical Guidance Note (LFGTN) 03: 'Guidance on the management of landfill gas,' unless otherwise agreed in writing with the Agency. | Where the Oxygen level exceeds 5% or where the addition of the Carbon Dioxide and Methane percentages is less than 80%, an assessment of air ingress into the system shall be undertaken. Where the concentration of carbon monoxide exceeds 100ppm then further investigation shall be undertaken. |
| Locations to be agreed in writing with the Agency | Gas flow rate | At frequencies specified in Table 5.4 (page 47) of LFTGN 03 'Guidance on the management of landfill gas.' | | |
| Input to LFG Utilisation Compound | Trace gas analysis in accordance with LFTGN04. | Annually | Collection and analysis shall be in accordance with that described in the Agency's "Guidance for Monitoring Trace Components in Landfill Gas" LFTGN04. | The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling. |
| Input to LFG Utilisation Compound | Methane Carbon Dioxide Oxygen Gas flow rate | Continuous | As set out in the Application or otherwise Determined with the Agency. | Where the Oxygen level exceeds 5% or where the addition of the Carbon Dioxide and Methane percentages is less than 80%, an assessment of air ingress into the system shall be undertaken. |

Table S4.9 Leachate– other monitoring requirements

| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
|--|--|----------------------|---|----------------------|
| Leachate chambers LC1, LC2, LC3, LC4, LC5, LC6 Locations shown on drawing LAW004. For future engineered cells, one leachate chamber per cell, as agreed in writing with the Environment Agency. | pH, electrical conductivity, temperature | Monthly | Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' (LFTGN02), unless otherwise agreed in writing with the Agency. | |
| | as monthly + NH4-N, Cl, BOD, COD, SO4, alkalinity, TON, TOC, Na, K, Ca, Mg | Quarterly | | |
| | as quarterly + Fe, Mn, Cd, Cr, Cu, Ni, Pb, Zn | 6 Monthly | List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01). | |
| | as 6 monthly + phosphate, nitrite, nitrate, VFAs | Annually | | |

Table S4.10 Surface water – other monitoring requirements

| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
|---|--|----------------------|---|----------------------|
| SW1, SW2 as indicated on drawing LAW004 | pH, electrical conductivity, dissolved oxygen, NH4-N, Cl, BOD, Fe, suspended solids, SO4 | Monthly | Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' (LFTGN02), unless otherwise agreed in writing with the Agency. | - |
| | as monthly + alkalinity, TON, TOC, Na, K, Ca, Mg, Mn, Cd, Cr, Cu, Ni, Pb, Zn | Quarterly | | |
| | as quarterly + Fe, As, Cn, Hg, sulphide, PAH, phenol | Annually | | |

Table S4.11 Groundwater – other monitoring requirements

| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
|---|--|----------------------|---|----------------------|
| BH's GW2 - GW9, WG2 - WG8, locations shown on drawing LAW004. | pH, electrical conductivity, dissolved oxygen, NH4-N, Cl | Monthly | Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' (LFTGN02), unless otherwise agreed in writing with the Agency. List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01). | - |
| | as monthly + SO4, alkalinity, TON, TOC, Na, K, Ca, Mg, Fe, Mn, Cd, Cr, Cu, Ni, Pb, Zn, phenols | Quarterly | | |
| | as quarterly + TPH, Hg, List 1 Suite | Annually | | |

Schedule 5 - Reporting

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

Table S5.1 Reporting of monitoring data

| Parameter | Emission or monitoring point/reference | Reporting period | Period begins |
|---|---|--|--------------------------|
| Leachate levels Parameters as required by condition 3.6.1 | MP1a, MP1b, MP2a, MP2b, MP3a, MP3b, MP4a, MP4b, MP5a, MP5b, MP6a, MP6b. | Quarterly | Date of issued variation |
| Emissions to air Parameters as required by condition 3.6.1 | A1, A2, & A8 Landfill gas flares. Landfill gas engines A3, A4, A5, A6 & A7 | Annually | Date of issued variation |
| Emissions to water Parameters as required by condition 3.6.1 | S1, S2, S3 | Quarterly | Date of issued variation |
| Groundwater Parameters as required by condition 3.6.1 | GW01, GW03, GW04, GW05, GW07, GW08, GW09, WG2, WG3, WG4, WG5, WG7, WG8 | Quarterly for monthly and quarterly parameters. Annually for annual parameters | Date of issued variation |
| Landfill gas surface emissions Parameters as required by condition 3.6.1 | Permanently and Temporarily capped zones | Annually | Date of issued variation |
| Landfill gas lateral migration Parameters as required by condition 3.6.1 | LAWGMP01, LAWGMP02, LAWGMP03, LAWGMP04, LAWGMP05, LAWGMP06, LAWGMP07, LAWGMP08, LAWGMP09, LAWGMP10, LAWGMP11, LAWGMP12, LAWGMP13, LAWGMP14, LAWGMP15, LAWGMP16, LAWGMP17, LAWGMP18, LAWGMP19, LAWGMP20, LAWGMP21, LAWGMP22, LAWGMP23, LAWGMP24, LAWGMP25, LAWGMP26, LAWGMP27, LAWGMP28, LAWGMP29, LAWGMP30, LAWGMP31, LAWGMP32, LAWGMP33, LAWGMP34. | Quarterly | Date of issued variation |
| Other Landfill gas monitoring Parameters as required by condition 3.6.1 | Trace gas analysis | Annually | Date of issued variation |
| Other leachate monitoring Parameters as required by condition 3.6.1 | LC1, LC2, LC3, LC4, LC5, LC6 | Quarterly for all parameters monitored monthly or quarterly frequency and annually for all other parameters. | Date of issued variation |

Table S5.1 Reporting of monitoring data

| Parameter | Emission or monitoring point/reference | Reporting period | Period begins |
|--|--|--|--------------------------|
| Other surface water monitoring Parameters as required by condition 3.6.1 | SW1, SW2 | Quarterly for all parameters monitored at a monthly or quarterly frequency. Annually for all other parameters | Date of issued variation |

Table S5.2 Annual production/treatment

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

Table S5.3 Performance Parameters

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

Table S5.4 Reporting Forms

| Media/parameter | Reporting Format | Date of Form |
|---|---|-----------------|
| Leachate | Form leachate 1 or other reporting format to be agreed in writing with the Agency. | 03/11/09 |
| Air | Form Air 1 or other reporting format to be agreed in writing with the Agency. | 03/11/09 |
| Controlled water | Form Water 1 or other reporting format to be agreed in writing with the Agency. | 03/11/09 |
| Groundwater | Form Groundwater 1 or other reporting format to be agreed in writing with the Agency. | 03/11/09 |
| Sewer | Form Sewer 1 or other reporting format to be agreed in writing with the Agency. | - |
| Landfill gas | Form LFG 1 or other reporting format to be agreed in writing with the Agency. | 03/11/09 |
| Particulate matter | Form Particulate 1 or other reporting format to be agreed in writing with the Agency. | - |
| Waste Return | Waste Return Form RATS2E. | Electronic form |
| Landfill topographical surveys and interpretation | Reporting format to be agreed in writing with the Agency. | - |

Schedule 6 - Notification

This page outlines the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

| | |
|--------------------------------|---|
| Permit Number | BX7886IJ |
| Name of operator | Cory Environmental (Central) Ltd |
| Location of Installation | Lyme & Wood Pits Integrated Waste Management Facility Land off Vista Road Haydock St Helens Merseyside |
| | |
| Time and date of the detection | |

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

| 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 | |

| Time periods for notification following detection of a breach of a limit | |
|---|----------------------------|
| Parameter | Notification period |
| | |
| | |

| (c) Notification requirements for the detection of any significant adverse environmental effect | |
|--|--|
| To be notified within 24 hours of detection | |
| Description of where the effect on the environment was detected | |
| Substances(s) detected | |
| Concentrations of substances detected | |
| Date of monitoring/sampling | |

Part B to be supplied as soon as practicable

| | |
|---|--|
| Any more accurate information on the matters for notification under Part A. | |
| Measures taken, or intended to be taken, to prevent a recurrence of the incident | |
| Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission | |
| The dates of any unauthorised emissions from the installation in the preceding 24 months. | |

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

* authorised to sign on behalf of Cory Environmental (Central) Ltd.

Schedule 7 - Interpretation

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

“*Annually*” means once every Year.

“*Application*” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“*Authorised Officer*” means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in Section 108(4) of that Act.

“*Background concentration*” means such concentration of that substance as is present in:

- For emissions to surface water, the surface water quality up-gradient of the site; or
- For emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge; or
- For emissions of landfill gas, the ground or air outside the site and not attributable to the site.

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

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

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

“*EP Regulations*” means The Environmental Permitting (England and Wales) Regulations SI 2007 No. 3538 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

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

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

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

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

within the site.

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

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

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

“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.

“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 procedures will not affect the agreed design criteria, specification or performance in a way that has a negative effect.

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

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

“Relevant person” and *“relevant conviction”* shall have the meanings given to them in the Environmental Protection Act 1990.

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

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

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

“Waste code” means the 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, List of Wastes (Northern Ireland) Regulations 2005 (as amended), or The Special Waste Amendment (Scotland) Regulations 2004 as appropriate, and in relation to hazardous waste, includes the asterisk.

“Year” means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

END OF PERMIT