

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

P Casey Enviro Limited

Lane Side Quarry Landfill Site

Off Bellstring Lane

Kirkheaton

West Yorkshire

Permit number

EPR/RP3332KY

Lane Side Quarry Landfill Site

Permit Number EPR/RP3332KY

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

Lane Side Quarry is located close to the village of Kirkheaton near Huddersfield. The land surrounding the quarry is locally known as Cockley Hill and is largely farmland with some residential properties and small businesses.

The site has a history of both quarrying, mining, brick making and previous landfilling - leaving features that need to be addressed in the engineering of this installation before it can go into operation.

Fireclay and coal were extracted in the late 1800's and early 1900's, followed by quarrying for brick making materials for the Kirkheaton Brickworks formerly located to the south. During the 1970's and 1980's the Brickworks was demolished and its site and the south east section of the quarry used for the landfilling of household, industrial, commercial and other wastes by West Yorkshire Metropolitan County Council (WYMCC). Then this landfill was restored. Some quarrying has taken place since the 1980's but this was not extensive and ceased during 2001.

Key features of the site which have to be taken into account for the engineering and operation of any installation at this location include:

- Coal mining shafts and adits
- Cockley Hill Beck; a stream that it is believed has been part of this site since the 1800's
- The identification that the site had become a habitat for great crested newts

Kirklees Borough Council awarded planning permission for restoration of the whole of this site by landfill in September 2000.

A previous application to the Environment Agency for a permit to landfill over the full site was made by the operator in 2001 (BK4839IA) but was subsequently withdrawn for commercial reasons.

A programme of capture and relocation of great crested newts has been ongoing since their identification at the site in 2003 with new ponds being created whilst restoring the area above the former Kirkheaton brickworks landfill.

The installation covered by this permit will be limited to the deposit of non-hazardous waste in two landfill cells of combined volume 630,840m³, located to the north west of Cockley Hill Beck. The Operator anticipates the life of the site to be approximately 6 years with a further year for restoration.

The cells will be constructed based on engineered containment. Leachate from the deposited waste will be collected and pumped from a sump at the base of each cell.

Leachate will be treated by biological aeration in a dedicated on site treatment plant before disposal to sewer.

Landfill Gas will be collected and utilised in a Gas Utilisation Plant (GUP) with any excess burnt by a landfill gas flare.

Quantitative risk assessments have been carried out for hydrogeology, stability and landfill gas.

Similarly a qualitative amenity risk assessment and habitats assessments have also been carried out.

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

Status Log of the permit		
Detail	Date	Comments
Application EPR/RP3332KY/A001	Duly made 10/12/09	
Additional Information Requested	10/08/10	Response Date 30/09/10
Additional Information Received	06/10/10	
Permit determined	28/10/2011	

End of Introductory Note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit

Permit number

EPR/RP3332KY

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

P Casey Enviro Limited ("the operator"),

whose registered office is

**Rydings Road
Rochdale
Lancashire
OL12 9PS**

company registration number **01727314**

to operate an installation at

**Lane Side Quarry Landfill Site
Off Bellstring Lane
Kirkheaton
Huddersfield
West Yorkshire
HD5 0EW**

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

Under regulation 27(2) of the Regulations, standard rules permit SR2008No11 are conditions of this permit covering part of the permitted activities in the area identified in Schedule 7 to this permit as 'Proposed Treatment Area Location'.

Name	Date
	28 th October 2011

MARTIN JENKINS

Authorised on behalf of the Environment Agency

1 Management

1.1 General management

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

1.2 Finance

- 1.2.1 No activities authorised by this permit shall be commenced unless the operator has entered into an Agreement with the Environment Agency to secure financial provision for meeting the obligations under this permit and has provided the provision.
- 1.2.2 The operator shall give prior notice to the Environment Agency of its intention to commence operations at the site.
- 1.2.3 The financial provision provided under condition 1.2.1 above shall thereafter be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Environment Agency.
- 1.2.4 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 1.2.1; and
 - (c) the estimated costs for the closure and aftercare of the landfill.

1.3 Energy efficiency

- 1.3.1 For the activities referenced A2 and A3 in schedule 1, table S1.1 the operator shall:
- (a) Review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (b) Implement any appropriate measures identified by a review.

1.4 Efficient use of raw materials

1.4.1 For the activities referenced A2 and A3 in schedule 1, table S1.1 the operator shall:

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

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

1.5.1 For the activities referenced A2 and A3 in schedule 1, table S1.1 the operator shall:

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

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- (b) If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan specified in schedule 1, table S1.2 or otherwise required under this permit, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.4 Improvement programme

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

2.5 Pre-operational conditions

- 2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4A have been completed
- 2.5.2 The operations specified in schedule 1 table S1.4B shall not commence until the measures specified in that table have been completed.

2.6 Landfill Engineering

- 2.6.1 No construction of any new cell of the landfill shall commence until the operator has submitted construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.6.2 For the activities referenced A1 in schedule 1, table S1.1, where the operator proposes to construct any new cell other than the first cell, but proposes no change from the design of the most recently approved cell which could have any impact on the performance of any element of the design, no construction of the new cell shall commence until operator has submitted a cell layout drawing and the Environment Agency has confirmed that it is satisfied with the cell layout drawing.
- 2.6.3 For the activities referenced A1 in schedule 1, table S1.1, the construction of a new cell shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Environment Agency.
- 2.6.4 For the activities referenced A1 in schedule 1, table S1.1, no disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Environment Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.6.5 No construction of landfill infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.6.6 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Environment Agency.
- 2.6.7 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill infrastructure.
- 2.6.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.6.5 and 2.6.6 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Environment Agency as soon as practicable.
- 2.6.9 For the purposes of conditions 2.6.1, 2.6.2, 2.6.4 and 2.6.5, the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
- (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.
- 2.6.10 Where the Environment Agency has required further information under condition 2.6.9(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:
- (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.

2.7 Waste acceptance

- 2.7.1 Wastes shall only be accepted for disposal if:
- (a) they are listed in schedule 2 tables S2.1 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.
- 2.7.2 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.
- 2.7.3 For the activities referenced A1 in schedule 1, table S1.1, where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.
- 2.7.4 For the activities referenced A1 in schedule 1, table S1.1, the operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.7.5 The total quantity of waste that shall be deposited in the landfill shall be limited to the phasing and pre-settlement levels shown on drawings 99120/149, 99120/150, 99120/151, 99120/152, 99120/153, 99120/154, 99120/155, 99120/156, 99120/157 all dated 04/08/11.
- 2.7.6 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.

- 2.7.7 For the activities referenced A1 in schedule 1, table S1.1, 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.

2.8 Leachate levels

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

2.9 Closure and aftercare

- 2.9.1 The operator shall maintain a closure and aftercare management plan.

2.10 Landfill gas management

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

2.11 Pests

- 2.11.1 The activities shall not give rise to pollution or hazards from pests. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 2.11.2 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded, save that compliance with an emission limit in table S3.2 shall include incorporation of the uncertainty allowance stated in Environment Agency guidance LFTGN 05 and LFTGN 08.
- 3.1.3 There shall be no emission from the activities into groundwater of any hazardous substances contrary to the EP Regulations.
- 3.1.4 There shall be no emission from the activities into groundwater of any non-hazardous pollutants so as to cause pollution.
- 3.1.5 The trigger levels for emissions into groundwater for the parameter(s) and monitoring point(s) set out in schedule 3 table S3.4 shall not be exceeded.
- 3.1.6 The operator shall submit to the Environment Agency a review of the Hydrogeological Risk Assessment:
 - (a) between nine and six months prior to the sixth anniversary of the granting of the permit, and
 - (b) between nine and six months prior to every subsequent six years after the sixth anniversary of the granting of the permit.
- 3.1.7 The limits for landfill gas arising from the installation set out in schedule 3, tables S3.5 and S3.6 shall not be exceeded.
- 3.1.8 The limits for particulate matter arising from the installation set out in schedule 3, table S3.11 shall not be exceeded.

3.2 Emissions of substances not controlled by emission limits

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

- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

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

3.4 Noise and vibration

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

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring and any other actions specified in the following tables in schedule 3 to this permit:
- (a) Leachate specified in tables S3.1 and S3.8;
 - (b) Point source emissions specified in tables S3.2 and S3.3;
 - (c) Groundwater specified in tables S3.4 and S3.10;
 - (d) Landfill gas specified in tables S3.5, S3.6 and S3.7;
 - (e) Surface water specified in table S3.9; and
 - (f) Particulate matter specified in table S3.11.

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

3.5.3 For the activities referenced A1 in schedule 1, table S1.1, 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 Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) the results of groundwater monitoring;
 - (ii) sub-surface landfill gas monitoring;
 - (iii) leachate levels, quality and quantities;
 - (iv) landfill gas generation and collection;
 - (v) waste types and quantities;
 - (vi) the specification and as built drawings of the basal, sidewall and capping engineering systems.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment 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) the energy consumed at the site, reported in the format set out in schedule 4 table S4.3;
- (c) the annual production/treatment set out in schedule 4 table S4.2;
- (d) the topographical surveys required by condition 3.5.3 other than those submitted as part of a CQA validation report;

- (e) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
 - (f) an assessment of the settlement behaviour of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;
 - (g) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.
- 4.2.5 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

- 4.3.1 The Environment Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit; or
 - (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 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment 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 Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

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

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

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

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A1	Section 5.2 Part A(1) (a) , The disposal of waste in a landfill.	Landfill for non-hazardous waste (D5 –Specially engineered landfill)	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7, as an integral part of landfilling.
A2	Section 5.3, Part A(1)(c)(i), Biological treatment	Storage and treatment of leachate in a facility with a capacity of >50 Tonnes/ day (D8 – Biological treatment of waste)	Leachate arising from the landfill.
Directly Associated Activity			
A3	Landfill gas utilisation.	Utilisation of landfill gas for energy recovery in a appliance <3 MW rated thermal input	Landfill gas arising from the landfill.
A4	Landfill gas flaring	Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the landfill
A5	Water discharges to controlled waters.	Discharges of site drainage from the landfill.	From surface water management system to point of entry to controlled waters.
A6	Fuel storage.	Storage of fuel for operation of plant and equipment.	From storage of fuel to use in the operation of plant and equipment.
A7	Storage of other raw materials including lubricating oils and antifreeze	Storage in bulk storage tanks	From receipt of raw materials to their use within the installation.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application dated September 2009 received at the environment Agency 19/10/2009	Response to questions in Part B of the application including: Volume 1 Section 2 – Operational Procedures* Section 5 – Monitoring Programme Operational Phase Volume 2 Section 2 – Environmental Setting and Installation Design* Section 3 – Hydrogeological Risk Assessment* Volume 3 Section 1 – Stability Risk Assessment Section 2 – Gas Risk Assessment* Section 3– Nuisance & Health Risk Assessment * = Superseded or supplemented by response to Schedule 5 notice see below	19/10/2009
Response 06/10/10 to Schedule 5 Notice dated 10/08/10	Supplements and supersedes application using an referencing system aligned to volumes and sections of original application eg request 1.2.2 is the second request in regards to Volume 1 Section 2 of the application (operational procedures). Also includes report number 99120/28 Odour Management Plan	06/10/10

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
1	Following installation of the new landfill gas monitoring boreholes in accordance with pre-operational measure 1. The Operator shall submit a report to the Environment Agency for approval in writing which proposes revised control and compliance limits for all individual perimeter landfill gas monitoring boreholes. The proposals shall be based on methods set out in the operator's response to schedule 5 notice for further information October 2010 Appendix F combined with perimeter landfill gas monitoring data collected over 12 months from consecutive monthly monitoring in the new and existing landfill gas monitoring boreholes as set out by pre-operational measure 1. The compliance limits shall be set using the Agency's guidance on the Management of Landfill Gas, LFTGN03. The report shall also include background methane and carbon dioxide concentrations from each borehole, what these mean to the conceptual model and proposals to set methane and carbon dioxide action levels Following approval - the revised compliance limits shall replace those in Tables S3.5.	13 months from the installation of boreholes in accordance with pre-operational condition 1.

Table S1.4A Pre-operational measures

Reference	Pre-operational Measures
1	<p>Prior to commencement of the ground stabilisation programme and construction of the artificial geological barrier.</p> <p>The Operator shall submit written proposals to the Environment Agency for approval on the location, design, construction method, timing and sampling of new boreholes for monitoring gas and groundwater, which includes the following:</p> <ul style="list-style-type: none">• The fitness for purpose of existing boreholes BH1, BH2, BH3, BH4, BH5, BH6, BH7, BH15 for monitoring both gas and groundwater.• Installation of 3 new groundwater/ gas boreholes. Suitable perimeter locations for these are indicated by P1, P2, P3 on TACCL drawing 99120/144B dated 04.10.10 but these should be adjusted such that they are at least 20m away from the edge of the containment landfill.• An additional 21no. perimeter landfill gas monitoring boreholes such that the overall gas monitoring arrangement including the gas / groundwater boreholes described above is in accordance with the maximum spacing requirements for uniform matrix dominated permeability strata in Environment Agency Guidance LFTGN03. <p>The operator shall submit borehole drilling logs for new boreholes to the Environment Agency. Where these drilling logs indicate discrete geological horizons and the possibility of multiple gas transmission pathways from the new landfill, from former landfill or from coal measures underlying the site into the shaft, a suitable arrangement of nested pipes sampling from different depths will be agreed with the Environment Agency. Sampling from different pipes in the nest will indicate the source(s) of the gas being detected.</p> <p>Once the proposals are approved the boreholes shall be installed.</p> <p>Following installation of the new monitoring boreholes the operator shall submit to the Environment Agency for approval a factual report of their actual locations, constructions and strata, voids and water encountered.</p>
2	<p>Prior to commencement of the ground stabilisation programme and construction of the artificial geological barrier.</p> <p>Following installation of the new monitoring boreholes set out in pre-operational measure 1, the operator shall:</p> <ul style="list-style-type: none">• Sample groundwater composition and measure water levels on at least three occasions, one month apart from all groundwater monitoring boreholes (BH1, BH2, BH3, BH4, BH5, BH6, BH7, P1, P2, P3). The first round of sampling shall be analysed for both the parameters in Table S3.10 and a full chemical screen. Thereafter the analysis should be for those parameters in Table S3.10 and any other compounds detected in the chemical screening of the first round.• On the basis of the monitoring results achieved, re-assess the groundwater flow regime, define hydraulic up-gradient and down gradient borehole locations and review interim groundwater controls and triggers for the down-gradient boreholes. <p>Once groundwater controls and triggers for boreholes are approved by the Environment Agency, these shall be incorporated into the permit monitoring schedules.</p> <ul style="list-style-type: none">• On the basis of the monitoring results achieved identify whether Cockley Hill Beck is connected to ground water and whether the beck gains or loses to groundwater on route.

Table S1.4A Pre-operational measures

Reference	Pre-operational Measures
3	<p>Prior to construction of the artificial geological barrier.</p> <p>The Operator shall :</p> <p>a. Carry out the following steps. All proposals and work carried out by the Operator shall be in accordance with the appropriate standards as set out in British Standards or, in the case these have been superseded, in Eurocode 7. For each step a written report shall be submitted to the Environment Agency for approval and the next step shall not be taken until approval has been given:</p> <ul style="list-style-type: none">• Submit detailed proposals of ground investigations, in order to determine the nature and thickness of the strata, groundwater levels, and the locations and dimensions of voids beneath the Lane Side landfill footprint.• Undertake ground investigations in accordance with the Environment Agency's written approval.• Submit a detailed factual report of the findings of the ground investigations of the sub-grade within the footprint of the Lane Side Quarry Landfill Site, including the nature and thickness of the strata, water strike and rest levels, and the locations and dimensions of voids beneath the Lane Side landfill footprint.• Submit a detailed interpretive report of the findings of the ground investigations.• Submit a detailed appraisal of options / methods to achieve a stable and sound sub-grade, based on the findings of the ground investigation. Submit detailed justification of the preferred method, which shall incorporate detailed specification for stabilisation of mine workings and voids, and a quantitative re-assessment of the effects of the preferred method on the HRA, SRA, and LFGRA.• Submit a detailed assessment of the design of any ponds, wet lands, watercourse and drainage ditches that are proposed up-gradient of the landfill cells. Identify how the design of these will avoid possible future threat to stabilisation measures, liner and integrity of the landfill cells. <p>b. Undertake stabilisation measures in accordance with the Agency's written approval</p>
4	<p>Following ground stabilisation works and prior to construction of the artificial geological barrier.</p> <p>Using existing and newly installed boreholes identified in Table S3.10 the Operator shall take measurements of groundwater levels and quality once per month for 3 months after completion of the stabilisation ground works</p> <p>A written report shall be submitted to the Environment Agency for approval, identifying changes to the hydrogeological risk assessment as a result of these ground works.</p>
5	<p>Prior to the receipt of waste</p> <p>The Operator shall produce a report describing how the section of Cockley Hill Beck and wetlands that feed it will be protected from contamination /blockage e.g. by litter/ dust & soil from landfilling activities .</p> <p>The proposals shall be implemented by the Operator from the date of approval in writing by the Environment Agency.</p>

Table S1.4A Pre-operational measures

Reference	Pre-operational Measures
6	<p>Prior to the receipt of waste</p> <p>The Operator shall update their Odour Management Plan (OMP) 99120/28 in writing with further definition / quantification:</p> <ul style="list-style-type: none">• define 'Medium' and 'High' hazard classification in section 2.3.2 in terms of metres away from site boundary• Include a description on engaging with neighbours on odour issues as recommended in Environment Agency guidance H4 in Section 3• Include a description of how discussion and agreement on wastes with high odour risk will be logged and quantify weather conditions that will trigger closure of the site to such wastes in Section 3• Describe cover for lateral flanks that will be used to minimise gas and odour release in Section 3• Define the point in landfill operations that will trigger installation of temporary horizontal gas wells and extraction and how these well will be protected from damage from traffic, compaction activities and settlement of the waste• Define methods by which gas and leachate pipework will be joined and sealed• Identify if flare will still operate on power failure• Gather monitoring data so that odour events and improvement to the OMP can be assessed in terms of FIDOL factors as described in Environment Agency guidance H4• Define protocol for sniff tests and Quantify trigger points for remedial action <p>The updated plan shall be implemented by the Operator from the date of approval in writing by the Environment Agency.</p>
7	<p>Prior to the receipt of waste</p> <p>The Operator shall produce a report in writing setting out a particulate management plan drawing guidance from Environment Agency Monitoring Technical Guidance Note M17; Monitoring ambient particulates in air around waste facilities.</p> <p>The proposals shall be implemented by the Operator from the date of approval in writing by the Environment Agency.</p>

Table S1.4B Pre-operational measures for future development

Reference	Operation	Pre-operational Measures
1	Prior to installation of Leachate Treatment	<p>Once initial contracts and nature of waste that is expected to be received by the installation has been established, the Operator shall undertake an assessment of leachate flowrate / composition and the impact on the water environment from their proposal to treat leachate before discharge to sewer.</p> <p>The operator shall use the methodology prescribed in the Environment Agency's guidance 'Environmental Assessment and Appraisal of BAT' (Ref. IPPC H1) in making this assessment.</p> <p>The Operator shall submit a report to the Environment Agency in writing for approval which includes the following:</p> <ul style="list-style-type: none"> • Identification of substances present in the effluent that are considered significant, and submit proposed emission limit values for these substances, • Identification of any odour and noise emissions that may affect nearby residences and public places • An effluent monitoring plan for any key substances identified and an action plan to reduce releases of those substances that are considered significant as part of the H1 Assessment. <p>The Operator shall implement any improvements or measures as agreed in writing with the Environment Agency into the development of the leachate treatment plant.</p> <p>The proposals shall be implemented by the Operator from the date of approval in writing by the Environment Agency.</p>
2	Prior to installation of Leachate Treatment	<p>Prior to installation of leachate storage / treatment plant the operator shall provide to the Environment Agency in writing for approval - the detailed design of the leachate treatment plant which incorporates:</p> <ul style="list-style-type: none"> • Minimisation of odour • Methane levels in line with DSER regulations • Provision for further air diffusers in storage /treatment tanks • Space within the bund for a further leachate storage / treatment tank • Sampling points for untreated and treated Leachate <p>The proposals shall be implemented by the Operator from the date of approval in writing by the Environment Agency.</p>
3	Prior to installation of the Gas Utilisation Plant	<p>Prior to installation of Gas Utilisation Plant, the Operator shall undertake full Environmental Risk Assessments of the worst case emissions (at Emission Limit Values) for H₂S, Sulphur Dioxide, Oxides of Nitrogen, Carbon Monoxide, VOC's from LFG engines and flare using Environment Agency H1 methodology. Where H1 method shows pollutant contributions to be significant - dispersion modelling taking account of local atmospheric, weather and topology shall be undertaken.</p> <p>The Operator shall provide a written report of analysis and proposals for approval by the Environment Agency.</p> <p>Following approval by the Environment Agency of the report the landfill gas proposals shall be implemented.</p>

Table S1.4B Pre-operational measures for future development

Reference	Operation	Pre-operational Measures
4	Prior to these wastes being applied for restoration	<p>Prior to the following wastes being used for restoration the Operator shall provide a report on their source, dustiness and propensity to cause odour:</p> <ul style="list-style-type: none"> • 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 13 wastes from stone cutting and sawing other than those mentioned in 01 04 07 • 02 01 03 plant-tissue waste • 02 01 07 wastes from forestry • 03 03 01 waste bark and wood

Table S1.5 Annual waste input limits

Category	Limit Tonnes/ Year
Non-hazardous waste	
Inert waste including inert waste imported for restoration	300,000

Schedule 2 - List of permitted wastes

Table S2.1 Permitted waste types

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 02	animal-tissue waste
02 01 03	plant-tissue waste
02 01 04	waste plastics (except packaging)
02 01 06	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
02 01 07	wastes from forestry
02 01 09	agrochemical waste other than those mentioned in 02 01 08
02 01 10	waste metal
02 02	wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01	sludges from washing and cleaning

Table S2.1 Permitted waste types

Waste code	Description
02 02 02	animal-tissue waste
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
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

Table S2.1 Permitted waste types

Waste code	Description
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 15	wastes from finishing other than those mentioned in 04 02 14
04 02 17	dye-stuffs 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
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 06	wastes from the MFSU of sulphur chemicals, sulphur chemical processes and desulphurisation processes
06 06 03	wastes containing sulphides other than those mentioned in 06 06 02

Table S2.1 Permitted waste types

Waste code	Description
06 09	wastes from the MFSU of phosphorous chemicals and phosphorous chemical processes
06 09 02	phosphorous slag
06 09 04	calcium-based reaction wastes other than those mentioned in 06 09 03
06 11	wastes from the manufacture of inorganic pigments and 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 03	wastes from the MFSU of organic dyes and pigments (except 06 11)
07 03 12	sludges from on-site effluent treatment other than those mentioned in 07 03 11
07 04	wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides
07 04 12	sludges from on-site effluent treatment other than those mentioned in 07 04 11
07 05	wastes from the MFSU of pharmaceuticals
07 05 12	sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 05 14	solid wastes other than those mentioned in 07 05 13
07 06	wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 07	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
08	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01	wastes from MFSU and removal of paint and varnish
08 01 12	waste paint and varnish other than those mentioned in 08 01 11
08 01 14	sludges from paint or varnish other than those mentioned in 08 01 13
08 01 16	aqueous sludges containing paint or varnish other than those mentioned in 08 01 15
08 01 18	wastes from paint or varnish removal other than those mentioned in 08 01 17
08 02	wastes from MFSU of other coatings (including ceramic materials)
08 02 01	waste coating powders
08 02 02	aqueous sludges containing ceramic materials
08 03	wastes from MFSU of printing inks
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

Table S2.1 Permitted waste types

Waste code	Description
08 04	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09
08 04 12	adhesive and sealant sludges other than those mentioned in 08 04 11
08 04 14	aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13
09	WASTES FROM THE PHOTOGRAPHIC INDUSTRY
09 01	wastes from the photographic industry
09 01 07	photographic film and paper containing silver or silver compounds
09 01 08	photographic film and paper free of silver or silver compounds
09 01 10	single-use cameras without batteries
09 01 12	single-use cameras containing batteries other than those mentioned in 09 01 11
10	WASTES FROM THERMAL PROCESSES
10 01	wastes from power stations and other combustion plants (except 19)
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	coal fly ash
10 01 03	fly ash from peat and untreated wood
10 01 05	calcium-based reaction wastes from flue-gas desulphurisation in solid form
10 01 07	calcium-based reaction wastes from flue-gas desulphurisation in sludge form
10 01 15	bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14
10 01 17	fly ash from co-incineration other than those mentioned in 10 01 16
10 01 19	wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18
10 01 21	sludges from on-site effluent treatment other than those mentioned in 10 01 20
10 01 23	aqueous sludges from boiler cleansing other than those mentioned in 10 01 22
10 01 24	sands from fluidised beds
10 01 25	wastes from fuel storage and preparation of coal-fired power plants
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 12	wastes from cooling-water treatment other than those mentioned in 10 02 11
10 02 14	sludges and filter cakes from gas treatment other than those mentioned in 10 02 13
10 02 15	other sludges and filter cakes
10 03	wastes from aluminium thermal metallurgy
10 03 02	anode scraps
10 03 05	waste alumina
10 03 16	skimmings other than those mentioned in 10 03 15
10 03 18	carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17
10 03 20	flue-gas dust other than those mentioned in 10 03 19

Table S2.1 Permitted waste types

Waste code	Description
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 09	wastes from cooling-water treatment other than those mentioned in 10 05 08
10 05 11	dross and skimmings other than those mentioned in 10 05 10
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

Table S2.1 Permitted waste types

Waste code	Description
10 09 10	flue-gas dust other than those mentioned in 10 09 09
10 09 12	other particulates other than those mentioned in 10 09 11
10 09 14	waste binders other than those mentioned in 10 09 13
10 09 16	waste crack-indicating agent other than those mentioned in 10 09 15
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 10 16	waste crack-indicating agent other than those mentioned in 10 10 15
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 14	glass-polishing and -grinding sludge other than those mentioned in 10 11 13
10 11 16	solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 11 20	solid wastes from on-site effluent treatment other than those mentioned in 10 11 19
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

Table S2.1 Permitted waste types

Waste code	Description
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
11 05	wastes from hot galvanising processes
11 05 01	hard zinc
11 05 02	zinc ash
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 01	ferrous metal filings and turnings
12 01 02	ferrous metal dust and particles
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles
12 01 05	plastics shavings and turnings
12 01 13	welding wastes
12 01 15	machining sludges other than those mentioned in 12 01 14
12 01 17	waste blasting material other than those mentioned in 12 01 16
12 01 21	spent grinding bodies and grinding materials other than those mentioned in 12 01 20
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
15 02	absorbents, filter materials, wiping cloths and protective clothing
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02

Table S2.1 Permitted waste types

Waste code	Description
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 03	End-of-life tyres - only bicycle tyres or tyres with diameter above 1400mm are allowed.
16 01 12	brake pads other than those mentioned in 16 01 11
16 01 17	ferrous metal
16 01 18	non-ferrous metal
16 01 19	plastic
16 01 20	glass
16 02	wastes from electrical and electronic equipment
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15
16 03	off-specification batches and unused products
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 03 06	organic wastes other than those mentioned in 16 03 05
16 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 <i>*not containing lead, nickel, cadmium, mercury or comprising separately collected electrolytes</i>
16 08	spent catalysts
16 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
16 08 03	spent catalysts containing transition metals or transition metal compounds not otherwise specified
16 11	waste linings and refractories
16 11 02	carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
16 11 06	linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 01	concrete, bricks, tiles and ceramics
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	wood, glass and plastic
17 02 01	wood

Table S2.1 Permitted waste types

Waste code	Description
17 02 02	glass
17 02 03	plastic
17 03	bituminous mixtures, coal tar and tarred products
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 04	metals (including their alloys)
17 04 01	copper, bronze, brass
17 04 02	aluminium
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	insulation materials and asbestos-containing construction materials
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 09	other construction and demolition wastes
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
18	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)
18 01	wastes from natal care, diagnosis, treatment or prevention of disease in humans
18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection(for example dressings, plaster casts, linen, disposable clothing, diapers)
18 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 *i.e. not consisting or containing dangerous substances
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 01	wastes from incineration or pyrolysis of waste
19 01 02	ferrous materials removed from bottom ash
19 01 12	bottom ash and slag other than those mentioned in 19 01 11
19 01 14	fly ash other than those mentioned in 19 01 13
19 01 16	boiler dust other than those mentioned in 19 01 15
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17
19 01 19	sands from fluidised beds

Table S2.1 Permitted waste types

Waste code	Description
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 03	stabilised/solidified wastes 1
19 03 05	stabilised wastes other than those mentioned in 19 03 04
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 04	vitrified waste and wastes from vitrification
19 04 01	vitrified waste
19 05	wastes from aerobic treatment of solid wastes
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
19 05 03	off-specification compost
19 06	wastes from anaerobic treatment of waste
19 06 04	digestate from anaerobic treatment of municipal waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste
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 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	solutions and sludges from regeneration of ion exchangers
19 10	wastes from shredding of metal-containing wastes
19 10 01	iron and steel waste
19 10 02	non-ferrous waste
19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 06	other fractions other than those mentioned in 19 10 05

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 S2.1 Permitted waste types

Waste code	Description
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 09	minerals (for example sand, stones)
19 12 10	combustible waste (refuse derived fuel)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
19 13	wastes from soil and groundwater remediation
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
19 13 06	sludges from groundwater remediation other than those mentioned in 19 13 05
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 01	paper and cardboard
20 01 02	glass
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 25	edible oil and fat
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 30	detergents other than those mentioned in 20 01 29
20 01 34	batteries and accumulators other than those mentioned in 20 01 33
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
20 01 99	Limited to Waste defined by Department of Health document ' Safe Management of Healthcare Waste' (Technical Memorandum 07-01) "Human hygiene waste and non-infectious disposal equipment, bedding and plaster cast" This is 'Offensive waste' packaged in yellow & black striped bags, requiring disposal by deep landfill.
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

Table S2.1 Permitted waste types

Waste code	Description
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

Table S2.2 Permitted waste types accepted for restoration

Waste code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
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
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 03	wastes from pulp, paper and cardboard production and processing
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 01	concrete, bricks, tiles and ceramics
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
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 13	wastes from soil and groundwater remediation
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01 i.e. not containing dangerous substances
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03 i.e. not containing dangerous substances

Schedule 3 – Emissions and monitoring

Table S3.1 Leachate level limits and monitoring requirements

Monitoring point reference/ Description	Limit (Note 1)	Monitoring frequency	Monitoring method
Remote Leachate Monitoring Chambers; Landfill Cell 1: LC1-1 Landfill Cell 1: LC1-2 Landfill Cell 2: LC2-1 Landfill Cell 2: LC2-2 as identified on application drawing 99120/147 dated 24/06/2009	1m above cell base Trigger level = 1.25 m above cell base	Weekly	Dip meter or as otherwise agreed with the Agency

Note 1: Levels in terms of metres above ordinance datum (m AOD) equivalent to these levels above cell base will be added for each of the sample points once CQA procedures have established as built level of cell base at the sample point locations.

Table S3.2 Point source emissions to air – emission limits and monitoring requirements

Emission point Ref. & Location (1)	Parameter	Source	Limit (including unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Landfill Gas Engine LFGE 1	Oxides of Nitrogen	Gas utilisation plant	500 mg/m ³	Hourly mean	Annually	As per M2 version 7 issued August 2010 'Monitoring of stack emissions to air'.
	CO		1400 mg/m ³			
	Total VOCs		1000 mg/m ³			
Flare 1	Oxides of Nitrogen	Landfill Gas Flare	150 mg/m ³	Hourly mean	Annually	As per M2 version 7 issued August 2010 Monitoring of stack emissions to air'.
	CO		50 mg/m ³			
	Total VOCs		10 mg/m ³			
	Operational Temperature		>1000 C	Hourly mean	Weekly while flare is operational	

- 1) identified on drawings 99120/120A dated 02/04/2010, 99120/165, 99120/166 sheet1, 99120/166 sheet2 all dated 27/09/2010
- 2) Annual monitoring is only required when flares operate in excess of 10% of the time, taken on an annual assessment period.

Table S3.3 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 (including unit) Note 1	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Discharge point to sewer						To be agreed in accordance with pre-operational condition 1, Table S1.4B

Table S3.4 Trigger levels for emissions into groundwater and monitoring requirements

Monitoring point reference	Parameter	Limit (including unit) Note 1	Reference Period	Monitoring frequency	Monitoring standard or method
Monitoring Boreholes BH1 BH2,BH3, P1,P2,P3 identified on drawing 99120/145A dated 04/10/2009 as amended by pre-operation measure 2	Cadmium	0.0005 mg/l	Spot Sample	Quarterly	As per LFTGN02 (issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'. As per H1 Technical Annex to Annex J: vs 2.0 October 2010 'Hydrogeological Risk Assessments For Landfills and the Derivation of Groundwater Control Levels and Compliance Limits'.
	Toluene	0.004 mg/l			
	Phenol	0.03mg/l			
	Ammoniacal Nitrogen	1mg/l			
	Chloride	250 mg/l			
	Nickel	0.05 mg/l			

Note 1: These limits are interim until agreed in accordance with pre-operational measure 2 in Table S1.4A.

Table S3.5 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (including unit) (1) (2)	Monitoring frequency	Monitoring standard or method
Set of boreholes BH3, BH4, BH5, BH6, BH7, BH8, BH15 identified on drawing 99120/144 dated 24/06/2009 and new boreholes installed in accordance with pre-operational measure 1.	Methane	1 %v/v	Monthly	As per LFTGN 03 issued September 2004 'Guidance on the management of landfill gas'.
	Carbon Dioxide	[no limit]		
	Oxygen	[no limit]		
	Atmospheric pressure	[no limit]		
	Differential Pressure	[no limit]		
	Temperature	[no limit]		
	Meteorological data			

(1) * - The limits specified take account of the approved background concentrations as detailed in Landfill Gas Risk Assessment updated as improvement condition 1

(2) * – the limits are interim until background and action levels of carbon dioxide and methane at each borehole are agreed in accordance with improvement programme condition 1. Due to the possible confounding factor of gas from coal measures and the historic Kirkheaton Brickworks landfill the background and action levels should be regularly re-appraised according to the data collected and Environment Agency guidance.

Table S3.6 Landfill gas from capped surfaces – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (include. unit)	Monitoring frequency	Monitoring Standard or method
Permanently capped zone	Average methane flux and total methane emission	Average zone emission rate of 0.001 mg/m2/second	Annually in accordance with LFTGN 07	As per LFTGN 07 issued September 2004 'Guidance on monitoring landfill gas surface emissions'
Temporarily capped zone	Average methane flux and total methane emission	Average zone emission rate of 0.1 mg/m2/second	Annually in accordance with LFTGN 07	As per LFTGN 07 issued September 2004 'Guidance on monitoring landfill gas surface emissions'

Table S3.7 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
Permanent in-waste monitoring boreholes and horizontal gas pipes identified on drawing 99120/141A dated 04.10.10	Methane	Monthly	As per LFTGN03 issued September 2004 'Guidance on the management of landfill gas'.	Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.
	Carbon Dioxide			
	Oxygen	Quarterly		Where the concentration of carbon monoxide exceeds 100ppm then further investigation shall be undertaken.
	Hydrogen sulphide			
	Atmospheric pressure			
	Differential pressure			
	Meteorological Data			
	Carbon Monoxide			
Gas collection system at well control valve and manifolds on gas system identified on drawing 99120/141A dated 04/10/2010.	Methane	Fortnightly	As per LFTGN03 issued September 2004 'Guidance on the management of landfill gas'.	Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.
	Carbon Dioxide			
	Oxygen			
	Carbon Monoxide			
	Atmospheric pressure			
	Differential pressure			
	Gas flow rate or suction			
% Balance Gas (calculated as the difference between the sum of measured gases and 100%)			Where the concentration of carbon monoxide exceeds 100ppm then further investigation shall be undertaken.	
Input to LFG Utilisation Compound identified on drawing 99120/165 dated 27/09/2010.	Trace gas analysis in accordance with LFTGN04.	Annually	As per LFTGN04 issued September 2004 'Guidance for Monitoring Trace Components in Landfill Gas'.	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.

Table S3.7 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
Input to LFG Utilisation Compound identified on drawing 99120/165 dated 27/09/2010.	Methane	Weekly	As per LFTGN05 issued September 2004 'Guidance for monitoring enclosed landfill gas flares'.	Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.
	Carbon Dioxide			
	Oxygen			
	Gas flow rate			
	% Balance Gas (calculated as the difference between the sum of measured gases and 100%)			
Flare identified on drawing 99120/165 dated 27/09/2010.	Temperature	Continuous and logged as per LFTGN05 issued 2004	As per M2 version 7 issued August 2010	

Table S3.8 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 Sumps; Landfill Cell 1: LC1-1 Landfill Cell 1: LC1-2 Landfill Cell 2: LC2-1 Landfill Cell 2: LC2-2 as identified on application drawing 99120/147 dated 24/06/2009	pH,	Quarterly	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'.	None
	Electrical conductivity EC,			
	Cadmium Cd,			
	Toluene			
	Phenol			
	Ammoniacal Nitrogen			
	NH4-N,		As per H1	
	Nickel Ni,		Technical Annex J: vs 2.0	
	Total Oxidised Nitrogen TON,		October 2010	
	Total Organic Carbon TOC,		'Hydrogeological Risk Assessments For Landfills and the Derivation of Groundwater Control Levels and Compliance Limits'.	
	Biological Oxygen Demand BOD,			
	Chemical Oxygen Demand COD,			
	Calcium Ca,			
	Magnesium Mg,			
	Mercury Hg,			
	Sodium Na,			
	Potassium K,			
Alkalinity (CaCO3),				
Total sulphates SO4,				
Chloride Cl,				
Iron Fe,				
Manganese Mn,		Annually		None
Chromium Cr,				
Copper Cu,				
Tin Sn,				
Lead Pb				
Zinc Zn.				
Mecoprop (MCP),				
Full hazardous substances screen				

Table S3.8 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 Sumps Landfill Cell 1: LC1-1 Landfill Cell 1: LC1-2 Landfill Cell 2: LC2-1 Landfill Cell 2: LC2-2 identified on drawing 99120/147 dated 24/06/2010.	Depth to base of monitoring well	Annually		None

Table S3.9 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 Identified on application drawing 99120/146 dated 24/06/09	pH Electrical Conductivity Temperature Ammoniacal Nitrogen (NH4-N) Chloride	Monthly	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'.	None
SW1, SW2 Identified on application drawing 99120/146 dated 24/06/09	Sulphates Total Alkalinity Total Oxidised Nitrogen Total Organic Carbon Sodium Potassium Calcium Magnesium Iron Manganese Cadmium Chromium Copper Nickel Lead Zinc	Quarterly	As per H1 Technical Annex to Annex J: vs 2.0 October 2010 'Hydrogeological Risk Assessments For Landfills and the Derivation of Groundwater Control Levels and Compliance Limits'.	None

Table S3.9 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
	Hazardous substances (as identified in leachate concentrations above the EA lower reporting level)	Annually		None

Table S3.10 Groundwater – other monitoring requirements

Emission point reference or source or description of point of measurement (1)	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Monitoring Boreholes BH4, BH5,BH6, BH7,BH1 BH2,BH3, P1,P2,P3 ⁽¹⁾	Water level	Monthly		None
Monitoring Boreholes BH5,BH6, BH7, BH1 BH2,BH3, P1,P2,P3 ⁽¹⁾	Dissolved Oxygen DO, pH, Electrical conductivity EC, Total Oxidised Nitrogen TON, Total Organic Carbon TOC, Biological Oxygen Demand BOD, Chemical Oxygen Demand COD, Calcium Ca, Magnesium Mg, Sodium Na, Potassium K, Alkalinity (CaCO3), Total sulphates SO4, Iron Fe, Managanese Mn, Mecoprop (MCP), Mercury Hg Chromium Cr, Copper Cu, Tin Sn, Lead Pb Zinc Zn.	Quarterly	As per LFTGN02 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'. As per H1 Technical Annex J: v2.0 October 2010 'Hydrogeological Risk Assessments For Landfills and the Derivation of Groundwater Control Levels and Compliance Limits'..	

Table S3.10 Groundwater – other monitoring requirements

Emission point reference or source or description of point of measurement (1)	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Monitoring Boreholes BH5, BH6, BH7, BH1 BH2, BH3, P1, P2, P3 ⁽¹⁾	Hazardous substances (as identified in leachate concentrations above the EA lower reporting level)	Annually		None
Monitoring Boreholes BH4, BH5, BH6, BH7, BH1 BH2, BH3, P1, P2, P3 ⁽¹⁾	Depth to base of monitoring well	Annually		None

(1) identified on drawing 99120/145A dated 04/10/2010 as amended by Pre-Operation Measure 1

Table S3.11 Particulate matter in ambient air - limits and monitoring requirements

Monitoring Point Ref./Description (1)	Parameter	Limit (Including Unit) (1)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
As identified by Pre- Operation Measure 7	Deposited particulate	200 mg/m-2 day-1	Daily	Monthly	As per M17 issued March 2004 'Monitoring of Particulate Matter in ambient air around waste facilities'

Note 1: Sampling locations, methods, and limit to be agreed as part of the Particulate Management Plan developed and approved by the Environment Agency under pre-operational measure 7

Schedule 4 - Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Leachate levels As required by condition 3.5.1	Remote Leachate Monitoring Chambers; Landfill Cell 1: LC1-1, LC1-2; Landfill Cell 2: LC2-1,LC2-2	Every month	1 January
Emissions to air Parameters as required by condition 3.5.1	Landfill Gas Engine LFGE 1 Flare 1	Every 12 months	1 January
Emissions to leachate treatment plant, sewer,. Parameters as required by condition 3.5.1	Input to Leachate Treatment Discharge to Sewer	Every 3 months	DD/MM, DD/MM, DD/MM, DD/MM
Groundwater Parameters as required by condition 3.5.1	Monitoring Boreholes BH6, BH7,BH1 BH2,BH3, P1,P2,P3	Every 3 Months	DD/MM, DD/MM, DD/MM, DD/MM
Landfill gas lateral migration Parameters as required by condition 3.5.1	Set of boreholes BH3, BH4, BH5, BH6, BH7, BH8, BH15, P1, P2, P3 and additional boreholes required to be installed under Pre-operational measure 1	Every 3 months	DD/MM, DD/MM, DD/MM, DD/MM
Landfill gas surface emissions Parameters as required by condition 3.5.1	Permanently capped zone Temporarily capped zone	Every 12 months	DD/MM
Other Landfill gas monitoring Parameters as required by condition 3.5.1	-Permanent in-waste monitoring boreholes and horizontal gas pipes	Every 3 months	DD/MM
	-Gas collection system at well control valve and manifolds on gas system (as identified on drawing 99120/141A dated 04/10/2010.)	Every 3 months	DD/MM
	Trace gas analysis at input to LFG Utilisation Compound	Every 12 months	DD/MM
	Methane, CO2, O2, Gas flow rate, % balance gas	Monthly	DD/MM

Table S4.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
	Flare	Monthly	DD/MM
Other leachate monitoring Parameters as required by condition 3.5.1	Remote Leachate Monitoring Chambers; Landfill Cell 1:, LC1-1, LC1-2; Landfill Cell 2: LC2-1,LC2-2 pH, EC,NH4-N, TON, TOC, BOD, COD, Ca, Mg, Na, K, Alkalinity, SO4, Cl, Fe Mn , Cd, Cr, Cu, Sn, Ni, Pb, Zn.Full hazardous substances Screening Depth to base of monitoring well	Every 3 months Every 12 months Every 12 months	DD/MM DD/MM
Other surface water monitoring Parameters as required by condition 3.5.1	SW1, SW2: pH, EC, Temp, NH4-N, Cl TON, TOC Ca, Mg, Na, K, Alkalinity, SO4, Cl, Fe Mn , Cd, Cr, Cu, Sn, Ni, Pb, Zn. Hazardous substances	Every 3 months Every 12 months	DD/MM, DD/MM,
Other groundwater monitoring Parameters as required by condition 3.5.1	Monitoring Boreholes BH6, BH7,BH1 BH2,BH3, P1,P2,P3: Water level, monitoring point base, DO, Eh, pH, EC, NH4-N, TON, TOC, BOD, COD, Ca, Mg, Na, K, Alkalinity , SO4, Cl, Fe, Mn, Cd, Cr, Cu, Sn, Ni, Pb and Zn. Phenol, Mecoprop, Hazardous substances screen, depth to base of monitoring well	Every 3 months Every 12 months	DD/MM, DD/MM,
Ambient air monitoring Parameters as required by condition 3.5.1	PM10 Deposited particulate	Every 6 months	DD/MM,
Assessment of environmental impact on Cockley Hill Beck		Every 12 months	DD/MM

Table S4.2: Annual production/treatment

Leachate:	Cubic metres/year
Disposed of off site;	
Disposed of to any onsite effluent treatment plant;	
Recirculated into the waste mass.	

Table S4.2: Annual production/treatment

Surface water and/ or groundwater: Cubic metres/year
 Disposed of off site;
 Disposed of to any onsite effluent treatment plant.

Landfill gas: Normalised cubic metres/year
 combustion in flares;
 combustion in gas engines;
 Other methods of gas utilisation.

Table S4.3 Performance Parameters

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

Table S4.4 Reporting Forms

Media/parameter	Reporting Format	Date of Form
Leachate	Form leachate 1 or other reporting format to be approved in writing with the Environment Agency	
Air	Form Air 1 or other reporting format to be approved in writing with the Environment Agency	
Controlled water	Form Water 1 or other reporting format to be approved in writing with the Environment Agency	
Groundwater	Form Groundwater 1 or other reporting format to be approved in writing with the Environment Agency	
Sewer	Form Sewer 1 or other reporting format to be approved in writing with the Environment Agency	
Landfill gas	Form LFG 1 or other reporting format to be approved in writing with the Environment Agency	
Particulate matter	Form Particulate 1 or other reporting format to be approved in writing with the Environment Agency	
Waste Return	Waste Return Form RATS2E	
Landfill topographical surveys and interpretation	Reporting format to be approved in writing with the Environment Agency	

Schedule 5 - Notification

This page outlines the information that the operator must provide.

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

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

Part A

Permit Number	EPR/RP3332/KY
Name of operator	P Casey Enviro Limited
Location of Facility	Lane Side Quarry Landfill Site
	Off Bellstring Lane, Kirkheaton, Huddersfield, West Yorkshire, HD5 0EW
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

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 facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

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

“*Annually*” means once every year.

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

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

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

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

“*Cell layout drawing*” means:

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

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

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

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

"Emissions to land" includes emissions to groundwater.

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

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

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

"Landfill Infrastructure" means any specified element of the:

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

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.

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

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

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

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

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

- groundwater under-drainage system;
- permanent geophysical leak location system;
- leak detection layer;
- sub-grade;
- barriers;
- liners;
- leachate collection system;
- leachate abstraction system;
- separation bund/layer;
- cell or area surface water drainage system;
- side wall subgrade and containment systems;

for the New Cell.

"No impact" means that the change made to the construction process will not affect the agreed design criteria, specification or performance in a way that has a negative effect.

“*Pests*” means Birds, Vermin and Insects.

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

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

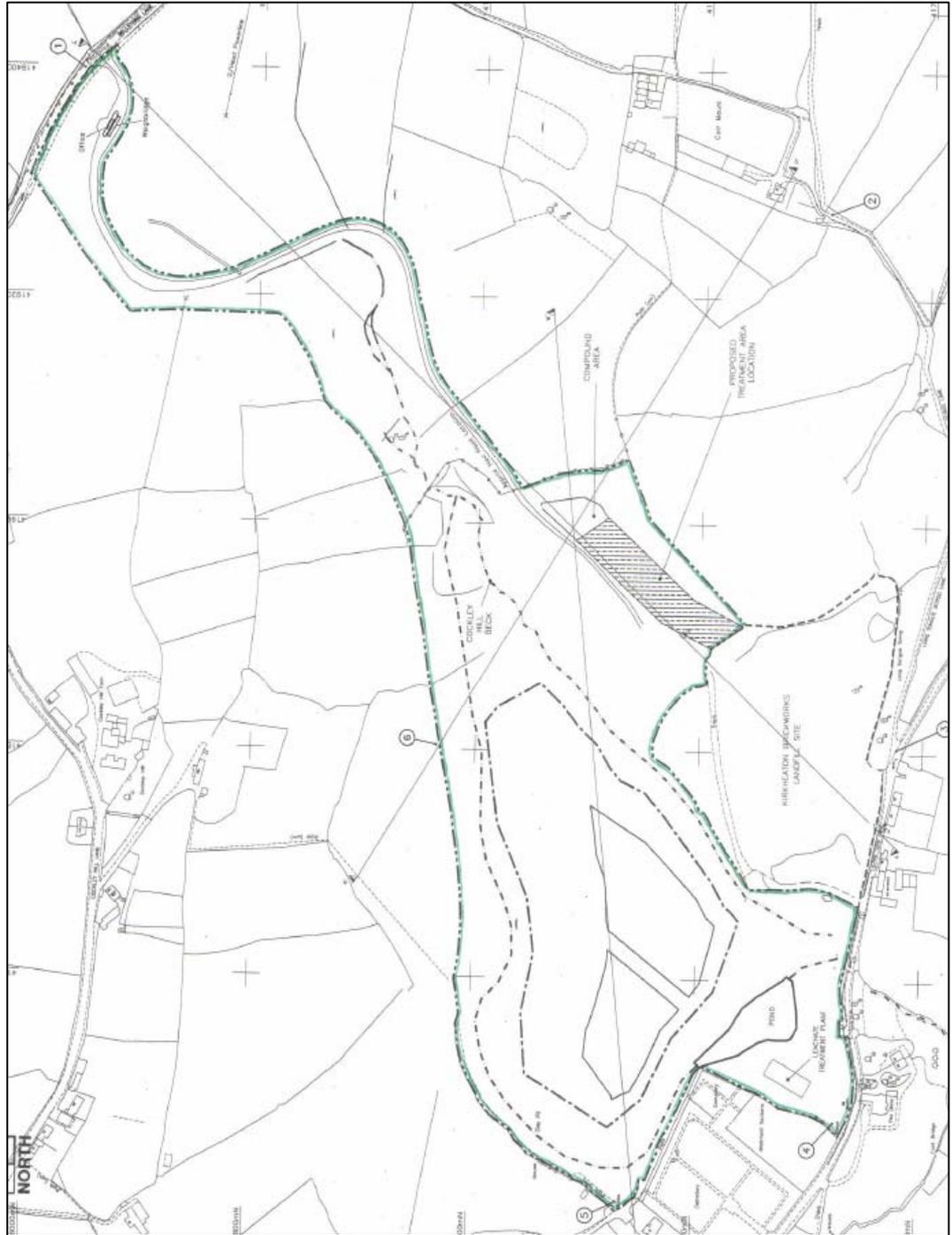
“*Waste code*” means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

“*Year*” means calendar year ending 31 December.

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

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

Schedule 7 - Site plan



[“©Crown Copyright. All rights reserved. Environment Agency, 100026380, YYYY.”]

END OF PERMIT

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number: Air1 / 14/04/2011

Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample and Times [3]	Date	Uncertainty [4]

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number: Water1 / 14/04/2011

Reporting of emissions to water (other than to sewer) and land for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample and Times [3]	Date	Uncertainty [4]

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number: Sewer1 / 14/04/2011

Reporting of emissions to sewer for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test _[2]	Method	Sample and Times ^[3]	Date	Uncertainty _[4]

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number: WaterUsage1 / 14/04/2011

Reporting of Water Usage for the year XXXX

Water Source	Usage (m³/year)	Specific Usage (m³/unit output)
TOTAL WATER USAGE		

Operator's comments :

Signed
(authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number: Energy1 / 14/04/2011

Reporting of Energy Usage for the year XXXX

Energy Source	Energy Usage Quantity	Primary Energy (MWh)	Specific Usage (MWh/unit output)
TOTAL	-		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number: Performance1 / 14/04/2011

Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY

Parameter	Units

Operator's comments :

Signed
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number: Leachate 1 / 14/04/2011

Reporting of leachate monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

Monitoring Point	Substance / Parameter	Compliance limit	Reference Period	Result ^[1]	Test ^[2]	Method	Sample and Times ^[3]	Date	Uncertainty ^[4]

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number:: Groundwater1 / 14/04/2011

Reporting of groundwater monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

Monitoring Point	Substance / Parameter	Trigger level	Reference Period	Result ^[1]	Test _[2]	Method	Sample and Times ^[3]	Date	Uncertainty ^[4]

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number: LFG1 / 14/04/2011

Reporting of landfill gas monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

Monitoring Point	Substance / Parameter	Compliance limit	Reference Period	Result ^[1]	Test Method ^[2]	Sample and Times ^[3]	Date	Uncertainty ^[4]

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/RP3332KY
Facility: Lane Side Quarry Landfill Site

Operator: P Casey Enviro Limited
Form Number: Particulate1 / 14/04/2011

Reporting of particulates for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)