



Variation notice with introductory note

Environmental Permitting (England & Wales) Regulations 2007

Colnbrook Landfill Site

Biffa Waste Services Limited
Sutton Lane
Slough
Berkshire
SL3 8AB

Permit number
EPR/BU7901

Variation Notice Number
EPR/BU7901IP/V004

Colnbrook Landfill Site

Permit Number EPR/BU7901

Variation number EPR/BU7901IP/V004

Introductory note

This introductory note does not form a part of the permit

The following notice, which is issued pursuant to regulation 20 and Part 1 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations S.I.2007 No. 3538 (the EP Regulations), gives notice of the variation of an environmental permit to operate a regulated facility. Schedule 1 of this notice lists any deleted conditions, schedule 2 lists any amended conditions and Schedule 3 lists any conditions that have been added.

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

There are no substantial changes to the installation as a result of this variation. However, the Schedules have been amended to reflect the potential impact of the site as a result of:

- further monitoring results having being made available which has enabled a more accurate assessment of emissions to be made;
- agreement of the conditions, following detailed consultation with the Operator;
- compliance with improvement conditions; and
- a review having been undertaken of the Hydrogeological Risk Assessment.

Status log of the permit

Application EPR/BU7901 (reference EPR/BU7901IP/A001)	Date received 06/06/2003	Response date
Response to request for information	e mails dated 15/09/2003 and 30/09/2003, following meeting on the 16/10/2003 and letter dated 17/10/2003	11/11/2003 and 12/11/2003
Response to request for information regarding technical information letter	02/12/2003	23/12/2003 and Revised Gas Risk Assessment Version 2.1 dated 12/12/2003.
Permit EPR/BU7901	Determined 05/02/2004	
Variation KP3334LR (reference EPR/BU7901IP/V002)		
Planning Inspectors decision		02/02/2006
Variation KP3334LR (reference EPR/BU7901IP/V002)	Determined 12/10/2006	
Variation Application GP3235SJ (reference EPR/BU7901IP/V003)	Received 01/06/2005	
Response to request for further information e mail	01/07/2005	E mail received 21/07/2005
Response to request for further information	22/07/2005	Letter dated 18/08/2005 and Risk Assessment
Variation GP3235SJ (reference EPR/BU7901IP/V003)	Determined 23/11/2006	
Variation EPR/BU7901IP/V004 (reference DP3639UZ)	Determined 05/02/2009	

Other installation permits relating to this installation

Operator	Permit Number	Date of Issue
Biffa Waste Services Ltd	EAWML100274	28 th August 2008

Superseded or partially superseded licences/authorisations/consents relating to this installation

Holder	Reference Number	Date of Issue	Fully or Partially Superseded
RMC Environmental Services	EAWML 83084	15/11/1989	Fully superseded

End of Introductory Note

Notice of variation

Environmental Permitting
(England and Wales) Regulations 2007

Permit number

EPR/BU7901

Variation number

EPR/BU7901IP/V004

The Environment Agency in exercise of its powers under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2007 (SI 2000 No 3538) varies the permit as set out below.

Biffa Waste Services Limited ("the Operator"),

whose Registered Office is

Coronation Road

Cressex

High Wycombe

Buckinghamshire

HP12 3TZ

Company registration number 946107

to operate an installation at

Colnbrook Landfill Site

Sutton Lane

Slough

Berkshire

SL3 8AB

to the extent set out in schedules 1 to 3 of this variation notice.

The notice shall take effect from 05/02/2009.

Signed

Date

	5 th February 2009
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Alan Hunter, NPS Permitting Team Leader

Authorised to sign on behalf of the Environment Agency

SCHEDULE 1 – CONDITIONS TO BE DELETED

- (2) All conditions and schedules of permit EPR/BU7901, Variations KP3334LR (reference EPR/BU7901IP/V002) and GP3235SJ (reference EPR/BU7901IP/V003) are deleted.

SCHEDULE 2 – CONDITIONS TO BE AMENDED

- (3) None.

SCHEDULE 3 – CONDITIONS TO BE ADDED

- (4) The following conditions and schedules are added to the permit.

Conditions

1. Management

1.1 General management

1.1.1 The activities shall be managed and operated:

- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the Operator as a result of complaints; and
- (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Accidents that may cause pollution

1.2.1 The Operator shall:

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

1.3 Finance

- 1.3.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the Operator and the Agency dated 5th February 2004 shall be maintained by the Operator throughout the subsistence of this permit and the Operator shall produce evidence of such provision whenever required by the Agency.
- 1.3.2 The Operator shall ensure that the charges it makes for the disposal of waste in the landfill cover the cost of operating the landfill, as far as possible the cost of the financial provision required by condition 1.3.1 and the estimated costs for the closure and aftercare of the landfill.

1.4 Energy efficiency

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

1.5 Site security

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

2. Operations

2.1 Permitted activities

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

2.2 The site

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

2.3 Operating techniques

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

2.4 Off-site conditions

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

2.5 Improvement programme

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

2.6 Pre-operational conditions

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

2.7 Engineering

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

2.8 Waste acceptance

2.8.1 Wastes shall only be accepted for disposal if:

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

2.8.2 Waste shall only be accepted at the Soil Treatment Facility (STF) on the site if:

- (a) it is of a type and quantity listed in schedule 3 table S3.2; and
- (b) it conforms to the description in the documentation supplied by the producer and holder; and
- (c) the total quantity of waste accepted at the STF shall not exceed the limits in Table S1.5.

2.8.3 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
- (c) waste, subject to treatment processes, at the point of dispatch;

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

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

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

- 2.8.6 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing ESID4 dated 17.10.2008.
- 2.8.7 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.
- 2.8.8 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of municipal waste and multiple collection vehicles, of the collector of such waste. Any information regarded by the Operator as commercially confidential shall be clearly identified in the record.

2.9 Leachate levels

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

2.10 Closure, aftercare and decommissioning

- 2.10.1 The Operator shall maintain and operate the activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.
- 2.10.2 The Operator shall maintain a site closure plan which demonstrates how the activities can be decommissioned to avoid any pollution risk and return the site of operation to a satisfactory state.
- 2.10.3 The Operator shall carry out and record a review of the site closure plan at least every 4 years.
- 2.10.4 The site closure plan (or relevant part thereof) shall be implemented on final cessation or decommissioning of the activities or part thereof.

2.11 Site protection and monitoring programme

- 2.11.1 The Operator shall implement and maintain the Site Protection and Monitoring Programme in relation to all areas which will not comprise permanent deposits of waste and shall carry out and record a review of it at least every 4 years commencing from the date the Site Protection and Monitoring Programme was received.

3. Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 4 tables S4.2, S4.3 and S4.4.
- 3.1.2 The limits given in that schedule shall not be exceeded, save that compliance with an emission limit shall include incorporation of the uncertainty allowance stated in Agency guidance LFTGN 05 and LFTGN 08.

- 3.1.3 Where a substance is specified in schedule 4 table S4.3 or S4.4 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.

3.2 Emissions to groundwater

- 3.2.1 There shall be no emission from the activities into groundwater of any substance in List I (as defined by the Groundwater Regulations) contrary to those regulations.
- 3.2.2 There shall be no emission from the activities into groundwater of any substance in List II (as defined in the Groundwater Regulations) so as to cause pollution (as defined in those regulations).
- 3.2.3 The limit for emissions into groundwater for the parameters and monitoring points set out in schedule 4 Table S4.5 shall not be exceeded.
- 3.2.4 The Operator shall submit to the Agency a review of the Hydrogeological Risk Assessment:
- (a) between 9 and 6 months prior to the fourth anniversary of the granting of the permit, and
 - (b) between 9 and 6 months prior to every subsequent 4 years after the fourth anniversary of the granting of the permit.

3.3 Fugitive emissions of substances

- 3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The Operator shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 Litter or mud arising from the activities shall not cause pollution. The Operator shall not be taken to have breached this condition if appropriate measures have been used to prevent or where that is not practicable to minimise, the litter and mud.
- 3.3.3 Litter or mud arising from the activities shall be cleared from affected areas outside the site as soon as practicable.
- 3.3.4 All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the Operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.
- 3.3.5 The limits for landfill gas arising from the installation set out in schedule 4, tables S4.6 and S4.12, shall not be exceeded.
- 3.3.6 The limits for particulate matter arising from the installation set out in schedule 4, table S4.13, shall not be exceeded.

3.4 Odour

- 3.4.1 Emissions from the activities shall be free from odour at levels likely to cause nuisance outside the site, as perceived by an authorised officer of the Agency, unless the Operator has used appropriate measures to prevent or where that is not practicable to minimise the odour.

3.5 Noise and vibration

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

3.6 Monitoring

- 3.6.1 The Operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring and any other actions specified in the following tables in schedule 4 to this permit:
- (a) Leachate specified in tables S4.1 and S4.9;
 - (b) Point source emissions specified in tables S4.2, S4.3 and S4.4;
 - (c) Groundwater specified in tables S4.5 and S4.11;
 - (d) Landfill gas specified in tables S4.6, S4.7, S4.8 and S4.12;
 - (e) Surface water specified in table S4.10;
 - (f) Particulate matter specified in table S4.13; and
 - (g) Contaminated soils specified in table S4.14.
- 3.6.2 The Operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.6.3 A topographical survey of the site referenced to ordnance datum shall be carried out:
- (a) annually, and
 - (b) prior to the disposal of waste in any new cell or new development area of the landfill, and
 - (c) following closure of the landfill or part of the landfill.

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

4. Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

- (d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) the results of groundwater monitoring;
 - (ii) the Site Protection and Monitoring Programme;
 - (iii) sub-surface landfill gas monitoring;
 - (iv) leachate levels, quality and quantities;
 - (v) landfill gas generation and collection;
 - (vi) waste types and quantities; and
 - (vii) the specification and as built drawings of the basal, sidewall and capping engineering systems.

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

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

4.2 Reporting

4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this installation and any agreed amendments thereto;
- (b) where the Operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
- (c) the energy consumed at the site, reported in the format set out in schedule 5 table S5.3
- (d) the annual production/treatment set out in schedule 5 table S5.2;
- (e) details of any contamination or decontamination of the site which has occurred;
- (f) the topographical surveys required by condition 3.6.3 other than those submitted as part of a CQA validation report;
- (g) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
- (h) an assessment of the settlement behavior of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;
- (i) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;

- (j) a summary of the WAC compliance testing undertaken in the period.
- 4.2.2 Within 28 days of the end of the reporting period the Operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 5 Table S5.1;
 - (b) for the reporting periods specified in schedule 5 Table S5.1 and using the forms specified in schedule 5 Table S5.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.3 A summary report of the waste types and quantities accepted and removed from the site shall be made for each quarter. It shall be submitted to the Agency within one month of the end of the quarter and shall be in the format required by the Agency.
- 4.2.4 The Operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency.
- 4.2.6 The results of reviews and any changes made to the Site Protection and Monitoring Programme shall be reported to the Agency, within 1 month of the review or change.

4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit;
 - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.
- 4.3.3. Prior written notification shall be given to the Agency of the following events and in the specified timescales:
- (a) as soon as practicable prior to the permanent cessation of any of the permitted activities;
 - (b) as soon as practicable prior to the cessation of the landfill disposal activities, for a period likely to exceed 1 month; and
 - (c) at least 7 days prior to the resumption of the landfill disposal activities after a cessation notified under (b) above.
- 4.3.4 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan in respect of any activities other than the disposal of waste in the landfill.

- 4.3.5 Where the Agency has requested in writing that it shall be notified when the Operator is to undertake monitoring and/or spot sampling, the Operator shall inform the Agency when the relevant monitoring is to take place. The Operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.6 The Agency shall be notified within 7 days of any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence.
- 4.3.7 The Agency shall be provided, within 14 days of the Operator or any relevant person being convicted of a relevant offence, (unless such information has already been notified to the Agency), with details of the nature of the offence, the place and date of conviction, and the sentence imposed.
- 4.3.8 The Agency shall be notified within 14 days of the Operator and/or any relevant person lodging an appeal against a conviction for any relevant offence and of the outcome when the appeal is decided.
- 4.3.9 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

4.4 Interpretation

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

Schedule 1 - Operations

Table S1.1 Activities

Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
Section 5.2 Part A(1) (a) , The disposal of waste in a landfill.	Landfill for non-hazardous waste (landfill classification under the Landfill Directive 1999).	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.8, as an integral part of landfilling.
Section 1.1, Part A(1)(b)(iii), Burning of waste as a fuel.	Utilisation of landfill gas for energy recovery in an appliance with a rated thermal input of ≥ 3 MW, but < 50 MW.	Landfill gas arising from the landfill.
Section 5.3A(1)(a) Disposal of waste other than by incineration or landfill.	Storage and treatment of leachate.	From landfill leachate management system and Soil Treatment Facility to point of entry to sewer.
	Biological treatment of contaminated soils.	Treatment of contaminated soils, consisting of the types and quantities specified in condition 2.8.
Directly Associated Activity		
Landfill gas flaring.	Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the landfill.
Water discharges to controlled waters.	Discharges of site drainage from the Installation.	From surface water management system to point of entry to controlled waters.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to questions 1.2, 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application Form	Application: 06/06/2003
Variation Application Documentation	The response to questions C2.1, C2.2, C2.3, C2.4, C2.5 and C2.11 in the supporting documentation of the Application.	Application: 01/06/2005
Response to letter dated 22/07/06 and Risk Assessment (No. 4B-0034-00147-01) dated August 2005	All sections of letter dated 18/08/06, and all sections of Risk Assessment dated August 2005.	18/08/2006
Colnbrook Landfill Site Noise and Vibration Management Plan 2007	All	Dated May 2007

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IP1	The Operator shall submit to the Agency, for its agreement in writing, a revised Groundwater Management Plan, which will include a review of the groundwater monitoring data, for existing groundwater monitoring points. The review shall include, where necessary, setting control and trigger levels in accordance with the Agency's document, 'Hydrogeological Risk Assessments for Landfill (LFTGN01).	05/06/2009
IP2	The Operator shall undertake a programme of monitoring in accordance with technical guidance note M18, of the discharge to sewer. The Operator shall sample and analyse the discharge at least once per month over a period of 6 months. A written report shall be submitted upon completion of the monitoring programme detailing a summary of the analysis, along with an assessment of the impact of the discharge in accordance with the H1 methodology. The report shall also include details of any improvements identified for implementation along with the timescales for completion of the improvements.	05/10/2009

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IP3	<p>A revised landfill gas management plan for the site should be prepared and submitted to the Agency for approval. The plan shall incorporate monitoring proposals for:</p> <ul style="list-style-type: none"> • surface gas emissions; and • establishing a network of perimeter and sensitive receptor monitoring point locations for ambient air monitoring giving details of the equipment used, procedures adopted and recognised measurement techniques (including duration) to be undertaken; • locations and installation at strategic locations on the gas extraction system for measurement of the flow rate of landfill gas.. 	05/05/2009
IP4	<p>The Operator shall submit a report (having regard to the Environment Agency's document "Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water", (LFTGN02)) to the Agency for agreement for the replacement or remediation of blocked and/or inaccessible leachate extraction and monitoring points. The report shall where necessary include a timetable for full completion within 3 months of replacement/remediation works.</p>	05/04/2009
IP5a	<p>The Operator shall carry out an investigation into the methane levels in perimeter gas monitoring boreholes PG34a (91301334), PG36r (91301336), PG37r (91301337), PG38r (91301338) and G39r (91301339) and Carbon Dioxide in boreholes PG02 (91301102) and PG35r (91301335). The objective shall be to determine the underlying cause of these elevated levels by identifying and establishing the true source(s) of such gases and their potential migration pathways, this shall include but not be limited to:</p> <ul style="list-style-type: none"> • A review of the historical site information to identify if the perimeter gas monitoring boreholes are being influenced by other gas sources other than landfill gas, • A review of the conceptual model to identify any features that could affect gas migration including an assessment of barriers, pathways and construction of the monitoring boreholes, • A review of historical monitoring data that establish/determine predictive trends for gas concentrations within these monitoring boreholes, source identification shall be justified by appropriate trace gas analysis techniques. 	05/06/2009
IP5b	<p>On completion the Operator shall submit a report to the Agency detailing the outcome of the investigation including recommendations with a realistic timetable for implementation and further review. The Operator shall derive appropriate compliance, assessment levels and monitoring frequency for the above monitoring boreholes for agreement. These levels shall be based upon the outcome of the investigation and cross-referenced to measurements recorded since these monitoring boreholes were installed.</p> <p>The potential for a combination of background and landfill derived gases to migrate and result in an adverse environmental impact upon identified receptors adjacent to the installation boundary shall also be assessed and reviewed.</p>	05/08/2009
IP6a	<p>The Operator shall submit to the Agency for approval proposals for the replacement or repair of perimeter landfill gas monitoring points PG11, PG12 and PG34 adjacent to their original locations.</p>	05/03/2009
IP6b	<p>The Operator shall install the proposed replacement boreholes and commence monitoring in for Methane, Carbon Dioxide, Oxygen, Atmospheric pressure, Differential Pressure and Temperature. A drawing shall be submitted within one month of completion of the installation showing the location and nomenclature of the installed boreholes.</p>	5 months of agreement of IP6a.
IP6c	<p>The Operator shall submit to the Agency for approval in writing, a revised landfill gas management plan that includes borehole specific control and trigger levels for methane and carbon dioxide, based upon a minimum of six sets of monthly monitoring results for those monitoring points installed. The revised gas management plan shall also include, but not be limited to, a documented system (including procedures and work instructions) for the implementation of monitoring measures, frequencies, schedules, techniques, compliance action plans, data management and reporting procedures in accordance with Agency guidance on the management of landfill gas (LFTGN04).</p>	05/02/2010
IP7	<p>The Operator shall submit to the Agency for approval in writing a revised odour management plan. The plan shall include environmental protection measures to be undertaken in the event of an exceedance of the ambient air methane emission limit.</p>	05/03/2009

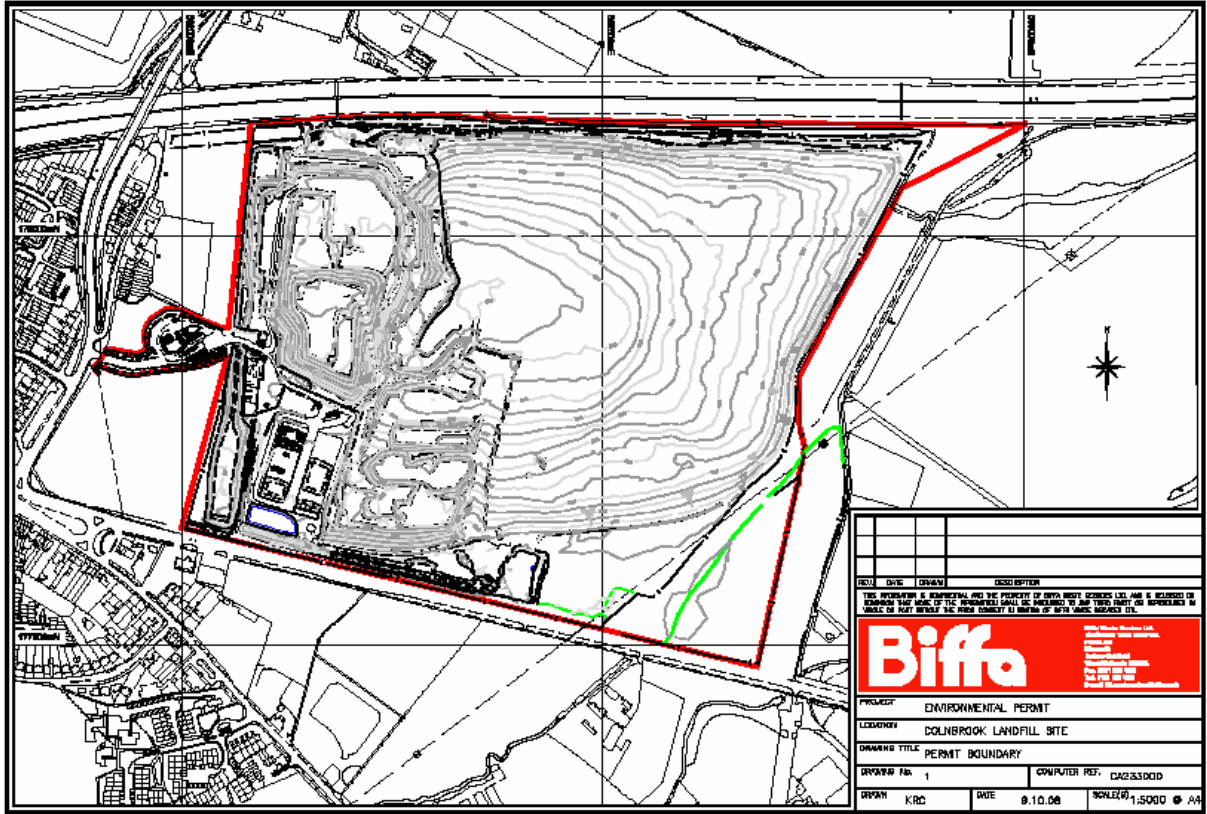
Table S1.4 Pre-operational measures for future development

Reference	Operation	Pre-operational Measures
1	Prior to the deposit of waste in any cell where waste deposition has not taken place.	The leachate blanket should be 500mm thick and constructed to the relevant Agency specification.
2	Prior to the deposit of waste in any cell where waste deposition has not taken place.	Submit for approval details for the installation of groundwater drainage collection pipework in the gravels behind the upper section of the sidewall liner and a groundwater management plan including details of the proposed emission point/s and appropriate control and trigger levels.

Table S1.5 Annual waste input limits

Category	Limit
Non-hazardous waste (Landfill)	300,000 Tonnes / Year
Hazardous waste (Soil Treatment Facility)	35,000 Tonnes at any one time

Schedule 2 - Site plan



Schedule 3 - List of permitted wastes

Table S3.1 Permitted waste types for disposal

EWC 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 02	wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01	sludges from washing and cleaning
02 02 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

Table S3.1 Permitted waste types for disposal

EWC code	Description
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
02 06 03	sludges from on-site effluent treatment
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 03	wastes from chemical treatment
02 07 04	materials unsuitable for consumption or processing
02 07 05	sludges from on-site effluent treatment
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03	wastes from pulp, paper and cardboard production and processing
03 03 01	waste bark and wood
03 03 02	green liquor sludge (from recovery of cooking liquor)
03 03 05	de-inking sludges from paper recycling
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 09	lime mud waste
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10
04	WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES
04 01	wastes from the leather and fur industry
04 01 01	fleshings and lime split wastes
04 01 02	liming waste
04 01 06	sludges, in particular from on-site effluent treatment containing chromium
04 01 07	sludges, in particular from on-site effluent treatment free of chromium
04 01 08	waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
04 01 09	wastes from dressing and finishing
04 02	wastes from the textile industry
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10	organic matter from natural products (for example grease, wax)
04 02 15	Wastes from finishing other than those mentioned in 04 02 14
04 02 17	dyestuffs and pigments other than those mentioned in 04 02 16
04 02 20	sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
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

Table S3.1 Permitted waste types for disposal

EWC code	Description
05 06	wastes from the pyrolytic treatment of coal
05 06 04	waste from cooling columns
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 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 03	wastes from MFSU of printing inks
08 03 15	ink sludges other than those mentioned in 08 03 14
08 03 18	waste printing toner other than those mentioned in 08 03 17
08 04	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09
08 04 12	adhesive and sealant sludges other than those mentioned in 08 04 11
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
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

Table S3.1 Permitted waste types for disposal

EWC code	Description
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
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 from 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 from 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

Table S3.1 Permitted waste types for disposal

EWC code	Description
10 11 20	solid wastes from on-site effluent treatment other than those mentioned in 10 11 19
10 12	wastes from manufacture of ceramic goods, bricks, tiles and construction products
10 12 01	waste preparation mixture before thermal processing
10 12 03	particulates and dust
10 12 05	sludges and filter cakes from gas treatment
10 12 06	discarded moulds
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 10	solid wastes from gas treatment other than those mentioned in 10 12 09
10 12 12	wastes from glazing other than those mentioned in 10 12 11
10 12 13	sludge from on-site effluent treatment
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 01	waste preparation mixture before thermal processing
10 13 04	wastes from calcination and hydration of lime
10 13 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 07	sludges and filter cakes from gas treatment
10 13 10	wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 11	wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 14	waste concrete and concrete sludge
11	WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY
11 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 02	zinc ash
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 02	ferrous metal dust and particles
12 01 04	non-ferrous metal dust and particles
12 01 05	plastics shavings and turnings
12 01 13	welding wastes
12 01 15	machining sludges other than those mentioned in 12 01 14
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 02	plastic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
15 02	absorbents, filter materials, wiping cloths and protective clothing
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 12	brake pads other than those mentioned in 16 01 11

Table S3.1 Permitted waste types for disposal

EWC code	Description
16 01 19	plastic
16 01 20	glass
16 03	off-specification batches and unused products
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 03 06	organic wastes other than those mentioned in 16 03 05
16 08	spent catalysts
16 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
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 03	plastic
17 04	metals (including their alloys)
17 04 11	cables other than those mentioned in 17 04 10
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	insulation materials and asbestos-containing construction materials
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 09	other construction and demolition wastes
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 01	wastes from incineration or pyrolysis of waste
19 01 12	bottom ash and slag other than those mentioned in 19 01 11
19 01 14	fly ash other than those mentioned in 19 01 13
19 01 16	boiler dust other than those mentioned in 19 01 15
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17
19 01 19	sands from fluidised beds
19 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

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

Table S3.1 Permitted waste types for disposal

EWC code	Description
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 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	wastes from the preparation of water intended for human consumption or water for industrial use
19 09 01	solid waste from primary filtration and screenings
19 09 02	sludges from water clarification
19 09 03	sludges from decarbonation
19 09 05	saturated or spent ion exchange resins
19 09 06	sludges from regeneration of ion exchangers
19 10	wastes from shredding of metal-containing wastes
19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 06	other fractions other than those mentioned in 19 10 05
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 04	plastic and rubber
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 09	minerals (for example sand, stones)
19 12 10	combustible waste (refuse derived fuel)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
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
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 25	edible oil and fat
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 30	detergents other than those mentioned in 20 01 29
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 41	wastes from chimney sweeping
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 02 02	soil and stones
20 02 03	other non-biodegradable wastes
20 03	other municipal wastes
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues

Table S3.1 Permitted waste types for disposal

EWC code	Description
20 03 04	septic tank sludge
20 03 06	waste from sewage cleaning
20 03 07	bulky waste

Table S3.2 Permitted waste types for Biopile Soil Treatment

EWC code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 05	drilling muds and other drilling wastes
01 05 05 *	oil-containing drilling muds and wastes
01 05 06 *	drilling muds and other drilling wastes containing dangerous substances
05	WASTES FROM PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL
05 01	wastes from petroleum refining
05 01 03 *	tank bottom sludges
05 01 05 *	oil spills
05 01 06 *	oily sludges from maintenance operations of the plant or equipment
05 01 09 *	sludges from on-site effluent treatment containing dangerous substances
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03 *	soil and stones containing dangerous substances
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 05 *	dredging spoil containing dangerous substances
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 07 *	track ballast containing dangerous substances
17 05 08	track ballast other than those mentioned in 17 05 07
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 03	stabilised/solidified wastes ²
19 03 04 *	wastes marked as hazardous, partly ³ stabilised
19 13	wastes from soil and groundwater remediation
19 13 01 *	solid wastes from soil remediation containing dangerous substances
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 03 *	sludges from soil remediation containing dangerous substances
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03

Footnote Hazardous wastes (*) may not be mixed with non-hazardous wastes for the purpose of dilution.

² 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.

³ A waste is considered as partly stabilised if, after the stabilisation process, dangerous constituents which have not been changed completely into non-dangerous constituents could be released into the environment in the short, middle or long term.

Schedule 4 – Emissions and monitoring

Table S4.1 Leachate level limits and monitoring requirements

Monitoring point reference/ Description	Limit	Monitoring frequency	Monitoring method
C1 (91303010), C1-G (91303012), C1-H (91303011), C2 (91303020), C2-A (91303021), C2-B (91303022), C3 (91303030), C3-C (91303031), C3-D (91303032), C4 (91303040), C4-E (91303041), C4-F (91303042), C5 (91303050), C5-I (91303051), C5-J (91303052), C6r (91303063), C6-K (91303061), C6-L (91303062), C7r (91303073), C7-M (91303071), C7-N (91303072), C8r (91303083), C8-O (91303081), C8-P (91303082), C9r (91303093), C9-Q (91303091), C9-R (91303092), C10r (91303103), C10-S (91303101), C10-T (91303102), C11r (91303113), C11-U (91303111), C11-V (91303112), C12 (91303120), C12-A (91303121), C12-B (91303122), C13 sump (91303130), C13 (91303131), C13 (91303132), C16 (91303160), C16-W (91303161), C16-X (91303162), C18 (91303180), C18-Y (91303181) and C18-Z (91303182) as shown on monitoring plan drawing CA180202 revision 2 dated 22/06/2007.	Leachate levels in cells 12, 13, 14, 15 and 17 shall not be permitted to exceed 4 metres above the base of each cell as determined at any leachate abstraction point throughout the operational phase of each cell and throughout the subsequent post-operational period whilst active landfill gas management is taking place. At no time either operationally or post-operationally, shall the leachate level in any cell be permitted to exceed 16 metres AOD.	Monthly	Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency.

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

Emission point Ref. & Location	Parameter	Source	Limit (including unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
A1 - Flare stack (permanent)	Oxides of Nitrogen	Landfill Gas Flares	150 mg/m ³	Hourly mean	Annually (1)	In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air".
	Carbon Monoxide		50 mg/ m ³			
	Total volatile organic compounds (VOC's)		10 mg/ m ³			
	Total non-methane volatile organic compounds (NMVOC's)		5 mg/ m ³			
	Operational Temperature		>1000°C (2)			
A2 Engine number 1 as shown on Engine and flare compound on plan 12/03	Oxides of Nitrogen, expressed as NO ₂	Gas utilisation plant	650 mg/ m ³	Hourly mean	Annually	In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air".
	Carbon Monoxide		1500 mg/m ³ m ³			
	Total volatile organic compounds (VOC's), expressed as Carbon		1750 mg/ m ³			
	Total non-methane volatile organic compounds (NMVOC's)		150 mg/m ³			

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

Emission point Location	Ref. & Parameter	Source	Limit (including unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
A3 Engine number 2 as shown on Engine and flare compound on plan 12/03.	Oxides of Nitrogen, expressed as NO ₂	Gas utilisation plant	650 mg/ m ³	Hourly mean	Annually	In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air".
	Carbon Monoxide		1500 mg/m ³ m ³			
	Total volatile organic compounds (VOC's), expressed as Carbon		1750 mg/ m ³			
	Total non-methane volatile organic compounds (NMVOC's)		150 mg/m ³			
Biofilter	Total VOC's	Contaminated soil treatment facility	75 mg/ m ³	-	Monthly	To be agreed with the Agency
	Benzene		5 mg/m ³			

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

(2) This is an indicative performance limit. An alternative minimum temperature may be acceptable providing the Operator can demonstrate that the other emission limit values are met at this lower temperature in accordance with Environment Agency Guidance on Flaring Nov 2002.

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

Emission point Location	Ref. & Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
NWR0408 as shown on drawing CA231200 DATED 29/ 03/05. Receiving water - unnamed tributary of Horton Brook	Suspended Solids	Intercepted surface water	60 mg/l	Spot Sample	Monthly	Monitoring to be carried out in accordance with Environment Agency Guidance Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency.
	Ammoniacal- N		2 mg/l			
	Chloride		150 mg/l			
	Iron		5 mg/l			
	pH		Minimum 5 pH units and Maximum 9 pH units			
STF1 on Plan ref Drawing A4(040805) dated 04/08/2005.	Ammoniacal- N	Process water tanks in the Soil Treatment Facility	2 mg/l	Spot Sample	Monthly	Monitoring to be carried out in accordance with Environment Agency Guidance Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency.
	Chloride		150 mg/l			
	Iron		5 mg/l			
Surface water drainage collection system	Suspended solids		60mg/l			List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01)
	Pentachlorophenol (PCP)		0.002 mg/l			
	Total Petroleum Hydrocarbons		0.1 mg/l			

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

Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
S1 (91306001). At existing point of entry to sewer on Sutton Lane.	Settleable Solids	Leachate effluent treatment plant	None set (1)	Spot sample	Monthly	Monitoring to be carried out in accordance with Environment Agency Guidance Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02)', unless otherwise agreed in writing with the Agency. List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01)
	COD			Spot sample		
	Saponifiable Oil or Grease			Spot sample		
	Unsaponifiable Oil or Grease			Spot sample		
	Sulphide			Spot sample		
	Cyanide			Spot sample		
	Ammoniacal Nitrogen			Spot sample		
	Sulphate			Spot sample		
	Available Chlorine			Spot sample		
	Rapidly Settleable Solids			Spot sample		
	Phosphate			Spot sample		
	Chromium			Spot sample		
	Copper			Spot sample		
	Lead			Spot sample		
	Nickel			Spot sample		
	Silver			Spot sample		
	Zinc			Spot sample		
	Phenol			Spot sample		
Dissolved Methane	Spot sample					
pH	Spot sample					
Temperature	Spot sample					

(1) Determined in accordance with the improvement programme in Schedule 1, Table S1.3 – IP2.

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

Monitoring point reference (1)	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W02 (91302002)	Ammoniacal Nitrogen	0.5 mg/l	Spot sample	Quarterly	Monitoring to be carried out in accordance with Environment Agency Guidance Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency. List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01)
	Chloride	150 mg/l			
	Cadmium	0.001 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005 mg/l			
	Mecoprop	0.0001 mg/l			
W02a (91302102)	Ammoniacal Nitrogen	0.5 mg/l	Spot sample	Quarterly	
	Chloride	150 mg/l			
	Cadmium	0.001 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005 mg/l			
	Mecoprop	0.0001 mg/l			
W03 (91302003)	Ammoniacal Nitrogen	0.5 mg/l	Spot sample	Quarterly	
	Chloride	150 mg/l			
	Cadmium	0.001 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005 mg/l			
	Mecoprop	0.0001 mg/l			
W03b (91302103)	Ammoniacal Nitrogen	0.5 mg/l	Spot sample	Quarterly	
	Chloride	150 mg/l			
	Cadmium	0.001 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005 mg/l			
	Mecoprop	0.0001 mg/l			

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

Monitoring point reference (1)	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W4 (91302004)	Ammoniacal Nitrogen	0.5 mg/l	Spot sample	Quarterly	Monitoring to be carried out in accordance with Environment Agency Guidance Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency. List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01)
	Chloride	150 mg/l			
	Cadmium	0.001 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005mg/l			
	Mecoprop	0.0001 mg/l			
W04a (91302104)	Ammoniacal Nitrogen	0.7 mg/l	Spot sample	Quarterly	
	Chloride	150 mg/l			
	Cadmium	0.005 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005mg/l			
	Mecoprop	0.0001 mg/l			
W05 (91302005)	Ammoniacal Nitrogen	1.2 mg/l	Spot sample	Quarterly	
	Chloride	200 mg/l			
	Cadmium	0.001mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005mg/l			
	Mecoprop	0.0001 mg/l			
W05a (91302105)	Ammoniacal Nitrogen	0.5 mg/l	Spot sample	Quarterly	
	Chloride	150 mg/l			
	Cadmium	0.001 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005mg/l			
	Mecoprop	0.0001 mg/l			

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

Monitoring point reference (1)	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W05b (91302205)	Ammoniacal Nitrogen	0.5 mg/l	Spot sample	Quarterly	Monitoring to be carried out in accordance with Environment Agency Guidance Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02), unless otherwise agreed in writing with the Agency. List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01)
	Chloride	175 mg/l			
	Cadmium	0.001 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005mg/l			
	Mecoprop	0.0001 mg/l			
W06 (91302006)	Ammoniacal Nitrogen	0.5 mg/l	Spot sample	Quarterly	
	Chloride	150 mg/l			
	Cadmium	0.001 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005mg/l			
	Mecoprop	0.0001 mg/l			
W06a (91302106)	Ammoniacal Nitrogen	0.5 mg/l	Spot sample	Quarterly	
	Chloride	150 mg/l			
	Cadmium	0.001 mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005mg/l			
	Mecoprop	0.0001 mg/l			
W06b (91302206)	Ammoniacal Nitrogen	3 .8 mg/l	Spot sample	Quarterly	
	Chloride	150 mg/l			
	Cadmium	0.001mg/l			
	Benzene	0.001 mg/l			
	Toluene	0.004 mg/l			
	Chromium	0.005 mg/l			
	Mecoprop	0.0001 mg/l			

(1) as shown on monitoring plan drawing CA180202 revision 2 dated 22/06/2007.

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

Monitoring point Ref. /description (1)	Parameter	Limit (including units)	Monitoring frequency	Monitoring standard or method
PG01 (91301101), PG02 (91301102), PG03 (91301103), PG04 (91301104), PG04b (91301304), PG05 (91301105), PG06 (91301106), PG06a (91301306), PG07 (91301107), PG07a (91301307), PG07b (91301407), PG07c (91301507), PG07d (91301607), PG09 (91301109), PG10 (91301110), PG10a (91301310), PG13 (91301113), PG14 (91301114), PG15a (91301315), PG15b (91301415), PG16 (91301116) , PG16a (91301316), PG17 (91301117), PG18 (91301118), PG19 (91301119) , PG20 (91301120) , PG21 (91301121), PG22 (91301122), PG23 (91301123), PG24r (91301324), PG25 (91301125), PG26 (91301126), PG28r (91301328), PG29 (91301129), PG29a (91301329), PG30 (91301130), PG31 (91301131), PG32r (91301332) , PG33 (91301133), PG35r (91301335) and PG40r (91301340).	Methane Oxygen Atmospheric pressure Differential Pressure Temperature	1 %v/v (2) no limit no limit no limit no limit	Monthly	Portable Infra Red Detector
PG01 (91301101)	Carbon Dioxide	7.1 % v/v	Monthly	Portable Infra Red Detector
PG03 (91301103)	Carbon Dioxide	13.5 % v/v	Monthly	Portable Infra Red Detector
PG04 (91301104)	Carbon Dioxide	4.9 % v/v	Monthly	Portable Infra Red Detector
PG04b (91301304)	Carbon Dioxide	5.5 % v/v	Monthly	Portable Infra Red Detector
PG05 (91301105)	Carbon Dioxide	7.5 % v/v	Monthly	Portable Infra Red Detector
PG06 (91301106)	Carbon Dioxide	4.1 % v/v	Monthly	Portable Infra Red Detector
PG06a (91301306)	Carbon Dioxide	7.1% v/v	Monthly	Portable Infra Red Detector
PG07 (91301107)	Carbon Dioxide	2.8 % v/v	Monthly	Portable Infra Red Detector
PG07a (91301307)	Carbon Dioxide	5.7 % v/v	Monthly	Portable Infra Red Detector
PG07b (91301407)	Carbon Dioxide	8.3 % v/v	Monthly	Portable Infra Red Detector
PG07c (91301507)	Carbon Dioxide	7.4% v/v	Monthly	Portable Infra Red Detector
PG07d (91301607)	Carbon Dioxide	2.4 % v/v	Monthly	Portable Infra Red Detector
PG09 (91301109)	Carbon Dioxide	2.6% v/v	Monthly	Portable Infra Red Detector
PG10 (91301110)	Carbon Dioxide	4.8 % v/v	Monthly	Portable Infra Red Detector
PG10a (91301310)	Carbon Dioxide	3.0 % v/v	Monthly	Portable Infra Red Detector
PG13 (91301113)	Carbon Dioxide	2.4% v/v	Monthly	Portable Infra Red Detector
PG14 (91301114)	Carbon Dioxide	1.8 % v/v	Monthly	Portable Infra Red Detector
PG15a (91301315)	Carbon Dioxide	3.2 % v/v	Monthly	Portable Infra Red Detector
PG15b (91301415)	Carbon Dioxide	1.1 % v/v	Monthly	Portable Infra Red Detector

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

Monitoring point Ref. /description (1)	Parameter	Limit (including units)	Monitoring frequency	Monitoring standard or method
PG16 (91301116)	Carbon Dioxide	2.8 % v/v	Monthly	Portable Infra Red Detector
PG16a (91301316)	Carbon Dioxide	3.8 % v/v	Monthly	Portable Infra Red Detector
PG17 (91301117)	Carbon Dioxide	2.9 % v/v	Monthly	Portable Infra Red Detector
PG18 (91301118)	Carbon Dioxide	4.0 % v/v	Monthly	Portable Infra Red Detector
PG19 (91301119)	Carbon Dioxide	3.8 % v/v	Monthly	Portable Infra Red Detector
PG20 (91301120)	Carbon Dioxide	3.0 % v/v	Monthly	Portable Infra Red Detector
PG21 (91301121)	Carbon Dioxide	3.7 % v/v	Monthly	Portable Infra Red Detector
PG22 (91301122)	Carbon Dioxide	3.6 % v/v	Monthly	Portable Infra Red Detector
PG23 (91301123)	Carbon Dioxide	3.4 % v/v	Monthly	Portable Infra Red Detector
PG24r (91301324)	Carbon Dioxide	6.4 % v/v	Monthly	Portable Infra Red Detector
PG25 (91301125)	Carbon Dioxide	4.7 % v/v	Monthly	Portable Infra Red Detector
PG26 (91301126)	Carbon Dioxide	3.1 % v/v	Monthly	Portable Infra Red Detector
PG28r (91301328)	Carbon Dioxide	5.6 % v/v	Monthly	Portable Infra Red Detector
PG29 (91301129)	Carbon Dioxide	2.4 % v/v	Monthly	Portable Infra Red Detector
PG29a (91301329)	Carbon Dioxide	7.8 % v/v	Monthly	Portable Infra Red Detector
PG30 (91301130)	Carbon Dioxide	3.8 % v/v	Monthly	Portable Infra Red Detector
PG31 (91301131)	Carbon Dioxide	5.4 % v/v	Monthly	Portable Infra Red Detector
PG32r (91301332)	Carbon Dioxide	4.4 % v/v	Monthly	Portable Infra Red Detector
PG33 (91301133)	Carbon Dioxide	5,5 % v/v	Monthly	Portable Infra Red Detector
PG40r (91301340)	Carbon Dioxide	4.5 % v/v	Monthly	Portable Infra Red Detector
PG02 (91301102), PG34a (91301334), PG35r (91301335), PG36r (91301336), PG37r (91301337), PG38r (91301338) and G39r (91301339).	Carbon Dioxide	Determined in accordance with improvement programme in Schedule 1, Table S1.3 - IP5	Monthly	Portable Infra Red Detector

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

Monitoring point Ref. /description (1)	Parameter	Limit (including units)	Monitoring frequency	Monitoring standard or method
PG02 (91301102), PG34a (91301334), PG36r (91301336), PG37r (91301337), PG38r (91301338) and G39r (91301339).	Methane Oxygen Atmospheric pressure Differential Pressure Temperature	-	Monthly	Portable Infra Red Detector
Boreholes installed as a result of the determination on condition – IP6.	Methane Oxygen Atmospheric pressure Differential Pressure Temperature	Determined in accordance with improvement programme in Schedule 1, Table S1.3 - IP6	Monthly	Portable Infra Red Detector

(1) As shown on monitoring plan drawing CA180202 revision 2 dated 22/06/2007

(2) Where perimeter boreholes are monitored but do not have emission limits set in table S4.6, detailed control levels are established within the gas management determined in accordance with condition IP5.

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

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

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

Table S4.8 Landfill gas – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
In-waste gas boreholes and wells in cells without active gas extraction	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Differential pressure Meteorological Data	Monthly	Monitoring to be carried out in accordance with Environment Agency - Landfill Technical Guidance Note (LFGTN) 03: 'Guidance on the management of landfill gas,' unless otherwise agreed in writing with the Agency.	None
gas collection system at well control valve and manifolds on gas system	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Suction	Fortnightly	Monitoring to be carried out in accordance with Environment Agency - Landfill Technical Guidance Note (LFGTN) 03: 'Guidance on the management of landfill gas,' unless otherwise agreed in writing with the Agency.	Where the Oxygen level exceeds 5% or where the addition of the Carbon Dioxide and Methane percentages is less than 80%, an assessment of air ingress into the system shall be undertaken Where the concentration of carbon monoxide exceeds 100ppm then further investigation shall be undertaken.
Locations determined in accordance with improvement programme in Schedule 1, table S1.3 – IP3	Gas flow rate			
Input to LFG Utilisation Compound	Trace gas analysis in accordance with LFTGN04.	Annually	(3)	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.
Input to LFG Utilisation Compound	Methane Carbon Dioxide Oxygen Gas flow rate	Continuous		Where the Oxygen level exceeds 5% or where the addition of the Carbon Dioxide and Methane percentages is less than 80%, an assessment of air ingress into the system shall be undertaken.
Perimeter monitoring borehole PG02 (91301102)	Trace gas determined in accordance with condition – IP5	(2)	(3)	Assessment level (2)
Perimeter monitoring borehole PG34a (91301334)	Methane	Monthly	Portable Infra Red Detector	5% Control level (1)
	Trace gas determined in accordance with condition - IP5	(2)	(3)	Assessment level (2)
Perimeter monitoring borehole PG35r (91301335)	Trace gas determined in accordance with condition – IP5	Monthly	(3)	Assessment level (2)

Table S4.8 Landfill gas – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Perimeter monitoring borehole PG36r (91301336)	Methane	Monthly	Portable Infra Red Detector	5% Control level (1)
	Trace gas determined in accordance with condition - IP5	(2)	(3)	Assessment level (2)
Perimeter monitoring borehole PG37r (91301337)	Methane	Monthly	Portable Infra Red Detector	5% Control level (1)
	Trace gas determined in accordance with condition - IP5	(2)	(3)	Assessment level (2)
Perimeter monitoring borehole PG38r (91301338)	Methane	Monthly	Portable Infra Red Detector	5% Control level (1)
	Trace gas determined in accordance with condition - IP5	(2)	(3)	Assessment level (2)
Perimeter monitoring borehole PG39r (91301339)	Methane	Monthly	Portable Infra Red Detector	5% Control level (1)
	Trace gas determined in accordance with condition - IP5	(2)	(3)	Assessment level (2)
Biofilter	Total Petroleum Hydrocarbons (TPH's)	Monthly	To be agreed with the Agency.	
	Toluene			
	Ethyl Benzene			
	Xylene			
	Polycyclic Aromatic Hydrocarbons (PAH's)			

(1).....On exceedance of control level for 3 consecutive months the Operator shall:

- Characterise gas flow rated initially and instigated flow rate monitoring at a minimum a 3 month intervals;
- Increase monitoring to weekly and initiated trace gas analysis within selected boreholes;
- Review gas management and trace gas analysis in the vicinity of the exceedance.
- Provide the Agency , within 4 months of the initial exceedance of the control level, a review of data to identify significant change in gas migration risks.

(2) Determined in accordance with improvement programme in Schedule 1, Table S1.3 – IP5.

(3) Collection and analysis shall be in accordance with that described in the Agency's "Guidance for Monitoring Trace Components in Landfill Gas" LFTGN04.

Table S4.9 Leachate– other monitoring requirements

Emission point reference or source or description of point of measurement (1)	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications – Assessment levels (2)
C1 (91303010), C2 (91303020), C3 (91303030), C4 (91303040), C5 (91303050), C6r (91303063), C7r (91303073), C8r (91303083), C9r (91303093), C10r (91303103), C11r (91303113), C12 (91303120), C13 sump (91303130), C16 (91303160) and C18 (91303180).	Mg, pH, EC, NH ₄ -N, BOD, COD, TOC and Cl	Monthly	Monitoring to be carried out in accordance with Environment Agency Guidance Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02). List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01)	Ammoniacal nitrogen – 631 mg/l Chloride - 2,670 mg/l Cadmium - 0.005 mg/l Naphthalene - 0.012 mg/l Mecoprop - 0.019 mg/l
	SO ₄ , Alk, TON, Na, Ca, Cu, Fe, Pb, Ni, K, Mecoprop, Cadmium and Naphthalene.	Quarterly		
	Mn, Cr, Zn, List 1 screen	Annually		
	Depth to base of monitoring well	Annually		
C1-G (91303012), C1-H (91303011), C2-A (91303021), C2-B (91303022), C3-C (91303031), C3-D (91303032), C4-E (91303041), C4-F (91303042), C5-I (91303051), C5-J (91303052), C6-K (91303061), C6-L (91303062), C7-M (91303071), C7-N (91303072), C8-O (91303081), C8-P (91303082), C9-Q (91303091), C9-R (91303092), C10-S (91303101), C10-T (91303102), C11-U (91303111), C11-V (91303112), C12-A (91303121), C12-B (91303122), C13, (91303131), C13 (91303132), C16-W (91303161), C16-X (91303162), C18-Y (91303181) and C18-Z (91303182).	Depth to base of monitoring well	Annually		

(1) As shown on monitoring plan drawing CA180202 revision 2 dated 22/06/2007.

(2) Leachate quality shall be assessed quarterly, or at such longer interval as is agreed in writing by the Agency, in accordance with Environment Agency "Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water – LFTGN02" with respect to the substances and assessment levels.

Table S4.10 Surface water – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
<p>Discharge location NWR0408</p> <p>Monitoring locations SW01, SW02, SW03 and SW04 as shown on monitoring plan drawing CA180202 revision 2 dated 22.06.2007</p>	Dissolved Oxygen, pH, Electrical Conductivity, Biological Oxygen Demand, Chemical Oxygen Demand, Total Suspended Solids, Ammoniacal Nitrogen, Chloride and Iron	Monthly	Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' (LFTGN02), unless otherwise agreed in writing with the Agency.	Where the following concentrations are exceeded the Operator should undertake a review of the water quality: Ammoniacal Nitrogen 2mg/l Chloride 150mg/l Iron 5mg/l
STF1 as shown on Drawing No. A4 CA232101 dated 04.08.2005.	Ammoniacal Nitrogen	Monthly	List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01)	Where the following concentrations are exceeded the Operator should undertake a review of the water quality: Ammoniacal Nitrogen 2 mg/l Chloride 150 mg/l Iron 5 mg/l Suspended Solids 60 mg/l Pentachlorophenol (PCP) 0.002 mg/l Total petroleum hydrocarbons 0.1 mg/l
	Chloride	Monthly		
	Iron	Monthly		
	Suspended Solids	Prior to discharge		
	Pentachlorophenol (PCP) ^{Note 1}	Prior to discharge		
	Total petroleum hydrocarbons	Prior to discharge		

Note 1. Only if PCP contaminated soils are accepted

Table S4.11 Groundwater – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
WO1, WO2, WO02a, WO3, WO3b, WO4, WO4a, WO5, WO5a, WO5b, WO6, WO6a, WO6b, WO7 and WO8r. as shown on monitoring plan drawing CA180202 revision 2 dated 22/06/2007	Water level, pH, NH4-N, EC, DO, and Cl	Monthly	Monitoring to be carried out in accordance with Environment Agency Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' (LFTGN02), unless otherwise agreed in writing with the Agency.	
	SO ₄ , Alk, TON, TOC, Na, K, Ca, Mg, Fe, Mn, Cr, Cu, Ni, Pb, Zn, Cadmium, Mecoprop and Naphthalene	Quarterly		
	Monitoring point base, and List I screen.	Annually	List I substances monitoring methods in accordance with the Agency's guidance 'Hydrogeological Risk Assessment for Landfills' (LFTGN01)	

Table S4.12 Landfill gas in ambient air - limits and monitoring requirements

Monitoring point Ref. /Description	Parameter	Limit (including unit) *	Reference Period	Monitoring Frequency	Monitoring Standard or Method
A (C6), B (C11), C (H11), D (M13), E (Q14), F (R8), G (R7), H (S4), I (T2), J (O2), K (L2), L (H2), M (D1), N (C1), O, P and Q	Methane in ambient air (1)	50 ppmv (1)	Spot Sample (1)	Monthly (1)	Flame Ionisation Detector (ppm range) (1)

(1) Determined in accordance with improvement programme in Schedule 1, Table S1.3 – IP7.

Table S4.13 Particulate matter in ambient air - limits and monitoring requirements

Monitoring Point Ref. / Description	Parameter	Limit (Including Unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
D1, D2, D3, D5, D6, D7 and D8	Dust	-	-	6 monthly	In accordance with Agency Guidance 'M17 - Monitoring of Particulate Matter in ambient air around waste facilities), or any subsequent guidance.

Table S4.14 Other monitoring requirements – Contaminated soil

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Soil biopiles as shown on Drawing No. A4 CA232101 dated 04.08.2005.	Total Petroleum Hydrocarbons (TPH) Polycyclic Aromatic Hydrocarbons (PAHs) Pentachlorophenol (PCP) ^{Note 1} Total Volatile Organic Compounds (VOCs) and pH	Each completed batch of treated soil shall be sampled.	To be agreed with the Agency	Laboratory must be accredited to EN ISO/IEC ISO17025:2000 for the analysis specified Samples to be obtained using standard sampling procedures as per BS 812

Note 1 Only if PCP contaminated soils are received for treatment

Schedule 5 - Reporting

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

Table S5.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Leachate levels As required by condition 3.6.1	C1, C1-G, C1-H, C2, C2-A, C2-B, C3, C3-C, C3-D, C4, C4-E, C4-F, C5, C5-I, C5-J, C6r, C6-K, C6-L, C7r, C7-M, C7-N, C8r, C8-O, C8-P, C9r, C9-Q, C9-R, 10r, C10-S, C10-T, C11r, C11-U, C11-V, C12, C12-A, C12-B, C13 sump (91303130), C13 (91303131), C13 (91303132), C16, C16-W, C16-X, C18, C18-Y and C18-Z.	Every 3 months	05/02/04
Emissions to air Parameters as required by condition 3.6.1	Landfill gas flare A1 and Landfill gas engines A2 and A3 Biofilter	Every 12 months Every 3 months	05/02/04 From commissioning date the STF.
Emissions to water Parameters as required by condition 3.6.1	S1 and STF1.	Every 3 months	05/02/04
Groundwater Parameters as required by condition 3.6.1	WO1, WO2, WO2a, WO3, WO3b, WO4, WO4a, WO5, WO5a, WO5b, WO6, WO6a, WO6b, WO7 and WO8r.	Every 3 Months	05/02/04
List 1 screen Monitoring point base		Every 12 months Every 12 months	
Ambient air monitoring Parameters as required by condition 3.6.1	A (C6), B (C11), C (H11), D (M13), E (Q14), F (R8), G (R7), H (S4), I (T2), J (Q2), K (L2), L (H2), M (D1), N (C1), O, P and Q	Every 3 months	05/02/04
Landfill gas surface emissions Parameters as required by condition 3.6.1	Permanently capped zone Temporarily capped zone	Every 12 months	05/02/04
Particulate matter Parameters as required by condition 3.6.1	D1, D2, D3, D5, D5, D6, D7 and D8	Every 6 months	05/02/04
Landfill gas lateral migration Parameters as required by condition 3.6.1	PG01, G02, PG03, PG04, PG04b, PG05, PG06, PG06a, PG07, PG07a, PG07b, PG07c, PG07d, PG09, PG10, PG10a, PG13, PG14, PG15a, PG15b, PG16, PG16a, PG17, PG18, PG19, PG20, PG21, PG22, PG23, PG24r, PG25, PG26, PG28r, PG29, PG29a, PG30, PG31, PG32r, PG33, PG34a, PG35r, PG36r, PG37r, PG38r, PG39r and PG40r	Every 3 months	05/02/04
Other Landfill gas monitoring Parameters as required by condition 3.6.1	Biofilter	Every 3 months	05/02/04
Trace gases	Input to LFG Utilisation Compound	Every 12 months	

Table S5.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Other leachate monitoring Parameters as required by condition 3.6.1	C1, C2, C3, C4, C5, C6r, C7r, C8r, C 9, 10r, C11r, C12, C13 (91303130), C16 and C18	Every 3 months	05/02/04
List 1 Screen		Every 12 months	
Monitoring point base	C1-G, C1-H, C2-A, C2-B, C3-C, C3-D, C4-E, C4-F, C5-I, C5-J, C6-K, C6-L, C7-M, C7-N, C8-O, C8-P, C9-Q, C9-R, C10-S, C10-T, C11-U, C11-V, C12-A, C12-B, C13 (91303131), C13 (91303132), C16-W, C16-X, C18-Y and C18-Z.	Every 12 months	
Other surface water monitoring Parameters as required by condition 3.6.1	NWR0408, SW01, SW02, SW03, SW04 and STF1.	Every 3 months	05/02/04

Table S5.2: Annual production/treatment

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

Table S5.3 Performance Parameters

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

Table S5.4 Reporting Forms

Media/parameter	Reporting Format	Date of Form
Leachate	From Leachate 1 or other reporting format to be agreed in writing with the Agency	05/02/2009
Air	Form Air 1 or other reporting format to be agreed in writing with the Agency	05/02/2009
Controlled water	Form Water 1 or other reporting format to be agreed in writing with the Agency	05/02/2009
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Agency	05/02/2009
Sewer	Form Sewer 1 or other reporting format to be agreed in writing with the Agency	05/02/2009
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Agency	05/02/2009
Particulate matter	Form Particulate 1 or other reporting format to be agreed in writing with the Agency	05/02/2009
Waste	Waste Return Form RATS2E	05/02/2009
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Agency	

Schedule 6 - Notification

This page outlines the information that the Operator must provide.

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

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

Part A

Permit Number	EPR/BU7901IP
Name of Operator	Biffa Waste Services Limited
Location of Installation	Colnbrook Landfill Site Sutton Lane Slough Berkshire SL3 8AB
Time and date of the detection	

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

To be notified within 24 hours of detection	
Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

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

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

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

Part B to be supplied as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of *Biffa Waste Services Limited*

Schedule 7 - Interpretation

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

“Annually” means once every Year.

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

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

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

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

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

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

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

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

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

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

“Landfill Infrastructure” means any specified element of the:

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

within the site.

“Land Protection Guidance” means Agency guidance “H7 - Guidance on the protection of land under the PPC Regime: Application site report and site protection monitoring programme”.

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

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

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

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

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

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

for the New Cell.

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

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

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

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

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

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

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

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, List of Wastes (Northern Ireland) Regulations 2005 (as amended), or The Special Waste Amendment (Scotland) Regulations 2004 as appropriate, and in relation to hazardous waste, includes the asterisk.

“Year” means calendar year ending 31 December.

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

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

END OF PERMIT