

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Hills Waste Solutions Limited

Purton Landfill Site
Mopes Lane
Purton
Swindon
Wiltshire
SN5 4HG

Variation application number
EPR/BU6018ID/V006

Permit number
EPR/BU6018ID

Purton Landfill

Permit number EPR/BU6018ID

Introductory note

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

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

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

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

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

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

Status log of the permit		
Description	Date	Comments
Application received BU6018ID (EPR/BU6018ID/A001)	Received 12/08/03	
Permit determined BU6018ID (EPR/BU6018ID)	05/03/04	
Variation Application SP3734SA (EPR/BU6018ID/V002)	Received 30/11/04	.
Variation issued SP3734SA (EPR/BU6018ID/V002)	03/03/2005	

Agency initiated variation determined RP3837LA (EPR/BU6018ID/V003)	20/03/2007	
Agency initiated variation determined EPR/BU6018ID/V004	30/12/2011	Variation to put landfill into Definitive Closure
Variation Application EPR/BU6018ID/V005	Received 13/05/2014	
Variation issued EPR/BU6018ID/V005	26/06/2014	Change of company registered office address
Environment Agency Landfill Sector Review 2013 Permit reviewed Variation determined EPR/BU6018ID/V006 Permit EPR/BU6018ID (Billing Ref: XP3733AL)	26/01/2015	Varied and consolidated permit issued in modern condition format (for hazardous landfills in aftercare)

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

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

permit number

EPR/BU6018ID

issued to

Hills Waste Solutions Limited ("the operator")

whose registered office is

Wiltshire House

County Park Business Centre

Shrivenham Road

Swindon

Wiltshire

SN1 2NR

company registration number **00571289**

to operate a regulated facility at

Purton Landfill

Mopes Lane

Purton

Swindon

Wiltshire

SN5 4HG

to the extent set out in the schedules.

The notice shall take effect from 26/01/2015

Name

Date

Anne Nightingale

26/01/2015

Authorised on behalf of the Environment Agency

Schedule 1

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

Condition	Description of change
1.5	Generic condition to reflect the requirements of the Waste Framework Directive.
2.8	Revised gas management condition imposed for all landfills.
3.1.1	Generic condition imposed on all activities to simplify sub-conditions
3.1.3 3.1.4	- Revised conditions to reflect the terminology used by the Groundwater Directive for 'hazardous substances' and to require hydrogeological risk assessment reviews are submitted every 6 years rather than every 4 years.
	Sub-condition that referred to emission of 'non-hazardous pollutants' deleted. Such emissions are regulated by condition 3.2.
	Two sub-conditions that referred to limits in specific tables in schedule 3 deleted as they are now covered by 3.1.1.
4.2.2	Amended to ensure that information on 'annual production/ treatment' (Schedule 4, Table S4.2) is provided in February each year where annual reports may be submitted at other times of the year.
4.2.2(a)	Text expanded to clarify the details we require in an annual report.
4.2.2(f)	New condition requiring annual submission of a plan of monitoring and extraction locations with reference to monitoring tables in schedule 3
4.3.1	Generic notifications condition added.
Schedules	
Table S1.1	Amended description of the landfill activity to clarify that this includes restoration. Activity references amended to reflect changes introduced by Industrial Emissions Directive (2010/75/EU).
Table S1.3	Amended to clarify that restoration is a separate part of the activity.
Schedule 3	Monitoring and compliance tables have been re-ordered so that those with compliance limits appear first. Standard monitoring frequency and parameters have been included for certain routine monitoring requirements
Table S4.1	Amended to only require regular reports of information that relate to compliance limits.
Table S4.3	Amended to include natural gas as an energy source for consistency with other sectors.
Schedule 6	Definitions added to clarify meaning of: • Inert waste • Exceeded • Hazardous substance • Medicinal product • Previous year • Waste acceptance criteria • Waste acceptance procedure

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/BU6018ID

This is the consolidated permit referred to in the variation and consolidation notice for Environment Agency initiated variation **EPR/BU6018ID/V006** authorising,

Hills Waste Solutions Limited ("the operator"),

whose registered office is

Wiltshire House
County Park Business Centre
Shrivenham Road
Swindon
Wiltshire
SN1 2NR

company registration number **00571289**

to operate an installation at

Purton Landfill
Mopes Lane
Purton
Swindon
Wiltshire
SN5 4HG

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

Name	Date
Anne Nightingale	26/01/2015

Authorised on behalf of the Environment Agency

1. Management

1.1 General management

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

1.2 Finance

- 1.2.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Environment Agency 05/03/04 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Environment Agency.

1.3 Energy efficiency

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

1.4 Efficient use of raw materials

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

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

1.5.1 The operator shall:

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

2 Operations

2.1 Permitted activities

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

2.2 The site

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

2.3 Operating techniques

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

2.4 Landfill Engineering

2.4.1 No construction of landfill infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.

2.4.2 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:

- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or

- (b) a change has otherwise been agreed in writing by the Environment Agency.
- 2.4.3 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill infrastructure.
- 2.4.4 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.4.1 and 2.4.2 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Environment Agency as soon as practicable.
- 2.4.5 For the purposes of conditions 2.4.1, the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
 - (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.
- 2.4.6 Where the Environment Agency has required further information under condition 2.4.5(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:
 - (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.

2.5 Waste acceptance

- 2.5.1 No waste shall be accepted for disposal within the installation.

2.6 Leachate levels

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

2.7 Closure and aftercare

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

2.8 Landfill gas management

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

- (b) implement the revised landfill gas management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3 Emissions and monitoring

3.1 Emissions to water, air or land

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

3.2 Emissions of substances not controlled by emission limits

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

3.3 Odour

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

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

3.4 Noise and vibration

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

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring and any other actions specified in the following tables in schedule 3 to this permit:
 - (a) Leachate specified in tables S3.1 and S3.6;
 - (b) Point source emissions specified in tables S3.2;
 - (c) Landfill gas specified in tables S3.3, S3.4 and S3.5; and
 - (d) Surface water specified in table S3.7.
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 A topographical survey of the site referenced to ordnance datum shall be carried out annually. The topographical survey shall be used to produce a plan of a scale adequate to show the surveyed features of the site.

4 Information

4.1 Records

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

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

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

4.2 Reporting

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

4.2.2 A report or reports on the performance of the activities over the previous year ('the annual report') shall be submitted to the Environment Agency by 31st January each year or such other date as may be agreed in writing by the Agency, with the exception of 4.2.2(c) that must be provided by the end of February each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this installation and any agreed amendments thereto. The review will include written descriptions of the improvements made to operational performance during the year, action plans developed and planned improvements for the coming year;
- (b) the energy consumed at the site, reported in the format set out in schedule 4, table S4.3
- (c) the annual production/ treatment set out in schedule 4, table S4.2;
- (d) the topographical survey required by condition 3.5.3 other than those submitted as part of a CQA validation report;

- (e) an assessment of the settlement behaviour of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;
 - (f) a plan(s) ('the monitoring and extraction point plan - MEPP') showing the locations of leachate and landfill gas extraction and all monitoring points.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4, table S4.1;
 - (b) using the forms specified in schedule 4, table S4.4 or other reporting format as agreed in writing with the Environment Agency; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

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

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and

- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

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

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

4.3.4 In any other case:

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

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

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

4.4 Interpretation

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

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities				
Activity reference	WFD Annex I and II operations (where applicable)	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A1	D5 –Specially engineered landfill and R10 – Land treatment resulting in benefit to agriculture or ecology	Section 5.2 Part A(1) (a) , The disposal of waste in a landfill.	Landfill for hazardous waste and landfill restoration	No waste shall be accepted for disposal at the landfill.
Directly Associated Activities				
A2	N/A		Temporary storage of waste - leachate	Leachate arising from the landfill.
A3	D6 – release to water body except seas/ oceans		Discharges of site drainage from the landfill.	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 (excluding the responses to questions 2.2.1 to 2.2.7), 2.3, 2.4 and 2.5 in part B of the Application and in accordance with sections 4.23 to 4.25 and 5.3 to 5.8 of the Working Plan submitted as Appendix J to the Application	
Closure report dated June 2009	All parts of the report including: Section 3 Environmental Setting and Conceptual Mode Section 6 Stability Risk Assessment Section 7 Monitoring Point Locations Section 8 Environmental Monitoring Schedule Section 9 Inspection and Maintenance Schedule	June 2009

Table S1.2 Operating techniques

Description	Parts	Date Received
Surface Monitoring Plan received in response to Improvement condition 2 of variation RP3837LA (EPR/BU6018ID/V0 03)	All parts of revised plan including Monitoring points, control and compliance limits, monitoring protocols.	31/03/2008 and approved 16/04/2008
Landfill Gas Risk Assessment received in response to Improvement condition 3 of variation RP3837LA (EPR/BU6018ID/V0 03)	All parts including Gas Management Plan	22/06/2009 and approved 17/09/2009
Leachate Management Plan October 2011	All parts including: Leachate Extraction System Maintenance & replacement of leachate towers Monitoring & management Protocols Leachate Control Levels Incident/Accident Management	19/10/11

Table S1.3 Annual waste input limits

Category	Limit Tonnes/ Year
Hazardous waste	0
Inert waste for cover	0
Waste for restoration	0
Total	0

Schedule 2 - List of permitted wastes

Table S2.1 Permitted waste types for disposal at a landfill for hazardous waste	
Waste code	Description
	None

Schedule 3 – Emissions and monitoring

Table S3.1 Leachate level limits and monitoring requirements

Monitoring point reference/ Description	Limit	Monitoring frequency	Monitoring standard and method
Non Operational Cells or Phases (Any cells or phases that have a final engineered cap agreed in accordance with the existing 'landfill engineering' condition)			
Leachate compliance points		Quarterly	As specified in Environment Agency Guidance TGN02 (February 2003) or other guidance which supersedes this document as agreed with the Environment Agency. Or otherwise agreed with the Agency as part of a leachate monitoring plan.
Collection point C4.5A	79m AOD		
Monitoring points C4.5B & C4.5C	79m AOD		

Table S3.2 Point source emissions to water (other than sewer) – emission limits and monitoring requirements

Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
D07 as per Drawing PUR/5000/M/17/RP 3738LA/A Dated 26/10/2007	Ammoniacal nitrogen	Surface water	5 mg/l	Spot Sample	Quarterly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), Horizontal Guidance Note H1 – Environmental Risk Assessment for permits, Annex J3, version 2.1, Dec 2011) or other guidance which supersedes these documents as agreed with the Environment Agency
	Chloride		628 mg/l			
	Nickel		0.081 mg/l			

Table S3.3 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (including units) *	Monitoring frequency	Monitoring standard or method
Boreholes M20, M25, M26 and M27	Methane	1 %v/v	Quarterly	As per LFTGN03 (September 2004) or other guidance which supersedes this document as agreed with the Environment Agency.
	Carbon Dioxide	1.5 %v/v		
	Oxygen	no limit		Record whether the ground is: • waterlogged • frozen • snow covered
	Atmospheric pressure	no limit		
	Differential Pressure	no limit		

*Limits specified take account of the agreed background concentrations as detailed in Golder Associates, June 2003, Landfill Gas Risk Assessment and Management Plan

Table S3.4 Landfill gas emissions from capped surfaces – monitoring requirements

Monitoring point Ref. /description	Parameter	Monitoring frequency	Monitoring Standard or method
Permanently capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2011) or other guidance which supersedes this document as agreed with the Environment Agency.
Whole site	Total methane emission	As agreed with the Environment Agency	As per LFTGN 07 (v2 2011) or other guidance which supersedes this document as agreed with the Environment Agency.

Table S3.5 Landfill gas – other monitoring requirements

Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
One in waste borehole per cell and/or leachate wells	Methane Carbon Dioxide Oxygen Carbon Monoxide Differential pressure Atmospheric pressure	6 monthly		
	Hydrogen sulphide Hydrogen	6 monthly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans
One in waste borehole or one leachate well per cell	Trace gas	Annually	Trace gas analysis in accordance with LFTGN04 or a trace gas characterisation method agreed with the Environment Agency or such other subsequent guidance as may be agreed in writing with the Environment Agency	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.

Table S3.6 Leachate – other monitoring requirements

Monitoring point reference or description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Non Operational Cells or Phases				
(Any cell or phases that have a final engineered cap agreed in accordance with condition 2.4) MEPP	pH, EC, total alkalinity, ammoniacal nitrogen, Chloride, COD, BOD, cadmium, chromium, copper, lead, nickel, iron, arsenic, magnesium, potassium, total sulphates, calcium, sodium, zinc, manganese,	Annually	At Leachate compliance points as listed in table S3.1	
MEPP	Toluene, naphthalene	Annually		
MEPP	Hazardous substances suite plus barium, molybdenum, antimony, selenium, fluoride, DOC.	Once every four years		None
MEPP	Depth to base (mAoD)	Annually		

Table S3.7 Surface water – other monitoring requirements

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

Schedule 4 - Reporting

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

Table S4.1 Reporting requirements

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

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

Table S4.2: Annual production/treatment

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

Table S4.3 Performance Parameters

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

Table S4.4 Reporting Forms

Media/parameter	Reporting Format	Date of Form
Leachate	Form leachate 1 or other reporting format to be agreed in writing with the Environment Agency	24/11/2014
Controlled water	Form Water 1 or other reporting format to be agreed in writing with the Environment Agency	24/11/2014
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Environment Agency	24/11/2014
Waste Return	Waste Return Form RATS2E	
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Environment Agency	

Schedule 5 - Notification

This page outlines the information that the operator must provide.

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

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

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

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

To be notified within 24 hours of detection

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

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

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

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

Part B to be supplied as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

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

“annually” means once every year.

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

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

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

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

“Cell layout drawing” means:

(a) A drawing or drawings of the proposed new cell that illustrate(s) in sufficient detail:

- i. the location of the new cell on the site;
- ii. the proposed level (Above Ordnance Datum) of the base of the excavation;
- iii. the proposed finished levels of all containment and leachate drainage layers;
- iv. the positions of leachate management infrastructure; and
- v. the positions of landfill gas infrastructure (if appropriate).

(b) A detailed written explanation of any minor design changes from the most recently approved cell that result from the new cell layout. This would include, for example:

- i. changes to slope length and gradient within the cell;
- ii. new leachate or landfill gas infrastructure construction design;
- iii. slope stability issues such as new basal excavation level; and/or
- iv. depth of waste.

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

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

- The results of all testing required by the CQA programme - this must include the records of any failed tests with a written explanation, details of the remedial action taken, referenced to the appropriate secondary testing;
- Plans showing the location of all tests;

- “As-built” plans and sections of the works;
- Copies of the site engineer’s daily records;
- Records of any problems or non-compliances and the solution applied;
- Any other site specific information considered relevant to proving the integrity of the New Cell or Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the Construction Proposals.

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

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

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

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

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

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

within the site.

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

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

“*LFTGN 07*” means Environment Agency Guidance on monitoring landfill gas surface emissions.

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

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

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

“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.

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

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

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

for the New Cell.

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

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

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

“Pests” means Birds, Vermin and Insects.

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

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

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

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

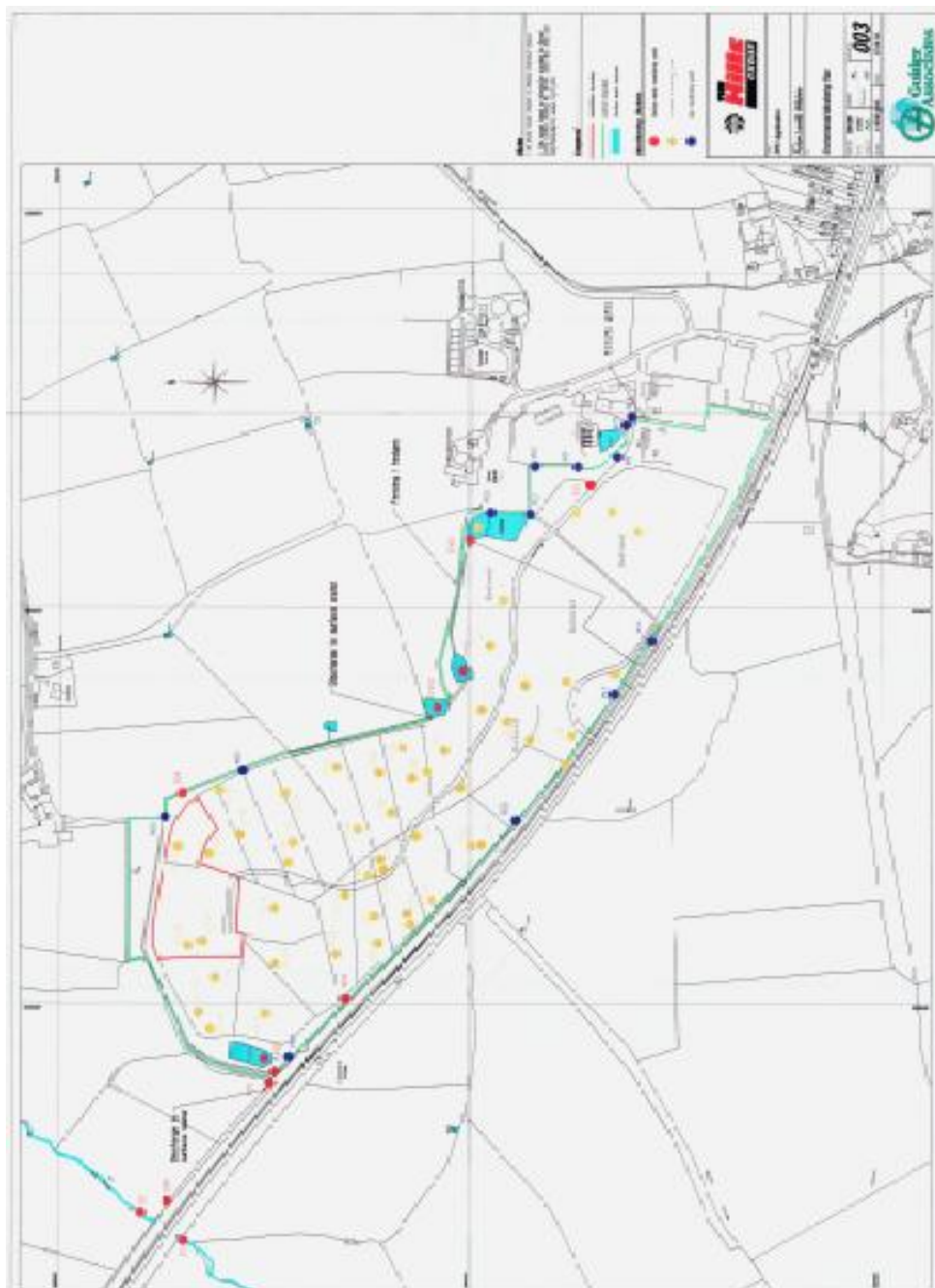
“Review of the Hydrogeological Risk Assessment” means a written review of the hydrogeological risk assessment included in the Application, together with any other parts of the Application that addressed the requirements of the EP Regulations. The review shall assess whether the activities of disposal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

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

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

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

Schedule 7 – Site Plan



END OF PERMIT.

Permit Number: EPR/BU6018ID/V006
Facility: Purton Landfill

Operator: Hills Waste Solution Limited
Form Number: Water 1 / 24/11/2014

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

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

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed
(Authorised to sign as representative of Operator)

Date.....

Operator: Hills Waste Solution Limited
Form Number: Leachate 1 / 24/11/2014

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

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed Date.....
(Authorised to sign as representative of Operator)

Operator: Hills Waste Solution Limited
Form Number: LFG 1 / 24/11/2014

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

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Date.....