

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Harleyford Aggregates Limited

Homers Farm Inert Landfill

Short Lane

Staines-on-Thames

TW19 7BQ

Permit number

EPR/GB3404HX

Homers Farm Inert Landfill

Permit number EPR/GB3404HX

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

This site occupies an area of approximately 10.5 hectares and is located c. 1km to the south of Heathrow Airport in the West of London. The site is located on agricultural land, although the surrounding area is largely developed with the A30 located along the southern boundary and settlements to the east.

The quarry void will be infilled at a total rate not exceeding 240,000 tonnes (150,000 m³) per year which is equivalent to around 800 tonnes per working day. The total quantity of material to be deposited will be approximately 470,000 m³ (749,000 tonnes).

Although there are various residential properties positioned c. 50 m of the site boundary, the operational management controls are considered adequate to mitigate any potential impacts.

In the event that the quarry void fills with water to the point where it may overtop, the excess water will be discharged via a recharge trench. This discharge will be monitored to ensure it does not pose a risk to receiving waters.

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

Status log of the permit		
Description	Date	Comments
Application EPR/GB3404HX/A001	Duly made 04/07/19	Application for landfill for inert waste, including an effluent discharge.
Additional information received	08/11/19	Additional information on waste volumes, HRA, dust management, discharge to land and water discharge infiltration structure design.
Additional information received	14/05/20	Additional information on SRA, HRA, waste volumes, permit boundary, waste acceptance criteria, site monitoring plan, dust management, water discharge infiltration structure design, discharge risk assessment and information relating to protection of existing oil pipelines.
Additional information received	27/07/20	Additional information on HRA, gas monitoring, water discharge infiltration design and assessment
Additional information received	30/07/20	Additional information on CQA Plan and SRA.
Permit determined EPR/GB3404HX	08/12/20	Permit issued to Harleyford Aggregates Limited.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/GB3404HX

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Harleyford Aggregates Limited ("the operator"),

whose registered office is

Marina Building Harleyford Estate

Henley Road

Marlow

Buckinghamshire

SL7 2DX

company registration number 00819220

to operate a waste operation at

Homers Farm Inert Landfill

Short Lane

Staines-on-Thames

TW19 7BQ

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

Name	Date
Alan Whitley	08/12/2020

Authorised on behalf of the Environment Agency

Conditions

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 dated 08/12/20 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Environment Agency.
- 1.2.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 1.2.1; and
 - (c) the estimated costs for the closure and aftercare of the landfill.

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

- 1.3.1 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 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.
- 2.3.2 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 (a) No construction of any new cell or development area shall commence until the operator has submitted construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.
- (b) The operator shall review the construction proposals every 12 months.
- 2.4.2 The construction of a new cell or development area 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 prepare a CQA Validation Report to cover every 12 month period of construction of the development area. The operator shall submit the CQA validation report to the Environment Agency within 4 weeks following construction of the development area.
- 2.4.4 No disposal of waste shall take place in a new cell or development area until the operator has submitted a CQA Validation Report and the Environment Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.4.5 No construction of landfill infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.4.6 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
- (b) a change has otherwise been agreed in writing by the Environment Agency.
- 2.4.7 The operator shall submit a CQA Validation Report within 4 weeks of the completion of the landfill infrastructure.
- 2.4.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.4.1 and 2.4.5 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.

- 2.4.9 For the purposes of conditions 2.4.1, 2.4.4 and 2.4.5 the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
- (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.
- 2.4.10 Where the Environment Agency has required further information under condition 2.4.9(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:
- (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.

2.5 Waste acceptance

- 2.5.1 Wastes shall only be accepted for disposal if:
- (a) they are listed in schedule 2, table S2.1; and
 - (b) they are inert waste; and
 - (c) they are not liquid waste (including waste waters but excluding sludge); and
 - (d) all the relevant waste acceptance procedures have been completed; and
 - (e) they fulfil the relevant waste acceptance criteria; and
 - (f) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria; and
 - (g) they are wastes which have been treated, except for wastes for which treatment is not technically feasible.
- 2.5.2 The operator shall:
- (a) visually inspect without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill and waste at the point of deposit; and
 - (b) be satisfied that the waste conforms to the requirements of condition 2.5.1.
- 2.5.3 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.
- 2.5.4 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.5.5 The total quantity of waste that shall be disposed of in the landfill shall be limited by the levels shown on drawing ESSD4 - Final Levels/ Restoration Plan (ESSD4) provided in ESSD, reference 1732/6P, Rev P, October 2020 (final waste levels will be 0.7m lower than indicated on Restoration Plan).
- 2.5.6 The quantity of waste that is disposed of or recovered at the site in any year shall not exceed the limits in schedule 1, table S1.3.
- 2.5.7 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 restoration and of the identity of the producer, or in the case of municipal waste and multiple collection vehicles, of the collector of such waste. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.

2.6 Closure and aftercare

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

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, table S3.1.
- 3.1.3 Where a substance is specified in schedule 3, but no limit is set for it, the concentration of such substance in emissions from the site shall be no greater than the background concentration.
- 3.1.4 The operator shall prevent the input of any hazardous substances from the activities into groundwater.
- 3.1.5 The operator shall submit to the Environment Agency a review of the Hydrogeological Risk Assessment:
 - (a) between nine and six months prior to the sixth anniversary of the granting of the permit; and
 - (b) between nine and six months prior to every subsequent six years after the sixth anniversary of the granting of the permit.

3.2 Emissions of substances not controlled by emission limits

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

3.3 Noise and vibration

- 3.3.1 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.
- 3.3.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to 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.

3.4 Monitoring

- 3.4.1 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) Point source emissions specified in table S3.1;
 - (b) Groundwater specified in tables S3.2 and S3.4;
 - (c) Landfill gas specified in table S3.3 and S3.3A;
 - (d) Surface water specified in table S3.5.
- 3.4.2 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.
- 3.4.3 A topographical survey of the site referenced to ordnance datum shall be carried out and shall be used to produce a plan of a scale adequate to show the surveyed features of the site:
- (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

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) landfill gas monitoring;
 - (iii) waste types and quantities.
- 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. 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 activity 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 topographical surveys required by condition 3.4.3 other than those submitted as part of a CQA validation report;
- (c) 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;
- (d) 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;
- (e) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey; and
- (f) a plan ('the monitoring point plan – MPP') showing the locations of all existing and any new 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) for the reporting periods specified in schedule 4, table S4.1 and using the forms specified in schedule 4, table S4.2 or other reporting format as agreed in writing with the Environment Agency; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.2.5 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 In the event:

- (a) 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) 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) 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 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

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

Where the operator is a registered company:

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

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

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

In any other case:

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

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

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

4.4 Interpretation

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

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

Schedule 1 – Operations

Table S1.1 activities	
Specified activity and WFD Annex I and II operations	Activity description and limits of specified activity
A1 Landfill D1: Deposit into or on to land	The disposal of inert waste into or onto land.
A2 Groundwater activity	Discharge of trade effluent consisting of dewatered water from an excavation via DIS01.

Table S1.2 Operating techniques			
	Description	Parts	Date Received
A1	Response to Schedule 5 Notice dated 17/04/20	Dust Management Plan, reference: 46802/3006, May 2020 provided in Site Operating Plan (ref: 60954R18REV3, July 2020)	14/05/20
	Response to Schedule 5 Notice dated 26/06/20	Site Monitoring Plan, reference: 60594R19REV4, August 2020	27/07/20
	Application	Waste Acceptance Criteria provided in Site Operating Plan (ref: 60954R18REV3, July 2020)	04/07/19
	Application (updated during determination)	Final Levels/ Restoration Plan (ESSD4) provided in ESSD, reference 1732/6P, Rev P, October 2020 (final waste levels will be 0.7m lower than indicated on Restoration Plan).	19/11/20
A2	Response to Schedule 5 Notice dated 26/06/20	Discharge Activity – Management and Operational Plan, reference: 60954R18REV3, provided in Site Operating Plan (ref: 60954R18REV3, July 2020)	27/07/20

Table S1.3 Annual waste input limits	
Category	Limit Tonnes/ Year
Inert Waste for disposal	240,000
Waste for restoration	To be specified on approval of your restoration plan

Schedule 2 – List of permitted waste

Table S2.1 Permitted waste types for disposal at a landfill for inert waste	
Waste code	Description
10	Wastes from thermal processes
10 11	wastes from manufacture of glass and glass products
10 11 03	waste glass-based fibrous materials (only without organic binders)
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 07	glass packaging
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 01	concrete, bricks, tiles and ceramics
17 01 01	concrete (selected construction and demolition wastes only ¹⁾)
17 01 02	bricks (selected construction and demolition wastes only ¹⁾)
17 01 03	tiles and ceramics (selected construction and demolition wastes only ¹⁾)
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 02	glass
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 (excluding topsoil, peat and excavated soil from contaminated sites)
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 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 05	glass
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	separately collected fractions (except 15 01)

Table S2.1 Permitted waste types for disposal at a landfill for inert waste	
Waste code	Description
20 01 02	Glass (separately collected glass only)
20 02	garden and park wastes (including cemetery waste)
20 02 02	soil and stones (excluding topsoil and peat)

1. Selected construction and demolition waste: with low content of other types of materials (metals, plastics, organics, wood, rubber, etc). The origin of the waste must be known.
 - No construction or demolition waste polluted with inorganic or organic dangerous substances, e.g. because of production processes in the construction, soil pollution, storage and use of pesticides, or other dangerous substances, etc, unless it is made clear that the demolished building was not significantly polluted.
 - No construction or demolition waste from buildings treated, covered or painted with materials containing dangerous substances in significant amounts.

Table S2.2 Permitted waste types for restoration	
Waste code	Description
	To be agreed in accordance with an approved restoration plan

Schedule 3 – Emissions and monitoring

Table S3.1 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
DIS01* discharge point from infiltration structure	Ammoniacal Nitrogen	Dewatered water from an excavation (blend of trapped groundwater and rainfall)	0.39mg/l	Spot sample	Monthly*	As specified in Environment Agency Guidance TGN02 ‘Monitoring of Landfill Leachate, Groundwater and Surface Water’ (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Chloride		80mg/l			
	Sulphate		210mg/l			
	Arsenic		0.001mg/l			
	Total Nickel		0.01mg/l			
	Napthalene		0.01ug/l			
	Maximum flow rate		169m³/day			
*Once infiltration structure is commissioned						

Table S3.2 Groundwater – emission limits and monitoring requirements					
Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
BH08	Chloride	175 mg/l	Spot Sample	Quarterly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> , or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Ammoniacal nitrogen as N	1.35 mg/l			
	Chromium	0.0004 mg/l			
	Arsenic	0.003 mg/l			
	Napthalene	0.03ug/l			
BH10	Chloride	109 mg/l			

Table S3.2 Groundwater – emission limits and monitoring requirements					
Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
	Ammoniacal nitrogen as N	0.22 mg/l			
	Chromium	0.0012 mg/l			
	Arsenic	0.004 mg/l			
	Napthalene	0.08ug/l			
BH11	Chloride	110 mg/l			
	Ammoniacal nitrogen as N	0.15 mg/l			
	Chromium	0.0008 mg/l			
	Arsenic	0.003 mg/l			
	Napthalene	0.06ug/l			
BH12	Chloride	83 mg/l			
	Ammoniacal nitrogen as N	0.18 mg/l			
	Chromium	0.0013 mg/l			
	Arsenic	0.004 mg/l			
	Napthalene	0.06ug/l			

Table S3.3 Landfill gas: in-waste monitoring – Action level and monitoring requirements				
Monitoring point Ref. /description	Parameter	Action level (including units)	Monitoring frequency	Monitoring standard, specifications and other actions
All in-waste landfill gas monitoring points	Methane	1% v/v	Monthly	As per LFTGN03 (September 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Carbon Dioxide	no limit		Where the concentration of methane at any in-waste monitoring location exceeds the specified action level, the operator shall investigate the root cause in accordance with their gas action plan and waste acceptance procedures.
	Oxygen	no limit		
	Atmospheric Pressure	no limit		
	Differential Pressure	no limit		
Table S3.3A Landfill gas: off-site/ perimeter monitoring – Compliance limit and monitoring requirements				
Monitoring point Ref. /description	Parameter	Limit (including units)	Monitoring frequency	Monitoring standard, specifications and other actions
BH01, BH02, BH03, BH04, BH05, BH06, BH07, BH08, BH09, BH10, BH11, BH12, BH13 and BH15	Methane	1% v/v	Monthly	As per LFTGN03 (September 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
BH14, BH16, BH17, BH18	Methane	no limit		Record whether the ground is: Waterlogged frozen snow covered
BH01 to BH18	Oxygen	no limit	Monthly	As per LFTGN03 (September 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Atmospheric Pressure	no limit		Record whether the ground is: Waterlogged
	Differential Pressure	no limit		

Table S3.3A Landfill gas: off-site/ perimeter monitoring – Compliance limit and monitoring requirements				
Monitoring point Ref./description	Parameter	Limit (including units)	Monitoring frequency	Monitoring standard, specifications and other actions
	Carbon Dioxide	no limit		frozen snow covered
	Flow rate	no limit		
	Volatile organic vapours	no limit		

Table S3.4 Groundwater – other monitoring requirements			
Monitoring Point Ref./Description	Parameter	Monitoring frequency	Monitoring standard or method
BH01 – BH18	Water Level, dip to base, Dip for presence and thickness of product	Monthly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> , or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Up gradient MPP (ESSD10)	Electrical Conductivity, Chloride, Ammoniacal Nitrogen, pH, Total Alkalinity, Magnesium, Potassium, Sulphate, Calcium, Sodium, Chromium (VI), Copper, Iron, Lead, Nickel, Zinc, Manganese, Selenium, Cyanide, Cadmium, Total Organic Carbon (TOC), Mineral Oils (C10 – C40)	Quarterly	
	Hazardous substances Arsenic, Mercury, Benzene, Toluene, Ethyl Benzene, Xylene, Poly Chlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH)	Annually for first six years of operation then every two years	PAH analysis must include all the substances listed in EPR 2016, schedule 10, paragraph 2(d).

Table S3.4 Groundwater – other monitoring requirements			
Monitoring Point Ref./Description	Parameter	Monitoring frequency	Monitoring standard or method
Down or cross gradient MPP (ESSD10)	Water Level, Electrical Conductivity, Chloride, Ammoniacal Nitrogen, pH	Quarterly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit</u> (www.gov.uk), or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Total Alkalinity, Magnesium, Potassium, Sulphate, Calcium, Sodium, Chromium (VI), Copper, Iron, Lead, Nickel, Zinc, Manganese, Selenium, Cyanide, Cadmium, Total Organic Carbon (TOC), Mineral Oils/hydrocarbons	Quarterly	
	Hazardous substances Arsenic, Mercury, Benzene, Toluene, Ethyl Benzene, Xylene, Poly Chlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH)	Annually for first six years of operation then every two years	PAH analysis must include all the substances listed in EPR 2016, schedule 10, paragraph 2(d).
MPP	Base of monitoring point (mAOD)	Annually	

Table S3.5 Surface water – other monitoring requirements

Monitoring point Ref./Description	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
DIS01	Alkalinity as CaCO ₃	No limit	Spot Sample	Fortnightly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit</u> (<u>www.gov.uk</u>), or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Ammoniacal nitrogen as N	No limit			
	Calcium	No limit			
	Chloride	No limit			
	Electrical conductivity	No limit			
	Ionic balance	No limit			
	Magnesium	No limit			
	Nitrogen (total oxided) as N	No limit			
	pH	No limit			
	Potassium	No limit			
	Sodium	No limit			
	Sulphate as SO ₄	No limit			
	TOC	No limit			
	Arsenic	No limit			
	Cadmium	No limit			
	Chromium	No limit			
	Copper	No limit			
	Iron	No limit			
	Lead	No limit			
	Manganese	No limit			

Table S3.5 Surface water – other monitoring requirements					
Monitoring point Ref./Description	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
	Nickel	No limit			
	Zinc	No limit			
	Mineral oil (C10-C40)	No limit			
	Total suspended solids	No limit			
	BTEX	No limit			
	US EPA 16 PAHs	No limit			
	Flow rate	No limit		Daily	

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data		
Parameter	Reporting period*	Period ends
Point source emission to water (other than sewer) As specified by schedule 3, table S3.1	Every 3 months	31 March, 30 June, 30 September, 31 December
Emission to groundwater As specified by schedule 3, table S3.2	Every 3 months	31 March, 30 June, 30 September, 31 December
Landfill gas in monitoring boreholes As specified by schedule 3, table S3.3	Every 3 months	31 March, 30 June, 30 September, 31 December
Other groundwater monitoring As specified by schedule 3, table S3.4	Every 3 months	31 March, 30 June, 30 September, 31 December
Other surface water monitoring As specified by schedule 3, table S3.5	Every 3 months	31 March, 30 June, 30 September, 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 Reporting Forms		
Media/parameter	Reporting Format	Date of Form
Controlled water	Form Water 1, or other reporting format to be agreed in writing with the Environment Agency	08/12/20
Groundwater	Form Groundwater 1, or other reporting format to be agreed in writing with the Environment Agency	08/12/20
Landfill gas	Form LFG 1, or other reporting format to be agreed in writing with the Environment Agency	08/12/20
Waste Return	E-waste Return Form	-
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 incident or accident which significantly affects or may significantly affect the environment	
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	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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 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	
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.

“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 Landfill Infrastructure.

“CQA Validation Report” means the final “as built” construction and engineering details 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 Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the Construction Proposals.

“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.

“Emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations 2016, SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

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

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

“Hazardous substances” as defined by the Environmental Permitting (England and Wales) Regulations 2016, SI 2016 No.1154, schedule 22.

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

“Landfill infrastructure” means any specified element of the:

- Artificially established geological barrier;
- surface water drainage systems;
- groundwater monitoring boreholes;
- landfill gas monitoring boreholes.

“List of Wastes” means the list of wastes established by Commission Decision 2014/995/EC replacing Decision 1994/3/EC and 2000/532/ EC establishing a list of wastes pursuant to Article 7 of Council Directive 2008/98/EC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“Liquids” means any liquid other than leachate.

“MPP” means the monitoring point plan, required to specify routine monitoring locations.

“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.

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

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

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

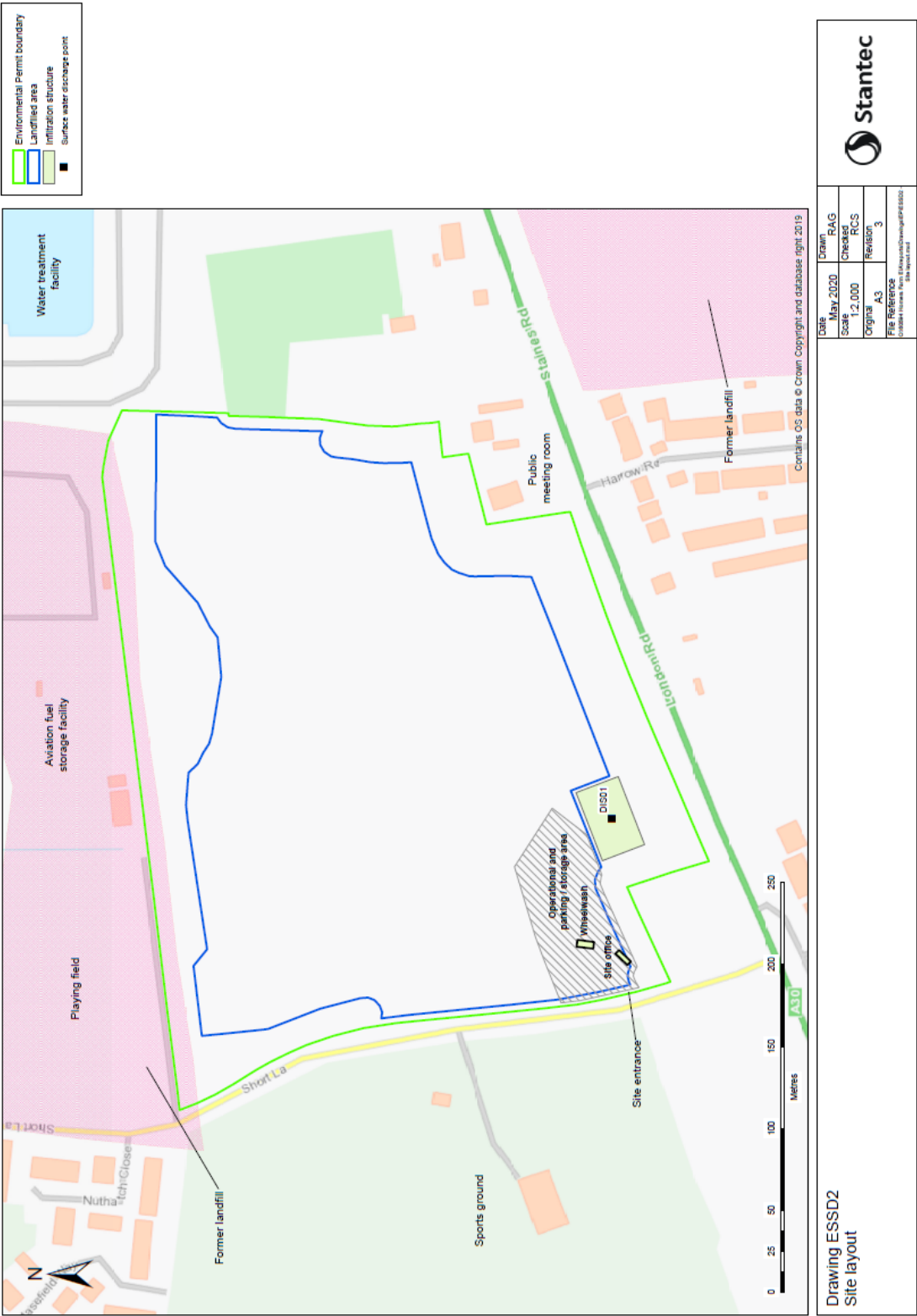
“Relevant waste acceptance procedures” means the procedure for the acceptance of waste at landfills and the associated sampling and test methods specified in the Council Decision Annex (2003/33/EC, European Council of 19 December 2002).

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

“Waste code” – See “List of Wastes”.

“WFD” means Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste [and repealing certain Directives] – the Waste Framework Directive.

Schedule 7 – Site plan



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