

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Veolia ES (UK) Limited
Leeming Biogas Facility
Land to the rear of Clapham Lodge
Dere Street
Leeming
Northallerton
D17 9LY

Permit number

EPR/MP3730RL

Leeming Biogas Facility

Permit number EPR/MP3730RL

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows:

The installation is operated by Veolia ES (UK) Limited and the primary activity carried out at the installation is the treatment of organic liquid wastes through anaerobic digestion. The activity is defined under Section 5.4 Part A(1) (b) (i) of the Environmental Permitting Regulations as *Recovery or a mix of recovery and disposal of non hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment*. The facility treats wastes from ice cream processing plants, food wastes from restaurants and Category 2 blood wastes (under the Animal By-Products regulations). The facility will process up to 80,000 tonnes of organic waste per year.

New feedstock wastes to be received at the site are subject to a pre-screening assessment and audit. Once assessed as acceptable, sealed tankers delivering the liquid wastes will be directed from the weighbridge where the quantity and nature of the load can be verified prior to the waste being directly sampled from the tanker. Subject to passing this initial check, waste is pumped directly into one of two reception tanks where the waste is sampled immediately and then analysed within 24 hours. This is to confirm that the waste is within the specified thresholds prior to anaerobic treatment. Waste is then fed via a macerator (20 mm particle size) to the two concrete primary digesters. After a hydraulic retention time (HRT) of 21 days at mesophilic temperatures, waste is transferred to the secondary stage concrete digestion tank. Waste remains in this tank for a further 19 days HRT. The digested material is then pasteurised to meet ABP requirements, prior to being pumped into the two final digestate storage tanks. The storage tanks are not gas tight but are covered by a semi porous floating cover.

The overall process is a sealed system where biogas is collected and stored in the digesters. The only emission point for displaced air is via a stack with a carbon filter at the pasteurisation stage. Gases developed up to this point are stored in a flexible membrane cover in the secondary digester. The purpose of the facility is to maximise gas generation so biogas is passed to a gas-upgrading facility (compression, dewatering and membrane separation) prior to injection into the national grid as biomethane. A CHP is also on site to burn biogas, providing heating and electricity. Digestate is exported off site to be used as a soil fertiliser.

The installation has numerous point source emissions, however, the predominant emission points are from the stack on the CHP, the stack from the gas upgrading facility, the emergency flare and the odour abatement stack. Only clean surface waters are collected in an attenuation pond and discharged to an existing culvert. Any process waters collected in the reception area and the process area are collected in an impermeable underground effluent tank and sent offsite for disposal. The odour abatement system consists of a carbon filter which absorbs odorous compounds from displaced air throughout the process. All other gases are balanced through the gas system and pass through the CHP plant or the gas upgrading facility.

The operator's environmental management system is not yet externally verified. However, the operator has committed to meeting the requirements of ISO 14001 following the commencement of site operations.

Leeming Biogas facility is located approximately 600 m away from Leeming village near Northallerton, North Yorkshire. It is set in a predominantly rural setting but is situated adjacent to RAF Leeming. The facility is 350 m from the A1 and is within 50 m of several residences. The facility is approximately centred on grid reference SE 29972 88576. There are no European habitats sites within 10 km of the facility. The closest site of nature and conservation is Newton-le-Willows Meadows Site of Special Scientific Interest which is approximately 8 km away.

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/MP3730RL/A001	Duly made 27/10/2015	Application for an anaerobic digestion facility with combustion of biogas.
Additional information received	14/12/2015	Schedule 5 notice response including a new odour modelling assessment.
Additional information received	02/02/2016	Schedule 5 notice response including revised noise management plan, BAT assessment, fugitive emissions plan, accident management plan and details on waste types.
Additional information received	31/03/2016	Schedule 5 notice response including clarification of operator status, revised odour management plan, BAT appendices and further details on bund design and construction.
Permit determined (Billing ref. MP3730RL)	27/04/2016	Permit issued to Veolia ES (UK) Limited.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/MP3730RL

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

Veolia ES (UK) Limited (“the operator”),

whose registered office is

210 Pentonville Road

London

N1 9JY

company registration number 02481991

to operate an installation at

Leeming Biogas Facility

Land to the rear of Clapham Lodge

Dere Street

Leeming

Northallerton

D17 9LY

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

Name	Date
Rebecca Warren	27 April 2016

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 Energy efficiency

- 1.2.1 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) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 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.

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

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and 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.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 table S2.2; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

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

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

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 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.

3.4 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.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
 - (a) point source emissions specified in tables S3.1 and S3.2;
 - (b) process monitoring specified in table S3.3.

- 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 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2 unless otherwise agreed in writing by the Environment Agency.

3.6 Pests

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.6.2 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

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

- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the annual production/treatment data set out in schedule 4 table S4.2; and
 - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 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.
- 4.2.5 Within 1 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.

4.3 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 (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 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency

when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

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

Where the operator is a registered company:

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

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

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

In any other case:

- (c) the death of any of the named operators (where the operator consists of more than one named individual);
- (d) any change in the operator's name(s) or address(es); and
- (e) 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.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

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	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
1	S5.4 A (1) (b) (i) Recovery or a mix of recovery and disposal of non hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.	R3: Recycling/reclamation of organic substances which are not used as solvents	<p>From receipt of waste through to digestion and recovery of by-products (digestate).</p> <p>Anaerobic digestion of waste in three tanks followed by burning of biogas produced from the process.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p>
Directly Associated Activity			
2	Storage of waste pending recovery or disposal	R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced)	<p>From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery and/or disposal.</p> <p>Storage of pumpable liquid wastes in a sealed reception tank and on an impermeable surface with sealed drainage.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p>
3	Physical treatment for the purpose of recycling	R3: Recycling/reclamation of organic substances which are not used as solvents	<p>From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery.</p> <p>Pre-treatment of waste in a sealed system on impermeable surface with sealed drainage system including maceration of pumpable liquid wastes.</p> <p>Post-treatment of digestate in a sealed system on an impermeable surface with</p>

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
			<p>sealed drainage system, including maceration.</p> <p>Heat treatment (pasteurisation) of waste in three tanks for the purpose of recovery. Displaced air from the storage, pre-treatment and digestion process is emitted via an air abatement system after digestate is pasteurised.</p> <p>Gas cleaning by biological means and dosing of waste with ferric chloride. Absorption using activated carbon.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p>
4	Heat and electrical power supply	R1:Use principally as a fuel to generate energy	<p>From the receipt of biogas produced at the on-site anaerobic digestion process to combustion with the release of combustion gases.</p> <p>Combustion of biogas in one 0.55 MW combined heat and power (CHP) engine.</p>
5	Emergency flare operation	D10: Incineration on land	<p>From the receipt of biogas produced at the on-site anaerobic digestion process to incineration with the release of combustion gases.</p> <p>Use of one auxiliary flare required only during periods of breakdown or maintenance of the CHP engine and the biogas upgrading plant.</p>
6	Gas upgrading	Upgrading of biogas to biomethane (including the	From the receipt of biogas produced at the on-site

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
		removal of moisture and other substances such as carbon dioxide, hydrogen sulphide, and volatile organic compounds) for injection into the National Grid.	anaerobic digestion process to injection into the National Grid. This includes return of off-specification biogas for combustion to the on-site CHP engine and/or emergency flare.
7	Raw material storage	Storage of raw materials including lubrication oil, antifreeze, ferric chloride, activated carbon, propane, de-greaser, diesel.	From the receipt of raw materials to despatch for use within the facility.
8	Gas storage	Storage of biogas produced from on-site anaerobic digestion of permitted waste in the roof space of digesters.	From the receipt of biogas produced at the on-site anaerobic digestion process and propane to despatch for use within the facility.
9	Digestate storage	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced) Storage of liquid digestate waste in two storage tanks.	From the receipt of digestate produced from the on-site anaerobic digestion process to despatch for use off-site. Digestate storage tanks are covered with a semi-porous floating cover.
10	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water in one attenuation pond.	From the collection of uncontaminated roof and site surface water from non operational areas only to re-use within the facility or discharge off-site.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Responses to Part B2 and B3 of the application form referenced supporting documentation and responses from additional information requests prior to duly making the application.	27/10/2016
Response to Schedule 5 Notice dated 18/12/2016	Covering letter detailing answers to specific questions 1 – 7 of the Schedule 5 notice. Ref HC1528-S501. Response to question 1, initial letter outlining operator status from facility construction company. Ref HC1528-S501.	02/02/2016

Table S1.2 Operating techniques		
Description	Parts	Date Received
	<p>Response to question 2, a revised BAT statement and all appendices (Appendix 1 – 32c). <i>Measures to Demonstrate BAT</i>. Ref <i>HC1528-S502</i>.</p> <p>Response to question 2, a revised raw materials inventory. Raw Materials Inventory V2. Ref <i>HC15128-S505</i>.</p> <p>Response to question 3, a revised fugitive emissions plan. <i>Fugitive Emissions Management Plan and Risk Assessment</i>. Ref <i>HC1528-S506</i>.</p> <p>Response to question 5, a revised noise management plan. <i>Leeming Biogas Noise Management Plan</i>. Ref <i>NMP/VES/001</i>.</p> <p>Response to question 6, a revised accident management plan. Leeming Biogas Accident Management Plan. Ref <i>HC15218-S509</i>.</p> <p>Spillage procedure. <i>Leeming Biogas Hazardous Chemical/Substance Spill Procedure</i>. Ref <i>Lee/0000</i>.</p>	
Additional information request No. 2.	Email response containing justification of the odour rates used within the odour modelling.	13/02/2016
Additional information request No. 2	Email response containing an amended site layout plan and confirmation that there are no fixed auxiliary boilers on site.	13/02/2016
Additional information request No. 4	Email response containing confirmation and justification that discharge of office effluent to a surface water culvert meets the Environment Agency's 'General binding rules'.	01/03/2016
Response to Schedule 5 Notice dated 03/03/2016	<p>Covering letter detailing specific answers to questions 1 – 4 of the Schedule 5 notice. Ref <i>HC1528-S5301</i></p> <p>Response to question 1, letter confirming the status of the operator. Ref <i>VES/Leeming/MR01</i>.</p> <p>Responses to question 2, a revised BAT statement appendices or documents.</p> <ul style="list-style-type: none"> • <i>Leeming Biogas – New Feedstock Acceptance</i>. BAT Appendix 2. Ref <i>W1009</i>. • <i>Leeming Biogas – Feedstock Acceptance to Site</i>. BAT Appendix 3. Ref <i>W1008</i>. • <i>Leeming Biogas Process Management Plan</i>. BAT Appendix 15c. Ref <i>W1107</i>. • <i>Leeming Biogas Sampling and Monitoring</i>. Ref <i>lee/1/001</i>. • <i>Business Impact Analysis</i>. Ref <i>SYS/2/028/008</i>. <p>Response to question 3, a revised odour management plan.</p>	31/03/2016

Table S1.2 Operating techniques		
Description	Parts	Date Received
	<p><i>Leeming Biogas – Odour Management Plan. Ref WI027.</i></p> <p>Response to question 4, a revised BAT appendix. <i>Bund Construction Statement. BAT Appendix 22c. Ref HC1528-S502.</i></p>	
Additional information received	Email containing redacted version of the operator's business continuity plan. <i>Business Continuity Plan. Ref LBL-BCP.</i>	25/04/2016
Additional information received	Email including clarification of testing regime for discharge of collected surface water in the bund.	25/04/2016

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	<p>The operator shall carry out a monitoring study to quantify the emissions in relation to the releases of pollutants to air from the facility. The study shall include the monitoring of point source releases to air from the biogas upgrading plant (emission point A2) during normal operation, having regard to the Environment Agency technical guidance M2 and to MCERTS standards.</p> <p>Two separate monitoring campaigns in a year shall be completed as follows:</p> <ul style="list-style-type: none"> • one monitoring campaign 6 months following operation of the biogas upgrading plant; and • one monitoring campaign 12 months following operation of the biogas upgrading plant. <p>The following pollutants to be monitored shall include:</p> <ul style="list-style-type: none"> • Total Volatile Organic Compounds (VOCs); and • Hydrogen sulphide 	12 months following operation of the biogas upgrading plant.
IC2	<p>Following the completion of IC1, the operator shall undertake an environmental impact assessment of point source releases to air from the biogas upgrading plant, using the information obtained through the emissions monitoring. The environmental impact assessment and all associated monitoring reports shall be submitted in writing to the Environment Agency for review.</p> <p>The environmental impact assessment shall include:</p> <ul style="list-style-type: none"> • details of the monitoring undertaken and the results obtained; • results of the assessment of long and short term impacts from the emissions in accordance with Environment Agency guidance on air quality risk assessments; and • a completed H1 assessment software tool <p>If the H1 assessment shows that long or short term impacts from the emissions are not insignificant, the operator shall propose an action plan to reduce the impacts of the substances identified.</p>	1 month following the completion of IC1.
IC3	The operator shall submit a written report to the Environment Agency on the implementation of its Environmental Management System (EMS) and the progress made in the accreditation of the system by an external body	27/04/2017

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	or if appropriate submit a schedule by which the EMS will be subject to accreditation.	
IC4	The operator shall provide a revised accident management plan to the Environment Agency for approval. It shall include specified contingency actions outlining how each abnormal activity will be managed. The revised accident management plan shall meet the requirements specified in Section 8.7.1 of the Draft Guidance <i>How to comply with your environmental permit. Additional guidance for: Anaerobic Digestion (November 2013)</i> .	26/10/2016
IC5	The operator shall submit a performance review of the carbon filter odour abatement at the pasteurisation plant to the Environment Agency for approval. The performance review shall demonstrate that the abatement system is capable of ensuring odour emissions do not extend beyond the permit boundary. The operator shall also confirm the details of odour abatement plant monitoring protocols and an assessment of the performance of the abatement system against design parameters.	26/10/2016
IC6	Following completion of IC5, if the performance review finds that the odour abatement system is ineffective in ensuring that odour emissions do not extend beyond the permit boundary, the operator shall submit to the Environment Agency for approval a detailed evaluation of alternative odour abatement techniques, proposals and timescales for the installation of an alternative odour abatement system. The proposals for alternative odour abatement shall be in accordance with the requirements of the Environment Agency's H4 Odour Management guidance and the Draft Guidance <i>How to comply with your environmental permit. Additional guidance for: Anaerobic Digestion (November 2013)</i> .	1 month following completion of IC5
IC7	The operator shall submit a revised odour management plan to the Environment Agency for approval with regard to Environment Agency's H4 Odour Management guidance. The revised plan shall include: <ul style="list-style-type: none"> • An amended feedstock and waste inventory which considers the impact of fugitive emissions from blood wastes due to its high odorous nature. The inventory should consider how odours from the handling of blood will be minimised. • A section which outlines how the operator will prevent point source odour emissions from the abatement plant at the pasteurisation units when spent carbon filter media is being replaced. • A revised routine contingency section which proposes site specific remedial actions for each odour source. Measures specified shall be actions that can be readily implemented. • A revised monitoring section which clearly defines the individual or individuals who are responsible for daily sniff testing. It must demonstrate how the individuals remain sensitive to on site odour and avoid adaptation to on-site odours. 	26/10/2016
IC8	The operator shall submit a performance review and monitoring procedure to the Environment Agency for approval to determine the efficacy of the floating cover of the digestate storage tanks in ensuring odour emissions do not extend beyond the permit boundary. The procedure shall include: <ul style="list-style-type: none"> • a methodology for monitoring odours from this source and the parameters used; • details of monitoring locations and frequency; • a timetable of implementation; and. • procedures for recording this information. 	26/10/2016

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC9	<p>Following completion of IC8, if the performance review finds that the floating cover is ineffective in ensuring that odour emissions do not extend beyond the permit boundary, the operator shall submit to the Environment Agency for approval a detailed evaluation of alternative odour containment techniques, proposals and timescales for the installation of an alternative odour containment system at the digestate storage tanks.</p> <p>The proposals for alternative odour containment shall be in accordance with the requirements of the Draft Guidance <i>How to comply with your environmental permit. Additional guidance for: Anaerobic Digestion (November 2013)</i>.</p>	1 month following completion of IC8.
IC10	The operator shall submit procedures to the Environment Agency for approval for monitoring the integrity of the bund surface and that it remains impermeable. The operator shall propose how they will ensure that the bund remains impermeable throughout the duration of permitted activities.	26/10/2016

Schedule 2 – Waste types, raw materials and fuels

Raw materials and fuel description	Specification
Fuel oil	Sulphur content not exceeding 0.1% by mass

Maximum quantity	Annual throughput shall not exceed 80,000 tonnes All waste must be pumpable liquid wastes only.
Waste code	Description
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01	sludges from washing and cleaning – food processing waste, food washing waste
02 01 02	animal-tissue waste including blood, animal flesh, fish processing waste, fish carcasses, poultry waste
02 01 03	plant-tissue waste including husks, cereal dust, waste animal feeds, off-cuts from vegetable and fruit and other vegetation waste
02 01 06	animal faeces, urine and manure (including spoiled straw) only
02 02	wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01	sludges from washing and cleaning, process water, food washing waste
02 02 02	animal-tissue waste including blood, animal flesh, fish processing waste, fish carcasses, poultry waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges from on-site effluent treatment
02 04	wastes from sugar processing
02 04 03	sludges from on-site effluent treatment
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing including solid and liquid dairy products, milk, food processing wastes, yoghurt, whey
02 05 02	sludges from on-site effluent treatment
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing including condemned food, food processing wastes, biscuits, chocolate, yeast, bread, bakery wastes

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	Annual throughput shall not exceed 80,000 tonnes All waste must be pumpable liquid wastes only.
Waste code	Description
02 06 03	sludges from on-site effluent treatment
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials including brewing waste, food processing waste, fermentation waste
02 07 02	wastes from spirits distillation including spent grains, fruit and potato pulp, sludge from distilleries
02 07 04	materials unsuitable for consumption or processing including brewing waste, food processing waste, fermentation waste, beer, alcoholic drinks, fruit juice
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 03	wastes from pulp, paper and cardboard production and processing
03 03 10	fibre rejects and sludges i.e. paper pulp (de-inked only), paper fibre
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10 – only allowed if not mixed with, or does not contain, de-inking sludge
04	Wastes from the leather, fur and textile industries
04 02	wastes from the textile industry
04 02 10	organic matter from natural products, e.g. grease, wax
07	Wastes from organic chemical processes
07 01	wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals
07 01 08*	glycerol waste from bio-diesel manufacture from non-waste vegetable oils only
16	Wastes not otherwise specified in the list
16 10	aqueous liquid wastes destined for off-site treatment
16 10 02	liquor/leachate from a composting process that accepts waste input types listed in this table only
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 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	waste types listed in this table, Table S2.2, that have been mixed together only
19 02 06	sludge types from waste listed in this table, Table S2.2, that have been heat treated only
19 02 10	glycerol not designated as hazardous i.e. excludes EWC code 19 02 08
19 05	wastes from aerobic treatment of solid wastes
19 05 01	non-composted fraction of municipal and similar wastes – acceptable only if derived solely from input types allowed by the AD Quality Protocol and remains segregated from, and uncontaminated by, any other waste type
19 05 02	non-composted fraction of animal and vegetable waste – acceptable only if derived solely from input types allowed by the AD Quality Protocol and remains segregated

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	Annual throughput shall not exceed 80,000 tonnes All waste must be pumpable liquid wastes only.
Waste code	Description
	from, and uncontaminated by, any other waste type
19 06	wastes from anaerobic treatment of waste
19 06 03	liquor from anaerobic treatment of municipal waste (from a process that treats wastes which are listed in this table only)
19 06 04	digestate from anaerobic treatment of source segregated biodegradable waste (from a process that treats wastes which are listed in this table only)
19 06 05	liquor from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only)
19 06 06	digestate from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only)
19 08	wastes from waste water treatment plants not otherwise specified
19 08 09	grease and oil mixture containing edible oils and fats
19 08 12	sludges from industrial biological treatment
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 12	waste types listed in this table, Table S2.2, that have been subjected to mechanical treatment only
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	separately collected fractions (except 15 01)
20 01 08	kitchen and canteen waste
20 01 25	edible oil and fat
20 03	other municipal wastes
20 03 01	mixed municipal waste – separately collected biowastes

Schedule 3 – Emissions and monitoring

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 on the site layout plan, <i>Environmental Permit Site Boundary & Point Source Releases to Air & Water Ref 13T671-114</i> in application EPR/MP3730RL/A001.	CHP engine 1 stack [note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500 mg/m ³	Hourly average	Annual	BS EN 14792
		Sulphur dioxide	350 mg/m ³			BS EN 14791
		Carbon monoxide	1400 mg/m ³			BS EN 15058
		Total VOCs	1000 mg/m ³			BS EN 12619:2013
A2 on the site layout plan <i>Environmental Permit Site Boundary & Point Source Releases to Air & Water Ref 13T671-114</i> in application EPR/MP3730RL/A001	Biogas upgrading plant stack	No parameter set	No limit set	--	--	--
A3 on the site layout plan <i>Environmental Permit Site Boundary & Point Source Releases to Air & Water Ref 13T671-114</i> in application EPR/MP3730RL/A001	Emergency flare stack [note 2]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	150 mg/m ³	Hourly average	[note 3]	BS EN 14792
		Carbon monoxide	50 mg/m ³			BS EN 15058
		Total VOCs	10 mg/m ³			BS EN 12619:2013
A4 – A11 Pressure relief valves on the site layout plan <i>Environmental Permit Site Boundary & Point Source Releases to Air & Water Ref 13T671-114</i> in application EPR/MP3730RL/A001	Digester tanks and waste reception tanks	No parameter set	No limit set	--	Record of operating hours	--
A12 – A14 Pressure relief vents on the site layout plan <i>Environmental Permit Site Boundary & Point Source Releases to Air & Water Ref 13T671-114</i> in application EPR/MP3730RL/A001	Emergency pressure release vents on pasteurisation tanks	No parameter set	No limit set	--	Record of operating hours	--

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A15 on the site layout plan <i>Environmental Permit Site Boundary & Point Source Releases to Air & Water</i> Ref 13T671-114 in application EPR/MP3730RL/A001	Pasteurisation tank odour abatement system stack	No parameter set	No limit set	--	--	--
A16 Vents from tank on the site layout plan <i>Environmental Permit Site Boundary & Point Source Releases to Air & Water</i> Ref 13T671-114 in application EPR/MP3730RL/A001	Oil/Fuel Storage tank	No parameter set	No limit set	--	--	--
<p>Note 1 - These limits are based on normal operating conditions and load - temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 5 per cent (dry gas). The measurement uncertainty specified in LFTGN08 v2 2010 shall apply.</p> <p>Note 2 - These limits are based on normal operating conditions and load - temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 3 per cent (dry gas). The measurement uncertainty specified in LFTGN05 v2 2010 shall apply.</p> <p>Note 3 - Monitoring to be undertaken 12 months after commissioning of the emergency flare. Following commissioning, monitoring to be undertaken in the event the emergency flare has been operational for more than 10 per cent of a year (876 hours). Record of operating hours to be submitted annually to the Environment Agency.</p>						

Table S3.2 Point source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 on site layout plan in schedule 7 emission to surface water culvert	Uncontaminated site surface water from roofs, site bund and non operational areas via an attenuation pond	No parameter set	No limit set	--	Weekly	Visual assessment – no visible oil or grease
W2 on site layout plan in schedule 7 outlet to culvert downstream of oil interceptor	Uncontaminated site surface water from roofs, site bund and non operational areas	No parameter set	No limit set	--	Weekly	Visual assessment – no visible oil or grease

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Biogas from Digesters	Flow	Continuous	In accordance with EU weights and measures Regulations	--
Biogas from Digesters	Methane	Continuous	None specified	Gas monitors to be calibrated every 6 months or in accordance with the manufacturer's recommendations.
	Hydrogen sulphide	Continuous	None specified	--
Waste reception tanks; Reception storage tanks	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Digesters and storage tanks	Integrity checks	Weekly	Visual assessment	--
Carbon filtration system	None specified	In accordance with manufacturer's recommendations.	None specified	Odour abatement system shall be regularly checked and maintained to ensure appropriate temperature and moisture content. Carbon filters to be replaced when saturated in accordance with manufacturer's recommendations.

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A1 and A3.	Every 12 months	1 January

Table S4.2 Annual production/treatment	
Parameter	Units
Electricity generated	MWh
Biomethane generated	tonnes or m ³
Whole digestate	tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes or m ³
Energy usage	Annually	MWh
Raw material usage	Annually	tonnes or m ³
Emergency flare operation	Annually	hours
Electricity exported	Annually	MWh
Biomethane exported	Annually	tonnes or m ³
CHP engine usage	Annually	hours
CHP engine efficiency	Annually	%

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	27/04/2016
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	27/04/2016
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	27/04/2016
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	27/04/2016
Waste returns	E-waste Return Form	--

Schedule 5 – Notification

These pages outline 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 submitted 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.

“ADQP” means Anaerobic Digestion Quality Protocol

“anaerobic digestion” means a process of controlled decomposition of biodegradable materials under managed conditions where free oxygen is absent, at temperatures suitable for naturally occurring mesophilic or thermophilic anaerobes and facultative anaerobe bacteria species, which convert the inputs to a methane-rich biogas and whole digestate.

“animal waste” means any waste consisting of animal matter that has not been processed into food for human consumption.

“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.

“building” means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

“digestate” means material resulting from an anaerobic digestion process.

“disposal” means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“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 limit.

“emissions to land” includes emissions to groundwater.

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

“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.

“impermeable surface” means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

“Industry Standard Protocol” means “A standardised protocol for the monitoring of bioaerosols at open composting facilities” published by the Association for Organics Recycling and developed in conjunction with the Environment Agency.

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

“pests” means Birds, Vermin and Insects.

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

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“sealed drainage system” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- no liquids will run off the surface otherwise than via the system
- all liquids entering the system are collected in a sealed sump, except where liquids may be lawfully discharged to foul sewer.

“treated wood” means any wood that has been chemically treated (e.g. to enhance or alter the performance of the original wood). Treatments may include penetrating oils, tar oil preservatives, water-borne preservatives, organic-based preservatives, boron and organo-metallic based preservatives, boron and halogenated flame retardants and surface treatments (including paint and veneer).

“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.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

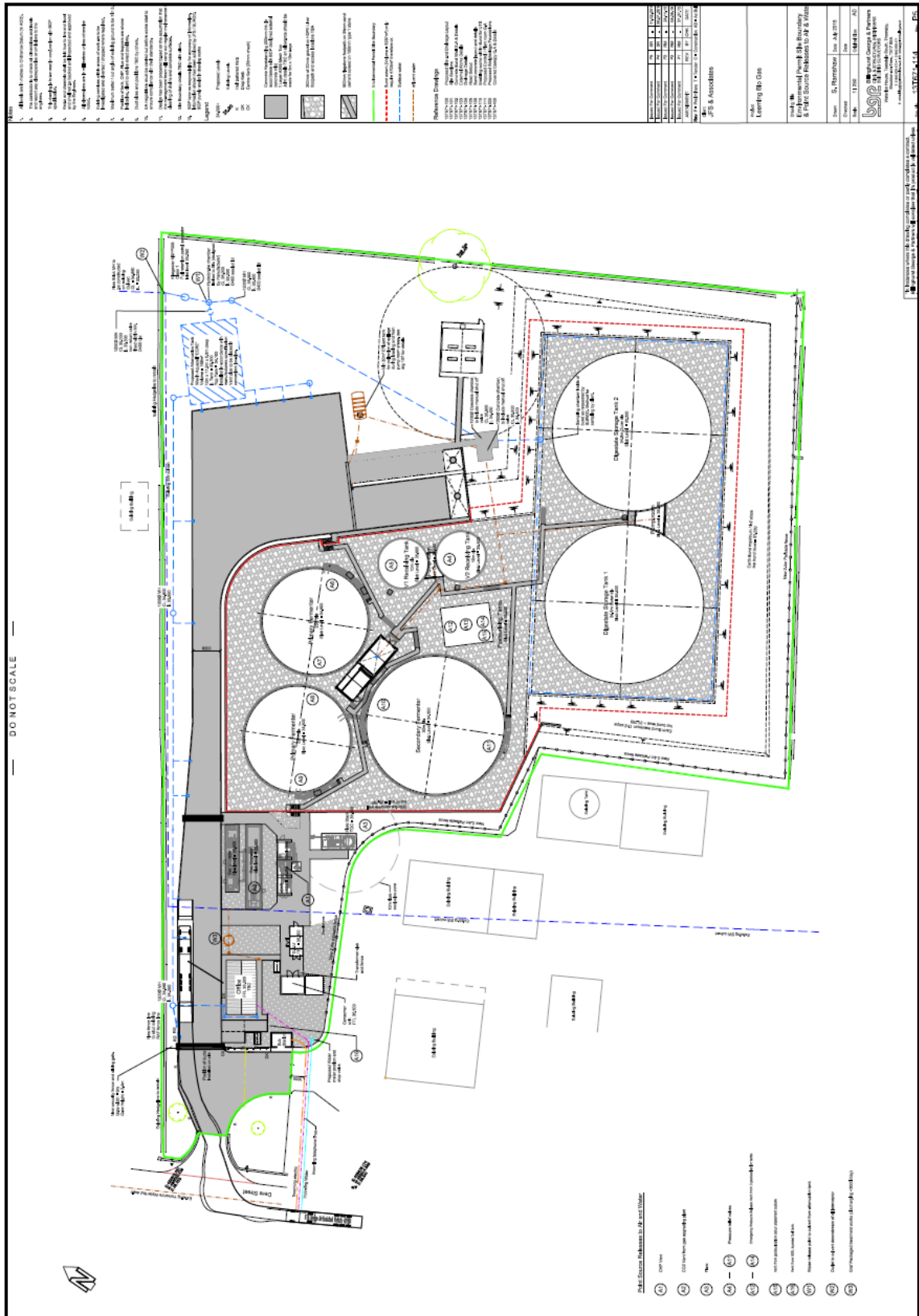
“year” means calendar year ending 31 December.

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

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid fuels, 3% or 5% for gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

Schedule 7 – Site plan



END OF PERMIT

Permit number
EPR/MP3730RL

Permit Number: EPR/MP3730RL

Operator:

Veolia ES (UK) Limited

**Facility: Leeming Biogas
Facility**

Form Number:

Air1 / 27/04/2016

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

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
A1	Oxides of nitrogen (NO and NO2 expressed as NO2)	500 mg/m3	1 hour period		BS EN 14792		
A1	Sulphur dioxide	350 mg/m3	1 hour period		BS EN 14791		
A1	Carbon monoxide	1400 mg/m3	1 hour period		BS EN 15058		
A1	Total VOCs	1000 mg/m3	1 hour period		BS EN 12619:2013		
A3	Oxides of nitrogen (NO and NO2 expressed as NO2)	150 mg/m3	1 hour period		BS EN 14792		
A3	Carbon monoxide	50 mg/m3	1 hour period		BS EN 15058		
A3	Total VOCs	10 mg/m3	1 hour period		BS EN 12619:2013		

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

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

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

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

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: **EPR/MP3730RL**

Operator: **Veolia ES (UK) Limited**

Facility: **Leeming Biogas
Facility**

Form Number: **WaterUsage1 / 27/04/2016**

Reporting of Water Usage for the year

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

Operator's comments:

Signed

Date.....

(authorised to sign as representative of Operator)

Permit Number: EPR/MP3730RL

Operator: Veolia ES (UK) Limited

Facility: Leeming Biogas Facility

Form Number: Energy1 / 27/04/2016

Reporting of Energy Usage for the year

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	MWh		
Natural Gas	MWh		
Gas Oil	tonnes		
Recovered Fuel Oil	tonnes		
Biogas	tonnes		
TOTAL	-		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments:

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/MP3730RL

Operator: Veolia ES (UK) Limited

**Facility: Leeming Biogas
Facility**

Form Number: Performance1 / 27/04/2016

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

Parameter	Units
Total raw material used	tonnes
CHP engine usage	hours
CHP engine efficiency	%
Emergency flare operation	hours
Electricity exported	MWh
Biomethane exported	tonnes or m3

Operator's comments:

Signed

Date.....

(Authorised to sign as representative of Operator)