

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Holme Bioenergy Limited
Park Farm AD Plant
Park Farm
Market Weighton Road
Holme-on-Spalding-Moor
York
YO43 4AG

Permit number

EPR/LP3500BL

Park Farm AD Plant

Permit number EPR/LP3500BL

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 located on Park Farm, approximately 350 metres to the north of Market Weighton Road, at national grid reference SE 81685 39564. The installation is bordered to the west by Park Farm intensive chicken farming installation (EPR/QP3836JZ). The installation has a lease agreement with the farm owners, it will also provide electricity and heat to the farm. The nearest residential receptor is approximately 320 metres to the south of the site. There are three local wildlife sites (LWS) within 2 km of the site and one internationally designated ecological site within 10 km of the Installation. These sites are designated as Bubwith-Holme-on-Spalding Moor disused railway line, Everingham Carrs and Old Flat Wood local wildlife sites and the Lower Derwent Valley SAC, SPA and Ramsar. The closest LWS is 40 metres from the installation boundary, the closest part of the SAC, SPA and Ramsar is over 7 km away from the installation boundary.

The installation is a new biological treatment facility which will treat liquid food waste, agricultural waste and animal by-products (ABP) feedstocks by anaerobic digestion (AD). This process will produce biogas for export to the grid or use in the on-site combined heat and power (CHP) engines and boilers. Electricity from the CHP engines may be used in the anaerobic digestion process, at the adjacent farm or may be exported to the grid. The digestion of the feedstocks will also create an output, referred to as digestate. This will be produced to PAS 110 standard for use as agricultural fertiliser.

This permit application is for the processing of up to 80,000 tonnes of waste per annum and will comprise the following infrastructure:

- Liquid feedstock reception tank
- Hydrolysis tank and hydrolysis buffer tank
- Pasteurisation plant (three 22 m³ tanks)
- Anaerobic digestion plant (two 4000 m³ tanks)
- Borger screen
- Gas upgrading unit
- Emergency flare
- Gas holder (2,200 m³ capacity)
- Digestate storage lagoon with residual gas recovery (24,000 m³ capacity)
- Two combined heat and power (CHP) engines (aggregated thermal input of 5.8 MWth)
- Two back-up boilers (aggregated thermal input of 2.4 MWth)

Waste feedstocks will be received, stored, and processed within sealed tanks and covered lagoons. The waste will be unloaded from tankers into the reception tank. It will be stored for a maximum of 24 hours in the reception tank before being pumped to the hydrolysis tanks. After initial treatment by hydrolysis for 4 to 6 days, the waste will be pumped to the pasteurisation tanks where it undergoes heat treatment at 70 °C for one hour in order to meet the Animal By-Product Regulations (ABPR) and PAS 110 standards. After pasteurisation, the waste will be transferred to the two digesters where it undergoes anaerobic digestion for 30 days. The resultant biogas will be extracted and transferred to the gas holder. The raw biogas will be either sent to the CHP engines to be combusted or sent to the gas upgrading unit. The gas upgrading unit will treat the biogas and remove ammonia, CO₂ and volatile organic compounds (VOCs). The CO₂ will be vented to atmosphere. Propane and odorant will be added to the treated biogas (biomethane) to give it an odour and raise its calorific value for export via pipeline for injection to the grid.

The digestate that is released from the digestion tanks is then stored in covered lagoons awaiting removal from the site and used as agricultural fertiliser. A residual gas recovery system will be in place in the lagoons. This environmental permit does not authorise the spreading of digestate to land.

The process is monitored by a Supervisory Control and Data Acquisition (SCADA) system which ensures the conditions within the digester tanks remain within limits specified in the Best Available Techniques (BAT) for AD sites.

Safety measures on the site will include secondary containment (bund) around permitted activities. The secondary containment will provide 110% spillage capacity for the largest tank or 25% of the total tank capacity. There will be continuous monitoring with automated alarms. An emergency flare which burns gas at 1000°C in 0.3 second bursts will be available for the management of excess gas during engine down time. Two boilers for heating of process tanks will also be available as a back-up to the CHP engines. Automated pressure release valves will be installed on relevant tanks in case a gas line becomes blocked and pressure needs to be released to prevent a build-up. Spill kits will be available to deal with spillages of raw materials and digestate.

The main releases to air will be from the upgrading and combustion of biogas (gas upgrading plant, CHP engines, boilers and emergency flare). Oxides of nitrogen, sulphur dioxide, carbon monoxide and total volatile organic compounds will be monitored periodically.

The digestion process will take place within sealed tanks. In normal operating conditions, no gas from the digestion process will be released to atmosphere. The site operates under an odour management plan that has been assessed and approved in accordance with our H4 Odour Management Guidance. Daily olfactory and visual monitoring will be carried out around the site boundary. Hydrogen sulphide is controlled via a combination of bacterial control within the digestion process in addition to ferric chloride dosing.

All waste treatment and storage areas are covered by a sealed drainage system enabling the operator to contain rainwater in this area and utilise it within the waste treatment process. Clean rainwater from areas not processing waste is discharged to a drainage ditch.

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/LP3500BL/A001	Duly made 16/10/19	Application for an anaerobic digestion facility with combustion and upgrading of resultant biogas.
Additional information received	19/11/19	Response to RFI considering if Park Farm is a sensitive residential receptor.
Additional information received	05/12/19	Response to schedule 5 questions covering BAT operating techniques and ammendments to the OMP.
Additional information received	12/12/19	Response to RFI detailing drainage proceeedures and site plan with emission points and final OMP.
Additional information received	16/12/19	Response to RFI detailing stack attributes on gas upgrading unit.
Additional information received	19/12/19	Response to RFI covering the impact of air emissions on local wildlife sites, confirmation of site name, updated OMP and operating procedures for non conforming material removed by screening process.
Permit determined (Billing reference: LP3500BL)	20/12/19	Permit issued to Holme Bioenergy Limited.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/LP3500BL

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

Holme Bioenergy Limited (“the operator”),

whose registered office is

Control Tower

Hemswell Cliff Industrial Estate

Hemswell Cliff

Gainsborough

DN21 5TU

company registration number **11346365**

to operate an installation at

Park Farm AD Plant

Park Farm

Market Weighton Road

Holme-on-Spalding-Moor

York

YO43 4AG

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

Name	Date
Peter Smalley	20/12/2019

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”).
- 2.1.2 The activities shall be undertaken in accordance with best available techniques.
- 2.1.3 All process plant and equipment shall be commissioned, operated and maintained and shall be fully documented and recorded in accordance with the manufacturer’s recommendations.
- 2.1.4 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

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 For the following activities referenced in schedule 1, table S1.1 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 tables S2.2 and S2.3; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
 - (c) the facility has sufficient free capacity to store and treat the waste.
- 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.

- 2.3.7 Waste pre-acceptance and acceptance procedures shall be undertaken in accordance with best available techniques.

2.4 Improvement programme

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

2.5 Pre-operational conditions

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

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.
- 3.1.4 For the following activities referenced in schedule 1, table S1.1 (AR4), the first monitoring measurements shall be carried out within four months of the issue date of the permit or the date when the MCP is first put into operation, whichever is later.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour, but including ammonia) 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.
- 3.2.4 The operator shall implement a leak detection and repair (LDAR) programme to detect and mitigate the release of volatile organic compounds.

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.

3.4.2 The operator shall:

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

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring 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.

3.5.5 For New Medium Combustion Plant, the first monitoring measurements shall be carried out within four months of the issue date of the permit or the date when the MCP is first put into operation, whichever is later.

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) only use approved products for pest control;
- (b) treat pest infestations promptly;
- (c) reject pest-infected incoming waste;
- (d) 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;
- (e) 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.

4.1.3 The operator shall maintain a record of the type and quantity of fuel used and the total annual hours of operation of each MCP.

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 reports 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.
- 4.2.6 The operator shall keep records of non-waste materials leaving the site, including the type of material, the batch number, the date of export off-site and the tonnage exported on that date. These records shall be maintained for at least 2 years.

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 Following the detection of an issue listed in condition 4.3.1, the operator shall review and revise the management system and implement any changes as necessary to minimise the risk of re-occurrence of the issue.
- 4.3.4 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.
- 4.3.5 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.

4.3.6 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.

4.3.7 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
AR1	S5.4 A(1) (b) (i) Recovery or a mix of recovery and disposal of non hazardous waste with a capacity exceeding 100 tonnes per day 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 two 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 and S2.3.</p> <p>Waste types listed in S2.3 shall not be accepted until the pre-operational condition detailed in table S1.4 is completed by the operator and approval is granted by the Environment Agency.</p>
Directly Associated Activity			
AR2	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 permitted waste to pre-treatment and despatch for anaerobic digestion on site.</p> <p>Storage of residual wastes from pre-treatment to despatch off-site for recovery.</p> <p>Storage of waste in a suitably constructed enclosed tank on an impermeable surface with sealed drainage.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2 and S2.3.</p> <p>Waste types listed in S2.3 shall not be accepted until the pre-operational</p>

			condition detailed in table S1.4 is completed by the operator and approval is granted by the Environment Agency.
AR3	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 by hydrolysis and maceration of waste in enclosed system and on impermeable surface with sealed drainage system.</p> <p>Heat treatment (pasteurisation) of waste in three tanks for the purpose of recovery.</p> <p>Gas cleaning by biological or chemical scrubbing.</p> <p>Waste types suitable for treatment are limited to those specified in Table S2.2 and S2.3.</p> <p>Waste types listed in S2.3 shall not be accepted until the pre-operational condition detailed in table S1.4 is completed by the operator and approval is granted by the Environment Agency.</p>
AR4	Steam 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 two combined heat and power (CHP) engine(s) with an aggregated thermal input of 5.8 MWth.</p> <p>Combustion of biogas or natural gas in two boiler(s) with an aggregated thermal input of 2.4 MWth.</p>

AR5	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, biogas upgrading plant and/or auxiliary boiler.</p>
AR6	Gas upgrading	Upgrading of biogas to biomethane (including the removal of moisture and other substances such as carbon dioxide, hydrogen sulphide and Volatile organic compounds) for injection into the National Grid.	From the receipt of biogas produced at the on-site anaerobic digestion process to injection into the National Grid. This includes return of off-specification biogas for combustion to the on-site CHP engines, auxiliary boilers and/or emergency flare.
AR7	Raw material storage	Storage of raw materials including lubrication oil, hydraulic oil, water, ferric chloride, carbon filters.	From the receipt of raw materials to despatch for use within the facility.
AR8	Gas 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)	<p>Storage of biogas produced from on-site anaerobic digestion of permitted waste in one stand-alone tank.</p> <p>From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for use within the facility.</p>
AR9	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)	<p>From the receipt of processed uncertified digestate produced from the on-site anaerobic digestion process to despatch for use off-site.</p> <p>Storage of processed uncertified liquid digestate in a covered lagoon.</p>
AR10	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water in sump.	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.
AR11	Air treatment	Collection and treatment of air from the buildings or plant using abatement	From the collection of air from site processes to

		system – carbon filters and particulate filters prior to release to atmosphere.	treatment and release of treated air to atmosphere.
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Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/LP3500BL/A001	Response to section 3a – technical standards, Part B3 of the application form. Operating Techniques document reference ST16936/002 and Assessment of best available techniques (BAT) document reference ST16936/003 submitted with the application as supporting documents.	16/10/19
Response to Schedule 5 Notice dated 29/11/19	Park Farm Schedule 5 response letter dated 05 th December 2019, document reference AC/KH/ST16936/LET001 submitted in response to schedule 5.	05/12/19
Additional information	Details of arrangements to ensure there is no contamination of the permeable surface outside bunded area on site submitted via email in response to a request for further information dated 11/12/2019.	12/12/19
Additional information	Odour management plan document reference ST16936/R006 submitted in response to a request for further information dated 19/12/2019.	19/12/19

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IP1	The operator shall carry out a monitoring study to verify the assumptions made in the application in relation to the releases of pollutants to air. The study shall include the monitoring of point source releases to air from the biogas upgrading plant emission point A5 during normal operation, having regard to the Environment Agency technical guidance M2 and to MCERTS standards. As a minimum, two separate monitoring campaigns in a year shall be completed (one monitoring survey six months following commissioning of the biogas upgrading plant). The pollutants to be monitored shall include: <ul style="list-style-type: none"> • total volatile organic compounds; and • hydrogen sulphide 	31/12/20 or otherwise agreed in writing by the Environment Agency
IP2	Following the completion of IP1, the operator shall undertake an emissions impact assessment of all point source releases to air, using the information obtained through the emissions monitoring. The emissions impact assessment report and all associated monitoring reports and assessments shall be submitted in writing to the Environment Agency for review. The emissions impact assessment shall, as a minimum, include: <ul style="list-style-type: none"> • reports showing 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 – Air emissions risk assessment for your environmental permit • a completed H1 assessment software tool 	31/01/21 or otherwise agreed in writing by the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	If the H1 assessment shows potential long or short term impacts from the emissions, the operator shall propose an action plan to reduce the impacts of the substances identified.	

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
1	Acceptance of waste streams for treatment.	Prior to the acceptance of any waste streams in table S2.3, the operator shall submit an assessment using the Framework Guidance Note (dated July 2013) which comprises a full waste stream characterisation and risk assessment for approval by the Environment Agency. The assessment shall demonstrate that the waste streams are suitable for biological treatment by anaerobic digestion.

Schedule 2 – Waste types, raw materials and fuels

Raw materials and fuel description	Specification
Fuel oil	<0.1% sulphur content

Maximum quantity	The total annual throughput of the site (tables S2.2 and S2.3 combined) shall not exceed 80,000 tonnes.
Exclusions	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> waste that is not biodegradable; biodegradable waste that is significantly contaminated with non-biodegradable contaminants like plastic and litter beyond incidental level of 0.5% by volume; wastes containing treated wood and post-consumer wood, wood-preserving agents or other biocides, persistent organic pollutants; wastes containing Japanese Knotweed or other invasive plant species listed in the Alien Invasive Species Regulations 2014; manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2011.
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 – vegetables, fruit and other crops
02 01 02	animal tissue waste
02 01 03	plant tissue waste
02 01 06	animal faeces, urine and manure (including spoiled straw) only
02 01 07	wastes from forestry
02 02	wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01	sludges from washing and cleaning
02 02 02	animal tissue waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 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

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	The total annual throughput of the site (tables S2.2 and S2.3 combined) shall not exceed 80,000 tonnes.
Exclusions	Wastes having any of the following characteristics shall not be accepted: <ul style="list-style-type: none"> • waste that is not biodegradable; • biodegradable waste that is significantly contaminated with non-biodegradable contaminants like plastic and litter beyond incidental level of 0.5% by volume; • wastes containing treated wood and post-consumer wood, wood-preserving agents or other biocides, persistent organic pollutants; • wastes containing Japanese Knotweed or other invasive plant species listed in the Alien Invasive Species Regulations 2014; • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2011.
Waste code	Description
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing
02 06 03	sludges from on-site effluent treatment
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 04	materials unsuitable for consumption or processing
02 07 05	sludges from on-site effluent treatment
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
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging – excludes laminates such as Tetrapaks and must conform to BS EN 13432 and not allowed if any non biodegradable coating or preserving substance is present.
15 01 02	biodegradable plastic packaging – must be independently certified to BS EN 13432
15 01 03	untreated wooden packaging – not allowed if any non biodegradable coating or preserving substance is present
15 01 05	composite packaging – must conform to BS EN 13432 and not allowed if any non biodegradable coating or preserving substance is present
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

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	The total annual throughput of the site (tables S2.2 and S2.3 combined) shall not exceed 80,000 tonnes.
Exclusions	Wastes having any of the following characteristics shall not be accepted: <ul style="list-style-type: none"> • waste that is not biodegradable; • biodegradable waste that is significantly contaminated with non-biodegradable contaminants like plastic and litter beyond incidental level of 0.5% by volume; • wastes containing treated wood and post-consumer wood, wood-preserving agents or other biocides, persistent organic pollutants; • wastes containing Japanese Knotweed or other invasive plant species listed in the Alien Invasive Species Regulations 2014; • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2011.
Waste code	Description
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 within this table, Table S2.2, that have been mixed together only
19 02 06	sludge types from waste listed within this table, Table S2.2, that have been heat treated only
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 from oil/water separation containing only edible oil and fats
19 08 12	sludges from biological treatment of industrial waste water from a process that treats wastes listed in this table only
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 01	paper and cardboard packaging – excludes laminates such as Tetrapaks and must conform to BS EN 13432 and not allowed if any non biodegradable coating or preserving substance is present.
20 01 08	biodegradable kitchen and canteen waste
20 01 25	edible oil and fat

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	The total annual throughput of the site (tables S2.2 and S2.3 combined) shall not exceed 80,000 tonnes.
Exclusions	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> • waste that is not biodegradable; • biodegradable waste that is significantly contaminated with non-biodegradable contaminants like plastic and litter beyond incidental level of 0.5% by volume; • wastes containing treated wood and post-consumer wood, wood-preserving agents or other biocides, persistent organic pollutants; • wastes containing Japanese Knotweed or other invasive plant species listed in the Alien Invasive Species Regulations 2014; • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2011.
Waste code	Description
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 03	other municipal wastes
20 03 01	mixed municipal waste – only separately collected biodegradable wastes of types listed within this table, Table S2.2
20 03 02	waste from markets – allowed only if source segregated biodegradable fractions e.g. plant material, fruit and vegetables

Table S2.3 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	The total annual throughput of the site (tables S2.2 and S2.3 combined) shall not exceed 80,000 tonnes.
Waste code	Description
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 02	green liquor sludge
03 03 08	paper and cardboard – not allowed if any non biodegradable coating or preserving substance is present
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
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 10	glycerol not designated as hazardous i.e. excludes EWC code 19 02 08

Schedule 3 – Emissions and monitoring

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
A1 [Point A1 on site plan in schedule 7]	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	107 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 [Point A2 on site plan in schedule 7]	CHP engine 2 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	107 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
A3 [Point A3 on site plan in schedule 7]	Boilers fuelled on biogas [note 2]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	200 mg/m ³	Hourly average	Annual	In accordance with TGN M5
		Sulphur dioxide	100 mg/m ³			
		Carbon monoxide	No limit set			
A4 [Point A4 on site plan in schedule 7]	Boilers fuelled on biogas [note 2]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	200 mg/m ³	Hourly average	Annual	In accordance with TGN M5
		Sulphur dioxide	100 mg/m ³			
		Carbon monoxide	No limit set			
A5 [Point A5 on site plan in schedule 7]	Biogas upgrading plant stack	VOCs	No limit set	--	Continuous	Leak detection and repair (LDAR) programme

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
A6 [Point A6 on site plan in schedule 7]	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
Pressure relief valves [Point A7-A12 on site plan in schedule 7]	Digesters/Digestate storage tanks/Waste reception tank/ Hydrolysis tank	Biogas release and operational events	No limit set	Recorded duration and frequency	Record of operational hours	--
Vents from Gas holder	Gas holder 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). Uncertainty allowance as stated in Environment Agency guidance TGN M2.</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).</p> <p>Note 3 - Monitoring to be undertaken 12 months after commissioning of the emergency flare.</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 plan in schedule 7 emission to drainage ditch	Uncontaminated site surface water from roofs and non-operational areas [Note 1]	Oil or grease	No visible oil or grease	--	Weekly	Visual assessment
W2 on site plan in schedule 7 emission to drainage ditch	Uncontaminated site ground water from anchor trench and non-operational areas [Note 1]	Oil or grease	No visible oil or grease	--	Weekly	Visual assessment
<p>Note 1 – Clean surface water from roofs, or from areas of the site that are not being used in connection with storing and treating waste can be discharged directly to surface waters, or to groundwater by seepage through the soil via a soakaway.</p>						

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
Digester feed (digestion process)	pH	As described in the site operating techniques	As described in the site operating techniques	Process monitoring to be recorded using SCADA system
	Alkalinity			
	Temperature			
	Hydraulic loading rate			
	Organic loading rate			
	Volatile fatty acids concentration			
	Ammonia			
	Digester liquid level			
	Digester foam level			
Biogas production	Biogas flow	Continuous	As described in the site operating techniques	Process monitoring to be recorded using SCADA system. Gas monitors to be calibrated every 6 months or in accordance with the manufacturer's recommendations.
	Methane	Continuous		
	CO ₂	Continuous		
	O ₂	Continuous		
	Pressure	Continuous		
	Hydrogen sulphide	Daily		
Digester operation	Agitation /mixing	Once a year	--	--
	Tank capacity and sediment assessment			
Digesters and storage tanks	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Biogas upgrading plant	VOCs including methane	Continuous	Fence line sensors	Methane monitoring points as specified in the DSEAR risk assessment and leak detection and repair programme.
Gas storage membrane /biogas upgrading plant	VOCs including methane	Continuous	Leak detection and repair (LDAR) programme	--
	Odour			
	Ammonia			
Site meteorological conditions	Wind speed. wind direction, temperature	Continuous	As specified in the site operating techniques	Conditions to be recorded in operational diary and records. Equipment shall be calibrated on a 4

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
				monthly basis, in accordance with manufacturer's recommendations or as agreed in writing by the Environment Agency.
Emergency flare	Operational hours	As required	Recording using a SCADA system	Date, time and duration of use of emergency flare shall be recorded.
Pressure relief valves	Biogas release	In accordance with manufacturer's recommendations	Daily visual inspection or remote monitoring	Date, time and duration of use of pressure relief events shall be recorded. Annual mass release shall be calculated. Pressure relief valves to be re-seated after release.
Digesters and storage tanks	Integrity checks	Weekly	Visual assessment	--
Storage lagoons and storage tanks	Volume	Daily	Visual or flow metre measurement	750 mm freeboard must be maintained for storage lagoons

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air from CHP engines and/or boilers Parameters as required by condition 3.5.1.	A1, A2, A3, A4	Every 12 months	1 January
Emissions to water Parameters as required by condition 3.5.1	W1, W2	Every 12 months	1 January
Process monitoring Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.4	Every 12 months	1 January

Parameter	Units
Electricity generated	MWh
Biomethane generated	tonnes or m ³
Whole digestate	tonnes

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	%
Auxiliary boiler usage	Annually	hours

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	20/12/19
Water	Form water 1 or other form as agreed in writing by the Environment Agency	20/12/19

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	20/12/19
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	20/12/19
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	20/12/19
Waste returns	E-waste Returns Form or other form as agreed in writing by the Environment Agency	--

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	

(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 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.

“accident management plan” means a plan that identifies risks and failures which can have an impact on the environment or have environmental consequences. The plan forms part of the management system. The plan must minimise the potential causes and consequences and identify clearly the roles, responsibilities and action to be taken to minimise the consequences of accidents. This includes measures to prevent and control fires on site, DSEAR assessment and clearly marked zones.

“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. This does include blood, feathers, uncooked butchers waste and any other animal waste that is not catering waste or former foodstuffs. This does not include faecal matter from animals (e.g. chicken litter or farmyard manure).

“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.

“best available techniques” means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole:

- a) “techniques” includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;
- b) “available techniques” means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and the advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator;
- c) “best” means most effective in achieving high general level of protection of the environment as a whole.

“biodegradable” means a material is capable of undergoing biological anaerobic or aerobic degradation leading to the production of CO₂, H₂O, methane, biomass and mineral salts depending on the environmental conditions of the process.

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

“capacity” means the potential capacity and not historical or actual production levels or throughput. This means that the designed capacity is the maximum rate at which the site can operate. Biological treatment of waste usually takes place over more than one day, so the physical daily capacity can be calculated by dividing the maximum quantity of waste that could be subject to biological treatment at any one time by the minimum residence time. For in-vessel composting, the residence time for sanitisation should be calculated separately and then aggregated to the complete composting time.

“channelled emissions” means the emissions of pollutants into the environment through any kind of duct, pipe, stack, etc. This also includes emissions from open top biofilters.

“combined heat and power” (CHP) or Cogeneration means the simultaneous generation in one process of thermal energy and electrical or mechanical energy.

“competent persons and resources” means that a technically competent person accredited to a relevant scheme must attend site and record their attendance, and that all roles and responsibilities are clearly stated in the management systems along with records of operatives’ training.

“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 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.

“generator” means any combustion plant which is used to generate electricity, excluding mobile, unless it is connected to the national grid.

“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.

“Leak detection and repair (LDAR) programme” means a structured approach to reduce fugitive emissions of organic compounds by detection and subsequent repair or replacement of leaking components. Currently, sniffing (described EN 15446) and optical gas imaging methods are available for the identification of leaks as set out in BAT 14 and section 6.6.2 of the Waste Treatment BAT Conclusions.

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

“medium combustion plant” or “MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants.

“pests” means Birds, Vermin and Insects.

“pollution” means emissions as a result of human activity which may-

- (a) be harmful to human health or the quality of the environment,
- (b) cause offence to human sense.
- (c) result in damage to material property, or
- (d) impair or interfere with amenities and other legitimate uses of the environment.

“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 venner).

“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.

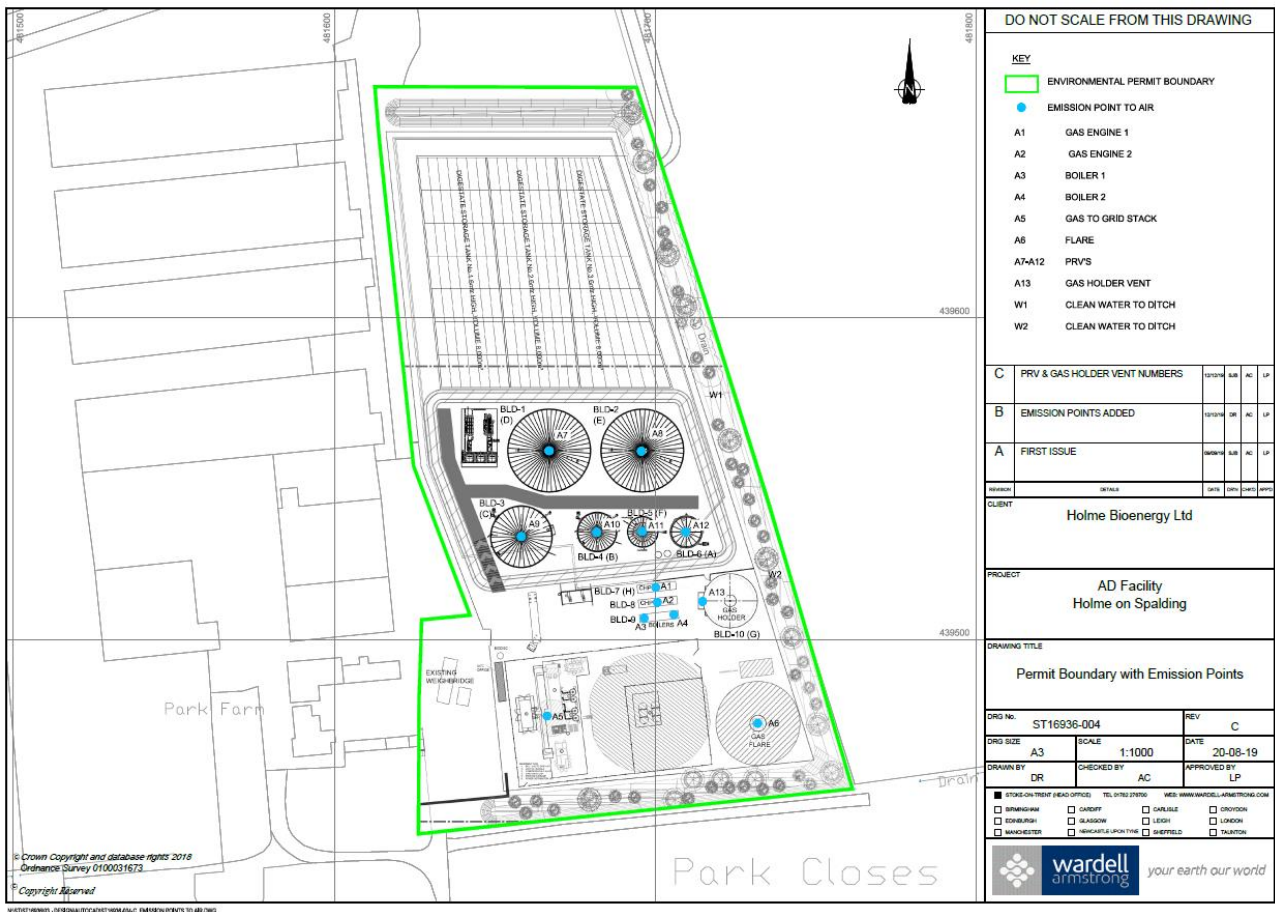
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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 and gaseous fuels other than gas engines or gas turbines, 6% dry for solid fuels; and/or
- in relation to emissions from gas engines or gas turbines, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 15% dry for liquid and gaseous fuels ; and/or

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



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Annex 1 of MCP

<p>1. Rated thermal input (MW) of the medium combustion plant.</p>	<p>2 x 2.883 MW thermal input CHP 2 x 1.2 MW thermal input Boilers Aggregated thermal input 8.166 MWth</p>
<p>2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).</p>	<p>2 x Biogas Spark Ignition Engine 2 x Gas boiler</p>
<p>3. Type and share of fuels used according to the fuel categories laid down in Annex II.</p>	<p>Biogas and Natural Gas</p>
<p>4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.</p>	<p>N/A New Site</p>
<p>5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code).</p>	<p>E.38.3.2</p>
<p>6. Expected number of annual operating hours of the medium combustion plant and average load in use.</p>	<p>2 x CHP – 8,640 (allows 5 days for maintenance) 2 x Boiler – 4,380 hours</p>
<p>7. Where the option of exemption under Article 6(3) or Article 6(8) is used, a declaration signed by the operator that the medium combustion plant will not be operated more than the number of hours referred to in those paragraphs.</p>	<p>N/A</p>
<p>8. Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.</p>	<p>Registered office address: Holme Bioenergy Limited Control Tower Hemswell Cliff Industrial Estate Hemswell Cliff Gainsborough DN21 5TU</p> <p>Where the MCP is located: Holme Bioenergy Limited Park Farm Market Weighton Road Holme-on-Spalding-Moor York YO43 4AG</p>

END OF PERMIT