Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Herriard Bio Power Limited

Re-Gas Herriard AD Plant
C/O Rke Biogroup Ltd
Belvedere House
Basing View
Basingstoke
England
RG21 4HG

Variation application number

EPR/AB3807KW/V003

Permit number

EPR/AB3807KW

Re-Gas Herriard AD Plant
Permit number EPR/AB3807KW

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Changes introduced as part of the variation notice

This variation authorises the increase in throughput from 36,500 tonnes per annum up to 52,500 tonnes per annum, for processing of waste and non-waste feedstocks, removal and addition of waste codes, and facility upgrades with key changes that include:

- Addition of one raw waste buffer tank, two primary digesters, two process water tanks, one lined surface water lagoon, one upgraded digestate pasteuriser tank, one combined heat and power engine (CHP) (2.85 MW), one emergency diesel backup generator (1.25 MW), one emergency flare with the existing flare upgraded and one biogas upgrading plant (BUP) for the production of biomethane for use on site, and transported offsite via gas pipeline to be injected to the National Gas Grid.
- Remodelling of the existing uncovered digestate storage lagoons into two engineered covered lagoons with biogas capture technology
- Upgrades to the waste reception building, that include a new odour abatement system
- A change to the registered address of Herriard Bio Power Limited
- A change to the site name

This variation transitions this facility from a waste operation to an installation.

Brief description of the process

Re-Gas Herriard AD Plant is an anaerobic digestion (AD) facility regulated as a section 5.4 A (1) (b) (i) activity of the Environmental Permitting Regulations 2016. Feedstock consisting of purpose grown energy crops (silage) are delivered to the facility after harvest by tractor or heavy goods (HGV) vehicles, and are stored, compacted and covered in clamps. Solid feedstocks are delivered by HGV vehicles to the waste reception building, where the mavitec de-packaging plant will separate packaging from organic food waste to produce a pumpable mixture to be pumped to the raw waste buffer tank (RWBT), for blending directly with received liquid waste. Liquid waste feedstocks are delivered in tankers and dispatched via tanker coupling within the waste reception building and piped to the RWBT.

The energy crop feedstock is fed to primary digester 1 via the feed hopper. Waste feedstock (prepared solid and liquid waste) are fed to the primary digester 2 and 3, following blending in the RWBT. The three primary digesters all feed into a shared post-digester (digester 1) and all undergo anaerobic digestion operated within the mesophilic temperature range, with a hydraulic retention time of 13-40 days. Following digestion, the by-product from the process (whole digestate) is screened, then pasteurised before passing through screw press separator to produce separated fibre digestate and separated liquor digestate all under cover with sealed drainage system. The fibre is temporarily stored in a bay and taken off site for storage in destination field heaps and the liquor digestate is stored in two covered lagoons. This environmental permit does not authorise the spreading of digestate on any land. An assessment of the digestate separation and storage bay to review the

effectiveness of treatment of diffuse emissions, has been included in the improvement programme (see Table S3.1 IC5).

Biogas produced via the digestion process is stored in the roof space of the digesters and is used to generate heat and power in two combined heat and power (CHP) engines (each with thermal inputs of 2.85MW). Note – the existing CHP is a standby, whilst the new CHP will become the duty CHP. The remaining biogas produced at the facility is sent to the BUP for upgrading to produce biomethane and transported offsite, via virtual pipeline to be injected to the National Gas Grid. There is also a vehicle refuelling station on site.

The facility operates two emergency flares to deal with any excess biogas or situations where there is a risk of excess pressure building up within the system. The installation is also equipped with an emergency backup diesel generator which will provide sufficient power to operate key functions during power outage to maintain safe site operations until normal operations resume.

The main emissions to air are from the combustion plant (CHP engines and back-up generator), emergency flares, biogas upgrading vent, odour abatement plant and tank pressure relief valves on the RWBT, primary digesters, one post digester and pasteuriser tank. All emissions having been assessed in line with our technical guidance and appropriate emissions limits set in the permit. The permit has been reviewed against the requirements of the Medium Combustion Plant Directive (MCPD) for 2025 (and 2030), and relevant conditions and monitoring requirements have been added.

There are no process discharges to controlled waters or sewer. The drainage system at the facility, includes clean surface water collection from digester roofs and designated clean areas that drain to the surface water lagoon for storage and use within the process. Remaining surface waters are contained within the sealed drainage system and pumped to the process water tanks for treatment in the AD process. Leachate from the silage clamps will also drain to the process water tanks via the underground leachate tank. An assessment of the drainage network has been included in the improvement programme (see table S3.1 IC7). Secondary containment for liquid storage and process tanks are within an impermeable concreate bund with a sealed drainage system providing secondary containment compliant to CIRIA C736 standards.

The facility operates a continuous process control monitoring system (SCADA) and the whole site operates in accordance with an environmental management system (EMS), with relevant technical competence requirements.

The facility is located at approximate National Grid Reference SU 65490 46638, located north of Bushywarren Lane, south of Basingstoke in a rural area with the surrounding land use being agricultural and horticultural, grassland and ancient woodland. Residential dwellings are located approximately 1 km southeast in the village of Herriard, with no delignated habitat sites within screening distances.

The schedules specify the changes made to the permit.

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

Status log of the permit		
Description	**Date**	**Comments**
Application received	Duly made 08/11/2013	Application for an Anaerobic Digestion Facility and the use of the resultant biogas in a Combined Heat and Power Plant.
Additional information received	26/11/2013	Revised H1 risk assessment.
Additional information received	16/12/2013	Air dispersion modelling.
Permit determined EPR/AB3807KW	20/01/2014	Permit issued to Herriard Bio Power Limited
Application received EPR/AB3807KW/V002 (Application withdrawn)	Duly made 10/09/2014	Application logged for the biowaste treatment permit review (waste regime), before subsequently submitting EPR/AB3807KW/V003 –

Status log of the permit		
Description	**Date**	**Comments**
		Application to vary permit from waste to installations permit
Application received EPR/AB3807KW/V003(variation and consolidation)	Duly made 09/12/2024	Application to vary permit from waste to installations permit
Additional information received	04/02/2025	Response to Schedule 5 Notice issued 14/01/25 Response to RFI issued 24/01/2025
Additional information received	07/02/2025	Response to RFI issued 06/02/2025
Variation determined and consolidation issued EPR/AB3807KW	19/03/2025	Varied and consolidated permit issued

End of introductory note.

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies and consolidates

Permit number

EPR/AB3807KW

Issued to

Herriard Bio Power Limited ("the operator")

whose registered office is

Herriard Bio Power Limited
C/O Rke Biogroup Ltd
Belvedere House
Basing View
Basingstoke
England
RG21 4HG

company registration number **08453453**

to operate a regulated facility at

Re- Gas Herriard AD Plant
Site Office
Bushywarren Lane
Herriard
Basingstoke
Hampshire
RG25 2NS

to the extent set out in the schedules.

The notice shall take effect from 19/03/2025.

Name	Date
Marcus Woodward	**19/03/2025**

Authorised on behalf of the Environment Agency.

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/AB3807KW

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/AB3807KW/V003 authorising,

Herriard Bio Power Limited ("the operator"),

whose registered office is

Herriard Bio Power Limited
C/O Rke Biogroup Ltd
Belvedere House
Basing View
Basingstoke
England
RG21 4HG

company registration number 08453453

to operate an installation at

Re-Gas Herriard AD Plant
Site Office
Bushywarren Lane
Herriard
Basingstoke
Hampshire
RG25 2NS

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

Name	Date
Marcus Woodward	**19/03/2025**

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.

2.2 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.

(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.

2.3.8 For the following activities referenced in schedule 1, table S1.1 (AR4):

(a) each MCP must be operated in accordance with the manufacturer's instructions and records must be made and retained to demonstrate this.

(b) the operator must keep periods of start-up and shut-down of each MCP as short as possible.

(c) there must be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993.

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 table S3.1.

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 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, including methane from diffuse sources.

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 table S3.1;

(b) process monitoring specified in tables S3.2 and 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, S3.2 and S3.3, unless otherwise agreed in writing by the Environment Agency.

3.5.5 In the case of 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.

3.5.6 Monitoring shall not take place during periods of start up or shut down.

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;

3.7 Fire prevention

3.7.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.7.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;

(b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.7.3 The operator shall undertake a DSEAR assessment and maintain an accident management plan.

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 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.

4.2.6 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.

4.2.7 The operator shall submit an annual report detailing the efficiency of removal of non-compostable and non-digestible materials from feedstock prior to processing and the level of contamination in the final recovered digestate and/or compost.

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.

4.3.8 The operator shall notify the Environment Agency as soon as is practicable, in writing of any change of medium combustion plant.

4.3.9 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

(a) a decision by the Secretary of State not to re-certify the agreement;

(b) a decision by either the operator or the Secretary of State to terminate the agreement; and

(c) any subsequent decision by the Secretary of State to re-certify such an agreement.

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 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	From receipt of waste through to digestion and recovery of by-products (digestate). Anaerobic digestion of waste in 4 tanks followed by burning of biogas produced from the process and upgrading of biogas. Waste types suitable for acceptance are limited to those specified in Table S2.2.
	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)	From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site. Storage of residual wastes from pre-treatment to despatch off-site for recovery. Storage of incoming liquid wastes inside the enclosed waste reception building fitted with appropriate odour abatement prior to treatment in the Raw Waste Buffer Tank on an impermeable surface with a sealed drainage system. Storage of solid wastes inside the waste reception building fitted with appropriate odour abatement prior to treatment on an impermeable surface with a sealed drainage system. Storage of waste in silage clamps under cover on an

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**
			impermeable surface with sealed drainage Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR3	Physical treatment for the purpose of recycling	R3: Recycling/reclamation of organic substances which are not used as solvents	From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery. Pre-treatment of waste in enclosed building fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system, including shredding, sorting, screening, compaction, baling, mixing, blending, maceration and de-packaging. Heat treatment (pasteurisation) of waste in one tank for the purpose of recovery. Gas cleaning by biological or physical (carbon filtration) or chemical scrubbing. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR4	Steam and electrical power supply	R1: Use principally as a fuel to generate energy	From the receipt of biogas produced at the on-site anaerobic digestion process to combustion with the release of combustion gases. Combustion of biogas in two combined heat and power (CHP) engines with an aggregated thermal input of 5.7 MW.

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**
			Combustion of gas oil in one back-up generator with a thermal input of 1.2 MW. The back-up generator must not exceed 500 hours operation in a 12-month period as a rolling average over a 5-year period or operate for more than 750 hours in any single year. [Note1]
AR5	Emergency flare operation	D10: Incineration on land	From the receipt of biogas produced at the on-site anaerobic digestion process to incineration with the release of combustion gases. Use of two auxiliary flares required only during periods of breakdown or maintenance of the CHP engines, biogas upgrading plant and/or back-up generator.
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 virtual pipeline into the National Grid. This includes return of off-specification biogas for combustion to the on-site CHP engines, and/or emergency flare.
AR7	Raw material storage	Storage of raw materials including lubrication oil, antifreeze, propane, ferric chloride, activated carbon, diesel.	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)	Storage of biogas produced from on-site anaerobic digestion of permitted waste in one Raw Waste Buffer Tank, and in roof space of digesters. From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for use within the facility.

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**
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)	From the receipt of processed digestate produced from the on-site anaerobic digestion process to despatch for use off-site. Separation of digestate into a solid and liquid fraction. Storage of processed liquid digestate in two covered storage lagoons. Storage of processed solid digestate in interim storage bay under cover on an impermeable surface with sealed drainage system prior to removing from site via trailers.
AR10	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water in one lined surface water lagoon.	From the collection of uncontaminated roof and site surface water from non-operational areas only to re-use within the facility or stored in the lined surface water lagoon.
AR11	Odour abatement	Collection and treatment of air from the buildings or plant using abatement system (carbon filters) prior to release to atmosphere.	From the collection of air from site processes to treatment and release of treated air to atmosphere.
AR12	Storage of energy crops	Storage of non-waste energy crops ensiled in a storage clamp adjacent to the AD process bund	From delivery of energy crops to the storage prior to its use as feedstock into the digesters
Note 1 - Must not exceed 500 hours operation in a 12-month period as a rolling average over a 5-year period or operate for more than 750 hours in any single year.			

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	Part B4, Table 3a of the application form – technical standards	01/10/2013

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	All parts of the supporting documents submitted with the application.	01/10/2013
Additional information received by email	Revised non-technical summary.	04/11/2013
Additional information received by email	Odour Management Plan – October 2013 Revision 1.	08/11/2013
Additional information received by email	Revised H1 risk assessment.	26/11/2013
Additional information received by email	Emissions to Air H1 Screening and Atmospheric Dispersion Modelling – December 2013 SLR Ref: 402-04805-00001.	16/12/2013
Application EPR/AB3807KW/V003	Section 5a in C2 of the application- Site plans Section 3a, Table 3 in C3 of the application – Technical standards and operating techniques Odour Management Plan HBP-OD-07 version:2.0 December 2024	21/11/2024
Response to Schedule 5 Notice issues 14/01/2025	Response to question 3-5 – Detailing the digestate separation process control and design Response to question 7 – Updated Pest Management Plan**;** HBP-OD-09 Pest Management Plan version:2.0 January 2025	04/02/2025
Additional information	Response to question 1- Detailing storage lagoon abatement process Response to question 2 – Updated Process flow Diagram; HBP-OD-05 Process Flow Diagram v4.0 Response to question 3 – Updated site plan; 29407- 005 Rev D - Site Emission & Permit Boundary Plan Jan 2025 Response to question 4 – Updated Accident Management Plan; HBP-OD-08 Accident Management Plan V2. Feb 2025	07/02/2025

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
Improvement condition for assessing emissions from the biogas upgrading plant (point sources only)		
IC1	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 (EP.7) during normal operation, having regard to the Environment Agency technical guidance, *Monitoring stack emissions: environmental permits* 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: • total volatile organic compounds; and • hydrogen sulphide	Issue date + 6 months or other date as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC2	Following the completion of IC1, the operator shall undertake an emissions impact assessment of point source releases to air from point (EP.7), 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: • 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 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.	Issue date + 6 months or other date as agreed in writing with the Environment Agency
Improvement condition to address methane slip emissions from gas engines burning biogas		
IC3	The operator shall submit a written plan for approval by the Environment Agency which establishes the methane emissions in the exhaust gas from engines burning biogas and or biomethane and compare these to the manufacturer's specification and benchmark levels. The plan shall develop proposals to assess the potential for methane slip and take corrective actions where emissions of methane above the manufacturer's specification are identified. The operator shall establish methane emissions in the exhaust gas and methane slip using the following standards: • EN ISO 25139 • EN ISO 25140	Issue date + 6 months or other date as agreed in writing with the Environment Agency
Improvement condition for review of effectiveness of abatement plant		
IC4	The operator shall carry out a review of the abatement plant on site, in order to determine whether the measures have been effective and adequate to prevent and where not possible minimise emissions released to air including but not limited to odour and ammonia. The operator shall submit a written report to the Environment Agency following this review for assessment and approval. The report shall include but not limited to the following aspects: • Full investigation and characterisation of the waste gas streams. • Abatement stack monitoring results (not limited to odour and ammonia) • Abatement process monitoring results (not limited to odour and ammonia) • Details of air quality quantitative impact assessment including modelling and a proposal for site-specific "action levels" (not limited to odour concentration, hydrogen sulphide and ammonia) • Odour monitoring results at the site boundary	Issue date + 3 months or other date as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	• Records of odour complaints and odour related incidents • Recommendations for improvement including the replacement or upgrading the abatement plant • Timescales for implementation of improvements to the abatement plant The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.	
Improvement condition for review of effectiveness of the digestate separation cover/enclosure		
IC5	The operator shall carry out a review of the digestate separation cover/ enclosure. The operator shall submit a written report to the Environment Agency following this review for assessment and approval. The report shall include but not limited to the following aspects: • Evidence that improvement works to cover the digestate separation area has been completed • Evidence that the digestate handling procedures have been updated • Details demonstrating the results of reviewing potential odour and ammonia emissions levels • Recommendations and timescales for any improvements necessary following this review • A maintenance and inspection regime The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.	Issue date + 4 months or other date as agreed in writing with the Environment Agency
Improvement condition for covering the digestate storage lagoons and internal inspection		
IC6	The operator shall submit a written report to the Environment Agency for confirmation. The report must contain: • Evidence that the work to cover the digestate storage lagoon has been completed • Evidence that the work complies with the Biological waste treatment: appropriate measures for permitted facilities (section 7.3 Lagoon storage), and Best Available Techniques (BAT) Conclusions (BATc) 4, for Waste treatment. • Evidence the covers are included in the maintenance and inspection regime • Details and timeframes for when an internal integrity inspection will be scheduled for both lagoons. • Evidence any potential issues are appropriately recorded and addressed following inspection	Issue date + 4 months or other date as agreed in writing with the Environment Agency
Improvement condition for review of the drainage network across the installation		
IC7	The operator shall submit a written report to the Environment Agency for assessment and written approval The report must contain.	Issue date + 4 months or other date as agreed in writing with the

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	• Evidence of a survey to assess the integrity of the subsurface drainage network • Evidence any potential issues are appropriately addressed following inspection, including but not limited to; drainage improvements to fully segregate dirty and clean water and the installation of an impermeable exterior drainage channel around the perimeter of the clamps • Evidence that the site drainage plans are updated accordingly • Evidence that the work complies with Biological waste treatment; appropriate measures for permitted facilities (section 7.6 Drainage) and, Best Available Techniques (BAT) Conclusions (BATc) 19 and 35, for Waste treatment and Silage, Slurry and Agricultural Fuel Oil Regulations The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.	Environment Agency
Improvement condition for site containment improvements		
IC8	The operator shall submit a written report to the Environment Agency for assessment and written approval The report must contain: • Evidence that the improvement works to address the degradation of hardstanding concreate surfaces have been completed (areas most notable - waste reception building, external clamps and separator/ fibre storage bay) • Evidence of improvement repairs and future protection works to address deterioration to the faces of the clamp walls have been completed • Evidence of works to replace the depressed manhole cover • Evidence that works are in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) or other equivalent industry standard The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.	Issue date + 4 months or other date as agreed in writing with the Environment Agency
Improvement condition for the installation of the gas capture technology from the lagoons to the roof space of the primary digester (D1)		
IC9	The operator shall submit a written report to the Environment Agency for confirmation. The report must contain: • Evidence that the installation of the gas capture technology has been carried out by suitably qualified engineers, in accordance with industry standards • Evidence that all gas pipework has been subject to pressure testing upon commissioning • Evidence that gas levels within the gas capture cover and effective transfer to D1 for gas storage are recorded daily • Evidence that contingency measures to manage any potential issues are in place and are appropriately recorded following inspections	Issue date + 4 months or other date as agreed in writing with the Environment Agency

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Vegetable matter (energy crops)	--
Maize silage	--

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	**Annual throughput of waste shall not exceed 40,000 tonnes.** **The total annual throughput consisting of wastes and non-wastes shall not exceed 52,500 tonnes.**
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • wastes containing wood-preserving agents or other biocides and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013. • pest infested waste
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 fully biodegradable animal bedding)
02 01 07	wastes from forestry
02 01 99	wastes not otherwise specified – spent mushroom compost from commercial mushroom growing 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, peeling, centrifuging and separation including wash waters and sludges from secondary food processing or the cook chill sector
02 02 02	animal tissue waste
02 02 03	materials unsuitable for consumption or processing including animal gut contents
02 02 04	sludges from on-site effluent treatment including sludges from gelatine production
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 (including sludge from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 03 04	materials unsuitable for consumption or processing (including waste from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 03 05	sludges from on-site effluent treatment (including sludge from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 04	**wastes from sugar processing**
02 04 03	sludges from on-site effluent treatment – sludges from the processing of sugar
02 05	**wastes from the dairy products industry**
02 05 01	materials unsuitable for consumption or processing – biodegradable wastes derived from the processing of dairy products only
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 – biodegradable wastes from the processing of materials used in bakery and confectionery
02 06 03	sludges from on-site effluent treatment – sludges from the processing of materials used in baking and confectionery
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 – biodegradable wastes from the processing of the raw materials used in the production of such beverages only (wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa))

02 07 02	wastes from spirits distillation – spent grains, hops and whisky filter sheets and cloths, yeast and yeast like residues, sludge from production process, or malt husks, malt sprouts, yeasts and yeast-like residues only
02 07 04	materials unsuitable for consumption or processing – biodegradable wastes from the processing of the raw materials used in the production of such beverages only (wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 05	sludges from on-site effluent treatment – sludges from the production of alcoholic and non- alcoholic beverages (except coffee, tea and cocoa)
03	**Wastes from wood processing and the production of paper, cardboard, pulp, panels and furniture, pulp, paper and cardboard**
03 03	wastes from pulp, paper and cardboard production and processing
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10
04	**Wastes from the leather, fur and textile industries**
04 02	**wastes from the textile industry**
04 02 10	organic matter from natural products such as grease and wax
04 02 21	wastes from unprocessed textile fibres - waste types in this section allowed if biodegradable material only
	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
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 (excluding veneers, plastic coatings or laminates) certified to EN 13432 or equivalent certified compostable standard
15 01 02	plastic packaging – compostable plastics only certified to EN 13432 or equivalent certified compostable or digestible standard
15 01 03	wooden packaging – virgin timber only
15 01 05	composite packaging meeting EN 13432 or equivalent certified compostable or digestible standard
16	**Wastes not otherwise specified in the list**

16 10	**aqueous liquid wastes destined for off-site treatment**
16 10 02	untreated wash waters from cleaning fruit and vegetables on farm only
16 10 02	milk and dairy waste milk from agricultural premises only
16 10 02	liquor/leachate from a composting process that accepts waste input types listed in this table only and in compliance with Animal By-Products Regulations
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	premixed wastes composed of waste types listed within this table, Table S2.2 only
19 02 06	sludge types from waste listed within 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
19 05 02	non-composted fraction of animal and vegetable waste
19 05 03	off-specification compost
19 06	**wastes from anaerobic treatment of waste**
19 06 03	liquor from anaerobic treatment of municipal waste (from a process that accepts wastes which are listed in this table only) and made up of previously pasteurised and stabilised batches only
19 06 04	digestate from anaerobic treatment of source segregated biodegradable waste (from a process that accepts wastes which are listed in this table only) and made up of previously pasteurised and stabilised batches only
19 06 05	liquor from anaerobic treatment of animal and vegetable waste (from a process that accepts wastes which are listed in this table only) and made up of previously pasteurised and stabilised batches only
19 06 06	digestate from anaerobic treatment of animal and vegetable waste (previously digested sewage sludge 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 which are 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 (from a process that treats wastes which are listed in this table 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 (excluding veneers, plastic coatings or laminates) meeting EN 13432 or equivalent certified compostable or digestible packaging only
20 01 08	biodegradable kitchen and canteen waste containing compostable plastics meeting EN 13432 or equivalent certified compostable or digestible packaging (Category 3 ABPR waste only)
20 01 25	edible oil and fat
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

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**
EP.1 [Point EP.1 on site plan in schedule 7]	Channelled emissions (odour abatement using carbon filtration) – Reception hall	Hydrogen sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for sampling NIOSH 6013 for analysis
		Ammonia	20 mg/m^3	Average over sample period	Once every 6 months	EN ISO 21877
		Odour concentration	1,000 ou_E/m^3	-	Once every 6 months	BS EN 13725
EP.2 [Point EP.2 on site plan in schedule 7]	CHP engine stack 1 - standby [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^3	Average over sample period	Annual	BS EN 14792
		Sulphur dioxide	350 mg/m^3 [note 2]	Average over sample period	Annual	BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m^3 [note 3]			BS EN 15058
		Carbon monoxide	1400 mg/m^3			BS EN 12619
		Total VOCs	No limit set			
EP.3 [Point EP.3 on site plan in schedule 7]	CHP engine stack 2- Duty [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^3	Average over sample period	Annual	BS EN 14792
		Sulphur dioxide	107 mg/m^3			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Carbon monoxide	1400 mg/m^3			BS EN 15058

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**
		Total VOCs	No limit set	--	--	BS EN 12619
EP.4 [Point EP4 on site plan in schedule 7]	Emergency flare stack 1	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	150 mg/m^3	Average over sample period	[note 4]	BS EN 14792
		Carbon monoxide	50 mg/m^3			BS EN 15058
		Total VOCs	10 mg/m^3			BS EN 12619:2013
EP.5 [Point EP.5 on site plan in schedule 7]	Emergency flare stack 2	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	150 mg/m^3	Average over sample period	[note 4]	BS EN 14792
		Carbon monoxide	50 mg/m^3			BS EN 15058
		Total VOCs	10 mg/m^3			BS EN 12619:2013
EP.6 [Point EP.6 on site plan in schedule 7]	Gas oil fired generator stack (Back-up)	No parameter set	[note 5]	--	--	--
EP.7 [Point EP.7 on site plan in schedule 7]	Biogas upgrading plant stack	VOCs including methane	No limit set	Average over sample period	Annual	BS EN 12619 or EN ISO 13199
		Vent gas flow rate	No limit set	Average over sample period	Annual	By measurement or calculation. Method to be agreed in writing with the Environment Agency.
EP.8 -12 [Point EP.8-12 on site plan in schedule 7] Pressure relief valve	Digesters/digestate storage tank(s) - Raw waste Buffer Tank (RWBT) - Digesters 1-3 - Post Digester	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--

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**
EP.13 [Point EP.13 on site plan in schedule 7] Pressure relief valve	Pasteuriser tank	No parameter set	No limit set	--	--	--
Note 1 – These emission limits are based on normal operating conditions and load - temperature 0°C (273 K); pressure 101.3 kPa and oxygen 5% (for gas engines) and oxygen 3% for emergency flares and medium combustion plants other than engines and gas turbines (such as boilers). Note 2 – This emission limit applies until 31 December 2029, unless the gas engine is replaced. Note 3 – This emission limit applies from 1 January 2030, unless otherwise advised by the Environment Agency. Note 4 – 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 as a combined total for both emergency flares EP.4 and EP.5). Record of operating hours to be submitted annually to the Environment Agency. Note 5 – The operation of the emergency generator shall not exceed 500 hours in a 12-month period as a rolling average over a 5-year period or operate for more than 750 hours in any single year.						

Table S3.2 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 site operating techniques	As described in site operating techniques	Process monitoring to be recorded using a SCADA system where relevant.
	Alkalinity			
	Temperature			
	Hydraulic loading rate			
	Organic loading rate			
	Volatile fatty acids concentration			
	Ammonia			
	Liquid /foam level			
Biogas in digester	Flow	Continuous	In accordance with EU weights and measures Regulations	Process monitoring to be recorded using a SCADA system where relevant. Gas monitors to be calibrated every 6 months or in accordance with the
	Methane	Continuous	None specified	
	CO_2	Continuous	None specified	
	O_2	Continuous	None specified	

Table S3.2 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
	Hydrogen sulphide	Daily	None specified	manufacturer's recommendations.
	Pressure	Continuous	None specified	
Digestate batch	Volatile fatty acids concentration	One sample at the end of each batch (hydraulic retention time) cycle.	As described in site operating techniques	--
	Ammonia			
Digesters and storage tanks	Integrity checks	Weekly	Visual assessment	In accordance with design specification and tank integrity checks.
Digesters	Agitation /mixing	Continuous	Systems controls	Records maintained in daily operational records.
	Tank capacity and sediment assessment	Once every 5 years from date of commission	Non-destructive pressure testing integrity assessment every 5 years or as specified by manufacturers technical specification.	In accordance with design specification and tank integrity checks.
Waste reception building or area; Digesters and storage tanks	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Diffuse emissions from all sources identified in the Leak Detection and Repair (LDAR) programme	VOCs including methane	Every 6 months or otherwise agreed in accordance with the LDAR programme	'Sniffing' and/or Optical Gas Imaging techniques in accordance with BS EN 15446 & BS EN 17628	Monitoring points as specified in a DSEAR risk assessment and LDAR programme. Limit as agreed with the Environment Agency as a percentage of the overall gas production.
CHP engine stacks	VOCs including methane	Annually	BS EN 12619	Total annual VOCs emissions from the CHP

Table S3.2 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
				engine(s) to be calculated and submitted to the Environment Agency.
	Exhaust gas temperature		Traceable to National Standards	
	Exhaust gas pressure		Traceable to National Standards	
	Exhaust gas water vapour content		BS EN 14790-1	Unless gas is dried before analysis of emissions.
	Exhaust gas oxygen		BS EN 14789	
	Exhaust gas flow		BS EN 16911-1	
Meteorological conditions	Wind speed, air temperature, wind direction	Continuous	Method as specified in management system	Conditions to be recorded in operational diary and records. Equipment shall be calibrated on a 4 monthly basis, in accordance with manufacturer's recommendations or as agreed in writing by the Environment Agency.
Emergency flare	Operating hours	Continuous	Recorded duration and frequency. Recording using a SCADA system or similar system	Date, time and duration of use of auxiliary flare shall be recorded.
	Quantity of gas sent to emergency flare			Quantity can be estimated from gas flow composition, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions.

Table S3.2 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Pressure relief valves and vacuum systems	Gas pressure	Continuous	Recording using a SCADA system	Continuous gas pressure shall be monitored.
	Re-seating	Weekly inspection	Visual	Operator must ensure that valves are re-seated after release in accordance with the manufacturer's design.
	Inspection, maintenance, calibration, repair and validation	Following foaming or overtopping or at 3 yearly intervals whichever is sooner	Written scheme of examination in accordance with condition 1.1.1	After a foaming event or sticking, build-up of debris, obstructions or damage, operator must ensure that pressure relief valve function remains within designed gas pressure in accordance with the manufacturer's design by suitably trained and qualified personnel.
	Inspection, calibration and validation report	In accordance with design and construction specifications or after over topping or foaming event	Written scheme of examination in accordance with condition 1.1.1	Operator must ensure that valves are re-seated after release, after a foaming event or sticking, build-up of debris, obstructions or damage. Operator must ensure that PRV function remains within designed operation gas pressure in accordance with the manufacturer's design by suitably trained/qualified personnel. Inspection, calibration and

Table S3.2 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
				validation report. In accordance with industry Approved Code of Practice
Storage lagoons and storage tanks	Volume	Daily	Visual or flow metre measurement	750 mm freeboard must be maintained for storage lagoons. Records of volume must be maintained.

Table S3.3 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Carbon filters				
Carbon filters Emission point – EP.1	Carbon bed temperature – inlet and outlet	Continuous	Temperature probe	Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations. Carbon filter(s) to be replaced in accordance with manufacturer's recommendations. Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	Moisture or humidity	Daily	Moisture meter	
	Back pressure	Weekly	Recognised industry method	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling	Action levels to be agreed on completion of IC4 as approved in writing by the

Table S3.3 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
			NIOSH 6013 for analysis	Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Ammonia – inlet	Every 6 months or as agreed in writing by the Environment Agency.	EN ISO 21877	Action levels to be agreed on completion of IC4 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Odour concentration – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	BS EN 13725	Action levels to be agreed on completion of IC4 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.

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 from CHP engines Parameters as required by condition 3.5.1.	EP2 and EP3	Every 12 months	1 January
Emissions to air from Gas fired generator (Back-up)	EP6	Every 12 months	1 January
Emissions to air from odour abatement plant Parameters as required by condition 3.5.1.	EP1	Every 6 months	1 January, 1 July
Process monitoring – digester tank integrity Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.2	Every 5 years from the date of commissioning or as per the manufacturer's recommendation, whichever is sooner	1 January
Process monitoring – under and over pressure relief systems Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.2	Every 12 months Yearly summary report of over-pressure and under-pressure events detailing mass balance release	1 January
Process monitoring – pressure relief systems (inspection, calibration and maintenance) Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.2	Every 3 years	1 January
Process monitoring – leak detection and repair surveys Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.2	Every 12 months LDAR report to be submitted annually	1 January
Process monitoring – use of emergency flare Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.2	Every 12 months	1 January
Non-compostable contamination removal efficiency Parameters as required by conditions 2.3.4, 2.3.7 and 4.2.7	--	Every 12 months Yearly report of detailing contamination removal efficiency and progress with plastic reduction contamination	

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Total annual VOCs emissions from gas engines (calculated)	As specified in schedule 3 table S3.2	Every 12 months	1 January

Table S4.2 Annual production/treatment	
Parameter	**Units**
Electricity generated	MWh
Biomethane generated	tonnes or m^3
Liquid digestate	m^3
Solid digestate	tonnes
Recovered outputs	tonnes or m^3

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	%
Gas fired generator usage	Annually	hours

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	DD/MM/YYYY
Process monitoring	Form process 1 or other form as agreed in writing by the Environment Agency	DD/MM/YYYY
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	DD/MM/YYYY
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	DD/MM/YYYY
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	DD/MM/YYYY
Waste returns	E-waste Return 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.

“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.

“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 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 a 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 CO_2, H_2O, 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. Further guidance ‘RGN2: Understanding the meaning of regulated facility Definition of regulated facility’ is available.

“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. See the guidance on the level of competence and duration of attendance

‘direct discharge’ means discharge to a receiving water body

“diffuse emissions” mean non-channelled emissions (e.g. of dust, organic compounds, odour) which can result in ‘area’ sources (e.g. tanks) or ‘point’ sources (e.g. pipe flanges). This also includes emissions from open-air windrow composting.

“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.

“existing medium combustion plant” means an MCP which was put into operation before 20 December 2018.

“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, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“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 by 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, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“new medium combustion plant” means an MCP which was put into operation after 20 December 2018. This includes replacement MCP and Generators.

“operational area” means any part of a facility used for the handling, storing and treatment of waste.

“operator” means in relation to a regulated facility:

(a) the person who has control over the operation of the regulated facility,

(b) if the regulated facility has not yet been put into operation, the person who will have control over the regulated facility when it is put into operation, or

(c) if a regulated facility authorised by an environmental permit ceases to be in operation, the person who holds the environmental permit

“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 a 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:

5 no liquids will run off the surface otherwise than via the system

6 all liquids entering the system are collected in a sealed sump, except where liquids may be lawfully discharged to foul sewer.

“specified generator” means a group of generators other than excluded between 1 and 50 megawatts or less than 50 megawatts as defined in Schedule 25B(2) of SI 2018 No.110 of the EPR.

“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).

“VOC” means Volatile organic compounds as defined in Article 3(45) of Directive 2010/75/EU – ‘volatile organic compound’ means any organic compound as well as the fraction of creosote, having at 293.15K a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use.

“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, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

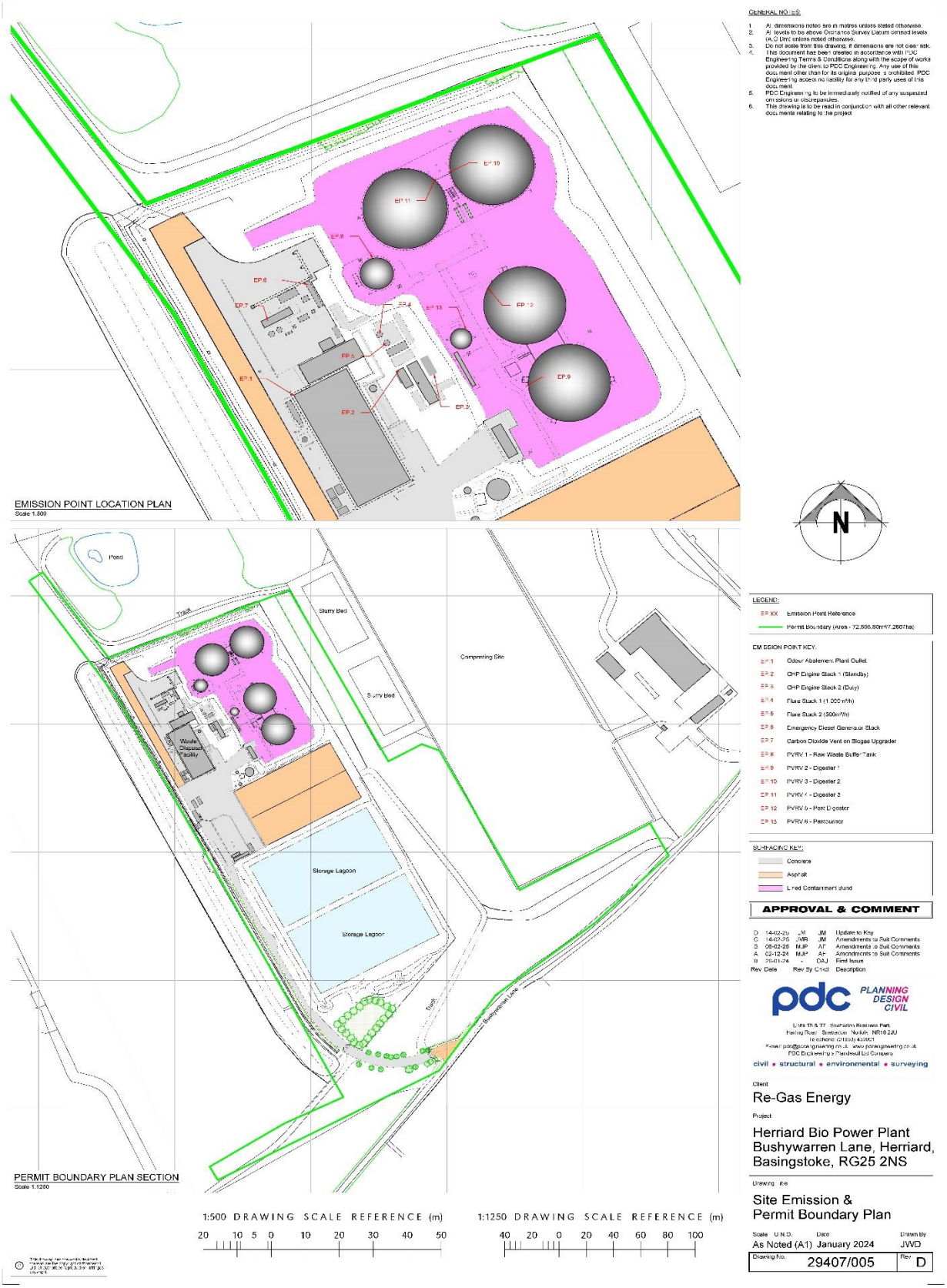
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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 and 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.

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



END OF PERMIT.

Permit Number: **Facility:**		**Operator:** **Form Number:**	**Air1 / DD/MM/YYYY**

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]

[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: **Facility:**		**Operator:** **Form Number:**	**WaterUsage1 / DD/MM/YYYY**

Reporting of Water Usage for the year

Water Source	Usage (m^3/year)	Specific Usage (m^3/unit output)
Mains water		
Site borehole		
River abstraction		
TOTAL WATER USAGE		

Operator's comments:

Signed …… Date……..

(authorised to sign as representative of Operator)

Permit Number: **Facility:**		**Operator:** **Form Number:**	**Energy1 / DD/MM/YYYY**

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: **Facility:**		**Operator:** **Form Number:**	**Performance1 / DD/MM/YYYY**

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	%
Biogas usage	tonnes or m^3
Auxiliary boiler usage	hours
Emergency flare operation	hours
Electricity exported	MWh

Operator's comments:

Signed …… Date……..

(Authorised to sign as representative of Operator)

Permit Number: **Facility:**		**Operator:** **Form Number:**	**Process1 / DD/MM/YYYY**

Reporting of process monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance / Parameter	Trigger Value /Threshold Value /Industry Standard	Result /Reading [1]	Test Method [2]	Monitoring Date and Time
Process monitoring of digestion stability					
Digester feed	pH				
	Alkalinity				
	Temperature				
	Hydraulic loading rate				
	Organic loading rate				
	Volatile fatty acids concentration				
	Ammonia				
	Liquid/foam level				
Digestate (Other monitoring)					

Emission Point	Substance / Parameter	Trigger Value /Threshold Value /Industry Standard	Result /Reading [1]	Test Method [2]	Monitoring Date and Time
Digestate batch	Volatile fatty acids concentration				
	Ammonia				
Monitoring of biogas produced					
Biogas in digester	Flow				
	Methane				
	CO_2				
	O_2				
	Hydrogen sulphide				
	Pressure				
Tank structural integrity					
Digester and storage structural stability	Integrity checks				
Digester tanks (Other monitoring)					
Digester tank	Agitation /mixing				
	Tank capacity and sediment assessment				
Site odour monitoring					
Waste reception building or area; Digester(s) and storage tank(s)	Odour olfactory monitoring				
Odour abatement plant					

Emission Point	Substance / Parameter	Trigger Value /Threshold Value /Industry Standard	Result /Reading [1]	Test Method [2]	Monitoring Date and Time
	Temperature				
	Moisture				
	Thatching compaction (biofilters only)				
	Efficiency assessment				
	Gas flow				
	Ammonia				
	Odour concentration				
	pH (inlet) **Wet scrubbing systems only**				
	pH (outlet) **Wet scrubbing systems only**				
Monitoring of diffuse emissions					
Diffuse emissions from all sources identified in the Leak Detection and Repair (LDAR) programme	VOCs including methane				
Monitoring of CHP engine stack(s)					
CHP engine 1	VOCs including methane				
	Exhaust gas temperature				
	Exhaust gas pressure				

Emission Point	Substance / Parameter	Trigger Value /Threshold Value /Industry Standard	Result /Reading [1]	Test Method [2]	Monitoring Date and Time
	Exhaust gas water vapour content				
	Exhaust gas oxygen				
	Exhaust gas flow				
	Total annual VOCs emissions (calculated)				
Meteorological conditions					
Wind speed					
Wind direction					
Air temperature					
Emergency flare operation					
Date of operation					
Time of operation					
Duration of operation					
Annual operational hours					
Pressure relief valve operation					
Date of release	Biogas release				
Time of release					
Duration of release					
Annual mass release					
Storage lagoons and storage tank volume (for digestate and leachate storage)					
Daily volume check	Volume				

Emission Point	Substance / Parameter	Trigger Value /Threshold Value /Industry Standard	Result /Reading [1]	Test Method [2]	Monitoring Date and Time
Storage tank volume (Digesters /Feedstock tanks / Other tanks)					
Daily volume check	Volume				
Composting batch – stockpiles and processing material					
Stockpiles and processing material	Temperature				
	Fly infestation or pupa formation				
Monitoring of composting batch					
Representative internal core for each composting batch during sanitisation stage	Temperature				
	Moisture				
	C:N ratio				
Representative internal core for each composting batch during stabilisation stage	Temperature				
	Moisture				
Representative internal core for each composting batch during further maturation stage	Temperature				
	Moisture				
Internal core for oversize storage piles	Temperature				

1. Monitoring results can be submitted to the Environment Agency in an electronic format or in other format as agreed in writing by the Environment Agency.
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.

Signed ……. Date……..

(Authorised to sign as representative of Operator)