

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Brigg Lane Biogas Limited
Brigg Lane Biogas Facility
Bonby Lane
Bonby
DN20 0PJ

Permit number

EPR/WP3530JB

Brigg Lane Biogas Facility

Permit number EPR/WP3530JB

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows:

The Installation is located within a rural area, approximately 1.6 km east of the village of Bonby, Lincolnshire and is bound to the north, west and east by arable, cropped fields with Bonby Lane to the south and further arable fields beyond this.

The Installation will comprise the following operations:

- Anaerobic digestion plant (two primary digesters and one secondary digester);
- Three waste pre-storage tanks;
- Combustion plant consisting of one combined heat and power (CHP) engine (1.57 MWth), one dual fuel boiler (0.5 MWth) and one emergency flare;
- Biogas upgrading plant; and
- A digestate storage lagoon, fire water lagoon and swale

The Installation will process up to 75,000 tonnes per annum of mixed liquid biodegradable wastes via anaerobic digestion (AD). Mixed liquid wastes from an adjacent food waste handling facility (operated by Bioganix Limited) will be delivered to the pre-storage tanks via two dedicated pipelines and/or via tankers. Wastes from other off-site sources will also be delivered to site by tankers. The liquid wastes will be transferred from the pre-storage tanks to pasteurisation tanks where the wastes will undergo heat treatment at 70°C for a minimum of one hour as required by the Animal By-Products Regulations.

Biological treatment via anaerobic digestion will take place in two primary digesters and one secondary digester. There will be an average 64-day hydraulic retention time across the two primary digesters, and an average 23-day hydraulic retention time in the secondary digester, dependent on final feedstock mixes. The temperature in the digesters will be maintained between 38°C and 42°C.

The by-product from the process (whole digestate) will be pumped to a digestate storage lagoon which will be constructed in accordance with the Silage, Slurry and Agricultural Fuel Oil (England) Regulations, prior to removal from site for use as a soil improver. This environmental permit does not authorise the spreading of digestate on land.

Main releases to air will be odour emissions from the processing of waste, odour abatement and emissions from the combustion and upgrading of biogas (CHP engine, boiler, emergency flare and upgrading plant). Oxides of nitrogen, sulphur dioxide, carbon monoxide and total volatile organic compounds will be monitored periodically. There will be no discharge of effluent to controlled waters or to land. Uncontaminated site surface water run-off and uncontaminated bund water will be transferred to the fire water lagoon and swale prior to discharge to ground via soak-away. Contaminated water will be transferred to the digestate storage lagoon or despatched off-site for treatment following water quality tests on site.

The site will be provided with hardstanding and secondary containment constructed in line with industry best practice standards to reduce the impact of pollution to surface water and groundwater. An Environmental Management System (EMS) will be in place prior to the commencement of site operations.

There is one internationally designated ecological site within 10 km of the Installation (Humber Estuary). Five local wildlife sites are located within 2 km of the Installation. Assessment by the Environment Agency shows that emissions from the Installation are unlikely to have an adverse impact on interest features of the ecological sites.

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

Status log of the permit		
Description	Date	Comments
Application EPR/WP3530JB/A001	Duly made 12/02/18	Application for an anaerobic digestion facility with combustion and upgrading of biogas.
Additional information received	20/04/18	Part response to Schedule 5 notice dated 12/03/18.
Additional information received	02/05/18	Clarification of list of wastes under emergency scenario and confirmation of source of waste glycerol proposed for the facility.
Additional information received	04/05/18	Final response to Schedule 5 notice dated 12/03/18.
Additional information received	18/05/18	Clarification of points in relation to waste pre-acceptance, emission points to ground, thermal input of boiler, use of biogas, emission point to air, commissioning plan and odour abatement.
Permit determined (Billing Ref: WP3530JB)	26/06/18	Permit issued to Brigg Lane Biogas Limited.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/WP3530JB

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

Brigg Lane Biogas Limited (“the operator”),

whose registered office is

**106a High Street
Chesham
Buckinghamshire
HP5 1EB**

company registration number 10134271

to operate an installation at

**Brigg Lane Biogas Facility
Bonby Lane
Bonby
DN20 0PJ**

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

Name	Date
Rebecca Warren	26/06/2018

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

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

1.2 Energy efficiency

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

1.3 Efficient use of raw materials

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

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

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

- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

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

2.2 The site

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

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 tables S2.2, S2.3 and S2.4; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

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

2.5 Pre-operational conditions

- 2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4A have been completed.
- 2.5.2 The operations specified in schedule 1 table S1.4B shall not commence until the measures specified in that table have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

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

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

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

3.4 Noise and vibration

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

- 3.5.1 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.
- 3.5.2 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.6 Monitoring

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1 and S3.2;
 - (b) process monitoring specified in table S3.3.
- 3.6.2 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.
- 3.6.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.6.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.6.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2 unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the annual production/treatment data set out in schedule 4 table S4.2; and
 - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

- 4.3.1 In the event:
- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
 - (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
 - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- Where the operator is a corporate body other than a registered company:
- (a) any change in the operator's name or address; and
 - (b) any steps taken with a view to the dissolution of the operator.
- In any other case:
- (a) the death of any of the named operators (where the operator consists of more than one named individual);
 - (b) any change in the operator's name(s) or address(es); and
 - (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) the Environment Agency shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.7 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 100 tonnes per day 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 three tanks followed by burning of biogas produced from the process. Waste types suitable for acceptance are limited to those specified in Tables S2.2, S2.3 and S2.4.
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 waste in enclosed tanks fitted with appropriate odour abatement on an impermeable surface with a sealed drainage system. Waste types suitable for acceptance are limited to those specified in Tables S2.2, S2.3 and S2.4.
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 on impermeable surface with a sealed drainage system including mixing, maceration and heat treatment (pasteurisation) of waste in four tanks for the purpose of recovery.

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
			<p>Gas cleaning by biological or chemical scrubbing.</p> <p>Waste types suitable for acceptance are limited to those specified in Tables S2.2, S2.3 and S2.4.</p>
AR4	Steam and electrical power supply	R1: Use principally as a fuel to generate energy	<p>From the receipt of biogas produced at the on-site anaerobic digestion process to combustion with the release of combustion gases.</p> <p>Combustion of biogas in one combined heat and power (CHP) engine with a thermal input of 1.57 MWth.</p> <p>Combustion of biogas in dual boiler with a thermal input of 0.5 MWth.</p>
AR5	Emergency flare operation	D10: Incineration on land	<p>From the receipt of biogas produced at the on-site anaerobic digestion process to incineration with the release of combustion gases.</p> <p>Use of one auxiliary flare required only during periods of breakdown or maintenance of the CHP engine, biogas upgrading plant and/or dual fuel boiler.</p>
AR6	Gas upgrading	Upgrading of biogas to biomethane (including the removal of moisture and other substances such as carbon dioxide, hydrogen sulphide and volatile organic compounds) for injection into the National Grid.	From the receipt of biogas produced at the on-site anaerobic digestion process to injection into the National Grid. This includes return of off-specification biogas for combustion to the on-site CHP engine, dual fuel boiler and/or emergency flare.
AR7	Raw material storage	Storage of raw materials including lubrication oil, diesel, trace elements, biocides, laboratory chemicals, glycol, sulphuric	From the receipt of raw materials 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
		acid, propane, odorant, ferric hydroxide, activated carbon.	
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 roof space of digesters. From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for use within the facility.
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 uncertified digestate produced from the on-site anaerobic digestion process to despatch for use off-site. Storage of processed uncertified whole digestate in one lined lagoon.
AR10	Surface water collection, storage and discharge	Collection and storage of uncontaminated roof and site surface water in one fire water lagoon and swale.	From the collection of uncontaminated roof and site surface water to re-use within the facility and/or discharge to ground via soak-away.
AR11	Air treatment	Collection and treatment of air from the treatment process using abatement system (carbon filters and wet acid scrubber) prior to release to atmosphere.	From the collection of air from site processes to treatment and release of treated air to atmosphere.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Supporting Information of the application (HC1556-16 - Measures to demonstrate BAT and process flow chart) provided in response to section 3a – technical standards, Part B3 of the application form (excluding references to EWC 07 01 08*); HC1556-08 – Fugitive Emissions Plan.	12/02/18
Part response to Schedule 5 Notice dated 12/03/18	Operating techniques described in the response to the Notice: Responses 3 to 6 (waste pre-acceptance and acceptance procedures), Responses 8 to 12 (secondary containment and storage design), Responses 13 to 16 (site drainage), Responses 17 to 19 (raw materials), Responses 23 to 30 (site operating techniques) and Response 33 (emission points).	20/04/18
Additional information	Clarification of list of wastes under emergency scenario and confirmation of source of waste glycerol proposed for the facility.	02/05/18
Final response to Schedule 5 Notice dated 12/03/18	Operating techniques described in the response to the Notice: Response 31 (accidents), Response 32 (DSEAR & HAZOP) and Responses 34 to 42 (odour management); HC1556-09 – Odour Management Plan (v.1.1); HC1556-20 – Accident Management Plan (v1.1)	04/05/18
Additional information	Clarification of points in relation to waste pre-acceptance, emission points to ground, thermal input of boiler, use of biogas, emission point to air, commissioning plan and odour abatement; HC1556-16 – Feedstock Acceptance Procedure (v1.2)	18/05/18

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
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 A16 during normal operation, having regard to the Environment Agency technical guidance M2 and to MCERTS standards. As a minimum, two separate monitoring campaigns in a year shall be completed (one monitoring survey six months following commissioning of the biogas upgrading plant). The pollutants to be monitored shall include: <ul style="list-style-type: none"> • total volatile organic compounds; and • hydrogen sulphide 	31/07/19
IC2	Following the completion of IC1, the operator shall undertake an environmental impact assessment of all point source releases to air, using the information obtained through the emissions monitoring. The environmental impact assessment report and all associated monitoring reports and assessments shall be submitted in writing to the Environment Agency for review.	31/08/19

Reference	Requirement	Date
	<p>The environmental impact assessment shall, as a minimum, include:</p> <ul style="list-style-type: none"> • reports showing details of the monitoring undertaken and the results obtained; • results of the assessment of long and short term impacts from the emissions in accordance with Environment Agency Guidance – Air emissions risk assessment for your environmental permit • a completed H1 assessment software tool <p>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, and implement the proposed actions upon approval by the Environment Agency.</p>	
IC3	<p>The operator shall submit a written copy of the site Environmental Management System (EMS) and make available for inspection all documents and procedures which form part of the site EMS.</p> <p>The EMS shall cover all activities at the installation and shall be in accordance with the Environment Agency Guidance – How to develop a management system: environmental permits and section 8.2.1 of the Environment Agency Draft Technical Guidance for Anaerobic Digestion (Reference LIT 8737, November 2013). The EMS shall include the techniques the operator relies upon to manage the operation, accidents (including flooding), closure and decommissioning of the site. The documents and procedures set out in the EMS shall form the written management system referenced in condition 1.1.1 (a) of the permit.</p>	27/07/18

Reference	Pre-operational measures
1	<p>Prior to the commencement of site operations using waste, the operator shall install abatement to treat odour emissions at the Installation as described in the odour management plan (HC1556-09 – Odour Management Plan v.1.1). The installation and the commissioning of the odour abatement system shall be implemented by the operator, subject to any such amendments or additions as notified by the Environment Agency.</p> <p>No site operations with waste shall commence or waste accepted at the Installation unless the Environment Agency has given prior written permission under this condition.</p>

Reference	Operation	Pre-operational measures
1	Operation of digestate storage lagoon and swale	The operator shall ensure that a review of the design, method of construction and integrity of the proposed digestate storage lagoon and swale is carried out by a qualified structural or civil engineer. The review shall compare the constructed lagoon and swale against the standards set out in SSAFO Regulations, Environment Agency Draft Technical Guidance for Anaerobic Digestion (Reference LIT 8737, November 2013), CIRIA C736 - Containment Systems for the Prevention of Pollution - secondary, tertiary and other measures for industrial and commercial premises or other relevant industry standard.

Table S1.4B Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
		<p>The review shall include:</p> <ul style="list-style-type: none"> • the physical condition of the digestate storage lagoon and swale (including leak detection); • any work required to ensure compliance with the above standards or other relevant industry standard; and • a preventative maintenance and inspection regime <p>A written report of the review shall be submitted to the Environment Agency detailing the review's findings and recommendations. Remedial action shall be taken to ensure that the digestate storage lagoon and swale meet the standards set out in the technical guidance documents and implement the maintenance and inspection regime.</p>

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Fuel oil	Sulphur content not exceeding 0.1% by mass.

Table S2.2 Permitted waste types and quantities for anaerobic digestion (delivery via dedicated pipelines from adjacent Bioganix food waste handling facility)	
Maximum quantity	The total annual throughput of the site (Tables S2.2, S2.3 and S2.4 combined) shall not exceed 75,000 tonnes.
Waste code	Description
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	premixed wastes composed only of non-hazardous wastes (biodegradable waste only)
19 02 06	sludges from physico/chemical treatment other than those containing dangerous substances

Table S2.3 Permitted waste types and quantities for anaerobic digestion (delivery via tankers from adjacent Bioganix food waste handling facility)	
Maximum quantity	The total annual throughput of the site (Tables S2.2, S2.3 and S2.4 combined) shall not exceed 75,000 tonnes.
Waste code	Description
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	premixed wastes composed only of non-hazardous wastes (biodegradable waste only)
19 02 06	sludges from physico/chemical treatment other than those containing dangerous substances

Table S2.4 Permitted waste types and quantities for anaerobic digestion (delivery via tankers from off-site sources)	
Maximum quantity	The total annual throughput of the site (Tables S2.2, S2.3 and S2.4 combined) shall not exceed 75,000 tonnes.
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 (pumpable liquids only)
02 01 03	plant tissue waste (pumpable liquids only)
02 01 06	animal faeces, urine and manure (including spoiled straw) only
02 01 99	residues from commercial mushroom cultivation (pumpable liquids 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
02 02 02	animal tissue waste (pumpable liquids only)
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 02 99	sludges from gelatine production, animal gut contents
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges from on-site effluent treatment
02 03 99	sludge from production of edible fats and oils to include seasoning residues, molasses residues, residues from production of potato, corn or rice starch
02 04	wastes from sugar processing
02 04 03	sludges from on-site effluent treatment
02 04 99	other biodegradable wastes (pumpable liquids only)
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing
02 06 03	sludges from on-site effluent treatment
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 04	materials unsuitable for consumption or processing

Table S2.4 Permitted waste types and quantities for anaerobic digestion (delivery via tankers from off-site sources)

Maximum quantity	The total annual throughput of the site (Tables S2.2, S2.3 and S2.4 combined) shall not exceed 75,000 tonnes.
Waste code	Description
02 07 99	spent grains, hops and whisky filter sheets/cloths, yeast and yeast-like residues, sludge from production process
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 03	wastes from pulp, paper and cardboard production and processing
03 03 10	fibre rejects, 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 01	wastes from the leather and fur industry
04 01 01	fleshings and lime split wastes (pumpable liquids only)
04 02	wastes from the textile industry
04 02 10	organic matter from natural products, e.g. grease, wax
16	Wastes not otherwise specified in the list
16 10	aqueous liquid wastes destined for off-site treatment
16 10 02	liquor/leachate from a composting process that accepts waste input types listed in this table only
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	waste types listed within this table, that have been mixed together only
19 02 06	sludges from physico/chemical treatment other than those containing dangerous substances
19 02 10	glycerol not designated as hazardous i.e. excludes EWC code 19 02 08
19 06	wastes from anaerobic treatment of waste
19 06 03	liquor from anaerobic treatment of municipal waste (from a process that treats wastes which are listed in this table only)
19 06 04	digestate from anaerobic treatment of source segregated biodegradable waste (from a process that treats wastes which are listed in this table only) – pumpable liquids only
19 06 05	liquor from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only)
19 06 06	digestate from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only) – pumpable liquids 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
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified

Table S2.4 Permitted waste types and quantities for anaerobic digestion (delivery via tankers from off-site sources)	
Maximum quantity	The total annual throughput of the site (Tables S2.2, S2.3 and S2.4 combined) shall not exceed 75,000 tonnes.
Waste code	Description
19 12 12	waste types listed in this table, that have been subjected to mechanical treatment only – pumpable liquids only
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	separately collected fractions (except 15 01)
20 01 08	biodegradable kitchen and canteen waste
20 01 25	edible oil and fat
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste – pumpable liquids only
20 03	other municipal wastes
20 03 01	mixed municipal waste – only separately collected biodegradable wastes of types listed within this table – pumpable liquids only
20 03 02	waste from markets – allowed only if source segregated biodegradable fractions e.g. plant material, fruit and vegetables – pumpable liquids only

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 & A2 [Points A1 and A2 on site plan in Schedule 7]	Pre-storage tanks	No parameter set	No limit set	--	--	--
A3 to A7 [Points A3 to A7 on site plan in Schedule 7]	Digester pressure relief valves	No parameter set	No limit set	--	--	--
A8 [Point A8 on site plan in Schedule 7]	Waste glycerol tank	No parameter set	No limit set	--	--	--
A9 [Point A9 on site plan in Schedule 7]	Cess pit	No parameter set	No limit set	--	--	--
A10 [Point A10 on site plan in Schedule 7]	Foam tank	No parameter set	No limit set	--	--	--
A11 [Point A11 on site plan in Schedule 7]	Emergency generator exhaust	No parameter set	No limit set	--	--	--
A12 [Point A12 on site plan in Schedule 7]	Dual fuel boiler	No parameter set	No limit set	--	--	--
A13 [Point A13 on site plan in Schedule 7]	CHP engine stack [note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500 mg/m ³	Hourly average	Annual	BS EN 14792
		Sulphur dioxide	350 mg/m ³			BS EN 14791
		Carbon monoxide	1400 mg/m ³			BS EN 15058
		Total VOCs	1000 mg/m ³			BS EN 12619:2013
A14 [Point A14 on site plan in schedule 7]	Emergency flare stack [note 2]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	150 mg/m ³	Hourly average	[note 3]	BS EN 14792

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
		Carbon monoxide	50 mg/m ³			BS EN 15058
		Total VOCs	10 mg/m ³			BS EN 12619:2013
A15 Point A15 on site plan in schedule 7]	Digestate loading area carbon filter vent	No parameter set	No limit set	--	--	--
A16 [Point A16 on site plan in schedule 7]	Biogas upgrading plant stack	No parameter set [note 4]	No limit set [note 4]	--	--	--
A17 [Point A17 on site plan in schedule 7]	Digestate storage lagoon cover vents	No parameter set	No limit set	--	--	--
A18 [Point A18 on site plan in schedule 7]	Diesel store vent	No parameter set	No limit set	--	--	--
<p>Note 1 - These limits are based on normal operating conditions and load - temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 5 per cent (dry gas). The measurement uncertainty specified in section 4.5.1 of LFTGN08 v2 2010 shall apply.</p> <p>Note 2 - These limits are based on normal operating conditions and load - temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 3 per cent (dry gas). The measurement uncertainty specified in section 5.3.1 of LFTGN05 v2 2010 shall apply.</p> <p>Note 3 - Monitoring to be undertaken 12 months after commissioning of the emergency flare. Following commissioning, monitoring to be undertaken in the event the emergency flare has been operational for more than 10 per cent of a year (876 hours). Record of operating hours to be submitted annually to the Environment Agency.</p> <p>Note 4 – Monitoring requirements to be reviewed by the Environment Agency following the completion of improvement conditions 1 and 2.</p>						

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

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W3 on Drawing 25776/165 Rev F – emission to soak away NGR TA 01585 16626	Uncontaminated site surface water from roofs and non-operational areas	Oil and grease	No visible oil or grease	--	Daily	Visual assessment
	Uncontaminated water arising from the bunded areas (main bund and process bund)	pH	No limit set ^{Note 1}	Spot sample	Monthly ^{Note 2}	In accordance with Environment Agency's Technical Guidance Note - M18 Monitoring of discharges to water and sewer.
		Chemical oxygen demand	No limit set ^{Note 1}			
		Ammoniacal nitrogen	No limit set ^{Note 1}			
Total suspended solids	No limit set ^{Note 1}					
W5 on Drawing 25776/165 Rev F – emission to soak away NGR TA 01463 16453	Uncontaminated site surface water from hardstanding	Oil and grease	No visible oil or grease	--	Daily	Visual assessment

Note 1 – The operator shall undertake sampling of bund water (from the main bund and process bund) as specified in the application. In the event that sampling shows that the water from the bunded area is contaminated, the operator shall arrange for the contaminated water to be removed from site. There shall be no further discharges to W3 from these areas until the source of the contamination is investigated and remedied.

Note 2 – monthly or in the event the bunded areas are filled with water, whichever is sooner.

Table S3.3 Process monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Biogas from Digesters	Flow	Continuous	In accordance with EU weights and measures Regulations	--
Biogas from Digesters	Methane	Continuous	None specified	Gas monitors to be calibrated every 6 months or in accordance with the manufacturer's recommendations.

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
	Hydrogen sulphide	Daily	None specified	--
Process building; Digesters and storage tanks	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Digesters and storage tanks	Integrity checks	Weekly	Visual assessment	--
Secondary containment (bunds)	Integrity checks	Daily	Visual assessment	--
Scrubber /carbon filtration system	Key process parameters to include liquid level and pH	In accordance with manufacturer's recommendations.	None specified	<p>Odour abatement system shall be regularly checked and maintained to ensure that the system is working effectively.</p> <p>Carbon filters to be replaced when saturated in accordance with manufacturer's recommendations.</p>

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.6.1.	A13, A14	Every 12 months	1 July
Emissions to water Parameters as required by condition 3.6.1	W3	Every 6 months	1 July

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

Parameter	Frequency of assessment	Units
Water usage	Annually	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	%
Boiler usage	Annually	hours

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	26/06/18
Water	Form water 1 or other form as agreed in writing by the Environment Agency	26/06/18
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	26/06/18
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	26/06/18

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	26/06/18
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.

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

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

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

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

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 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.

“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

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

“pests” means Birds, Vermin and Insects.

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

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

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

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

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

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

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

“year” means calendar year ending 31 December.

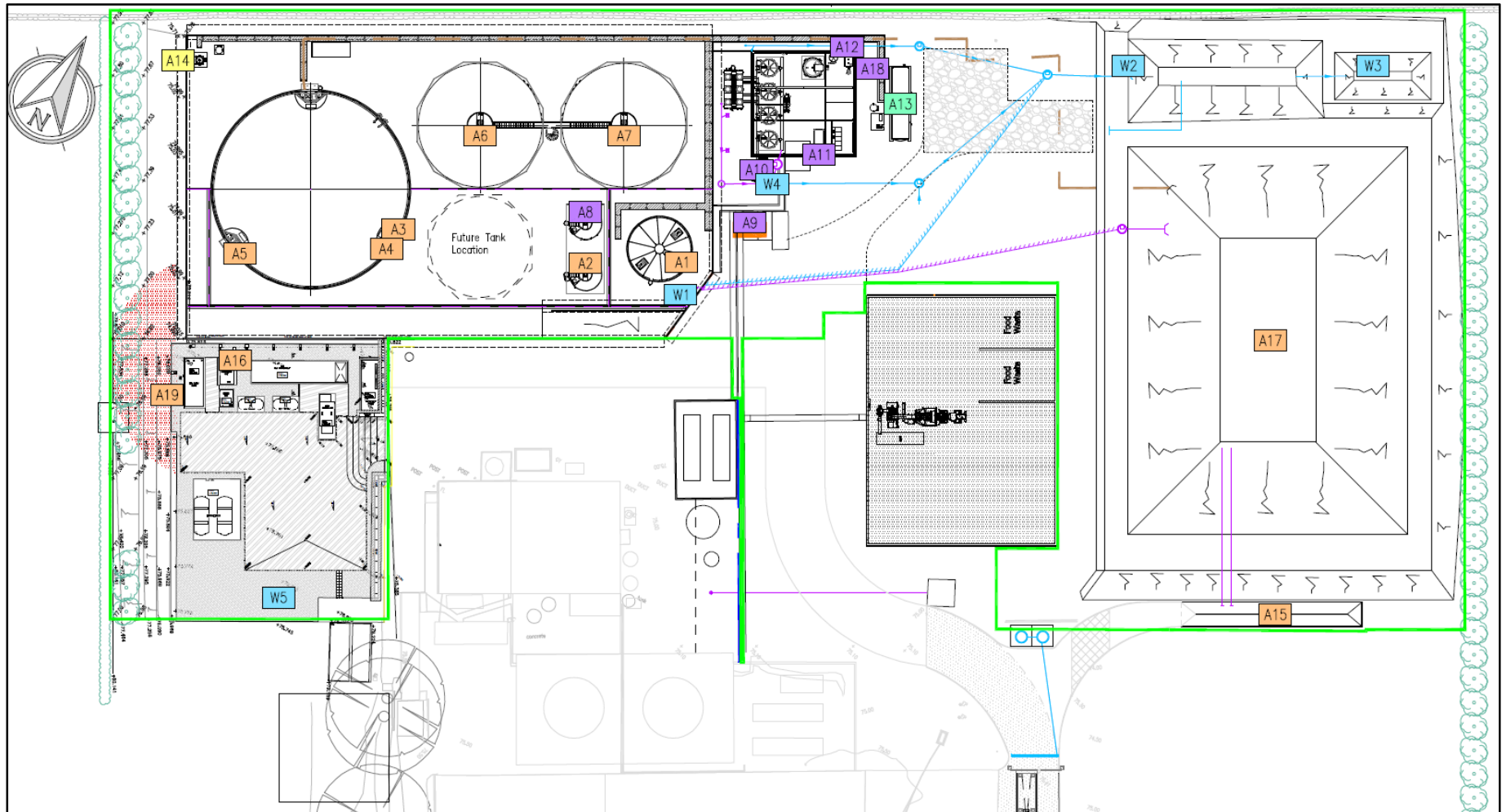
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

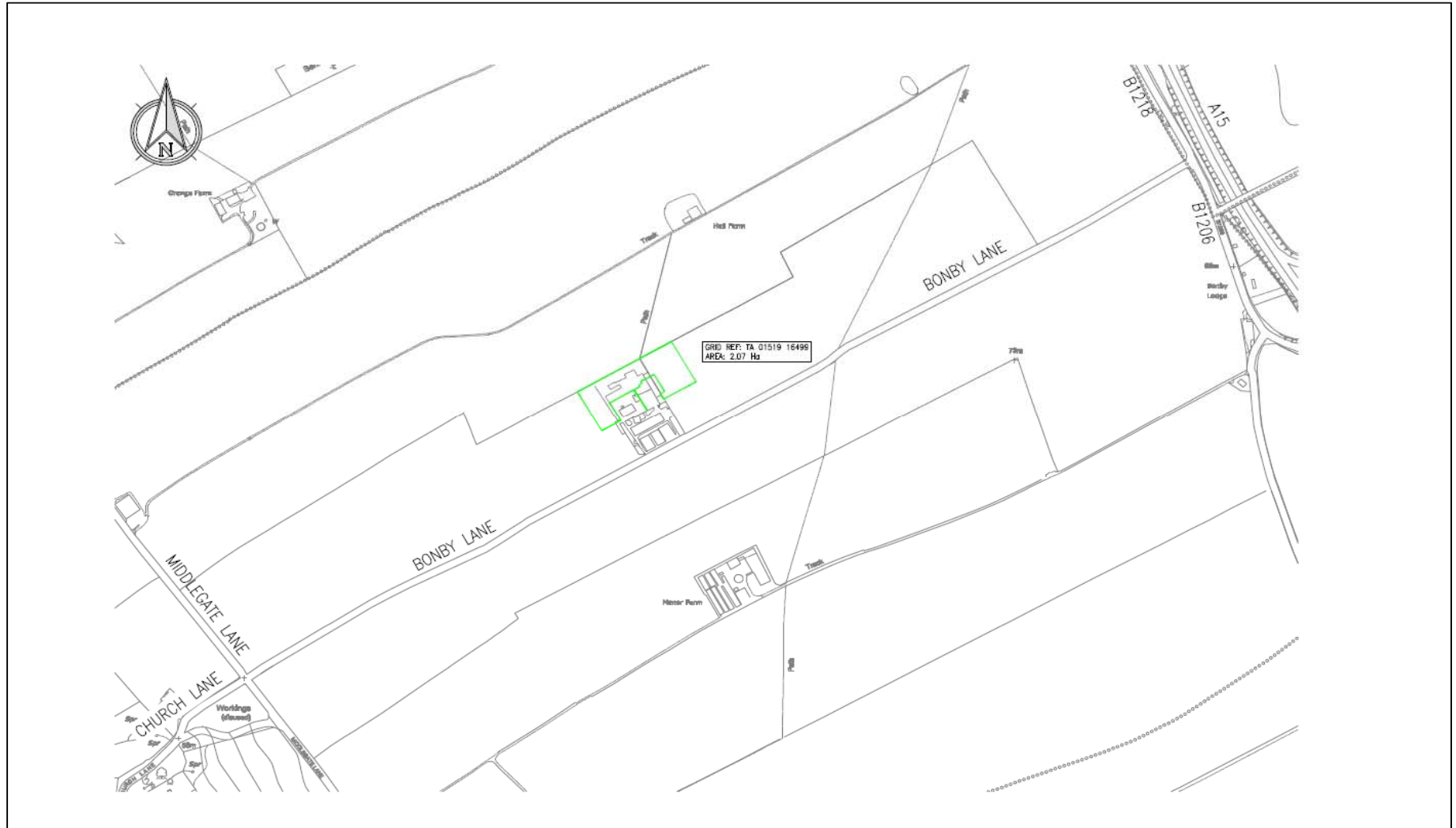
- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid fuels, 3% or 5% for gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources,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

Schedule 7 – Site plan

Site plan



Site location plan



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END OF PERMIT

Permit number
EPR/WP3530JB