

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Murrow AD Plant
Somerset Farm
Cants Drove
Murrow
Wisbech
Cambridgeshire
PE13 4HN

Variation application number

EPR/FB3133AW/V006

Permit number

EPR/FB3133AW

Murrow AD Plant

Permit number EPR/FB3133AW

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.

This variation authorises the increase throughput of waste processed from 100,000 tonnes per annum to 125,000 tonnes per annum, an extension to the permitted site boundary to accommodate this increase in capacity, the addition of Carbon dioxide (CO₂) capture technology and associated storage linked to the existing biogas upgrading unit, two discharge points for clean surface water from impermeable areas of the facility, additional waste codes accepted and changes this permit from a standard rules installation to a bespoke installation.

Brief description of the process

Murrow AD Plant is an anaerobic digestion (AD) facility, and is regulated as a Section 5.4 A (1) (b) (i) Schedule 1 activity, with Adapt Biogas Ltd contracted to oversee operations and maintenance on behalf of Murrow AD Plant Ltd.

The operator process's purpose grown crops, (principally maize), crop residues, liquid residues, and animal manures and slurries within five primary digesters and one secondary anaerobic tank to produce biogas and digestate.

Solid farm-based feedstocks are released from vehicles and delivered to site on sheeted trailers (unless from Somerset Farm - transferred directly via a front-end loader) and stored on a short-term basis in a series of outdoor concrete bays with sealed drainage system prior to processing. Liquid feedstocks are received by tanker into a liquid reception tank. Farm based feedstocks with higher odour potential such as poultry manures are processed immediately on receipt in accordance with on site management procedures. Principally feedstocks are moved to the AD site at the point of use and managed using a first in first out (FIFO) system.

Feedstocks are introduced into the process via feeding units which are top loaded using a telehandler. The mixed material in the digesters undergoes anaerobic digestion with an average hydraulic retention time of 39 days. Following digestion, the by-product of the process (whole digestate) is passed through a separator to produce a separated liquid and solid fraction. The separated solid fraction drops into a concrete bay and is routinely taken, outside of the installation for interim storage in satellite field heaps at the intended site of spreading for use as an agricultural fertiliser or soil conditioner.

The separated liquid digestate is piped to one of two earth bank digestate storage lagoons. Lagoon two is included within the site boundary as part of this variation and is subject to pre-operation condition (see Table S1.4b PO2) to ensure the lagoon complies with CIRIA 736 containment to accept digestate that is categorised as not-end-of waste. Lagoon one, a shared resource with the offtake contractor is only used for digestate that does not require waste permitting controls and therefore currently is not required to be within the site boundary. The lagoons are filled via a direct pipeline connection from the AD site, with the contents kept separate. A diverter arrangement allows the operator to select which lagoon digestate will be sent to. Separated liquid digestate is spread to land from store, for agricultural benefit. This environmental permit does not authorise the spreading of digestate on any land.

Biogas produced during the digestion process is stored in gas storage roofs in the head space of the six digesters and used to power two 250 kW combined heat and power (CHP) engines (each with thermal inputs of 0.619MW). These CHPs provide both heat and power for site operations as do a further two 500 kW CHPs (each with thermal inputs of 1.193MW) which are run on imported liquified natural gas (LNG). All four engines were commissioned after December 2018. The remaining biogas produced at the site is upgraded to produce biomethane and injected directly to the high-pressure National Gas Transmission (NTS) system via 1km of pipework and a block valve.

During the biogas upgrading process, CO₂ is removed from biogas and processed in a CO₂ recovery facility that removes any final trace impurities and transforms the CO₂ into a liquid state. The recovered liquid CO₂ is then stored in a tank as a final product that reaches end of waste status and is fit for use in the food and drink manufacturing and supply industry. This activity is subject to a pre-operational condition (See Table S1.4b PO1).

The facility operates an emergency flare for management of excess gas during engine or upgrading unit downtime. This flare is capable of burning all biogas produced at the installation in an emergency situation should the need arise. 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.

Air emissions include point source emissions from the CHP engines, the emergency flare, back-up generator, biogas upgrading vent, tank pressure relief valves on five digesters, one secondary digester, liquid feedstock tank, CO₂ recovery unit, remote biomethane upgrading unit and flogas tanks, with all emissions having been assessed in line with our technical guidance and appropriate emissions limits set in the permit.

Surface water and effluent / run off arising at the installation is retained in an internal drainage collection system in a series of sumps within the facility and either pumped back into the AD plant for use in the process or for contingency sent to the digestate storage lagoon via emission point W1.

Clean surface water surplus to requirements, accumulating at defined low points within the large containment area (separated from the adjacent feedstock storage and treatment areas by a barrier interface, will be collected and discharged via emission points W2 or W3 to nearby surface waters).

Additionally, clean surface water accumulating at defined low points with the concreated bunded area, will be collected and stored within two 30m³ water storage tanks and either pumped back into the AD plant for use in the process or discharged via emission point W2 to nearby surface waters.

The facility containment for liquid storage and process tanks are within an impermeable concrete bund with a sealed drainage system providing secondary containment compliant to CIRIA C736 standards. An additional containment area (oversized for future development) with no activities taking place and separated by a barrier interface is currently surfaced with an impermeable HDPE liner and subject to the improvement programme (See Table S1.3 IC 5 & 6) to ensure secondary containment compliance both in the interim and the foreseeable future.

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 installation is located at approximate National Grid Reference TF 37303 04635, a predominantly rural area of drained fenland and is part of the wider Somerset Farm mixed agricultural setting. Residential dwellings are isolated and located 230m north of the site, with the village of Murrow located 1.3 km also north of the site. Designated habitats sites are Nene Washes, a SSSI, SPA and RAMSAR site, 2.2km to the south and Protected habitats (coastal and floodplain grazing marsh) within 1km of the installation. An

assessment by the Environment Agency shows that emissions from the activities undertaken at the installation are unlikely to have a significant impact on the habitat sites.

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 EPR/FB3133AW/A001 | Duly made 15/08/2012 | Application for anaerobic digestion facility including use of the resultant biogas (SR2010No 16) |
| Permit determined EPR/FB3133AW | 16/10/2012 | Permit issued to Dale Bio Plant Limited |
| Application EPR/FB3133AW/V002 (variation) | 13/11/2013 | Application to vary SR2010No16 permit to become SR2012No12 permit and increase the permitted boundary. |
| Variation determined EPR/FB3133AW/V002 | 02/12/2013 | Varied permit issued |
| Application EPR/FB3133AW/V003 (variation) | Duly made 31/10/2014 | Application to vary permit to increase the permitted boundary |
| Variation determined EPR/FB3133AW/V004 | 07/11/2014 | Varied permit issued |
| Application EPR/FB3133AW/V004 (variation) | 24/10/2014 | Application to vary permit to an installation under IED |
| Application withdrawn. EPR/FB3133AW/V005 (variation) | 04/02/2015 | Application withdrawn, outside scope of IED. |
| Application EPR/FB3133AW/V005 (variation) | 18/06/2019 | Application to vary SR2012No12 permit to become SR2012 No 9 permit and increase the permitted boundary |
| Variation determined EPR/FB3133AW/V005 | 17/07/2019 | Varied permit issued |
| Application EPR/FB3133AW/V006 (variation and consolidation) | Duly made 15/05/2024 | Application to vary permit to bespoke installation |
| Additional information | 26/07/2024 | Response to Schedule 5 Notice issued 27/06/2024 |
| Additional information | 26/07/2024 | Response to RFI issued 05/07/2024 |
| Variation determined and consolidation issued EPR/FB3133AW | 09/10/2024 | 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

Permit number

EPR/FB3133AW

Issued to

Murrow AD Plant Limited (“the operator”)

of/ whose registered office is

**Somerset Farm
Cants Drove
Murrow
Wisbech
Cambridgeshire
PE13 4HN**

company registration number 07789756

to operate a regulated facility at

**Murrow AD Plant
Somerset Farm
Cants Drove
Murrow
Wisbech
Cambridgeshire
PE13 4HN**

to the extent set out in the schedules.

The notice shall take effect from 09/10/2024.

| Name | Date |
|-----------------|------------|
| Marcus Woodward | 09/10/2024 |

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/FB3133AW

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/FB3133AW/V006 authorising,

Murrow AD Plant Limited (“the operator”),

whose registered office is

**Somerset Farm
Cants Drove
Murrow
Wisbech
Cambridgeshire
PE13 4HN**

company registration number 07789756

to operate an installation at

**Murrow AD Plant
Somerset Farm
Cants Drove
Murrow
Wisbech
Cambridgeshire
PE13 4HN**

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

| Name | Date |
|-----------------|------------|
| Marcus Woodward | 09/10/2024 |

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 S2.3; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
 - (c) the facility has sufficient free capacity to store and treat the waste.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.
- 2.3.7 Waste pre-acceptance and acceptance procedures shall be undertaken in accordance with best available techniques.

2.3.8 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.

2.5 Pre-operational conditions

2.5.1 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.

3.1.4 For the following activities referenced in schedule 1, table S1.1 (AR4) Limited Operating Hours MCPs shall:

- (a) Not exceed 500 hours operation in a 12-month period as a rolling average over a 3 year period, for new MCPs, and thereafter assessed annually.
- (b) Not operate for more than 750 hours in any single year.

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 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.

3.2.3 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.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1 and S3.2.
 - (b) process monitoring specified in table S3.4;
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2, unless otherwise agreed in writing by the Environment Agency.
- 3.5.5 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 | <p>From receipt of waste through to digestion and recovery of by-products (digestate).</p> <p>Anaerobic digestion of waste in six tanks followed by burning of biogas produced from the process.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2 and S2.3 (subject to completion of pre-operational measure PO2).</p> |
| Directly Associated Activity | | | |
| AR2 | Storage of waste pending recovery or disposal | R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced) | <p>From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site.</p> <p>Storage of residual wastes from pre-treatment to despatch off-site for recovery.</p> <p>Storage of incoming liquid wastes in a tank prior to treatment on an impermeable surface with a sealed drainage system.</p> <p>Storage of solid wastes in concrete clamps prior to treatment on an impermeable surface with a sealed drainage system.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2 and S2.3 subject to completion of pre-operational measure PO2.</p> |

| Table S1.1 activities | | | |
|------------------------------|--|--|--|
| Activity reference | Activity listed in Schedule 1 of the EP Regulations | Description of specified activity and WFD Annex I and II operations | Limits of specified activity and waste types |
| AR3 | Physical treatment for the purpose of recycling | R3: Recycling/reclamation of organic substances which are not used as solvents | <p>From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery.</p> <p>Post-treatment of digestate on an impermeable surface with a sealed drainage system, including separation, screening to remove contraries, centrifuge or pressing and addition of thickening agents (polymers) or drying for use as a fertiliser or soil conditioner (drying for the purpose of use as a fuel is not permitted).</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2 and S2.3.</p> |
| AR4 | Steam and electrical power supply | R1: Use principally as a fuel to generate energy | <p>From the receipt of biogas produced at the on-site anaerobic digestion process to combustion with the release of combustion gases.</p> <p>Combustion of biogas in two combined heat and power (CHP) engines, and combustion of natural gas in two combined heat and power (CHP) engines with an aggregated thermal input of 3.62 MWth.</p> <p>Combustion of diesel in one auxiliary boiler with an aggregated thermal input of 0.789 MWth. The back-up generator may only operate for no more than 500 hours per year (as a five-year rolling average).</p> |
| 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. |

| 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 |
| | | | Use of one auxiliary flare required only during periods of breakdown or maintenance of the CHP engines, biogas upgrading plant and/or auxiliary boiler. |
| AR6 | Gas upgrading | Upgrading of biogas to biomethane (including the removal of moisture and other substances such as carbon dioxide, hydrogen sulphide and Volatile organic compounds) for injection into the National Grid. | From the receipt of biogas produced at the on-site anaerobic digestion process to injection into the National Grid. This includes return of off-specification biogas for combustion to the on-site CHP engines, auxiliary boiler 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 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 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 offsite covered storage lagoons. Storage of processed solid digestate in interim silage clamps under cover on an impermeable surface with sealed drainage system, |

| 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 |
| | | | prior to removing from site via trailers. Storage of digestate derived from anaerobic digestion of manure and energy crops only |
| AR10 | Digestate treatment | Digestate separation into a solid and liquid fraction R3: Recycling/reclamation of organic substances which are not used as solvents | From the receipt of processed solid digestate fibre produced from the on-site anaerobic digestion process to treatment via composting and despatch for use off-site. |
| AR11 | Surface water collection and storage | Collection and storage of uncontaminated roof and site surface water. | From the collection of uncontaminated roof and site surface water from non-operational areas only to re-use within the facility or if surplus to requirements discharged to surface waters (emission points W2 and W3). |
| AR12 | Process water collection and storage | Collection and storage of process water in an internal drainage collection system, retained via a series of sumps within the site and one sump beyond the site boundary. | From the collection of effluent from the storage of waste to re-use within the facility or despatch off site. |
| AR13 | Storage of Maize/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 |
| AR14 | Recovery of CO ₂ | Recovery of CO ₂ removed during biogas upgrading to produce a final food grade product Liquefaction of CO ₂ involving, compression, cooling, drying and distillation, resulting in liquid CO ₂ . | From the receipt of biogas produced at the on-site anaerobic digestion process to recovery of liquid CO ₂ . This includes the separation of CO ₂ and CH ₄ and the production of liquid CO ₂ . Methane (CH ₄) removed in the process is diverted back to the AD gas storage facility for use in the CHPs |

| 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 |
| | | | and biogas upgrading facility (AR6). |
| AR15 | Storage of recovered liquid CO ₂ | Storage of recovered liquid CO ₂ food grade product | Storage of recovered CO ₂ in one vacuum storage tank pending removal for use by tanker offsite. |

| Table S1.2 Operating techniques | | |
|---|---|----------------------|
| Description | Parts | Date Received |
| Application EPR/FB3133AW/V006 | Section 3b and 5a in C2 of the application- TCM and Site plans. Section 3a, Table 3 in C3 of the application – Technical standards and operating techniques – Odour Management Plan v3.0 MUR-OD-04 14/02/2024 and Noise Management Plans v -Feb 2024 MUR-OD-023 Bioaerosol Risk Assessment –15 th February 2024; 5500-3r3 | 30/03/2023 |
| Response to RFI issued 03/05/2024 | Response to section 2a in C2.5 of the application – MCP Technical Standards. Response to Section 3a in C3 of the application – Technical standards and operating techniques – Carbon Capture Plant | 15/05/2024 |
| Response to Schedule 5 Notice dated 27/06/2024 | Response to question 1-6 – to 3a in C3, compliance with Technical standards, including a separator to be installed at the interface of the feedstock storage/ handling area and containment bunded area. Response to questions 8 and 9 - to Table 3 in C3, compliance with Odour Management Plan MUR-OD-04 v4 19/07/2024 Compliance with Noise Management Plan MUR-OD-023 July 2024 Response to question 7 – compliance with Pest Management Plan MUR-SOP-14 v3 22/07/2024 Response to question 10 – compliance with Accident Management Plan MUR-OD-05 v2.0 21/07/2024 | 26/07/2024 |
| Response to RFI issued 05/07/2024 | Response to question 1 to 5a in C2 of the application – Site plan. | 26/07/2024 |

| Table S1.3 Improvement programme requirements | | |
|---|--|---|
| Reference | Requirement | Date |
| Improvement condition for assessing emissions from the biogas upgrading plant (point sources only) | | |
| IC1 | <p>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 A4 during normal operation, having regard to the Environment Agency technical guidance, <i>Monitoring stack emissions: environmental permits</i> 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).</p> <p>The pollutants to be monitored shall include:</p> <ul style="list-style-type: none"> • total volatile organic compounds; and • hydrogen sulphide | 1/10/2025 or otherwise agreed in writing by the Environment Agency |
| IC2 | <p>Following the completion of IC1, the operator shall undertake an emissions impact assessment of point source releases to air from point A4, 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.</p> <p>The emissions 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.</p> | 01/11/2025 or otherwise agreed in writing by the Environment Agency |
| Improvement condition to address methane slip emissions from gas engines burning biogas | | |
| IC3 | <p>The operator shall establish the methane emissions in the exhaust gas from engines burning biogas and compare these to the manufacturer's specification agreed in writing with the Environment Agency. The operator shall, as part of the methane leak detection and repair (LDAR) programme, develop proposals to assess the potential for methane slip and take corrective actions where emissions above the manufacturer's specification are identified.</p> | 01/04/2025 or other date as agreed in writing with the Environment Agency |
| Improvement condition for secondary containment – Bunding assessment (temporary liner) | | |
| IC4 | <p>The operator shall submit for information a report to the Environment Agency on the control measures which demonstrate maintaining the integrity of the temporary bund.</p> <p>The report must contain:</p> <ul style="list-style-type: none"> • Detailed management procedure • Maintenance of the HDPE membrane liner • Evidence that rainwater/leachate will not accumulate in vast quantities and/or is removed regularly <p>The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.</p> | 01/01/2025 or other date as agreed in writing with the Environment Agency |

| Table S1.3 Improvement programme requirements | | |
|---|--|---|
| Reference | Requirement | Date |
| Improvement condition for improvement of secondary containment | | |
| IC5 | <p>The operator shall submit a written report to the Environment Agency for assessment and written approval prior to the commencement of any works.</p> <p>The report must contain.</p> <ul style="list-style-type: none"> • A proposal for the secondary containment bunding, demonstrating that the proposals meet appropriate CIRIA C736 standards or an equivalent approved standard • Evidence that the bunding has been constructed by a competent structural engineer, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) • A preventative maintenance and inspection regime • A timescale of implementation of proposals <p>The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.</p> | 01/06/2025 or other date as agreed in writing with the Environment Agency |
| Improvement condition for liquid waste storage tank cover | | |
| IC6 | <p>The operator shall submit a written report to the Environment Agency for confirmation.</p> <p>The report must contain:</p> <ul style="list-style-type: none"> • Evidence that the work to cover the liquid tank has been completed • Evidence that the works complies with Biological waste treatment; appropriate measures for permitted facilities;7. Waste storage, and Best Available Techniques (BAT) Conclusions (BATc) 4, for Waste treatment. | 01/05/2025 or other date as agreed in writing with the Environment Agency |
| Improvement condition for updating the Site Condition Report | | |
| IC7 | <p>The operator shall submit a written report to the Environment Agency for confirmation.</p> <p>The report must contain:</p> <ul style="list-style-type: none"> • Evidence that the storage lagoon has been included in permitted area for the Site condition report. | 01/01/2025 or other date as agreed in writing with the Environment Agency |
| Improvement condition for updating the Digestate storage plan | | |
| IC8 | <p>The operator shall submit for information a written and updated “Digestate Storage Plan”. The plan shall contain the results of a review of the storage of digestate produced from site operations. The review shall examine site contingency arrangements in the event of closed land spreading periods, extreme weather conditions, site closure, disease outbreak etc.</p> <p>The storage plan shall include:</p> <ul style="list-style-type: none"> • Additional storage capacity on-site (at least 2 months storage) and storage capacity off-site. • Identification of alternative outlets for digestate and/or compost liquor – identify companies /permitted waste facilities that would | 01/12/2024 or other date as agreed in writing with the Environment Agency |

| Table S1.3 Improvement programme requirements | | |
|--|---|---|
| Reference | Requirement | Date |
| | <p>be able to manage the digestate and/or liquor output(s), taking into account their permits and capacity constraints.</p> <p>The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.</p> | |
| Improvement condition for installing kerb/barrier interface (between HDPE liner and feedstock storage and process area) | | |
| IC9 | <p>The operator shall submit a written report to the Environment Agency for confirmation.</p> <p>The report must contain:</p> <ul style="list-style-type: none"> • Evidence that the barrier interface has been installed • Evidence that the works complies with Biological waste treatment; appropriate measures for permitted facilities; 4.2 Site design, and Best Available Techniques (BAT) Conclusions (BATc)19, for emissions to water. | 01/12/2024 or other date as agreed in writing with the Environment Agency |
| Improvement condition for manging surface water accumulating in the concreted bunded area | | |
| IC10 | <p>The operator shall submit a written report to the Environment Agency for confirmation.</p> <p>The report must contain:</p> <ul style="list-style-type: none"> • Evidence that water storage tanks has been installed for surface water arising in concreted bunded area | 01/12/2024 or other date as agreed in writing with the Environment Agency |

| Table S1.4B Pre-operational measures for future development | | |
|--|------------------------------------|--|
| Reference | Operation | Pre-operational measures |
| PO1 | CO ₂ liquefaction plant | <p>At least eight weeks prior to the operation of the CO₂ liquefaction plant, the operator shall submit a written report detailing the technical and operational details of the CO₂ liquefaction plant to the Environment Agency for assessment and written approval.</p> <p>The report must contain:</p> <ul style="list-style-type: none"> • A revised noise risk assessment incorporating the new CO₂ liquefaction plant; • A H1 assessment for the emission point CO₂ liquefaction plant in Table S3.1; • An updated accident risk assessment and safety and control measures, including details regarding staff training. • A BAT options appraisal showing that the most appropriate measures including monitoring requirements are being implemented in the CO₂ liquefaction plant; • Details regarding maintenance schedule for the CO₂ liquefaction plant. |

| Table S1.4B Pre-operational measures for future development | | |
|--|--|--|
| Reference | Operation | Pre-operational measures |
| PO2 | Suitability of site digestate storage lagoon in relation to Waste types listed in table S2.3 | <p>At least eight weeks prior to the acceptance of waste types listed in table S2.3; the operator shall submit a report to the Environment Agency for assessment and written approval</p> <p>The report must contain:</p> <ul style="list-style-type: none"> • Evidence that storage lagoon one where digestate and/or leachate is being stored, treated, and/or handled has been constructed by a competent structural engineer, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) or equivalent approved standard. • Evidence that a 750 mm freeboard is maintained for storage lagoons • Evidence of cover arrangements on storage lagoons used to store digestate and/or leachate to minimise odour, ammonia and methane emissions • Evidence of the suitability for providing containment when |

| Table S1.4B Pre-operational measures for future development | | |
|--|------------------|--|
| Reference | Operation | Pre-operational measures |
| | | <p>subjected to the dynamic and static loads caused by digestate liquid</p> <ul style="list-style-type: none"> • Evidence of a preventative maintenance and inspection regime for storage lagoons |

Schedule 2 – Waste types, raw materials and fuels

| Raw materials and fuel description | Specification |
|------------------------------------|--|
| Vegetable matter (energy crops) | Substantially free of non-vegetable matter |
| Maize silage | Substantially free of non-vegetable matter |

| | |
|-------------------------|--|
| Maximum quantity | The combined annual throughput shall not exceed 125,000 tonnes for both S2.2 and S2.3 |
| Exclusions | <p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> • 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 03 | plant tissue waste |
| 02 01 06 | animal faeces, urine and manure (including spoiled fully biodegradable animal bedding) |
| 02 01 99 | wastes not otherwise specified – spent mushroom compost from commercial mushroom growing only |
| 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 |

| Table S2.3 Permitted waste types and quantities for anaerobic digestion | |
|--|--|
| Maximum quantity | The combined annual throughput shall not exceed 125,000 tonnes for both S2.2 and S2.3 |
| Exclusions | <p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> • 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 |
| 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 | Sludges form washing and 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 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 |
|----------|--|

Schedule 3 – Emissions and monitoring

| Table S3.1 Point source emissions to air – emission limits and monitoring requirements | | | | | | |
|--|-----------------------------|---|------------------------|----------------------------|----------------------|---|
| Emission point ref. & location | Source | Parameter | Limit (including unit) | Reference period | Monitoring frequency | Monitoring standard or method |
| A1 [Point A1 on site plan in schedule 7] | Emergency flare stack | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | 150 mg/m ³ | Average over sample period | [note 2] | BS EN 14792 |
| | | Carbon monoxide | 50 mg/m ³ | | | BS EN 15058 |
| | | Total VOCs | 10 mg/m ³ | | | BS EN 12619:2013 |
| A3a [Point A3(4No.) on site plan in schedule 7] | CHP engine stack a [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 |
| | | Total VOCs | No limit set | -- | | -- |
| A3b [Point A3(4No.) on site plan in schedule 7] | CHP engine stack b [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 |

| 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 | 1400 mg/m ³ | | | BS EN 15058 |
| | | Total VOCs | No limit set | -- | -- | BS EN 12619 |
| A3c [Point A3 (4No.) on site plan in schedule 7] | CHP engine stack c - fuelled on natural gas | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | 100 mg/m ³ | Average over sample period | Annual | TGN M5 |
| | | Sulphur dioxide | No limit set | | | |
| | | Carbon monoxide | No limit set | | | |
| A3d [Point A3 (4No.) on site plan in schedule 7] | CHP engine stack d- fuelled on natural gas | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | 100 mg/m ³ | Average over sample period | Annual | TGN M5 |
| | | Sulphur dioxide | No limit set | | | |
| | | Carbon monoxide | No limit set | | | |
| A4 [Point A4 on site plan in schedule 7] | Biogas upgrading plant stack | VOCs including methane | No limit set | Leak detection and repair (LDAR) programme | In accordance with written management system | BS EN15446 |
| A5 [Point A5 on site plan in schedule 7] | CO ₂ liquefaction plant storage tank emergency vent | No parameter set – CO ₂ undergoing recovery | No limit set | -- | -- | -- |
| A6 [Point A6 on site plan in schedule 7] | Diesel generator stack | No parameter set | No limit set | -- | -- | -- |
| A7 [Point A7(a-f) on site plan in schedule 7] | Digesters/digestate storage tanks Primary and secondary digester pressure relief valves (a-f) | Biogas release and operational events | No limit set | Recorded duration and frequency | Daily inspection | -- |
| A8 [Point A8 on site plan] | Liquid feedstock reception tank vent | No parameter set | No limit set | -- | -- | -- |

| 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 |
| in schedule 7] | | | | | | |
| A9 [Point A9 on site plan in schedule 7] | Remote operable valve (ROV) – pressure relief valve switch for upgraded biomethane | No parameter set | No limit set | -- | -- | -- |
| A10 [Point A10 on site plan in schedule 7] | Liquified Natural Gas (LNG) Flogas tank - pressure relief valve | No parameter set | No limit set | -- | -- | -- |
| A11 [Point A11 on site plan in schedule 7] | Liquified Natural Gas (LNG) Flogas tank - pressure relief valve | No parameter set | No limit set | -- | -- | -- |
| A12 [Point A12 on site plan in schedule 7] | Liquified Natural Gas (LNG) Flogas tank - pressure relief valve | No parameter set | No limit set | -- | -- | -- |
| A13 [Point A13 on site plan in schedule 7] | Offtake vacuum tankers | No parameter set | No limit set | -- | -- | -- |
| A14 [Point A14 on site plan in schedule 7] | Digestate lagoon cover vents | No parameter set | No limit set | -- | -- | -- |
| <p>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).</p> <p>Note 2 – 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> | | | | | | |

| Emission point ref. & location | Source [Note 1] | Parameter | Limit (incl. unit) | Reference Period | Monitoring frequency | Monitoring standard or method |
|---|--|------------------|---------------------------|-------------------------|-----------------------------|--------------------------------------|
| W2 and W3 on site plan in schedule 7 emission to surface water – adjacent ditch | Uncontaminated site surface water from defined low points within non-operational areas | Oil and grease | No visible oil or grease | -- | Weekly | Visual assessment |

Note 1 – Clean surface water from roofs, or from areas of the site that are not being used in connection with storing and treating waste can be discharged directly to surface waters, or to groundwater by seepage through the soil via a soakaway.

| 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 manufacturer's recommendations. |
| | Methane | Continuous | None specified | |
| | CO ₂ | Continuous | None specified | |
| | O ₂ | Continuous | None specified | |
| | Hydrogen sulphide | Daily | None specified | |

| Table S3.4 Process monitoring requirements | | | | |
|---|---------------------------------------|--|---|---|
| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
| | 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 | BS EN 15446 In accordance with the LDAR programme | 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 engine(s) to be calculated and submitted to the |

| Table S3.4 Process monitoring requirements | | | | |
|--|---|-----------------------------|---|--|
| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
| | | | | 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 | <p>Conditions to be recorded in operational diary and records.</p> <p>Equipment shall be calibrated on a 4 monthly basis, in accordance with manufacturer's recommendations or as agreed in writing by the Environment Agency.</p> |
| 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. |
| Pressure relief valves and vacuum systems | Gas pressure | Continuous | Recording using a SCADA system | Continuous gas pressure shall be monitored. |

| Table S3.4 Process monitoring requirements | | | | |
|--|---|--|--|--|
| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
| | 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 | <p>Operator must ensure that valves are re-seated after release, after a foaming event or sticking, build-up of debris, obstructions or damage.</p> <p>Operator must ensure that PRV function remains within designed operation gas pressure in accordance with the manufacturer's design by suitably trained/qualified personnel.</p> <p>Inspection, calibration and validation report. In accordance with industry Approved Code of Practice</p> |

| Table S3.4 Process monitoring requirements | | | | |
|--|------------------|-----------------------------|--------------------------------------|--|
| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
| Storage lagoon and storage tanks | Volume | Daily | Visual or flow metre measurement | 750 mm freeboard must be maintained for storage lagoon. Records of volume must be maintained. |

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. | A3a,A3b,A3c,A3d | Every 12 months | 1 January, 1 April, 1 July, October |
| Emissions to water and land Parameters as required by condition 3.5.1 | W2, W3 | Every 12 months | 1 January |
| Emissions to air from odour abatement plant Parameters as required by condition 3.5.1. | A13, A14 | 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 S3.4 | 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 S3.4 | Every 12 months Yearly summary report of over-pressure and under-pressure events detailing mass balance release | 1 January |
| Process monitoring – leak detection and repair (inspection, calibration and maintenance) Parameters as required by condition 3.5.1 | As specified in schedule 3 table S3.4 | Every 3 years | 1 January |
| Process monitoring – use of emergency flare Parameters as required by condition 3.5.1 | As specified in schedule 3 table S3.4 | 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 | |
| Total annual VOCs emissions from gas engines (calculated) | As specified in schedule 3 table S3.4 | Every 12 months | 1 January |

| Table S4.2 Annual production/treatment | |
|---|--------------------------|
| Parameter | Units |
| Electricity generated | MWh |
| Biomethane generated | tonnes or m ³ |
| CO ₂ generated | tonnes or m ³ |
| Whole digestate | tonnes |
| 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 | % |
| Auxiliary boiler 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 CO₂, H₂O, methane, biomass, and mineral salts, depending on the environmental conditions of the process.

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

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

“compost” means solid particulate material that is the result of composting, which has been sanitised and stabilised, and which confers beneficial effects when added to soil, used as a component of growing media or used in another way in conjunction with plants.

‘compostable plastics’ means waste containing packaging or non-packaging items (or both) with a valid certificate of conformity to EN 13432 or an equivalent standard for compostable and digestible items, the certificate issued by an independent certification body capable of fully biodegrading by a biological process to create compost or digest.

“composting” means the managed biological decomposition of biodegradable waste organic materials, under conditions that are predominantly aerobic and that allow the development of thermophilic temperatures as a result of biologically produced heat and that result in compost.

“composting batch” means an identifiable quantity of material that progresses through the composting system and when fully processed has similar characteristics throughout. For composting systems that operate on a continuous- or plug-flow basis, batches will be taken to mean a series of “portions of production”.

‘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.

“maturation” means optional period of treatment or storage of separated fibre digestate under predominantly aerobic conditions.

“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.

“Representative internal” – means representative monitoring at a point internally of the windrows that will give a representative assessment of temperature. Note: Larger windrows will require more bespoke temperature equipment to adequately assess temperature profiles accurately.

“sanitisation” means the actively managed and intensive stage of composting, lasting for at least 5 days, characterised by high oxygen demand and temperatures of over 55°C, during which biological processes, together with conditions in the composting mass, eradicate human and animal pathogens or reduce them to acceptably low levels. The operator also needs to meet ABPR requirements.

“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.

“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.

“stable, stabilised” means the degree of processing and biodegradation at which the rate of biological activity has slowed to an acceptably low and consistent level and will not significantly increase under favourable, altered conditions.

“stabilisation stage” means the stage of composting following sanitisation, during which biological conditions in the composting mass, give rise to compost that is nominally stable.

“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



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[civil](#) / [structural](#) / [environmental](#) / [surveying](#)

Client

Adapt Biogas

Project

**Murrow AD Plant
Somerset Farm, Cant's Drove,
Wisbech, PE13 4HN**

Drawing Title

**Permit Boundary &
Emissions Plan**

| | | | |
|-------------|--------|------------|----------|
| Scale | U.N.O. | Date | Drawn By |
| 1:1000 (A1) | | April 2022 | PD |

| | |
|-------------|-----|
| Drawing No. | Rev |
| 24726/155 | N |

EMISSION POINTS KEY

To Air:

- (A1) Flare
- (A2) Unused
- (A3) CHP Engine Exhaust Stacks (4No.)
- (A4) Biogas Upgrading Unit CO2 Vent
- (A5) Proposed Carbon Capture Equipment (Emergency Pressure Relief Valve)
- (A6) Back Up Diesel Generator Exhaust Stack
- (A7) Emergency Digester Pressure Relief Valves
- (A8) Liquid Feedstock Tank Air Vent
- (A9) ROV Switch (Pressure Relief Valve)
- (A10) LNG Flogas Tank: Emergency Vent Stack at Vaporisers
- (A11) LNG Flogas Tank: Emergency Vessel Vent Stack
- (A12) LNG Flogas Tank: Emergency Regulators
- (A13) Offtake Vacuum Tankers
- (A14) Digestate Lagoon Cover Vents

To Water:

- (W1) Discharge Point for Clean Surface Water
- (W2) Discharge Point for Clean Surface Water
- (W3) Discharge Point for Clean Surface Water

GENERAL KEY

- Current Permit Area (18,955m²)
- Gas Pipeline
- Emission Points
- Areas Added To Permit (27,818m²)
- Digestate pipe underground

END OF PERMIT

Variation and consolidation
Application number
EPR/FB3133AW/V006