

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Broadley Energy Limited

Broadley Copse Farm
Downs Road
Funtington
Chichester
PO18 9BT

Variation application number

EPR/JP3332YL/V006

Permit number

EPR/JP3332YL

Broadley Copse Farm

Permit number EPR/JP3332YL

Introductory note

This introductory note does not form a part of the notice

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

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

Changes introduced by this variation notice/statutory review

The Industrial Emissions Directive (IED) came into force on 7 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. Article 21(3) of the IED requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. The BAT Conclusions for Waste Treatment (the BREF) was published on 17 August 2018 following a European Union wide review of BAT, implementing decision (EU) 2018/1147 of 10 August 2018.

The scope of the permit review also covers the assessment of:

- the bioaerosols monitoring and compliance with M9 bioaerosols monitoring requirements;
- the design and construction of secondary containment and storage lagoons;
- the available storage facilities and measures to reduce ammonia emissions from storage; and
- information on existing medium combustion plant and/or specified generators on site.

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for biowaste treatment. The opportunity has also been taken to consolidate the original permit and subsequent variations.

Brief description of the process

The Installation is located approximately 400 metres to the northeast of the village of Funtington and 1.5 kilometres to the northwest of the village of East Ashling. The installation is approximately centred on National Grid Reference SU 80946 08572.

The site is bordered to the east, south and west by agricultural land. To the north of the site is the neighbouring pig farm, Broadley Copse Farm Pig Unit, which is a permitted installation operated by Basil Baird (Fareham) Limited. The pig farm installation has the permit number EPR/NP3830RX.

The installation processes up to 43,300 tonnes per annum (tpa) of feedstock. Approximately 25,500 tpa of this is pig manure, with the remainder of the feedstock consisting of straw from the neighbouring pig farm, dirty water from the pig farm and the Anaerobic Digestion (AD), maize and rye silage, and clean water from an attenuation pond to the southwest of the site boundary.

The AD facility comprises of the following operations:

- AD plant (two digesters);
- Waste storage containers - two feed hoppers, a silage clamp and straw bunker;
- Two storage lagoons for digestate;
- A holding lagoon for dirty water;

- Combustion plant consisting of two combined heat and power (CHP) engines and an emergency flare; and,
- Other ancillary plant (pasteurisers, condensers, screw press, pipework, etc.).

There are a number of waste storage areas for the different wastes going into the AD process. Pig manure is transported from the adjacent pig farm and is stored in two steel feed hoppers. Maize and rye is brought onto the site by vehicles, via the weighbridge, before being stored in two large silage clamps. The silage from the clamps is then added to the pig manure in the two feed hoppers. From the feed hoppers, the silage and manure is fed into the mixing pump where it is mixed with recirculated digestate or rain water, before being pumped into either of the two digester tanks.

Straw is also transported from the pig farm and is then stored in a straw bunker. The straw is then passed through the shredder into an economiser. Dirty water that has originated from both the pig farm and AD site, is pumped from the intake tank into the economiser and mixed with the straw, before being fed into either of the two digester tanks.

The two digester tanks each have a gross volume of approximately 4,247m³, and a useable volume of 3,929m³. The residence time for the substrate is approximately 56 days. The digesters both have a double membrane gas accumulator roof to allow for the biogas produced to remain stored in the digester.

After reaching the residency period, the digestate is pumped through a shredder to the two pasteurisation tanks. After pasteurisation has occurred the digestate is transferred to a screw press to separate the liquid and solid fractions of the digestate.

The liquid digestate is pumped to the two digestate lagoons which have an aggregated available capacity of 16,950m³. The liquid digestate is stored in the lagoons until it is taken off site for use on agricultural land. The solid fraction of the digestate will be directed out of the screw press onto an open trailer, and will be utilised on agricultural land.

The biogas produced by the AD process is treated through cooling and condensation separation prior to being combusted in the CHP units to produce heat and electricity. The CHP engines have an aggregated thermal input of 4.264 MW. The heat and electricity is used to run the AD plant, with the excess electricity exported to the national grid. Biogas is burnt in the site's flare only during emergency procedures, periods of breakdown, or maintenance of the CHP engines or auxiliary boiler.

All liquid tanks, whose emissions to water or land could cause pollution, are contained in adequate secondary containment constructed in line with industry best practice standards, and sized to contain 110% of the contents of the largest tank within a bund.

The Kingley Vale SAC & SSSI is the closest statutory conservation site, located approximately 1,500m from the installation. There are a further five statutory sites within 10 kilometres of the installation, and an estimated ten non-statutory sites within 2 kilometres of the installation. Assessment by the Environment Agency shows that emissions from the operations at the Installation are unlikely to have a significant impact on the habitat sites. The site is located within a Nitrate Vulnerable Zone and the main activities of the site are adjacent to the Funtington Source Protection Zone 1.

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 EPR/JP3332YL/A001	Duly made 01/08/2017	Application for an anaerobic digestion facility with combustion of biogas.
Additional information received	17/08/2017	Updated Odour Management Plan and Fugitive Emissions Management Plan.
Additional information received	19/09/2017	Updated air quality modelling and confirmation of CHP stack height.

Status log of the permit		
Description	Date	Comments
Additional information received	09/10/2017	Additional BAT Assessment.
Additional information received	17/10/2017	Statement of Operator responsibility for Broadley Energy Limited and Basil Baird (Fareham) Limited.
Additional information received	27/10/2017	Report on construction of secondary containment.
Additional information received	29/11/2017	Submitted BioConstruct GmbH Operational Manual and Maintenance Plan.
Additional information received	29/01/2018	Revised Digestate Management Plan, Fugitive Emissions Management Plan and Environmental Management System.
Additional information received	31/01/2018	Updated BAT Assessment.
Additional information received	09/02/2018	Process Flow Diagram and Drainage Flow Diagram.
Additional information received	15/02/2018	Updated air quality assessment.
Additional information received	20/02/2018	Details on SCADA alarm system.
Additional information received	22/02/2018	Updated Accident Management Plan.
Additional information received	23/02/2018	Additional BAT Assessment.
Additional information received	08/03/2018	Updated Odour Management Plan.
Additional information received	09/03/2018	Confirmation of recalibration of CHP engine B, monthly air emission monitoring methods and revised site plan and permit boundary.
Additional information received	13/03/2018	Updated air emissions assessment.
Permit determined Application EPR/JP3332YL	20/03/2018	Permit issued to Broadley Energy Limited.
Application EPR/JP3332YL/V002 (variation and consolidation)	Duly made 23/05/2018	Application to include the use of a second CHP unit.
Additional information received	18/06/2018	CHP engine B emission calculations
Additional information received	04/07/2018	CHP engine B monitoring report.
Additional information received	15/08/2018	Procedure for breakdown of CHP engines.
Additional information received	28/08/2018	Updated site layout plan and soakaway location plan.
Variation determined EPR/JP3332YL	28/08/2018	Varied permit issued.
Notified of change of registered office address	06/02/2020	Registered office address changed to Trafalgar House, Meridian Business Park, Meridian Way, Norwich, NR7 0TA.
Variation determined EPR/JP3332YL/V003	17/02/2020	Varied permit issued to Broadley Energy Limited.
Regulation 61 Notice sent to Operator	22/04/2021	Regulation 61 Notice requiring information for statutory review of permit.

Status log of the permit		
Description	Date	Comments
Notified of change of registered office address	19/11/2021	Registered office address changed to 4th Floor, 36 Spital Square, London, E1 6DY.
Variation determined EPR/JP3332YL/V004	22/04/2022	Varied permit issued to Broadley Energy Limited.
Notified of change of Registered office	24/10/2022	Registered office changed to The Old School, High Street, Stretham, Ely, CB6 3LD
Variation issued EPR/JP3332YL/V005	31/10/2022	Varied permit issued to Broadley Energy Limited
Regulation 61 Notice response	03/10/2023	Response received from operator.
Application EPR/JP3332YL/V006 (Variation and consolidation)	Environment Agency Initiated Variation	Statutory review of permit occasioned by Waste Treatment BAT Conclusions published on 17 August 2018.
Environment Agency Biowaste Treatment Sector Review Permit reviewed Variation determined (EPR/JP3332YL/V006) Billing Ref: JP3332YL	15/01/2024	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 and consolidates

Permit number

EPR/JP3332YL

Issued to

Broadley Energy Limited ("the operator")

whose registered office is

The Old School

High Street

Stretham

Ely

CB6 3LD

company registration number **10306226**

to operate a regulated facility at

Broadley Copse Farm

Downs Road

Funtington

Chichester

West Sussex

PO18 9BT

to the extent set out in the schedules.

The notice shall take effect from 15/01/2024.

Name	Date
Maxine Evans	15/01/2024

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/JP3332YL

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/JP3332YL/V006 authorising,

Broadley Energy Limited (“the operator”),

whose registered office is

The Old School

High Street

Stretham

Ely

CB6 3LD

company registration number **10306226**

to operate an installation

Broadley Copse Farm

Downs Road

Funtington

Chichester

West Sussex

PO18 9BT

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

Name	Date
Maxine Evans	15/01/2024

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.
- 2.1.4 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

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

2.3 Operating techniques

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

- 2.3.7 Waste pre-acceptance and acceptance procedures shall be undertaken in accordance with best available techniques.
- 2.3.8 For the following activities referenced in schedule 1, table S1.1 (AR4):
- (a) each MCP must be operated in accordance with the manufacturer's instructions and records must be made and retained to demonstrate this.
 - (b) the operator must keep periods of start-up and shut-down of each MCP as short as possible.
 - (c) there must be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993.

2.4 Improvement programme

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

3 Emissions and monitoring

3.1 Emissions to water, air or land

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

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.
- 3.2.4 The operator shall implement a leak detection and repair (LDAR) programme to detect and mitigate the release of volatile organic compounds, including methane from diffuse sources.

3.3 Odour

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

3.4 Noise and vibration

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

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1 and S3.2;
 - (b) process monitoring specified in table S3.3;
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2 unless otherwise agreed in writing by the Environment Agency.
- 3.5.5 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;
- (d) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
- (e) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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.

4.2 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 reoccurrence 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 the medium combustion plant.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
AR1	S5.4 A (1) (b) (i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.	R3: Recycling/ reclamation of organic substances which are not used as solvents	From receipt of waste through to digestion and recovery of by-products (digestate). Anaerobic digestion of waste in two tanks followed by burning of biogas produced from the process. Waste types suitable for acceptance are limited to those specified in Table S2.2.
Directly Associated Activity			
AR2	Storage of waste pending recovery or disposal	R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced)	From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site. Storage of waste in two covered lagoons [Points 16A and 16B, as shown on site plan referenced: Proposed Site Layout 21443/004 dated: 28/08/18]. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR3	Physical treatment for the purpose of recycling	R3: Recycling/ reclamation of organic substances which are not used as solvents	From the receipt of waste to despatch for anaerobic digestion on site. Pre-treatment of waste and raw material in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system, including: - shredding of straw [Labelled as shredder, point 12 on site plan referenced: Proposed Site Layout 21443/004 dated: 28/08/18]. - macerating pig manure and silage [Labelled as feedhopper pump, point 22 on site plan referenced: Proposed Site Layout 21443/004 dated: 28/08/18]. - mixing dirty water and shredded straw [Labelled as economiser, point 11 on site plan referenced: Proposed Site Layout 21443/004 dated: 28/08/18]. Post-treatment of digestate in an enclosed building fitted with an appropriate odour abatement and on an impermeable surface with a

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
			<p>sealed drainage system, including pressing for use as a fertiliser or soil conditioner.</p> <p>Heat treatment (pasteurisation) of waste in 2 tanks for the purpose of recovery.</p> <p>Gas cleaning by biological or chemical scrubbing.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</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 with an aggregated thermal input of 4.264 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>The flare with a minimum residence time of 0.3 seconds at 1000°C.</p> <p>Use of an auxiliary flare required only during emergency procedures, periods of breakdown or maintenance of the CHP engine or auxiliary boiler.</p>
AR6	Raw material storage	Storage of raw materials including lubrication oil, activated carbon and diesel.	From the receipt of raw materials to despatch for use within the facility.
AR7	Storage of non-waste feedstocks	Storage of non-waste feedstock	<p>From the receipt of energy crops to pre-treatment and despatch for anaerobic digestion on site.</p> <p>Storage of maize and rye in two clamps on an impermeable surface with sealed drainage.</p>
AR8	Gas storage	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).	<p>Storage of biogas produced from on-site anaerobic digestion of permitted waste in roof space of digesters.</p> <p>From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for use within the facility.</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
AR9	Digestate storage	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 processed digestate produced from the on-site anaerobic digestion process to despatch for use off-site. Storage of processed uncertified liquid digestate in two covered lagoons.
AR10	Surface water collection	Collection of roof and site surface water from operational areas.	From the collection of roof and site surface water from operational areas within a sealed drainage system only to re-use within the facility.
AR11	Auxiliary boiler	Burning of oil	To only be used in the event of breakdown of CHP engine B, which provides heat to the digestate tanks, or to assist in the recovery from a failure in the digestion process, which requires re-establishing the tanks.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Responses to Parts B2 and B3 of the application form. Site Drainage Report (reference: Detailed Site Drainage Report - Revision A, dated: April 2017).	Duly made 27/07/2017
Additional information	Statement of Operator responsibility for Broadley Energy Limited and Basil Baird (Fareham) Limited (reference: Statement of Operator responsibility at Broadley Copse Farm).	17/10/2017
Additional information	BioConstruct GmbH O&M Manual (reference: OM Manual_Chichester_SVST_171120). BioConstruct GmbH Maintenance Plan (reference: Maintenance Instructions_Chichester_Mika_171109)	29/11/2017
Additional information	Digestate Management Plan (reference BEL-OD-07 Digestate Management Plan V1 280118_F). Fugitive Emissions Management Plan (reference: BEL-PROC-20 Fugitive Emissions Plan V1 280118_F). Environmental Management System - Monitoring and Maintenance Schedules 01-08. Environmental Management System - Procedures 17-27.	29/01/2018
Additional information	BAT Assessment and referenced supporting documentation (reference: ETL_319_JSC_00224_R00260_FINAL_Broadley Copse AD Plant _BAT Assessment Report_BEL-OD-05_31 January 2018).	31/01/2018
Additional information	Process Flow Diagram (reference: ETL319_SPC0066_Process Flow Diagram_V1.0_BEL_January 2018 240118)	09/02/2018

Table S1.2 Operating techniques		
Description	Parts	Date Received
	Drainage Flow Diagram (reference: ETL00312_Drainage Flow Diagram_V1.0_BEL_January 2018 220118)	
Additional information	Details on SCADA alarm system (email reference: 'Application Bespoke - SCADA Alarm Manual', report reference: Application Bespoke - SCADA Error list_Chichester_Mika_TG_180129)	20/02/2018
Additional information	Accident Management Plan and referenced supporting documentation (reference: BEL-OD-03 Accident Management Plan V2 22.02.18 F).	22/02/2018
Additional information	Additional BAT Assessment and referenced supporting documentation (reference: EPR-JP3332YL - BAT Assessment comments 23.02.2018 - Final).	23/02/2018
Additional information	Confirmation of biogas interlock procedure (email reference: Application Bespoke Biogas Interlocking Procedure).	06/03/2018
Additional information	BAT confirmation of basic energy requirements (reference: 'Electricity Generation and Consumption Table').	07/03/2018
Additional information	Updated Odour Management Plan and referenced supporting documentation (reference: BEL-OD-04 (Version 5) Odour Management Plan).	08/03/2018
Additional information	Monthly air emission monitoring approach (email reference: Application Bespoke - Gas Engine Emissions Monitoring). Updated site layout (reference: Proposed Site Layout 21443/004).	09/03/2018
Additional information	Procedure for abnormal condition use of CHPs (reference: BEL-PROC-31 (Version 2.3) Procedure to Ensure Short Term Environmental Assessment Levels (EAL) for Oxides of Nitrogen (NOx) are not exceeded in Event of Breakdown of CHP Engine A or downtime of SCR).	15/08/2018
Additional information	Updated Site Layout Plan (reference: Proposed Site Layout 21443/004). Soakaway Location Plan (reference: Access Road Layout & Cross Sections 21443/115 – Rev A).	28/08/2018
Response to Regulation 61 Notice Dated 22/04/2021	Annex 1 Returns Spreadsheet	03/10/2023

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The operator shall install an enclosed biogas flare with a minimum residence time of 0.3 seconds at 1000°C in accordance with Best Available Techniques. The flare must incorporate appropriate flame arrestors to prevent flash back and automatic isolation valves.	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC2	<p>The operator shall submit a written Digestate Management Plan to the Environment Agency for approval. The plan must use operational data to provide:</p> <ul style="list-style-type: none"> an estimate of the liquid and solid fraction of the digestate following separation; and, an estimate of the mass reduction of the material fed into the digesters. <p>Based on calculations, the plan should provide a review of the available digestate storage capacity at the site, and the ability of the site to meet statutory Nitrate Vulnerable Zone requirements, and provide 6 months storage for the liquid digestate.</p>	Within 6 months of issuing the permit or otherwise agreed in writing by the Environment Agency
IC3a	The operator shall compete and make available for inspection all documents which were identified in the Master Document Control File as being produced by April 2018 (reference: BEL-OD-10 Master Document Control File V2.2, dated: 09/03/18).	Completed
IC3b	The operator shall compete and make available for inspection all documents which were identified in the Master Document Control File as being produced by May 2018 (reference: BEL-OD-10 Master Document Control File V2.2, dated: 09/03/18).	Completed
IC3c	The operator shall compete and make available for inspection all documents which were identified in the Master Document Control File as being produced by June 2018 (reference: BEL-OD-10 Master Document Control File V2.2, dated: 09/03/18).	Completed
IC4	<p>The operator shall complete a gap analysis audit of the Environmental Management System (EMS). The findings of this analysis shall be submitted in a report to the Environment Agency for approval.</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).</p> <p>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>	Completed
IC5	<p>The operator shall undertake monitoring of the emissions from CHP engine B. The monitoring shall be undertaken in accordance with the approach stated by the operator (email reference: Application Bespoke - Gas Engine Emissions Monitoring, dated: 09/03/18).</p> <p>The operator shall submit a written report to the Environment Agency detailing the monitoring undertaken and results obtained.</p>	Completed
IC6	The operator will provide the Environment Agency the details of the feed plan and gas production as detailed in the procedure reference BEL-PROC-31 Gas Production under limited operation v1.0.	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC7	<p>The Operator shall undertake air emission monitoring in accordance with the Environment Agency guidance note M2 “Monitoring of stack emissions to air”. The monitoring shall be for oxides of nitrogen (NOx), sulphur dioxide, carbon monoxide and total VOCs from emission points A1 and A2, as defined in table S3.1.</p> <p>The monitoring schedule shall be designed to provide data representative of typical and worst case operating conditions. A reasoned ‘worst case’ for the engines working to the expected maximum capacity is to be agreed with the Environment Agency before monitoring commences.</p> <p>The Operator shall submit a written report to the Environment Agency detailing the monitoring undertaken, the results obtained, and contain a comparison with, and justification for, the data used in the Operators detailed air quality assessment of these emission points.</p> <p>Following completion of the monitoring exercise, the Operator shall use these detailed release data to produce a written report, providing a comparison of the efficiencies for CHP engines A and B.</p>	Within 6 months of issuing the permit or otherwise agreed in writing by the Environment Agency.
Improvement condition for primary containment		
IC8	<p>The operator shall submit a written ‘primary containment plan’ and shall obtain the Environment Agency’s written approval to it. The plan shall contain the results of an inspection and program of works undertaken by a qualified engineer, and shall assess the extent design specification and condition of primary containment systems where polluting liquids and solids are being stored, treated, and/or handled.</p> <p>The plan shall include:</p> <ul style="list-style-type: none"> • an assessment of the physical condition of all primary containment systems (storage and treatment vessels) using a Written Scheme of Examination and their suitability for providing primary containment when subjected to the dynamic and static loads caused by catastrophic tank failure; • a program of works with timescales for the implementation of individual improvement measures necessary to demonstrate that the primary containment is fit for purpose or alternative appropriate measures to ensure all polluting materials will be contained on site; and • a preventative maintenance and inspection regime <p>The plan shall be implemented in accordance with the Environment Agency’s written approval.</p>	15/01/2025 or other date as agreed in writing with the Environment Agency
Improvement condition for secondary containment design		

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC9	<p>The operator shall submit a written 'secondary and tertiary containment plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of an inspection and program of works undertaken by a competent structural engineer, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of secondary and tertiary containment systems where all polluting liquids and solids are being stored, treated, and/or handled.</p> <p>The inspection shall consider, but not be limited to, the storage vessels, bunds, loading and unloading areas, transfer pipework/pumps, temporary storage areas, and liners underlying the site.</p> <p>The plan shall include:</p> <ul style="list-style-type: none"> • an assessment of the physical condition of all secondary and/or tertiary containment systems, using a Written Scheme of Examination and their suitability for providing containment when subjected to the dynamic and static loads caused by catastrophic tank failure; • a program of works with timescales for the implementation of individual improvement measures necessary for the secondary and/or tertiary containment systems to comply with CIRIA C736 (2014) guidance, or equivalent. • a preventative maintenance and inspection regime <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	15/01/2025 or other date as agreed in writing with the Environment Agency
Improvement condition for storage lagoon design including lagoon cover		
IC10	<p>The operator shall submit a written 'storage lagoon plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of an inspection and program of works undertaken by a competent structural engineer, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of the site lagoon(s) where digestate is being stored, treated, and/or handled.</p> <p>The inspection shall consider, but not be limited to, the transfer pipework/pumps, and liners underlying the storage lagoon.</p> <p>The plan shall include:</p> <ul style="list-style-type: none"> • an assessment of the physical condition of the storage lagoon, using a Written Scheme of Examination and the suitability for providing containment when subjected to the dynamic and static loads caused by the digestate; • a program of works with timescales for the implementation of individual improvement measures necessary for the storage lagoon to comply with CIRIA C736 (2014) guidance, or equivalent. • a preventative maintenance and inspection regime • Existing cover arrangements on storage lagoons used to store digestate to minimise odour, ammonia and methane emissions <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	15/01/2025 or other date as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
Improvement condition for operational contingency storage capacity		
IC11	<p>The operator shall provide a written “operational contingency storage plan” and shall obtain the Environment Agency’s written approval to it. The plan shall contain the results of a review of the current storage of digestate produced from site operations. The review shall examine site contingency arrangements in the event of closed landspreading periods, extreme weather conditions, site closure, disease outbreak etc.</p> <p>The contingency 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 – identify companies /permitted waste facilities that would be able to manage the digestate output, taking into account their permits and capacity constraints. <p>The plan shall be implemented in accordance with the Environment Agency’s written approval.</p>	15/01/2025 or other date as agreed in writing with the Environment Agency
Improvement condition for review of abatement plant design		
IC12	<p>The operator shall submit to the Environment Agency a written review report of the design details of the site ventilation system and abatement plant and obtain the Environment Agency’s written approval to it.</p> <p>The report shall include but not limited to:</p> <ol style="list-style-type: none"> a) Ventilation design performance criteria for effective fugitive odorous emission control b) Design of the abatement systems that will ensure compliance with the odour condition 3.3. The report shall include a demonstration (whether by a detailed review of technical papers or by trial results) that all odorous chemical compounds and their loading rates expected in the relevant air streams have been considered in the design; and supporting evidence that the odorous compounds will be controlled and/or abated either by operating techniques or by the proposed abatement systems. c) Design alarms and triggers for each relevant scenario to alert the operator to the malfunction of both ventilation and abatement systems. The report should further list all relevant contingency mitigation actions to minimise risk of elevated odour pollution from the installation linked to each malfunction scenario and detail the actions to restore systems to normal operating conditions for effective odour control. <p>Ventilation and abatement systems should be designed by suitably qualified named engineers who can supervise and sign-off on construction quality assurance.</p>	15/01/2025 or other date as agreed in writing with the Environment Agency
Improvement condition for assessment of methane slip		
IC13	<p>The operator shall establish the methane emissions in the exhaust gas from engines burning biogas and compare these to the manufacturer’s specification and benchmark levels 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 or appropriate benchmark levels are identified.</p>	15/01/2025 or other date as agreed in writing with the Environment Agency

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Chemicals	Operational requirement only
Maize silage	Substantially free of non-vegetable matter

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	Annual throughput shall not exceed 49,875 tonnes (waste feedstock only).
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 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

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 6B on site plan referenced: Proposed Site Layout 21443/004 dated: 28/08/18].	2.132 MWth CHP engine B stack [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	200 mg/m ³ [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m ³ [note 3]			
		Carbon monoxide	1400 mg/m ³			BS EN 15058
		Total VOCs	1000 mg/m ³			BS EN 12619
A2 [Point 6A on site plan referenced: Proposed Site Layout 21443/004 dated: 28/08/18].	2.132 MWth CHP engine A stack [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	200 mg/m ³ [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m ³ [note 3]			
		Carbon monoxide	1400 mg/m ³			BS EN 15058
		Total VOCs	1000 mg/m ³			BS EN 12619
A3 [Point 7 on site plan referenced: Proposed Site Layout 21443/004]	Emergency flare stack [note 4]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	150 mg/m ³	Average over sample period	[note 5]	BS EN 14792
		Carbon monoxide	50 mg/m ³			BS EN 15058

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
dated: 28/08/18].		Total VOCs	10 mg/m ³			BS EN 12619
Backup generator [Point 21 on site plan referenced: Proposed Site Layout 21443/004 dated: 28/08/18].	Backup generator	No parameter set	No limit set	--	--	--
Pressure relief valves on digester 1 [Point 29A] and digester 2 [Point 29B] as shown on site plan referenced: Proposed Site Layout 21443/004 dated: 28/08/18].	Digesters 1 & 2	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Auxiliary boiler [Point 28A on site plan referenced: Proposed Site Layout 21443/004, dated: 28/08/18].	0.567 MWth Auxiliary boiler oil fired	No parameter set	No limit set	--	Record of operating hours	--
Vent from tanks	Oil/fuel storage tanks	No parameter set	No limit set	--	--	--
<p>Note 1 - These emission limits are based on normal operating conditions and load - temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 5%(for gas engines burning biogas and oxygen 3% (for medium combustion plants other than engines and gas turbines burning biogas).</p> <p>Note 2 – This emission limit applies until 31 December 2029, unless the gas engine is replaced.</p> <p>Note 3 – This emission limit applies from 1 January 2030, unless otherwise advised by the Environment Agency.</p> <p>Note 4 - These emission limits are based on normal operating conditions and load - temperature 0°C (273K); pressure: 101.3 kPa and oxygen 3%.</p> <p>Note 5 - Following commissioning, monitoring to be undertaken in the event the emergency flare has been operational for more than 10 per cent of a year (876 hours). Record of operating hours to be submitted annually to the Environment Agency.</p>						

Table S3.2 Point source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
Soakaway located south west of the permit boundary (as shown on site plan reference: Access Road Layout & Cross Sections 21443/115 – Rev A, received: 28/08/18)	Uncontaminated site surface water from the access road.	--	--	--	--	--

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Digester feed (digestion process)	pH	As described in 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	
	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			

Digester(s) and storage tank(s)	Integrity checks	Weekly	Visual assessment	In accordance with design specification and tank integrity checks.
Digester(s)	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; Digester(s) and storage tank(s)	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 stack(s)	VOCs including methane	Annually	BS EN 12619	Total annual VOCs emissions from the CHP engine(s) to be calculated and submitted to the Environment Agency.

	Exhaust gas temperature		Traceable to National Standards	
	Exhaust gas pressure		Traceable to National Standards	
	Exhaust gas water vapour content		BS EN 14790-1	Unless gas is dried before analysis of emissions.
	Exhaust gas oxygen		BS EN 14789	
	Exhaust gas flow		BS EN 16911-1	
Meteorological conditions	Wind speed, air temperature, wind direction	Continuous	Method as specified in management system	<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	<p>Recorded duration and frequency.</p> <p>Recording using a SCADA system or similar system</p>	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.
	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</p>

				<p>trained/qualified personnel.</p> <p>Inspection, calibration and validation report. In accordance with industry Approved Code of Practice</p>
Storage lagoons and storage tanks	Volume	Daily	Visual or flow metre measurement	<p>750 mm freeboard must be maintained for storage lagoons.</p> <p>Records of volume must be maintained.</p>
Carbon filters	Carbon bed temperature – inlet and outlet	Continuous	Temperature probe	<p>Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations</p> <p>Carbon filter(s) to be replaced in accordance with manufacturer's recommendations</p> <p>Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.</p>
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	Moisture or humidity	Daily	Moisture meter	
	Back pressure	Weekly	Recognised industry method	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling	Action levels to be agreed on completion of IC12 as approved in writing by the

			NIOSH 6013 for analysis	Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Ammonia – inlet	Every 6 months or as agreed in writing by the Environment Agency.	EN ISO 21877	Action levels to be agreed on completion of IC12 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Odour concentration – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	BS EN 13725	Action levels to be agreed on completion of IC12 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air from CHP engines Parameters as required by condition 3.5.1.	A1, A2	Every 12 months	1 January
Process monitoring – digester tank integrity Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	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 S3.3	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 S3.3	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 S3.3	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 S3.3	Every 12 months	1 January
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Table S4.2 Annual production/treatment	
Parameter	Units
Electricity generated	MWh
Biomethane generated	tonnes or m ³
Liquid digestate	tonnes or m ³
Solid digestate	tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes or m ³
Energy usage	Annually	MWh
Raw material usage	Annually	tonnes or m ³
Emergency flare operation	Annually	hours
Electricity exported	Annually	Hours
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	15//01/2024
Process monitoring	Form process 1 or other form as agreed in writing by the Environment Agency	15//01/2024
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	15//01/2024
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	15//01/2024
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	15//01/2024
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.

“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:

- a) no liquids will run off the surface otherwise than via the system
- b) 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:

- a) 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
- b) 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.

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civil • structural • environmental • surveying

Date: Jan 2018
Drawn by: GJM
Checked by: GJM

Project:
Farm Renewables

AD Plant,
Broadley Copse, Downs Road,
Chichester, PO18 9BT

Drawing Title:
Permit Boundary Plan

Scale: U.K.: 1:500 (A1)
Date: Jan 2018
Drawing No: 21443 / 2010

Sheet: 1 of 1
Priority: CMJ

Permit number
EPR/JP3332YL

Annex 1 of MCP

1. Rated thermal input (MW) of the medium combustion plant.	2.132 MWth X2
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	2 combined heat and power (CHP) engines with an aggregated thermal input of 4.264 MWth
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Biogas
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	Original permit issued 20/03/2018.
5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code).	35.11
6. Expected number of annual operating hours of the medium combustion plant and average load in use.	8322 hours at an average load of 700kW
7. Where the option of exemption under Article 6(3) or Article 6(8) is used, a declaration signed by the operator that the medium combustion plant will not be operated more than the number of hours referred to in those paragraphs.	n/a
8. Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.	Operator: Broadley Energy Limited Registered Address: The Old School, High Street, Stretham, Ely, CB6 3LD Plant Location: Broadley Copse Farm, Downs Road, Funtington, Chichester, West Sussex, PO18 9BT

END OF PERMIT