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Resources**  
Wales

## **Permit with introductory note**

The Environmental Permitting (England & Wales) Regulations 2016

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**Bryn Power Limited**

**Gelliargwellt Farm  
Gelligaer  
Hengoed  
CF82 8FY**

Permit number

**EPR/ AB3092ZE**

# Gelliargwellt Farm Anaerobic Digester Facility

## Permit number EPR/ AB3092ZE

### Introductory note

#### **This introductory note does not form a part of the permit**

The main features of the permit are as follows.

This permit allows the operator to carry out anaerobic digestion of wastes and the combustion of the resultant biogas. Permitted wastes are non-hazardous biodegradable wastes including those controlled by the Animal-By-Products Regulations (ABPR). Hazardous wastes are not permitted. The total permitted annual throughput is 35,000 tonnes a year.

Renewable energy is generated using the resultant biogas through two combined heat and power (CHP) engines (1.6 MW<sub>th</sub> and 1.4 MW<sub>th</sub>). Liquid and solid residues are recovered to agricultural land as a biofertiliser.

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

| Status log of the permit                                 |                         |   |
|--|-------------------------|---|
| Description  | Date                    | Comments  |
| Application<br>EPR/PB3590HA/A001                         | Duly made<br>11/09/15   | Application for an Anaerobic Digestion Facility.  |
| Schedule 5 Notice request for information                | 07/10/15                | Request for detailed site plan  |
| Response received  | 23/10/15                | Plan provided   |
| Further information received                             | 19/11/15                | Wording of amendments to Management Plan.   |
| Further information received                             | 04/12/15                | Confirmation D15 code be included in the AD permit and removed from the IVC permit.   |
| EPR/AB3092ZE/A001  | 21/01/16                | Permit issued to Bryn Power Limited. Please note that due to an internal system change, the permit reference was updated from EPR/ PB3590HA to EPR/AB3092ZE prior to issue. |
| Variation Application<br>EPR/AB3092ZE/V002<br>PAN-003431 | Submitted<br>02/10/2018 | Application to add CHP engine, vary emission limits, and change permit boundary.  |
| Variation Application<br>EPR/AB3092ZE/V002<br>withdrawn  | December<br>2018        | Application withdrawn by operator following dialogue with regulator   |

|   |  |  |
|---|--|--|
| Variation Application<br>PAN-005433<br>EPR/AB3092ZE/V003      | Duly Made<br>14/11/2019                        | Application to add CHP engine, vary emission limits, and increase permitted area. Note: Application made 7 <sup>th</sup> May 2019, but in agreement with operator, put on hold until part surrender PAN-007149 also submitted as inter-related |
| Part Surrender Application<br>PAN-007149<br>EPR/AB3092ZE/S004 | Duly Made<br>17/10/2019                        | Part surrender application to remove three small land areas from permit  |
| Additional information requested PAN-007149                   | 30/09/2019                                     | Requested changes to site plan and clarification to site condition report  |
| Additional information requested PAN-005433                   | 30/09/2019                                     | Requested changes to application form, supporting technical information, and OPRA charging information   |
| Additional information received PAN-007149                    | 17/10/2019                                     | Revised site plan and site condition report  |
| Additional information received PAN-005433                    | 08/11/2019,<br>12/11/2019<br>and<br>14/11/2019 | Revised Form A, Form C2, C3, F1, Site Plan, Site Condition Report and OPRA charging sheet. Submission of Non-Technical Summary and air dispersion modelling data files.  |
| Schedule 5 Notice request for information PAN-005433          | 05/12/19                                       | Request for detailed information on measures taken to control engine VOC emissions, and various technical clarifications to information in application   |
| Part surrender determined EPR/AB3092ZE/S004                   | 18/11/2019                                     | Part surrender issued  |
| Schedule 5 Response received PAN-005433                       | 14/01/20                                       | Information provided in response to Schedule 5 Notice  |
| Variation EPR/AB3092ZE/V003                                   | 11/02/20                                       | Variation issued   |

End of introductory note

# Permit

The Environmental Permitting (England and Wales) Regulations 2016

**Permit number**  
**EPR/ AB3092ZE**

This is the consolidated permit referred to in the variation and consolidation notice for application PAN-005433 authorising,

**Bryn Power Limited** (“the operator”),

whose registered office is

**Gelliargwellt Farm**  
**Gelligaer**  
**Hengoed**  
**CF82 8FY**

company registration number **07943843**

to operate an installation at

**Gelliargwellt Farm**  
**Gelligaer**  
**Hengoed**  
**CF82 8FY**

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

| Name           | Date              |
|----------------|-------------------|
| <b>H Noble</b> | <b>11/02/2020</b> |

Authorised on behalf of Natural Resources Wales

# 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 recovered with a high level of energy efficiency and 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 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 (a) 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 Natural Resources Wales.
- (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales 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 Natural Resources Wales.
- 2.3.2 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 table(s) S2.1; and
  - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.3 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.

2.3.4 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

## **2.4 Pre-operational conditions**

2.4.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.3 have been completed.

## **2.5 Improvement programme**

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.4 by the date specified in that table unless otherwise agreed in writing by Natural Resources Wales.
- 2.4.2 Except in the case of an improvement which consists only of a submission to Natural Resources Wales, the operator shall notify Natural Resources Wales 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 Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales 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 Natural Resources Wales.

- 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.

### **3.3 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 Natural Resources Wales, 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 Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
  - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

### **3.5 Monitoring**

- 3.5.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, 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 specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by Natural Resources Wales.
- 3.3.4 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 Natural Resources Wales.

### **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) if notified by Natural Resources Wales, submit to Natural Resources Wales for approval within the period specified, a pests management plan which identifies and minimises risks of pollution, hazard or annoyance from pests;
- (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by Natural resources Wales

## **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 Natural Resources Wales, 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 Natural Resources Wales.

### **4.2 Reporting**

4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) 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 Natural Resources Wales, 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 Natural Resources Wales, 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 Natural Resources Wales using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

### 4.3 Notifications

- 4.3.1 (a) In the event 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 Natural Resources Wales,
  - (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) in the event of a breach of any permit condition the operator must immediately—
- (i) inform Natural Resources Wales, and
  - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 [(a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) Natural Resources Wales shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 Natural Resources Wales shall be given at least 14 days notice before implementation of any part of the site closure plan.

## 4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately, in which case it may be provided by telephone.

# Schedule 1 - Operations

**Table S1.1 activities**

| Activity reference | Activity listed in Schedule 1 of the EP Regulations   | Description of specified activity and WFD Annex I and II operations  | Limits of specified activity   |
|--------------------|---|--|--|
| A1                 | S5.4A(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 one or more of the following activities:<br>Biological Treatment | Anaerobic Digestion (with a capacity exceeding 100 tonnes per day) of permitted waste followed by burning of biogas produced from the process.<br><br>R3: Recycling/reclamation of organic substances which are not used as solvents<br><br>R13: Storage of waste pending any of the operations numbered R1 to R3 (excluding temporary storage, pending collection, on the site where it was produced) | Anaerobic Digestion of wastes including pasteurisation and chemical addition.<br><br>Wastes as specified in table S2.2<br><br>Pre-treatment of waste including shredding, sorting, compaction, bailing, mixing and maceration.<br><br>Gas storage and drying.<br><br>Treatment of digestate including screening to remove plastic residues, centrifuge or pressing, addition of thickening agents (polymers) or drying.<br><br>Use of pressure valves to protect the integrity of the plant. Such systems should not be used routinely to vent unburnt biogas.<br><br>All food waste to be stored and treated indoors on an impermeable surface with sealed drainage, surrounded by a bund with a capacity of at least 110% of the largest vessel or 25% of the total tankage volume (whichever is highest).<br><br>Digestate shall be stored within covered containers or covered lagoons and |

**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   |
|-------------------------------------|---|---|--|
|                                     |   |   | Should be of a design and capacity fit for purpose.  |
|                                     |   |   | All biogas condensate shall be discharged into a sealed drainage system.   |
|                                     |   |   | From receipt of permitted waste through to its digestion and recovery of by-products from the installation.  |
|                                     |   | D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced) | <p>Relating to the D15 activity:</p> <p>-Segregated food waste only.</p> <p>-Waste codes as in Table S2.1.</p> <p>-No more than 30 tonnes at any one time.</p> <p>-All segregated food waste to be bulked up ready for transfer off site for recovery (under the R13 code) or disposal under the D15. No mixing of segregated food waste with green waste prior to this operation.</p> |
| <b>Directly Associated Activity</b> |   |   |  |
| A2                                  | Biogas storage and supply system                    | Storage of biogas arising from the Anaerobic Digestion Plant  | From receipt of gas into the holders to supply to the listed activity  |
| A3                                  | Emergency flare operation                           | <p>Use of an auxiliary flare required only for periods of breakdown or maintenance of the CHP engines.</p> <p>D10: Incineration on land</p>       | From receipt of biogas to the release of combustion products from the flare stack.   |
| A4                                  | R1: Burning of waste as a fuel                      | Combustion of biogas in two combined heat and power (CHP) engines.  | From receipt of biogas produced on site to combustion via CHP engines with the release of combustion gases   |

**Table S1.2 Operating techniques**

| <b>Description</b>   | <b>Parts</b>   | <b>Date Received</b>                               |
|--|--|--|
| Technical Guidance Note<br>EPR 1: How to comply<br>with your environmental<br>permit | All  | NA   |
| Environmental<br>Management System<br>Document reference: BPL-<br>EPA-2015-MSrevA    | All  | 25/11/15   |
| Odour management plan  | All  | 19/01/17   |
| Variation application and<br>revised/further information<br>provided                 | Form C1 and C2 and supporting information including<br>details relating to engine and their emissions, air<br>dispersion modelling and environmental management<br>system. | 07/05/19,<br>08/11/19,<br>12/11/19 and<br>14/11/19 |
| Schedule 5 response  | Details relating to engine maintenance, emissions<br>control and minimisation  | 14/01/20   |

**Table S1.3 Pre-operational measures**

| <b>Reference</b>   | <b>Pre-operational measures</b>  |
|--------------------|--|
| POM1<br>(COMPLETE) | A finalised copy of the Environment Management System shall be submitted to Natural resources Wales for written approval prior to operations commencing on site.   |
| POM2<br>(COMPLETE) | Prior to the commencement of commissioning; the Operator shall provide a written commissioning plan, including timelines for completion, for approval by Natural Resources Wales. The commissioning plan shall include the expected emissions to the environment during the different stages of commissioning, the expected durations of commissioning activities and the actions to be taken to protect the environment and report to Natural Resources Wales in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved. |
| POM3<br>(COMPLETE) | Prior to commencement of operations the operator shall install the recommended noise attenuation measures as referenced in section seven of the Hunter Acoustics Environmental Noise Assessment Report – Ref 3781/Nia1_Rev1. This is to ensure that the installation operates within the proposed day time and night time environmental noise limits, at the four nearest sensitive receptors as specified in section 5 the report.  |

**Table S1.4 Improvement programme requirements**

| Reference | Requirement   | Date   |
|-----------|---|--|
| IC1       | <p>Following successful commissioning of the AD Plant, the Operator shall undertake noise monitoring at the four nearest local receptors. This shall include:</p> <ul style="list-style-type: none"> <li>• A full noise monitoring survey and assessment meeting the BS4142:2014 standard</li> <li>• 1/3<sup>rd</sup> octave and narrow band (FFT) measurements to identify any tonal elements or low frequency noise</li> </ul> <p>Upon completion of the work, a written report shall be submitted to Natural Resources Wales. The report shall make reference to the Environmental Noise Limits proposed in Section 5 of the Hunter Acoustics Environmental Noise Assessment Report – Ref 3781/Nia1_Rev1. If rating levels associated with the AD Plant are detected which are likely to cause adverse impact at sensitive receptors, the report shall include an assessment of the most suitable abatement techniques, an estimate of the cost and a proposed timetable for their installation.</p> | Complete   |
| IC2       | <p>The Operator shall increase the stack height of the emission points A1 and A5 (CHP engine exhausts) to at least 10m above ground level, as identified as necessary in their permit variation V003 air quality assessment (dated February 2019) to ensure sufficient dispersion of pollutants from these sources. The Operator should obtain any necessary permissions, consents etc necessary to undertake the work, which shall be completed as soon as possible, in any case within 6 months of permit variation V003 issue.</p> <p>In the event that a height extension is not possible for any reason, the Operator will need to identify and implement alternative options with at least equal emissions impact reduction. In this case the operator shall agree such options and a plan for their implementation in writing, with Natural Resources Wales, within the time allocated for IC2.</p>  | 6 months from date of permit variation V003 issue. |

## Schedule 2 - Waste types, raw materials and fuels

**Table S2.1 Permitted waste types and quantities for Bryn Power Anaerobic Digestion Facility**

| Maximum quantity | The total quantity of waste accepted at the site for Anaerobic Digestion shall not exceed 35,000 tonnes per year.   |
|------------------|---|
| Waste code       | Description   |
| <b>02</b>        | <b>WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING</b>   |
| <b>02 01</b>     | <b>wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>  |
| 02 01 01         | sludges from washing and cleaning   |
| 02 01 02         | animal-tissue waste   |
| 02 01 03         | plant-tissue waste  |
| 02 01 06         | animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site  |
| 02 01 07         | wastes from forestry  |
| 02 01 99         | wastes not otherwise specified – <i>residues from commercial mushroom cultivation only.</i>   |
| <b>02 02</b>     | <b>wastes from the preparation and processing of meat, fish and other foods of animal origin</b>  |
| 02 02 01         | sludges from washing and cleaning   |
| 02 02 02         | animal-tissue waste   |
| 02 02 03         | materials unsuitable for consumption or processing  |
| 02 02 04         | sludges from on-site effluent treatment   |
| 02 02 99         | wastes not otherwise specified – <i>Sludges from gelatine production and animal gut contents only.</i>  |
| <b>02 03</b>     | <b>wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation</b>   |
| 02 03 01         | sludges from washing, cleaning, peeling, centrifuging and separation  |
| 02 03 04         | materials unsuitable for consumption or processing  |
| 02 03 05         | sludges from on-site effluent treatment   |
| 02 03 99         | wastes not otherwise specified – <i>Sludge from production of edible fats and oils, tinning process residues, tobacco dust, veins and sludge, defective cigarette batches, residues from processing coffee, tea and cocoa, oilseed residues and Glycerol residue from biodiesel manufacture from non waste vegetable oils only.</i> |
| <b>02 04</b>     | <b>wastes from sugar processing</b>   |
| 02 04 03         | sludges from on-site effluent treatment   |
| 02 04 99         | wastes not otherwise specified – <i>Biological sludge only.</i>   |
| <b>02 05</b>     | <b>wastes from the dairy products industry</b>  |
| 02 05 01         | materials unsuitable for consumption or processing  |
| 02 05 02         | sludges from on-site effluent treatment   |
| <b>02 06</b>     | <b>wastes from the baking and confectionery industry</b>  |
| 02 06 01         | materials unsuitable for consumption or processing  |
| 02 06 03         | sludges from on-site effluent treatment   |
| <b>02 07</b>     | <b>wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)</b>   |
| 02 07 01         | wastes from washing, cleaning and mechanical reduction of raw materials   |



**Table S2.1 Permitted waste types and quantities for Bryn Power Anaerobic Digestion Facility**

|                   |  |
|-------------------|--|
| Maximum quantity  | The total quantity of waste accepted at the site for Anaerobic Digestion shall not exceed 35,000 tonnes per year.  |
| <b>Waste code</b> | <b>Description</b>   |
| 02 07 02          | wastes from spirits distillation   |
| 02 07 04          | materials unsuitable for consumption or processing   |
| 02 07 05          | sludges from on-site effluent treatment  |
| 02 07 99          | wastes not otherwise specified – <i>malt husks, sprouts and dust, spent sludge from breweries, sludge from wine production, yeast and yeast like residues only.</i>            |
| <b>03</b>         | <b>WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD</b>   |
| <b>03 03</b>      | <b>wastes from pulp, paper and cardboard production and processing</b>   |
| 03 03 02          | green liquor sludge (from recovery of cooking liquor)  |
| 03 03 08          | wastes from sorting of paper and cardboard destined for recycling  |
| 03 03 10          | fibre rejects, fibre-, filler- and coating-sludges from mechanical separation  |
| <b>04</b>         | <b>WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES</b>   |
| <b>04 01</b>      | <b>wastes from the leather and fur industry</b>  |
| 04 01 01          | fleshings and lime split wastes  |
| 04 01 05          | tanning liquor free of chromium  |
| 04 01 07          | sludges, in particular from on-site effluent treatment free of chromium  |
| <b>04 02</b>      | <b>wastes from the textile industry</b>  |
| 04 02 10          | organic matter from natural products (for example grease, wax)   |
| <b>07</b>         | <b>WASTES FROM ORGANIC CHEMICAL PROCESSES</b>  |
| <b>07 01</b>      | <b>wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals</b>  |
| 07 01 08          | other still bottoms and reaction residues – <i>Glycerol only</i>   |
| <b>15</b>         | <b>WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED</b>  |
| <b>15 01</b>      | <b>packaging (including separately collected municipal packaging waste)</b>  |
| 15 01 01          | paper and cardboard packaging  |
| 15 01 02          | plastic packaging – <i>biodegradable plastic packaging that must meet BS EN 13432 only</i>   |
| 15 01 03          | wooden packaging   |
| 15 01 05          | composite packaging  |
| <b>19</b>         | <b>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</b> |
| <b>19 02</b>      | <b>wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)</b>  |
| 19 02 03          | premixed wastes composed only of non-hazardous wastes  |
| 19 02 06          | sludges from physico/chemical treatment other than those mentioned in 19 02 05   |
| 19 02 10          | combustible wastes other than those mentioned in 19 02 08 and 19 02 09 – <i>Glycerol only.</i>   |
| <b>19 05</b>      | <b>wastes from aerobic treatment of solid wastes</b>   |
| 19 05 01          | non-composted fraction of municipal and similar wastes   |
| 19 05 02          | non-composted fraction of animal and vegetable waste   |
| 19 05 03          | off-specification compost  |
| 19 05 99          | wastes not otherwise specified – <i>liquor /leachate from aerobic composting of municipal, animal and vegetable wastes only.</i>   |

**Table S2.1 Permitted waste types and quantities for Bryn Power Anaerobic Digestion Facility**

|                   |  |
|-------------------|--|
| Maximum quantity  | The total quantity of waste accepted at the site for Anaerobic Digestion shall not exceed 35,000 tonnes per year.                              |
| <b>Waste code</b> | <b>Description</b>   |
| <b>19 06</b>      | <b>wastes from anaerobic treatment of waste</b>  |
| 19 06 03          | liquor from anaerobic treatment of municipal waste   |
| 19 06 04          | digestate from anaerobic treatment of municipal waste  |
| 19 06 05          | liquor from anaerobic treatment of animal and vegetable waste  |
| 19 06 06          | digestate from anaerobic treatment of animal and vegetable waste   |
| <b>19 08</b>      | <b>wastes from waste water treatment plants not otherwise specified</b>  |
| 19 08 09          | grease and oil mixture from oil/water separation containing only edible oil and fats   |
| 19 08 12          | sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11   |
| <b>19 12</b>      | <b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>          |
| 19 12 12          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11                      |
| <b>20</b>         | <b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b> |
| <b>20 01</b>      | <b>separately collected fractions (except 15 01)</b>   |
| 20 01 01          | paper and cardboard  |
| 20 01 08          | biodegradable kitchen and canteen waste  |
| 20 01 25          | edible oil and fat   |
| 20 01 38          | wood other than that mentioned in 20 01 37   |
| <b>20 02</b>      | <b>garden and park wastes (including cemetery waste)</b>   |
| 20 02 01          | biodegradable waste  |
| <b>20 03</b>      | <b>other municipal wastes</b>  |
| 20 03 01          | mixed municipal waste  |
| 20 03 02          | waste from markets   |

## Schedule 3 – Emissions and monitoring

**Table S3.1 Point source emissions to air – emission limits and monitoring requirements**

| Emission point ref. & location             | Parameter   | Source                        | Limit (including unit) | Reference period | Monitoring frequency | Monitoring standard or method          |
|--|---|-------------------------------|------------------------|------------------|----------------------|--|
| A1 CHP Exhaust (Jenbacher Engine)<br>Note1 | Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> ) | CHP1                          | 500mg/m <sup>3</sup>   | Hourly mean      | Annually             | BS EN 14792                            |
|  | Carbon Monoxide   |                               | 1400mg/m <sup>3</sup>  |                  |                      | BS EN 15058                            |
|  | Sulphur Dioxide   |                               | 350mg/m <sup>3</sup>   |                  |                      | BS EN 14791                            |
|  | VOC's   |                               | 2000mg/m <sup>3</sup>  |                  |                      | BS EN 12619                            |
| A2 Flare Stack<br>Note1, 2                 | Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> ) | Emergency Flare               | 150mg/m <sup>3</sup>   | Hourly mean      | Annually             | BS EN 14792                            |
|  | Carbon Monoxide   |                               | 50mg/m <sup>3</sup>    |                  |                      | BS EN 15058                            |
|  | Total Volatile Organic Compounds (VOCs)                                   |                               | 10mg/m <sup>3</sup>    |                  |                      | BS EN 12619                            |
| A3 Pressure relief valves                  | No parameters set   | Digesting tank, Biogas holder | No limit set           | -                | -                    | -                                      |
| A4 Boiler Exhaust                          | No parameters set   | Boiler                        | No limit set           | -                | -                    | Permanent sampling access not required |
| A5 CHP Exhaust (Edina Engine)<br>Note1     | Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> ) | CHP2                          | 500mg/m <sup>3</sup>   | Hourly mean      | Annually             | BS EN 14792                            |
|  | Carbon Monoxide   |                               | 1400mg/m <sup>3</sup>  |                  |                      | BS EN 15058                            |
|  | Sulphur Dioxide   |                               | 350mg/m <sup>3</sup>   |                  |                      | BS EN 14791                            |
|  | VOC's   |                               | 2000mg/m <sup>3</sup>  |                  |                      | BS EN 12619                            |

Note 1: The measurement uncertainty specified in LFTGN08 v2 2010 shall apply

Note 2: Monitoring of flare emissions is only necessary when the flare operated in excess of 10% of the time

**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 (including unit) | Reference Period | Monitoring frequency | Monitoring standard or method |
|--|------------------------------|--------------|------------------------|------------------|----------------------|-------------------------------|
| W1 on site plan in schedule 7 emission to soakaway | Uncontaminated surface water | Visual check | –                      | Spot sample      | Before discharge     | None specified                |
|  |                              | Ammonia      | 0.5 ppm                | Spot sample      | Before discharge     | None specified                |

**Table S3.3 Process monitoring requirements**

| Emission point reference or source or description of point of measurement                      | Parameter                                   | Monitoring frequency | Monitoring standard or method                          | Other specifications                 |
|--|---|----------------------|--|--------------------------------------|
| Biogas from digesting tank and biogas holder   | Flow  | Continuous           | In accordance with EU weights and measures regulations | -                                    |
| Biogas from digesting tank, biogas holder and waste reception building                         | Methane, Hydrogen Sulphide & Carbon dioxide | Continuous           | Inline continuous gas monitor                          | -                                    |
| Biogas from digesting tank, biogas holder, waste reception building and external storage areas | Odour                                       | Daily                | Olfactory Monitoring                                   | Odour detection at the site boundary |
| Bund sump and storm water inspection chambers  | Oil/grease and ammonia no >0.5ppm           | Periodically         | Instantaneous ammonia reading                          | -                                    |
| Amount of biogas used by the CHP unit per day  | t/day                                       | Daily                | As agreed in writing with Natural Resources Wales      | -                                    |

## 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 parameters as required by condition 3.5.1    | A1 CHP Exhaust, A5 CHP Exhaust and A2 Flare Stack | Annually         | 1 January     |
| Emissions to water. Parameters as required by condition 3.5.1 | W1  | Every 12 months  | 1 January     |

**Table S4.2: Annual production/treatment**

| Parameter                      | Units          |
|--------------------------------|----------------|
| Biogas produced by AD facility | m <sup>3</sup> |
| Total amount of waste treated  | Tonnes         |

**Table S4.3 Performance parameters**

| Parameter  | Frequency of assessment | Units                     |
|--|-------------------------|---------------------------|
| Power output – Electricity                         | Annually                | MWh                       |
| Energy efficiency                                  |                         | MWh/m <sup>3</sup> biogas |
| Electrical energy exported to the grid             |                         | MWh                       |
| Electrical energy drawn from the grid              |                         | MWh                       |
| Water usage  |                         | m <sup>3</sup>            |
| Operational time of emergency flare                |                         | % of operational time     |
| Amount of biogas combusted in the CHP unit per day |                         | m <sup>3</sup> /day       |

**Table S4.4 Reporting forms**

| Media/parameter        | Reporting format   | Date of form |
|------------------------|--|--------------|
| Air                    | Form Air 1 or other form as agreed in writing by Natural Resources Wales         | 11/02/20     |
| Water discharge        | Form Water 1 or other form as agreed in writing by Natural Resources Wales       | 11/02/20     |
| Performance indicators | Form Performance 1 or other form as agreed in writing by Natural Resources Wales | 11/02/20     |

# 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                  | <b>EPR/AB3092ZE</b>                     |
| Name of operator               | <b>Bryn Power Limited</b>               |
| Location of Facility           | <b>Gelliargwellt Farm (AD Facility)</b> |
| Time and date of the detection |   |

| <b>(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment</b> |  |
|--|--|
| <b>To be notified Immediately</b>  |  |
| 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>(b) Notification requirements for the breach of a permit condition</b> |  |
|---|--|
| <b>To be notified immediately</b>   |  |
| Emission point reference/ source  |  |
| Parameter(s)  |  |
| Limit   |  |
| Measured value and uncertainty  |  |
| Date and time of monitoring   |  |
| 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 |
|  |                     |
|  |                     |
|  |                     |

|   |  |
|---|--|
| <b>(c) In the event 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:</b> |  |
| <b>To be notified immediately</b>   |  |
| 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.  |  |

|                  |  |
|------------------|--|
| <b>Name*</b>     |  |
| <b>Post</b>      |  |
| <b>Signature</b> |  |
| <b>Date</b>      |  |

\* authorised to sign on behalf of the operator

## Schedule 6 - Interpretation

“accident” means an accident that may result in pollution.

“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 Natural Resources Wales 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.

“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 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.

"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.

"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.

"hazardous property" has the meaning in Annex III of the Waste Framework Directive

"hazardous waste" has the meaning given in the Hazardous Waste (Wales) Regulations 2005 (as amended)

"hazardous substance" means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008

"Industrial Emissions Directive" means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

"Pests" means Birds, Vermin and Insects.

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

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

*"Waste code" means the six digit code referable to a type of waste in accordance with the list of wastes established by Commission Decision 2000/532/EC as amended from time to time (the 'List of Wastes Decision') and in relation to hazardous waste, includes the asterisk.*

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

"year" means calendar year ending 31 December.

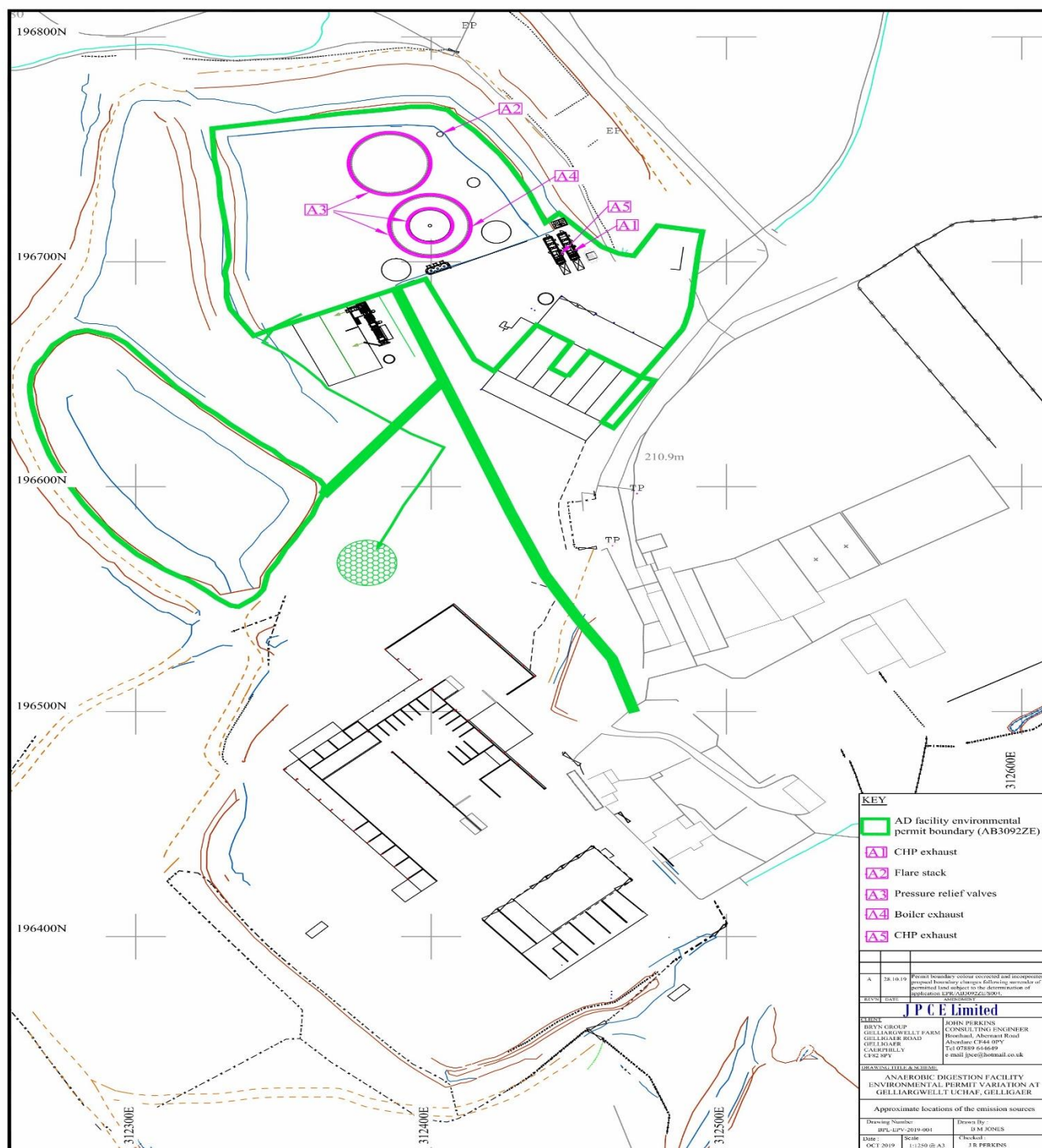
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

- (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 5% dry for liquid 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.



## Schedule 7 - Site plan



**Note: Green hatched area indicates surface water soakaway (part of installation).**

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**END OF PERMIT**