



**Cyfoeth
Naturiol**
Cymru
**Natural
Resources**
Wales

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Agrivert Limited

Parc Stormy Anaerobic Digestion Facility
Stormy Down
Porthcawl
Bridgend
CF33 4RS

Permit number

EPR/AB3191FR

Stormy Down Anaerobic Digestion Facility

Permit number EPR/AB3191FR

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 activities listed to be carried out at a 3MWe Food Waste Anaerobic Digestion (AD) Facility at Stormy Down, Porthcawl. The facility will process and manage up to 75,000 tonnes of biodegradable organic waste per annum (including processing liquids). The facility will comprise the following elements:

- 2 x Primary and 2 x Secondary Digester tanks;
- 1 x Storage tank;
- Pumping containers;
- 3 x Pasteurisation tanks;
- 2 x CHP units with associated ancillary equipment;
- Silage clamp;
- Reception building;
- Bio-filter;
- Site office.

The capacity of the AD facility will be met primarily from food waste collected from households in the local area as well as Powys, Carmarthenshire, Ceredigion and Pembrokeshire. The facility allows authorities flexibility to collect segregated wastes. An appropriate quantity of silage will be delivered to help balance the digester biology. Liquid wastes include compost leachate, waste cooking oils and drinks manufacturing waste as well as rainfall collected from on-site water attenuation. The biogas produced from the waste material will be fed through gas engines, which generate electricity. The electricity is transmitted directly into the National Grid via a high voltage connection. It is anticipated that the facility will generate in the region of 28GWh of electricity per annum.

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

Status log of the permit		
Description	Date	Comments
Application EPR/AB3990HF/A001	Duly made 05/01/16	Application for new bespoke permit to operate an AD facility.
Additional Information Requested	02/12/15	Revised Air Quality Assessment requested.
Information Received	22/12/15	Revised AQ assessment received
Permit determined EPR/AB3191FR	31/05/16	Permit issued

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/AB3191FR

The Natural Resources Body for Wales (“Natural Resources Wales”) authorises,
under regulation 13 of the Environmental Permitting (England and Wales)
Regulations 2010

Agrivert Limited (“the operator”),

Whose registered office is;


**The Stables
Radford
Chipping North
Oxfordshire
OX7 4EB**

Company registration number 02885265

to operate an installation at

**Parc Stormy Anaerobic Digestion Facility
Stormy Down
Porthcawl
Bridgend
Mid Glamorgan
CF33 4RS**

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

Name	Date
	31/05/16

Eirian Macdonald

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 or other approval issued by Natural Resources Wales.

1.2 Energy efficiency

- 1.2.1 For the following activities referenced in schedule 1, table S1.1 (A1 to A11.) 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 For the following activities referenced in schedule 1, table S1.1 (A1 to A11.) 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 For the following activities referenced in schedule 1, table S1.1 (A1 to A11.) 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) For the following activities referenced in schedule 1, table S1.1 (A1 to A11.) 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 S2.2
 - (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.

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 For the following activities referenced in schedule 1, table S1.1 (A1 to A11.) Where a substance is specified in schedule 3 table S3.2 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.
- 3.1.4 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 Monitoring

- 3.3.1 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;
- 3.3.2 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.
- 3.3.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.1 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, S3.2 and S3.3 unless otherwise agreed in writing by Natural Resources Wales.

3.4 Odour

- 3.4.1 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 odour management plan, to prevent or where that is not practicable to minimise the odour.
- 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 odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.5 Noise and vibration

- 3.5.1 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.

3.5.2 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.

3.6 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 For the following activities referenced in schedule 1, table S1.1 (A1 to A11.) 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;
 - (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;
 - (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	S5.4 Part A (1)(b)(1)	<p>Recovery of non-hazardous waste with a capacity exceeding 100 tonnes per day involving</p> <p>(i) biological treatment</p> <p>R3: Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological/transformation processes).</p> <p>R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where the waste is produced).</p>	<p>The total annual throughput - up to 75,000 tonnes of liquid and solid organic waste (including processing liquids):</p> <p>Daily treatment capacity of 350t/day</p> <p>Maximum waste storage is 29,885m³</p> <p>Waste acceptance and pre-treatment will take place within an enclosed building.</p> <p>The waste reception building will be provided with fast acting roller shutter doors providing access and egress to aid the creation of negative air pressure conditions.</p> <p>Bulking and mixing will only take place under instruction from appropriately trained personnel.</p> <p>Exhaust air from the processing/separating and storage areas will pass through abatement prior to discharge to the atmosphere.</p> <p>Activities shall be carried out on an impermeable surface with a sealed drainage system.</p> <p>Where separated fractions do not meet the PAS 110 Quality Protocol, they will continue to be treated as wastes and the procedures for the storage of wastes will be followed.</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
Directly Associated Activity			
A2	Physical pre-treatment of Waste	Mechanical treatment of waste including screening, mixing and blending. D9: Physico-chemical treatment which results in compounds or mixtures that are discarded	2 x bunkers (80m ³) each i.e. 160m ³ in total Mixing Tank (860m ³) Floor Capacity (100m ³) Total Capacity (346m ³)
A3	Combustion of resultant Biogas	The combustion of fuel (biogas & oil) for the purpose of generating electricity and heat for use within the installation & national grid. R1: Use principally as a fuel or other means to generate electricity	Biogas – 10t/day 2 x CHP engines capable of generating 3MW
A4	Biogas Storage	Storage of biogas in double skinned roof digesters	
A5	Gas Flare	Use of an auxiliary flare required only for short periods of breakdown or maintenance. D10: Incineration on land	
A6	Raw Materials Storage	Storage of silage. Storage of lubrication oil used in the CHP engines	Silage storage clamp capacity – 5000 tonnes Lubrication oil tanks capacity – 5000L
A7	Digestate Storage	Storage of Digestate prior to transport off-site to spread on land or for storage off-site	Digestate tanks capacity – 5587m ³
A8	Waste Oil Storage	Storage of used lubrication oil in the CHP engine	Waste oil tank capacity – 2500L
A9	Waste Liquid Storage	Storage of liquids within the reception building or within the silage storage tank	Liquid tanks (2) – 740m ³ Silage leachate tank – 100m ³ Total – 840m ³
A10	Scrubber and Bio-filter	Waste reception building and odour control unit	
A11	Temporary Boiler (Note 1)	The combustion of gas and oil for the purpose of generating heat for use within the installation. R1: Use principally as a fuel or other means to generate electricity	

Note 1 – During the commissioning of the AD site, a temporary boiler will be required to facilitate on-site operations until such time as the site becomes fully operational.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Response to Part B2 of the application, section 3d – management systems. Doc ref: EPB2 Q3d and Attachment 2	13/11/15
Application	Response to Part B2 of the application, section 6a – site plans & boundary. Doc ref: EPB2 Q6 and attachment 4	13/11/15
Application	Response to Part B2 of the application, section 6b – site condition report. Doc ref: EPB2 Q6b & attachment 5	13/11/15
Application	Response to Part B2 of the application, section 6c – non-technical summary. Doc ref: EPB 2 Q6c & attachment 6	13/11/15
Application	Response to Part B3 of the application, Table 3a – technical standards. Doc ref: EPB3 Q3	13/11/15
Application	Response to Part B3 of the application, Table 3b – General requirements (OMP). Doc ref: Attachment 9 (Odour Management Plan)	13/11/15
Application	Response to Part B3 of the application, section 6a & 6b – energy efficiency. Doc ref: EPB3 Q6	13/11/15
Application	Response to Part B3 of the application, section 6e – waste reduction. Doc ref: EPB3 Q6	13/11/15
Application	Response to Part B3 of the application, Appendix 5 (waste procedures) Doc ref's: EPB 3 Appendix 5 and attachment 10 EPB 3 and attachment 4 EPB Q1 Attachment 4 – site plans	13/11/15
Application	Document EPB2 Section 9.4 – BAT assessment	13/11/15
Additional Information Submitted	Drainage Philosophy – Surface water drainage arrangements (Water Management Plan)	10/03/16

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description	Specification
Ferrous Chloride Max Storage – 35m ³	Added periodically to convert sulphides (which are not desirable for the gas engines) into sulphates
Silage Max Storage – 5000 tonnes	Used as a moderating feedstock and to replace waste inputs in the event of an unplanned disruption to deliveries
Biogas Methane (50-65%) Carbon Dioxide (35-40%) Other (<1%)	Combusted to produce electricity and heat. Biogas was selected as a fuel because it is readily available as a by-product from the AD process
Lubrication Oil Mineral Oil (100%)	To reduce friction between moving surfaces in engines
Transformer Oil Highly refined Mineral Oil (100%)	To create a cooling medium in the transformer
Water Max Storage – 235m ³ (5m ³ scrubber tank and 230m ³ from rainwater harvest)	Used in the AD process

Table S2.2 Permitted waste types and quantities

Maximum quantity	The total annual throughput must not exceed 75,000 tonnes per annum
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	Sludge's from washing and cleaning – biodegradable only
02 01 02	Animal-tissue waste
02 01 03	Plant-tissue waste
02 01 06	Animal faeces, urine and manure (Inc. spoiled straw), effluent, collected separately and treated offsite
02 01 07	Wastes from forestry
02 01 99	Spent mushroom compost or discarded mushrooms from commercial mushroom cultivation only
02 02	Wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01	Sludge's from washing and cleaning – biodegradable only
02 02 02	Animal-tissue waste
02 02 03	Materials unsuitable for consumption or processing
02 02 04	Sludge's from on-site effluent treatment – biodegradable only
02 02 99	Sludge's from gelatine production; animal gut contents
02 03	Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea, tobacco preparation and processing, conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 01	Sludge's from washing, cleaning peeling, centrifuging and separation
02 03 04	Materials unsuitable for consumption or processing
02 03 05	Sludge's from on-site effluent treatment – biodegradable only
02 03 99	Sludge's from production of edible fats and oils; seasoning residues; molasses residues; residues from production of potato, corn or rice starch
02 04	Wastes from sugar processing

Table S2.2 Permitted waste types and quantities	
Maximum quantity	The total annual throughput must not exceed 75,000 tonnes per annum
Waste code	Description
02 04 03	Sludge's from on-site effluent – biodegradable only
02 04 99	Wastes from sugar processing – biodegradable wastes only allowed if no chemical agents added and no toxic residues
02 05	Wastes from the dairy product industry
02 05 01	Materials unsuitable for consumption or processing including solid and liquid dairy products, milk, food processing wastes, yogurts, whey
02 05 02	Sludge's from on-site effluent treatment – biodegradable only
02 06	Wastes from the baking and confectionary industry
02 06 01	Materials unsuitable for consumption or processing food condemned, food processing wastes, biscuits, chocolate, yeast, bread, bakery wastes
02 06 03	Sludge's from on-site effluent treatment
02 07	Wastes from the production of alcoholic and non-alcoholic beverages (except tea, coffee and cocoa)
02 07 01	Wastes from washing, cleaning and mechanical reduction for raw materials including brewing waste, food processing waste, fermentation waste
02 07 02	Wastes from spirits distillation including spent grains, fruit and potato pulp, sludge from distilleries
02 07 04	Materials unsuitable for consumption or processing including brewing wastes, food processing waste, fermentation waste, alcoholic drinks, fruit juice
02 07 99	Malt husks, malt sprouts, malt dust; spent grains, hops, yeast and yeast like residues, sludge's from production process
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 01	Wastes from wood processing and production of panels and furniture
03 01 01	Waste bark and cork
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03	Wastes from pulp, paper and cardboard production and processing
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-sludge's from mechanical separation
03 03 11	Sludge's from on-site effluent treatment other than those mentioned in 03 03 10
04	Wastes from the leather, fur and textiles industries
04 01	Wastes from the leather and fur industry
04 01 01	Wastes from the leather industry
04 01 05	Tanning liquor, free of chromium
04 01 07	Sludge's, in particular from on-site effluent treatment, free of chromium
04 02	Waste from the textiles industry
04 02 10	Organic matter from natural products (for example grease, wax)
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	Packaging (including separately collected municipal packaging waste)
15 01 01	Paper and cardboard packaging
15 01 02	Plastic packaging
15 01 03	Wooden packaging
15 01 05	Composite packaging – biodegradable only

Table S2.2 Permitted waste types and quantities	
Maximum quantity	The total annual throughput must not exceed 75,000 tonnes per annum
Waste code	Description
19	Waste from waste management facilities, offsite waste water treatment plant and the preparation of water intended for human consumption and water for industry use
19 02	Wastes from physical/chemical treatment of wastes (including dechromatation, decyanidation, neutralisation)
19 02 03	Premixed wastes composed only of non-hazardous wastes
19 02 06	Sludge's from physico/chemical treatment other than those mentioned in 19 02 05
19 02 10	Combustible waste other than those mentioned in 19 02 08 and 19 02 09 – glycerol not designated as hazardous waste
19 05	Wastes from aerobic treatment of solid waste
19 05 01	Non-composted fraction of municipal and similar wastes
19 05 02	Non-composted fraction of animal and vegetable wastes
19 05 03	Off-specification compost from a source segregated biodegradable waste
19 05 99	Liquor/leachate from a composting process; Digestate from an aerobic digestion process
19 06	Wastes from anaerobic treatment of waste
19 06 03	Liquor from anaerobic treatment of municipal waste
19 06 04	Digestate from anaerobic treatment of municipal waste (source segregated waste only)
19 06 05	Liquor from anaerobic treatment of animal and vegetable waste
19 06 06	Digestate from anaerobic treatment of animal and vegetable waste
19 08	Wastes from waste water treatment plants not otherwise specified
19 08 09	Grease and oil mixture from oil/water separation containing only edible oils and fats
19 08 12	Sludge's from industrial biological treatment of industrial waste water other than those mentioned in 19 08 11
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletizing) not otherwise specified
19 12 12	Other wastes (including mixture of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) not otherwise specified
20 01	Separately collected fractions (except 15 01)
20 01 01	Paper and cardboard
20 01 08	Biodegradable kitchen and canteen waste
20 01 25	Edible oil and fat
20 01 38	Untreated wood where there is no non-biodegradable coating or preserving substance present
20 02	Garden and Park wastes (including cemetery waste)
20 02 01	Biodegradable waste
20 03	Other municipal wastes
20 03 01	Mixed municipal wastes – separately collected bio wastes
20 03 02	Waste from markets – allowed only of source segregated biodegradable fractions e.g. plant material, fruit and vegetable

Schedule 3 – Emissions and monitoring

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

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method		
A1 [Point A1 on site plan in Schedule 7]	CHP Engine 1 <small>(note 1)</small>	NO _x	500 mg/m ³	Hourly Mean	Annual	Monitoring methods used shall be in accordance with Environment Agency document “ <i>Technical Guidance Note M2 Monitoring of stack emissions to air</i> ”.		
		SO ₂	350 mg/m ³					
		nm VOC's	75 mg/m ³					
		VOC	1000 mg/m ³					
		CO	1400 mg/m ³					
A2 [Point A2 on site plan in Schedule 7]	CHP Engine 2 <small>(note 1)</small>	NO _x	500 mg/m ³	Hourly Mean	Annual			
		SO ₂	350 mg/m ³					
		nm VOC's	75 mg/m ³					
		VOC	1000 mg/m ³					
		CO	1400 mg/m ³					
A3 [Point A3 on site plan in Schedule 7]	Flare Stack <small>(Note 2)</small>	NO _x	No limits set		No monitoring required			
		SO ₂						
		nmVOC's						
		VOC						
		CO						
A4 [Point A4 on site plan in Schedule 7]	Temporary auxiliary boiler	NO _x	No limits set		No monitoring required			
		SO ₂						
		nmVOC's						
		VOC						
		CO						
V1 [Point V1 on site plan in Schedule 7]	Primary Digestate Storage Tank	Hydrogen Sulphide	No limits set		No monitoring required			
		Methane						
		CO						
V2 [Point V2 on site plan in Schedule 7]	Substrate storage tank	Hydrogen Sulphide	No limits set		No monitoring required			
		Methane						
		CO						
V3 [Point V3 on site plan in Schedule 7]	Substrate storage tank	Hydrogen Sulphide	No limits set		No monitoring required			
		Methane						
		CO						
V4 [Point V4 on site plan in Schedule 7]	Substrate storage tank	Hydrogen Sulphide	No limits set		No monitoring required			
		Methane						
		CO						
V5 [Point V5 on site plan in]	Digestate Storage Tank	Hydrogen Sulphide	No limits set		No monitoring required			
		Methane						
		CO						

Note 1: These limits are based on normal operating conditions and load – temperature 0°C (273K); 101.3kPa and oxygen: 5 per cent (dry gas). The measurement uncertainty specified in LFTGN08 v2 2010 shall apply.

Note 2: 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 to NRW annually

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
W1 Emergency overflow from rainwater harvest tank	Clean, Un-contaminated surface water run-off from the site.	None Set	None Set			No Monitoring Required

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
Bio filter	Temperature		Temperature Probe	Bio filter shall be regularly checked and maintained to ensure appropriate temperature and moisture content
	Moisture		None specified	
	Thatching / compaction		None specified	
Biogas from digesters	Flow	Continuous	In accordance with EU weights and measures regulations	-
Biogas from digesters	Methane	Continuous	None specified	
	Hydrogen Sulphide			
	Carbon Dioxide			
Digesters, storage tanks and waste reception building	Odour	Daily	Olfactory monitoring	Odour detection at site boundary
Amount of biogas used by the CHP unit per day	t/day	Daily	As agreed in writing with Natural Resources Wales	-

Schedule 4 – Reporting

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 3.3.1.	A1, A2	Annually	1 st Apr 2016

Table S4.2: Annual production/treatment

Parameter	Units
Biogas produced by AD facility	m ³
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 ³ biogas
Electrical Energy exported to the grid		MWh
Electrical Energy drawn from the grid		MWh
Water Usage		m ³
Operational time of flare		% of operational time
Amount of biogas combusted in the CHP unit per day		m ³ /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	01/01/16
Performance Parameters	Form performance 1 or other form as agreed in writing by Natural Resources Wales	01/01/16
Water Usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	01/01/16

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.

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment	
To be notified Immediately	
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 permit condition	
To be notified immediately	
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

(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:	
To be notified immediately	
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.

“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.

“Emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 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 or background concentration 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.

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

“Year” means calendar year ending 31 December.

“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.

“Background concentration” means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“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.

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

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 (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

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 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.

The site plan illustrates the layout of the Waste-to-Energy Plant, including the following labeled components:

- Emission Point A1 & A2** (Chip Gas Engines Inc. Monitoring Point.)
- Emergency Vent V5** Digestate Storage Tank
- Emergency Vent V4** Substrate Storage Tank
- Emergency Vent V3** Substrate Storage Tank
- Emission point A3** (Flare) Inc. Monitoring Point.
- Boiler & Scrubber unit**
- Emergency Vent V2** Substrate Storage Tank
- Boundary of Vehicle Access Area, Site surfaced in concrete & tarmac**
- Emergency Vent V1** Digestate Storage Tank
- Reception Building & Control Panel Rooms for Continuous Monitoring Systems**
- Emission point for A4** Temporary Auxiliary Boiler
- Bore Hole**

4	Revised to Boundary	05/04/10	JAH/1
3	Revised to Power of Attorney	05/03/10	JAH/1
2	Revised to FWS comments	05/11/09	JAH/1
1	Final Issue	12/08/09	JAH/1
Rev	Description	Date	By



Project
Anaerobic Digestion Facility
Parc Stormy
Stormy Down

Title
Site Layout Plan
Permit Boundary,
Point Source & Emissions

Scale @ A1	Scale @ A3	Drawn by/Checked by	Date
1:500		JM	08.06.15