

# Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

---

Lodge Farm Biogas Limited

Lodge Farm Digester  
Lodge Farm  
Commonwood  
Holt  
Wrexham  
LL13 9TE

Permit number  
EPR/DB3736AT

# Lodge Farm Digester

## Permit number EPR/DB3736AT

### 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 throughput is 2,000 tonnes a year with a maximum of 100 tonnes of waste or a combination of waste and non-waste – both liquid and solids – on any one day.

Renewable energy will be generated using the resultant biogas through the combined heat and power engine (CHP) and the liquid and solid digestate shall be recovered to agricultural land as a biofertiliser.

There shall be no point source emissions from site, other than via the stack of the CHP and the flare used on site during periods of maintenance and emergency.

The site has an impermeable surface with sealed drainage to prevent any discharges to ground/surface waters.

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

#### **Status log of the permit**

<b>Description</b>	<b>Date</b>	<b>Comments</b>
Permit determined EPR/DB3736AT	11/09/12	Standard rule permit SR2010 No16 issued to Lodge Farm Biogas Ltd
Application EPR/DB3736AT/V002 (variation)	Duly made 02/04/13	Application to vary from SR2010 No16 to SR2012 No12, including an amended site boundary.
Variation determined EPR/DB3736AT	15/07/13	Varied Tier 3 bespoke permit issued to account for site location and inability to meet standard rule criteria.

End of introductory note

# Permit

The Environmental Permitting (England and Wales) Regulations 2010

**Permit number**

**EPR/DB3737AT**

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

**Lodge Farm Biogas Limited** (“the operator”),

whose registered office is

**Lodge Farm  
Commonwood  
Holt  
Wrexham  
Clwyd  
Wales  
LL13 9TE**

company registration number 07547361

to operate waste operations at

**Lodge Farm Digester  
Lodge Farm  
Commonwood  
Holt  
Wrexham  
LL13 9TE**

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

Name	Date
Stephen Attwood	17 <sup>th</sup> July 2013

Authorised on behalf of the 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 Avoidance, recovery and disposal of wastes produced by the activities

1.2.1 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.

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

## 2 Operations

### 2.1 Permitted activities

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

### 2.2 The site

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

## **2.3 Operating techniques**

- 2.3.1 (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 S2.1 [, S2.2 etc]; and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

## **2.4 Improvement programme**

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by Natural Resources Wales.

# **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 3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.

## **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 Pests**

- 3.5.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

- 3.5.2 The operator shall:

- (a) if notified by 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 from pests;
- (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

### **3.6 Monitoring**

- 3.6.1 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 table S3.1.

- 3.6.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.6.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.6.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by Natural Resources Wales.
- 3.6.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 table S3.1 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 Within one 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.
- 4.2.3 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 tables S4.1 and S4.2;
- (b) for the reporting periods specified in schedule 4 tables S4.1 and S4.2 and using the forms specified in schedule 4 table S4.3 ; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

## **4.3 Notifications**

4.3.1 Natural Resources Wales shall be notified without delay following the detection of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
- (b) the breach of a limit specified in the permit; or
- (c) any significant adverse environmental effects.

4.3.2 Any information provided under condition 4.3.1 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.

4.3.5 In any other case:

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

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

(a) 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.

## **4.4 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 "without delay", in which case it may be provided by telephone.

# Schedule 1 - Operations

Table S1.1 Activities	
Description of activities	Limits of activities
<p>R13: Storage of wastes pending the operations numbered R1, R3 and D10</p> <p>R3: Recycling or reclamation of organic substances that are not used as solvents</p> <p>R1: Use principally as a fuel or other means to generate energy.</p>	<p>Digestive shall be stored within covered containers or covered lagoons and should be of design and capacity fit for purpose. Lagoons shall have a free board of 750 mm</p> <p>Treatment of waste including shredding, sorting, screening, compaction, baling, mixing and maceration shall be carried out in an enclosed building.</p> <p>Digestion of wastes including pasteurisation and chemical addition.</p> <p>Gas cleaning and upgrading to biomethane.</p> <p>Gas storage and drying.</p> <p>All biogas condensate shall be discharged into a sealed drainage system or recirculated back to the digester.</p> <p>Treatment of digestate including screening to remove plastic residues, centrifuge or pressing, addition of thickening agents (polymers) or drying.</p> <p>Composting and maturation of digestate.</p> <p>Wastes that are animal by-products or contain animal by-products must be handled and processed in accordance with any requirements and restrictions imposed by the animal by-products legislation</p> <p>The maximum throughput of animal wastes shall be no more than 10 tonnes per day.</p> <p>The total quantity of waste or a combination of waste and non-waste including solids and liquids accepted at the site shall not exceed 100 tonnes in any one day.</p> <p>Burning of biogas in gas engines, gas turbines, boilers and use in fuel cells.</p>
<p><b>D10:</b> Incineration on land</p>	<p>Use of an auxiliary flare required only for short periods of breakdown or maintenance of facility.</p> <p>Use of pressure release valves to protect the integrity of the plant. Such systems should not be used routinely to vent unburnt biogas.</p> <p>All process plant and equipment shall be commissioned, operated and maintained, and shall be fully documented and recorded, in accordance with the manufacturers recommendations.</p>

*Table continued overleaf*

<b>Table S1.1 Activities</b>	
<b>Description of activities</b>	<b>Limits of activities</b>
	<p>All storage and process tanks shall be located on an impermeable surface with sealed construction joints within a bunded area. The bunded area shall have a capacity at least 110% of the largest vessel or 25% of the total tankage volume, whichever is the greater.</p> <p>All waste solids, liquids and sludges shall be stored and processed on an impermeable surface with a sealed drainage system.</p> <p>Wastes shall be stored or treated within enclosed containers, reactor vessels or enclosed well ventilated buildings fitted with a biofilter and/or scrubbing system.</p> <p>The biofilter must be specifically designed to minimise the release of odour, bioaerosols and microorganisms and maintained for the process undertaken and be fit for purpose.</p> <p>Waste types as specified in Table S2.1.</p>

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
How to comply with your environmental permit	All	N/A
Odour Management Plan (OMP)	All	15/07/13
How to comply with your environmental permit for intensive farming:	Appendix 9 (producing a proposal for covering slurry stores)	N/A
S5.06 Guidance for recovery and disposal of hazardous and non-hazardous waste	All	N/A

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IPC 1	Provide an updated Environmental Management System (EMS) for submission to Natural Resources Wales.	2 months from the date of permit issue or as otherwise agreed in writing with Natural Resources Wales.
IPC 2	Provide lagoon cover, constructed to the standards set out in Appendix 9 (producing a proposal for covering slurry stores) of How to comply with your environmental permit for intensive farming..	6 months from the date of permit issue or as otherwise agreed in writing with Natural Resources Wales.
IPC 3	Kerbing to be installed around reception building and all effluent contained within a sealed drainage system	6 months from the date of permit issue or as otherwise agreed in writing with Natural Resources Wales.
IPC 4	Complete bunding and surface work around all storage and process tanks to comply with Table S1.2 of permit	6 months from the date of permit issue or as otherwise agreed in writing with Natural Resources Wales.

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

**Table S2.1 Permitted waste types and quantities**

<b>Maximum quantity</b>	The maximum permitted waste accepted must not exceed 2,000 tonnes a year
<b>Exclusions</b>	<ul style="list-style-type: none"> <li>hazardous wastes</li> </ul>
<b>Waste code</b>	<b>Description</b>
<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	residues from commercial mushroom cultivation
<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	sludges from gelatine production – animal gut contents
<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 02	wastes from preserving agents
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges from on-site effluent treatment
02 03 99	sludge from production of edible fats and oils – seasoning residues, molasses residues – residues from production of potato, corn or rice starch
<b>02 04</b>	<b>wastes from sugar processing</b>
02 04 03	sludges from on-site effluent treatment
02 04 99	other biodegradable wastes
<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
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	spent grains, hops and whisky filter sheets/cloths, yeast and yeast like residues, sludge from distilleries
<b>03</b>	<b>Wastes from Wood Processing and the Production of Panels and Furniture, Pulp, Paper and Cardboard</b>
03 03 02	green liquor sludge (from recovery of cooking oil)
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 10	fibre rejects and sludges i.e. paper pulp (de-inked only), paper fibre
<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 not containing chromium
<b>04 02</b>	<b>waste 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, formation, supply and use of basic organic chemicals</b>
07 01 08	glycerol
<b>07 02</b>	<b>wastes from the MFSU of plastics, synthetic rubber and man-made fibres</b>
07 02 13	waste plastic
<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 – not allowed if any non-biodegradable coating or preserving substance present. Excludes laminates such as Tetrapaks.
15 01 02	biodegradable plastic packaging – must be independently certified to BS EN 13432
15 01 03	untreated wooden packaging – not allowed if any non-biodegradable coating or preserving substance present.
15 01 05	composite packaging – must conform to BS EN 13432 and not allowed if any non-biodegradable coating or preserving substance present.
<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 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 02 06	sludge types from waste listed in this table, Table 2.3, that have been heat treated only
19 02 10	glycerol not designated as hazardous i.e. excludes EWC code 19 02 08
<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	composting liquors
<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 oils 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	waste types listed in this table (Table S2.2), that have been subjected to mechanical treatment only
<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
<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 – separately collected biowastes
20 03 02	waste from markets – allowed only if source segregated biodegradable fractions e.g. plant material, fruit and vegetables.

## Schedule 3 – Emissions and monitoring

Table 3.1 Point source emissions to air - emission limits and monitoring requirements			
Emission Point and Source	Parameter	Limit (including units)	Monitoring Frequency and Standard or Method
Stacks on engines	Oxides of Nitrogen Carbon monoxide Sulphur dioxide Total volatile organic compounds including methane	500 mg/m <sup>3</sup> 1400 mg/m <sup>3</sup> 350 mg/m <sup>3</sup> 1000 mg/m <sup>3</sup>  Emission levels at Normal Temperature and Pressure and 5%O <sub>2</sub> , unless otherwise agreed in writing by the Agency  Uncertainty allowance as stated in EA guidance LFTGN08 v2 2010.  To ensure effective plume breakaway, minimum stack gas exit velocity shall be no less than 15 m/s or 12 m/s where stack volume flow is less than 0.5 m <sup>3</sup> /s; OR The gas exit temperature shall be no less than 200°C	Annual monitoring  Monitoring equipment, techniques, personnel and organisations employed for the engine stack emissions monitoring programme (including the measurement of exhaust gas temperature) shall have either MCERTS certification or MCERTS accreditation (as appropriate).
Stacks on boilers burning biogas	Oxides of Nitrogen	No limit set	None specified
Auxiliary flare	Oxides of Nitrogen	No limit set	Record of operating hours.
Pressure relief valves	Biogas	No limit set	Weekly visual or remote monitoring to ensure valves are correctly seated.

Table S3.2 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Biofilter/and or scrubbing system	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary

## 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 3.5.1.	As per Table S3.1	Every 12 months	1 January

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

Parameter	Units
Electrical energy produced by Solids CHP plant	KWhrs
Electrical energy produced by Liquids CHP plant	KWhrs
Electrical energy exported to the grid	KWhrs
Electrical energy drawn from the grid	KWhrs
Thermal energy produced by the solids CHP plant for use in the wood pellet plant	KWhrs
Thermal energy produced by the liquids CHP plant for use in the wood pellet plant	KWhrs

**Table S4.3 Reporting forms**

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by Natural Resources Wales	15/07/13
Energy usage	Form energy 1 or other form as agreed in writing by the Agency	15/07/13

# Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

## Part A

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

<b>(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution</b>	
<b>To be notified within 24 hours of detection</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 limit</b>	
<b>To be notified within 24 hours of detection unless otherwise specified below</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	

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

<b>(c) Notification requirements for the detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</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.

*“Annex II”* means Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

*“anaerobic digestion”* means a process of controlled decomposition of biodegradable materials under managed conditions where free oxygen is absent, at temperatures suitable for naturally occurring mesophilic or thermophilic anaerobe and facultative anaerobe bacteria species, which convert the inputs to a methane-rich biogas and whole digestate.

*“animal by-products legislation”* refers to animal by-products which are subject to the requirements and controls in Regulation (EC) 1069/2009 (as amended) and its corresponding implementing Regulation (EC) 142/2011 (as amended). These are enforced through The Animal By-Products (Enforcement) (England) Regulations 2011 and The Animal By-Products (Enforcement) (No2) (Wales) Regulations 2011. You will need to add NI and Scot legislation if QP covers the UK

*“animal by-products”* are defined in Article 3 of Regulation (EC) 1069/2009 as ‘entire bodies or parts of animals, products of animal origin or other products obtained from animals that are not intended for human consumption’. This includes catering waste, used cooking oil, former foodstuffs, butcher and slaughterhouse waste, blood, feathers, wool, hides and skins, fallen stock, pet animals, zoo and circus animals, hunt trophies, manure, ova, embryos and semen not intended for breeding purposes.

*“animal waste”* means any waste consisting of animal matter that has not been processed into food for human consumption

*“application”* means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

*“authorised officer”* means any person authorised by 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.

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

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

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

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

*“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 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 waste”* has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 No.894, the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138), the List of Wastes (England) Regulations 2005 No.895 and the List of Wastes (Wales) Regulations 2005 No. 1820 (W.148).

*“impermeable surface”* means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface, and should be read in conjunction with the term “sealed drainage system” (below).

*“maturation”* means a stage when by agitating and turning the compost it no longer results in reheating and the monitored temperature falls to ambient without the compost being too dry or anaerobic. Phytotoxins that are formed during the 'active' composting phase are metabolised by micro-organisms, which will result in the final material not being harmful to plants. This usually coincides with drop in pH toward neutral, and the conversion of ammonia into nitrates and recolonisation of beneficial micro-organisms. The maturation phase may need active management by turning to prevent the material becoming anaerobic

*“MCERTS”* means the Natural Resources Wales's Monitoring Certification Scheme.

*“Natural Resources Wales”* means the Natural Resources Body for Wales established by article 3 of the Natural Resources Body for Wales (Establishment) Order 2012. The Natural Resources Body for Wales (Functions) Order 2013 transferred the relevant functions of the Countryside Council for Wales, and functions of the Natural Resources Wales and the Forestry Commission in Wales to the Natural Resources Body for Wales.

*“Pests”* means Birds, Vermin and Insects.

*“pollution”* means emissions as a result of human activity which may—

(a) be harmful to human health or the quality of the environment,

(b) cause offence to a human sense,

(c) result in damage to material property, or

(d) impair or interfere with amenities and other legitimate uses of the environment.

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

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

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

(a) no liquid will run off the surface otherwise than via the system;

(b) except where they may lawfully be discharged to foul sewer, all liquids entering the system are collected in a sealed sump.

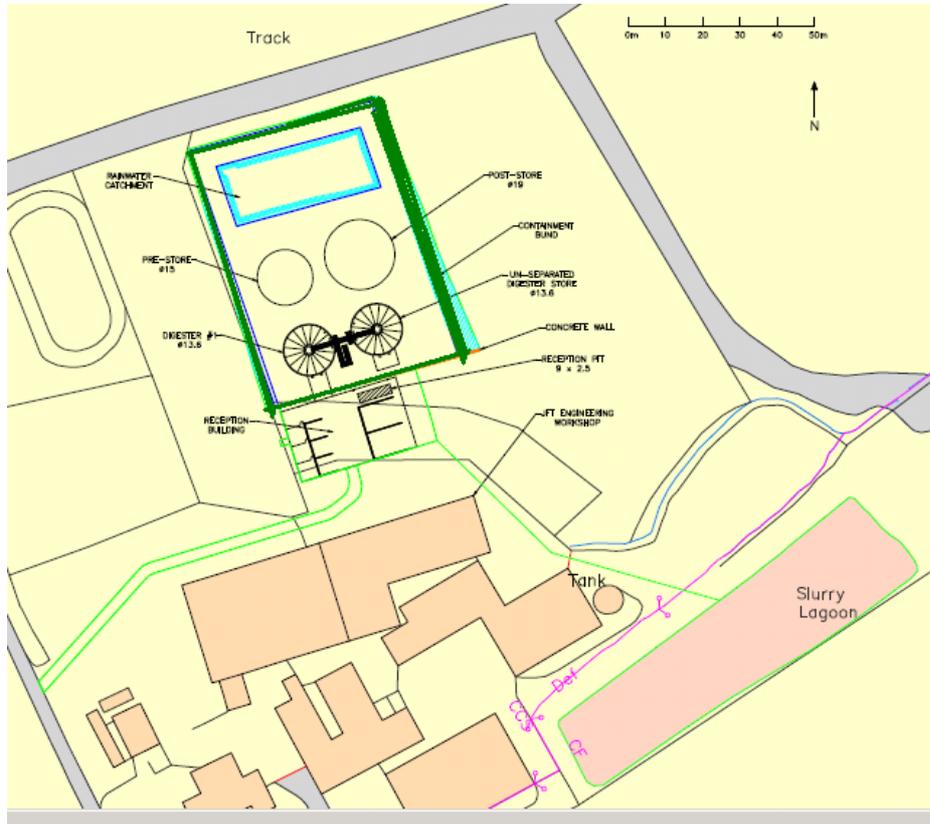
*“secure storage”* means storage where waste cannot escape and members of the public do not have access *“secure storage”* means storage where waste cannot escape and members of the public do not have access to it.

*“site”* means the location where waste storage and treatment activities can take place. *“Waste code”* means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

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

*“year”* means calendar year ending 31 December.

# Schedule 7 - Site plan



© Crown Copyright and database right 2013. Ordnance Survey licence number 100019741.

END OF PERMIT

Permit Number: EPR/DB3736AT

Operator: Lodge Farm Biogas Limited

Facility: Lodge Farm Digester

Form Number: Air1 / 15/07/13

**Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY**

Emission Point	Substance / Parameter	Emission		Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
		Limit Value	Reference Period				
Stacks on engines	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NOx)	500 mg/m <sup>3</sup>	Hourly Average		BS EN 14792		
	Carbon monoxide	1400 mg/m <sup>3</sup>	Hourly Average		BS EN 15058		
	Total Volatile Organic Compounds (VOCs)	1000 mg/m <sup>3</sup>	Hourly Average		BS EN 12619:1999 or BS EN 13526:2002 depending on concentration		
	Sulphur dioxide	350 mg/m <sup>3</sup>	Hourly Average		BS EN 14791		

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed .....  
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/DB3736AT

Operator: Lodge Farm Biogas Limited

Facility: Lodge Farm Digester

Form Number: Energy1 / 15/07/13

**Reporting of Energy Usage for the year YYYY**

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electrical energy produced by CHP plant	MWh		
Electrical energy exported to the grid	MWh		
Electrical energy drawn from the grid	MWh		
Thermal energy produced by the CHP	MWh		
TOTAL			

\* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

Signed .....  
(Authorised to sign as representative of Operator)

Date.....

