

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2007

Brookfields Farm Anaerobic Digester

Lower Reule Bioenergy Ltd
Brookfield Farm
Lower Reule
Church Eaton
Stafford
ST20 0BG

Permit number

EPR/FP3093VJ

Brookfields Farm Anaerobic Digester Permit Number EPR/FP3093VJ

Introductory note

This introductory note does not form a part of the permit

The main features of the facility are as follows. Two vessels for anaerobic digestion with associated liquid waste input tanks together with storage of solid and liquid waste digestate. The solid digestate is stored on an impermeably surfaced area with sealed drainage and the facility discharges rainwater to a swale to regulate discharge of rainwater run off from building roofs to groundwater. The digestion produces a high methane content gas that will be desulphurised and dried and burnt in a spark ignition internal combustion engine to produce electricity and heat.

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

Status Log of the permit

Detail	Date	Response Date
Application EA/EPR/FP3093VJ/A001	Duly made 06/10/09	
Additional Information Received		13/01/2010
Permit determined	26/02/2010	

End of Introductory Note

Permit

Permit number
EPR/FP3093VJ

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2007

Lower Reule Bioenergy Ltd ("the operator"),

whose registered office is

Willow End, Cowley, Stafford, Staffordshire, ST20 0BE

company registration number **06759707**

to operate a facility comprising waste operations at

Brookfields Farm

Lower Reule

Church Eaton

Stafford

ST20 0BG

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

Name	Date
 Ian Sinclair	26 February 2010

Authorised on behalf of the Agency

Conditions

1 Management

1.1 General management

1.1.1 The activities shall be managed and operated:

- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances and closure and those drawn to the attention of the operator as a result of complaints; and
- (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.

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 Accident management plan

1.2.1 The operator shall:

- (a) maintain and implement an accident management plan;
- (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
- (c) make any appropriate changes to the plan identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is 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 2 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 the Agency.

(b) If notified by the Agency that the activities are giving rise to pollution, the operator shall submit to the Agency for approval within the period specified, a revision of any plan specified in schedule 1, table S1.2 or otherwise required under this permit, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Agency.

2.3.2 Waste shall only be accepted if:

- (a) it is of a type and quantity listed in schedule 3 table S3.1 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 hazard classification associated with the waste; and
- (e) the waste code of the waste.

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 4 tables S4.1

3.1.2 The limits given in schedule 4 shall not be exceeded.

3.2 Fugitive emissions of substances

3.2.1 Fugitive emissions of substances (excluding odour, noise and vibration) 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 fugitive emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

- (a) if notified by the Agency that the activities are giving rise to pollution, submit to the Agency for approval within the period specified, a fugitive emissions management plan;
- (b) implement the approved fugitive emissions management plan, from the date of approval, unless otherwise agreed in writing by the Agency.

3.2.3 All liquids, 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 the Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3. The operator shall:

- (a) if notified by the Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Agency for approval within the period specified, an odour management plan;
- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Agency.

3.4 Noise and vibration

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

3.4.2 The operator shall:

- (a) if notified by the Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Agency for approval within the period specified, a noise and vibration management plan;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring specified in the following tables in schedule 4 to this permit:

- (a) point source emissions specified in tables S4.1.

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.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made

4.1.2 All records, plans and the management system required to be maintained by this permit shall be held on the site where practicable, or other location agreed in writing and controlled by the operator.

4.2 Reporting

4.2.1 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency

4.2.2 Within 1 month of the end of each quarter, the operator shall submit to the Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 5 table S5.1;
- (b) 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 The Agency shall be notified without delay following the detection of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission 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 6 to this permit within the time period specified in that schedule.

4.3.3 Where the Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

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

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

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

In any other case:

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

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 7 shall have the meaning given in that schedule.

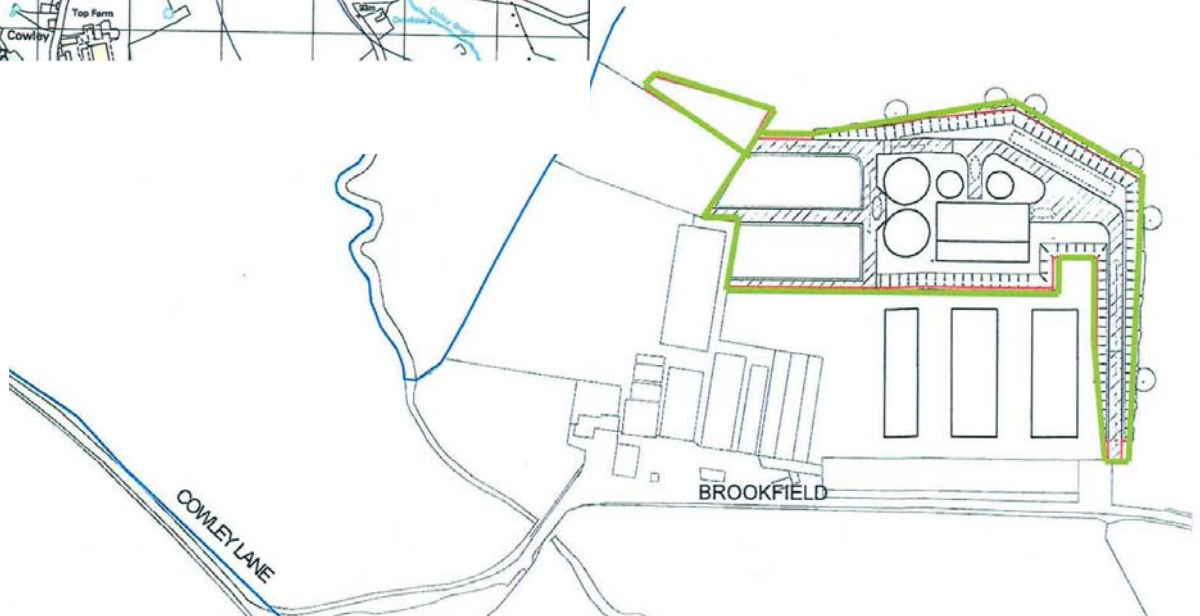
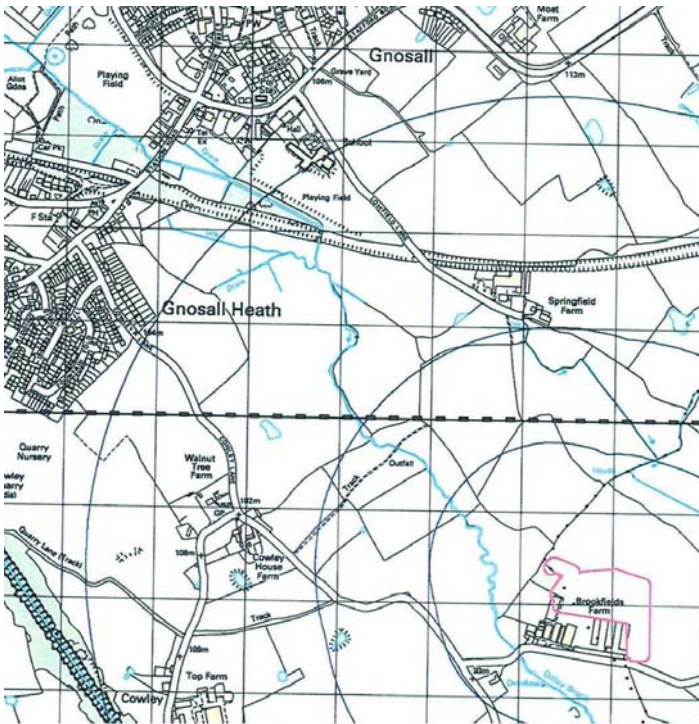
4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities	
Description of activities	Limits of activities
<p>R13 Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)</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>D10: Incineration on land</p>	<p>Treatment of waste including shredding, sorting, screening, compaction, bailing, mixing and maceration</p> <p>Digestion of waste including pasteurisation and chemical additions</p> <p>Gas cleaning by biological or chemical scrubbing</p> <p>Gas storage and drying</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>The maximum throughput of animal waste shall be < 10 tonnes per day</p> <p>The total quantity of waste accepted at the site shall be less than 75,000 tonnes per year</p> <p>The use of combustible gasses produced as a by-product of the anaerobic digestion process as fuel</p> <p>Except for the auxiliary flare, the aggregate rated thermal input of all appliances used to burn biogas shall be less than 3 megawatts</p> <p>Use of an auxiliary flare required only for periods of breakdown or maintenance of the spark gas engines. Use restricted to less than 10% of annual biogas production</p>

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Sections 1, 2, 3, 4 and 5 of the application document	06/10/09
Response to Schedule 5 Notice dated 04/01/10	Response to question 1 detailing management systems and Question 8 dealing with record keeping.	13/01/10

Schedule 2 - Site plan



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Schedule 3 - Waste types, raw materials and fuels

Table S3.1 Permitted waste types	
Maximum quantity	30,000 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	sludges from washing and cleaning
02 01 06	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
02 02	wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 03	material unsuitable for consumption or processing
02 03	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
02 03 04	material unsuitable for consumption or processing
02 05	waste from the dairy products industry
02 05 01	material unsuitable for consumption or processing
02 06	wastes from the baking and confection industry
02 06 01	material unsuitable for consumption or processing
20	MUNICIPAL WASTE (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPERATELY COLLECTED FRACTIONS
20 01	separately collected fractions
20 01 08	biodegradable kitchen and canteen wastes

Schedule 4 – Emissions and monitoring

Table S4.1 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
Spark Ignition Internal Combustion Engine [Point A1 on figure 5 in the Application Documents]	Carbon Monoxide	Engine Exhaust stack	1500 mg/m ³	Hourly Mean	Annually	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)
	Oxides of Nitrogen		650 mg/m ³	Emission levels at normal temperature and pressure and 5% O ₂ unless otherwise agreed by the Agency,		
	Sulphur Dioxide		350 mg/m ³			
	Total Volatile Organic Compounds including methane		1000 mg/m ³			
	Non methane Volatile Organic Compounds		75 mg/m ³			
Spark Ignition Internal Combustion Engine [Point A1 on figure 5 in the Application Documents]	Temperature	Engine Exhaust	Gas engine exhaust gas temperature where the exhaust leaves the engine shall be no less than 200 °C	Hourly average		
Biogas Flare	None Set. Because of restriction of use of the Flare to less than 10% of the annual biogas production	Burning of Biogas during emergency and service shut down procedures	None Set	None Set	None Set	None Set

Schedule 5 - Reporting

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

Table S5.1 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	Every 12 months	09/02/2010

Schedule 6 - 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	FP3093VJ
Name of operator	Lower Reule Bioenergy Ltd
Location of Facility	Brookfields Farm, Lower Reule, Church Eaton, Stafford
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution

To be notified within 24 hours of detection

Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit

To be notified within 24 hours of detection unless otherwise specified below

Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Lower Reule Bioenergy Ltd

Schedule 7 - Interpretation

"*accident*" means an accident that may result in pollution.

"*Annexe II A*" means Annexe IIA to Directive 2006/12/EC of the European Parliament and of the Council on 5 April 2006 on Waste

"*annually*" means once every year.

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

"*authorised officer*" means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

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

"*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 IIA to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

"*emissions to land*" includes emissions to groundwater.

"*EP Regulations*" means The Environmental Permitting (England and Wales) Regulations SI 2007 No.3538 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"*fugitive emission*" means an emission to air, water or land from the activities from a localised or diffuse source which is 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.

"*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).

"*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 IIB to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 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.

"*year*" means calendar year ending 31 December.

END OF PERMIT

Permit Number FP3093VJ

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