

# Notice of variation and consolidation with introductory note

**The Environmental Permitting (England & Wales) Regulations 2010**

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GWE Biogas Limited  
Sandhill Biogas Plant  
Sandhill  
Garton Road  
Kirkburn  
Driffield  
East Yorkshire  
YO25 9DR

**Variation application number**

EPR/TP3835KE/V003

**Permit number**

EPR/TP3835KE

# Sandhill Biogas Plant

## Permit number EPR/TP3835KE

### Introductory note

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

The following notice gives notice of the variation and consolidation of an environmental permit.

Schedule 1 to the Environmental Permitting Regulations has been updated by the Environmental Permitting (England and Wales) (Amendment) Regulations 2013 to reflect the implementation of the Industrial Emissions Directive (IED) into England and Wales. This variation implements the changes made to Schedule 1 of the Regulations and completes the transition of the existing waste facility to an IED Installation. This variation also implements the addition of eleven waste codes and updates the permit to reflect current activities at the Installation. Table S1.1 specifies the activities authorised by the permit.

The schedules specify the changes made to the permit.

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

Status log of the permit		
Description	Date	Comments
Application EPR/TP3835KE/A001 received	Duly made 17/11/09	Application for an anaerobic digestion facility including combustion of biogas.
Additional information received	05/05/10 24/05/10 01/07/10 19/07/10 28/07/10 30/07/10 19/08/10 24/08/10	Information on several aspects of the Application.
Permit determined EPR/TP3835KE	09/09/10	Permit issued to GWE Biogas Limited.
Environment Agency initiated variation determined EPR/TP3835KE/V002	04/04/13	Variation to implement the changes introduced by the IED.
Application EPR/TP3835KE/V003 (variation and consolidation)	Duly made 09/07/14	Variation application to update the permit to IED conditions and include additional waste codes.
Variation determined EPR/TP3835KE (Billing ref. DP3731VP)	21/08/14	Varied and consolidated permit issued in modern condition format.

End of introductory note

## Notice of variation and consolidation

### The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

#### Permit number

**EPR/TP3835KE**

#### Issued to

**GWE Biogas Limited** (“the operator”)

whose registered office is

**Sandhill  
Garton Road  
Kirkburn  
Driffield  
East Yorkshire  
YO25 9DR**

company registration number 06600650

to operate a regulated facility at

**Sandhill Biogas Plant  
Sandhill  
Garton Road  
Kirkburn  
Driffield  
East Yorkshire  
YO25 9DR**

to the extent set out in the schedules.

The notice shall take effect from 21/08/2014.

Name	Date
Thomas Ruffell	21/08/2014

Authorised on behalf of the Environment Agency

## **Schedule 1**

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

## **Schedule 2 – consolidated permit**

Consolidated permit issued as a separate document.

# Permit

## The Environmental Permitting (England and Wales) Regulations 2010

### Permit number

**EPR/TP3835KE**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/TP3835KE/V003 authorising,

**GWE Biogas Limited** ("the operator"),

whose registered office is

**Sandhill**

**Garton Road**

**Kirkburn**

**Driffield**

**East Yorkshire**

**YO25 9DR**

company registration number 06600650

to operate an installation at

**Sandhill Biogas Plant**

**Sandhill**

**Garton Road**

**Kirkburn**

**Driffield**

**East Yorkshire**

**YO25 9DR**

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

Name	Date
Thomas Ruffell	21/08/2014

Authorised on behalf of the Environment Agency

# Conditions

## 1 Management

### 1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
  - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

### 1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
  - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
  - (c) take any further appropriate measures identified by a review.

### 1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
  - (b) maintain records of raw materials and water used in the activities;
  - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
  - (d) take any further appropriate measures identified by a review.

### 1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
  - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
  - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

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

## **2 Operations**

### **2.1 Permitted activities**

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

### **2.2 The site**

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

### **2.3 Operating techniques**

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

## **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 table S3.1.

- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

## **3.2 Emissions of substances not controlled by emission limits**

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

## **3.3 Odour**

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

## **3.4 Noise and vibration**

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
  - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## **3.5 Monitoring**

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in table S3.1;
  - (b) process monitoring specified in table S3.2

- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 table S3.1 unless otherwise agreed in writing by the Environment Agency.

## **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 the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
  - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## **4 Information**

### **4.1 Records**

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
  - (b) be made as soon as reasonably practicable;
  - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
  - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
    - (i) off-site environmental effects; and
    - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

### **4.2 Reporting**

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
  - (b) the annual production/treatment data set out in schedule 4 table S4.2; and
  - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
  - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
  - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

## 4.3 Notifications

- 4.3.1 In the event:
- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
    - (i) inform the Environment Agency,
    - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
    - (iii) take the measures necessary to prevent further possible incidents or accidents;
  - (b) of a breach of any permit condition the operator must immediately—
    - (i) inform the Environment Agency, and
    - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
  - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 [(a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit,] shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency

when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

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

Where the operator is a registered company:

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

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

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

In any other case:

- (e) the death of any of the named operators (where the operator consists of more than one named individual);
- (f) any change in the operator's name(s) or address(es); and
- (g) 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) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

- 4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

- (a) a decision by the Secretary of State not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

## **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			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	S5.4 A1 (b) (i)	<p>Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 100 tonnes per day involving biological treatment</p> <p>Anaerobic digestion of permitted waste followed by burning of biogas produced from the process</p> <p>R3: Recycling/reclamation of organic substances which are not used as solvents</p> <p>R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced)</p>	<p>From receipt of permitted waste through to digestion and recovery of by-products (digestate).</p> <p>Anaerobic digestion of permitted waste including pasteurisation and chemical addition.</p> <p>Pre-treatment of waste prior to digestion in an enclosed building and on an impermeable surface including shredding, sorting, screening, compaction, baling, mixing and maceration.</p> <p>Treatment of digestate in an enclosed building and on an impermeable surface including screening to remove plastic residues, centrifuge or pressing and addition of thickening agents and drying.</p> <p>Gas cleaning by biological or chemical scrubbing</p> <p>Treatment of animal waste and EWC 07 01 08* shall not exceed 10 tonnes per day.</p> <p>Waste types as specified in Table S2.2</p>
<b>Directly Associated Activity</b>			
A2	Combustion of biogas	<p>Combustion of biogas in 3 combined heat and power (CHP) engines with an aggregated thermal input of 5.7 MW</p> <p>R1: Use principally as a fuel to generate energy</p>	<p>From the receipt of biogas produced at the on-site anaerobic digestion process to combustion via CHP engines with the release of combustion gases</p>
A3	Emergency flare	Use of an auxiliary flare required only during periods	From the receipt of biogas produced at the on-site

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
		of breakdown or maintenance of the CHP engines D10: Incineration on land	anaerobic digestion process to incineration with the release of combustion gases
A4	Heat treatment	Pasteurisation of permitted waste using heat	From the receipt of waste to recovery
A5	Raw material storage	Storage of raw materials including lubrication oil, sulphuric acid, coagulant, cleaning fluids, diesel	From the receipt of raw materials to despatch for use within the facility
A6	Gas storage	Storage of biogas in dual-purpose tanks	From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for use within the facility
A7	Digestate storage	Storage of liquid/solid digestate in storage tank(s)	From the receipt of digestate produced at the on-site anaerobic digestion process to despatch for use off-site
A8	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water	From the collection of uncontaminated roof and site surface water in surface water storage lagoon and/or storage tank(s) to re-use within the facility or discharge off-site

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/TP3835KE/A001	Response to question 5a - Technical Standards, Part B of the application form	17/11/09
Response to request for additional information dated 25/01/10	Response to information detailing H1 Part 2 risk assessment, air quality impact assessment, site plans, permeate water quality and flow, site process water and water drainage queries.	05/05/10
	Information regarding the site Environmental Management System (EMS)	01/07/10
	Information regarding annual raw material usage queries	20/07/10
	Information detailing site accident management plan	30/07/10
	Information detailing overall process description	19/08/10
Variation application EPR/TP3835KE/V003	Revised site plan	09/07/14

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

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Chemicals	Operational requirement only
Fuel oil	Operational requirement only

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	Annual throughput shall not exceed 60,000 tonnes.
Exclusions	Treatment of animal waste and EWC 07 01 08* shall not exceed 10 tonnes per day.
Waste code	Description
<b>02</b>	<b>Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing</b>
<b>02 01</b>	<b>wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>
02 01 01	sludges from washing and cleaning - food processing waste, food washing waste
02 01 02	animal-tissue waste including blood, animal flesh, fish processing waste, fish carcasses, poultry waste
02 01 03	plant-tissue waste including husks, cereal dust, waste animal feeds, off-cuts from vegetable and fruit and other vegetation waste
02 01 06	animal faeces, urine and manure including spoiled straw
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 - food processing waste, food washing waste
02 02 02	animal-tissue waste including blood, animal flesh, fish processing waste, fish carcasses, poultry waste
02 02 03	materials unsuitable for consumption or processing (biodegradable only)
02 02 04	sludges from on-site effluent treatment (biodegradable only)
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 (biodegradable only)
02 03 05	sludges from on-site effluent treatment (biodegradable only)
02 03 99	sludge from production of edible fats and oils to include 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 (biodegradable only)

<b>Table S2.2 Permitted waste types and quantities for anaerobic digestion</b>	
<b>Maximum quantity</b>	<b>Annual throughput shall not exceed 60,000 tonnes.</b>
<b>Exclusions</b>	<b>Treatment of animal waste and EWC 07 01 08* shall not exceed 10 tonnes per day.</b>
<b>Waste code</b>	<b>Description</b>
02 04 99	other wastes (biodegradable only)
<b>02 05</b>	<b>wastes from the dairy products industry</b>
02 05 01	materials unsuitable for consumption or processing including solid and liquid dairy products, milk, food processing wastes, yoghurt, whey
02 05 02	sludges from on-site effluent treatment (biodegradable only)
<b>02 06</b>	<b>wastes from the baking and confectionery industry</b>
02 06 01	materials unsuitable for consumption or processing (biodegradable only)
02 06 03	sludges from on-site effluent treatment (biodegradable only)
<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 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 waste, food processing waste, fermentation waste, beer, alcoholic drinks, fruit juice
02 07 05	sludges from on-site effluent treatment (biodegradable only)
02 07 99	spent grains, hops and whisky filter sheets/cloths, yeast and yeast-like residues, sludge from production process
<b>03</b>	<b>Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard</b>
<b>03 01</b>	<b>wastes from wood processing and the production of panels and furniture</b>
03 01 01	waste bark and cork (biodegradable only)
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04 (untreated only)
<b>03 03</b>	<b>wastes from pulp, paper and cardboard production and processing</b>
03 03 02	green liquor sludge (from recovery of cooking liquor)
03 03 08	wastes from sorting of paper and cardboard destined for recycling - paper and cardboard - not allowed if any biodegradable coating or preserving substance is present
03 03 10	fibre rejects and sludges i.e. paper pulp (de-inked only), paper fibre
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10 - only allowed if not mixed with or does not contain de-inking sludge
<b>04</b>	<b>Wastes from the leather, fur and textile industries</b>
<b>04 01</b>	<b>wastes from the leather and fur industry</b>
04 01 01	fleshings and lime split wastes
04 01 05	tanning liquor free of chromium
04 01 07	sludges, in particular from on-site effluent treatment not containing chromium
<b>04 02</b>	<b>wastes from the textile industry</b>

<b>Table S2.2 Permitted waste types and quantities for anaerobic digestion</b>	
<b>Maximum quantity</b>	<b>Annual throughput shall not exceed 60,000 tonnes.</b>
<b>Exclusions</b>	<b>Treatment of animal waste and EWC 07 01 08* shall not exceed 10 tonnes per day.</b>
<b>Waste code</b>	<b>Description</b>
04 02 10	organic matter from natural products (for example grease, wax)
<b>07</b>	<b>Wastes from organic chemical processes</b>
<b>07 01</b>	<b>wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals</b>
07 01 08*	other still bottoms and reaction residues - glycerol residue from biodiesel manufacture from non-vegetable oils only
<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 biodegradable coating or preserving substance is present. Excludes laminates such as Tetrapaks
15 01 02	plastic packaging - biodegradable only - must be independently certified to BS EN 13432
15 01 03	wooden packaging - not allowed if any biodegradable coating or preserving substance is present
15 01 05	composite packaging - biodegradable only - must be independently certified to BS EN 13432
<b>16</b>	<b>Wastes not otherwise specified in the list</b>
<b>16 10</b>	<b>aqueous liquid wastes destined for off-site treatment</b>
16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01 - only allowed if digestate from an aerobic digestion process that accepts only the waste types listed in this table (Table S2.2) and allowed by the AD Quality Protocol
<b>19</b>	<b>Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use</b>
<b>19 02</b>	<b>wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)</b>
19 02 03	premixed wastes composed only of non-hazardous wastes - waste types listed in this table (Table S2.2) that have been mixed together only
19 02 06	sludges from waste types listed in this table (Table S2.2) that have been heat treated only
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09 - glycerol not designated as hazardous i.e. excludes EWC 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 from source-segregated waste
19 05 99	composting liquors
<b>19 06</b>	<b>wastes from anaerobic treatment of waste</b>

<b>Table S2.2 Permitted waste types and quantities for anaerobic digestion</b>	
<b>Maximum quantity</b>	<b>Annual throughput shall not exceed 60,000 tonnes.</b>
<b>Exclusions</b>	<b>Treatment of animal waste and EWC 07 01 08* shall not exceed 10 tonnes per day.</b>
<b>Waste code</b>	<b>Description</b>
19 06 03	liquor from anaerobic treatment of municipal waste
19 06 04	digestate from anaerobic treatment of source segregated municipal waste
19 06 05	liquor from anaerobic treatment of animal and vegetable waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste
<b>19 08</b>	<b>wastes from waste water treatment plants not otherwise specified</b>
19 08 09	grease and oil mixture from oil/water separation containing only edible oil and fats
19 08 12	sludges from industrial biological treatment
<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 - not allowed if any biodegradable coating or preserving substance is present. Excludes laminates such as Tetrapaks.
20 01 08	biodegradable kitchen and canteen waste
20 01 25	edible oil and fat
20 01 38	wood other than that mentioned in 20 01 37 - untreated wood where no non-biodegradable coating or preserving substance is present
<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 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	CHP 1 <sup>1</sup>	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	500 mg/m <sup>3</sup>	Hourly average	Annual	BS EN 14792	
A2	CHP 2 <sup>1</sup>						
A3	CHP 3 <sup>1</sup>						
A1	CHP 1 <sup>1</sup>	Sulphur dioxide	350 mg/m <sup>3</sup>				BS EN 14791
A2	CHP 2 <sup>1</sup>						
A3	CHP 3 <sup>1</sup>						
A1	CHP 1 <sup>1</sup>	Carbon monoxide	1400 mg/m <sup>3</sup>				BS EN 15058
A2	CHP 2 <sup>1</sup>						
A3	CHP 3 <sup>1</sup>						
A1	CHP 1 <sup>1</sup>	Total VOCs	1000 mg/m <sup>3</sup>				BS EN 12619:2013
A2	CHP 2 <sup>1</sup>						
A3	CHP 3 <sup>1</sup>						
"Emergency Flare" on site plan in schedule 7	Emergency flare stack <sup>2</sup>	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	150 mg/m <sup>3</sup>	Hourly average	[note 3]	BS EN 14792	
		Carbon monoxide	50 mg/m <sup>3</sup>			BS EN 15058	
		Total VOCs	10 mg/m <sup>3</sup>			BS EN 12619:2013	
"Biofilter" on site plan in schedule 7	Biofilter stack	No parameter set	No limit set	--	--	--	
Pressure relief valves	Digester tanks	No parameter set	No limit set	--	Record of operating hours	--	
Note 1 - These limits are based on normal operating conditions and load - temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 5 per cent (dry gas). The measurement uncertainty specified in LFTGN08 v2 2010 shall apply.							
Note 2 - These limits are based on normal operating conditions and load - temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 3 per cent (dry gas). The measurement uncertainty specified in LFTGN05 v2 2010 shall apply.							
Note 3 - Monitoring to be undertaken in the event the emergency flare has been operational for more than 10 per cent of a year (876 hours).							

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
Biogas from Digester tanks	Flow	Continuous	In accordance with EU Weights and Measures Regulations	--
Biogas from Digester tanks and storage tanks	Methane	Continuous	--	Gas monitors to be calibrated every 6 months to manufacturer's recommendations
	Hydrogen sulphide			
Waste reception building; Digester tanks and storage tanks	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary
Biofilter and/or equivalent abatement system	Temperature	Daily	Temperature probe	Biofilter and/or equivalent abatement system shall be regularly checked and maintained to ensure appropriate temperature and moisture content
	Moisture		None specified	
	Thatching/compaction		None specified	
Digester tanks	Animal waste	Daily	--	Monitoring data to be made available for inspection by the Environment Agency on request
Digester tanks and storage tanks	Integrity checks	Weekly	Visual assessment	--

## Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A1, A2, A3	Every 12 months	1 January

Table S4.2 Annual production/treatment	
Parameter	Units
Electricity generated	MWh
Whole digestate	tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
CHP engine usage	Annually	hours
CHP engine efficiency	Annually	%
Electricity exported	Annually	MWh
Emergency flare operation	Annually	hours
Water usage	Annually	tonnes or m <sup>3</sup>
Energy usage	Annually	MWh
Biogas usage	Annually	tonnes or m <sup>3</sup>
Raw material usage	Annually	tonnes or m <sup>3</sup>

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	21/08/14
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	21/08/14
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	21/08/14
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	21/08/14
Waste returns	E-waste Returns Form	--

## 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	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

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

## Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

\* authorised to sign on behalf of the operator

## Schedule 6 – Interpretation

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

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

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

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

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

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

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

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

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 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.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“impermeable surface” means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface.

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

“Industry Standard Protocol” means “A standardised protocol for the monitoring of bioaerosols at open composting facilities” published by the Association for Organics Recycling and developed in conjunction with the Environment Agency.

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

“pests” means Birds, Vermin and Insects.

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

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

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes (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.

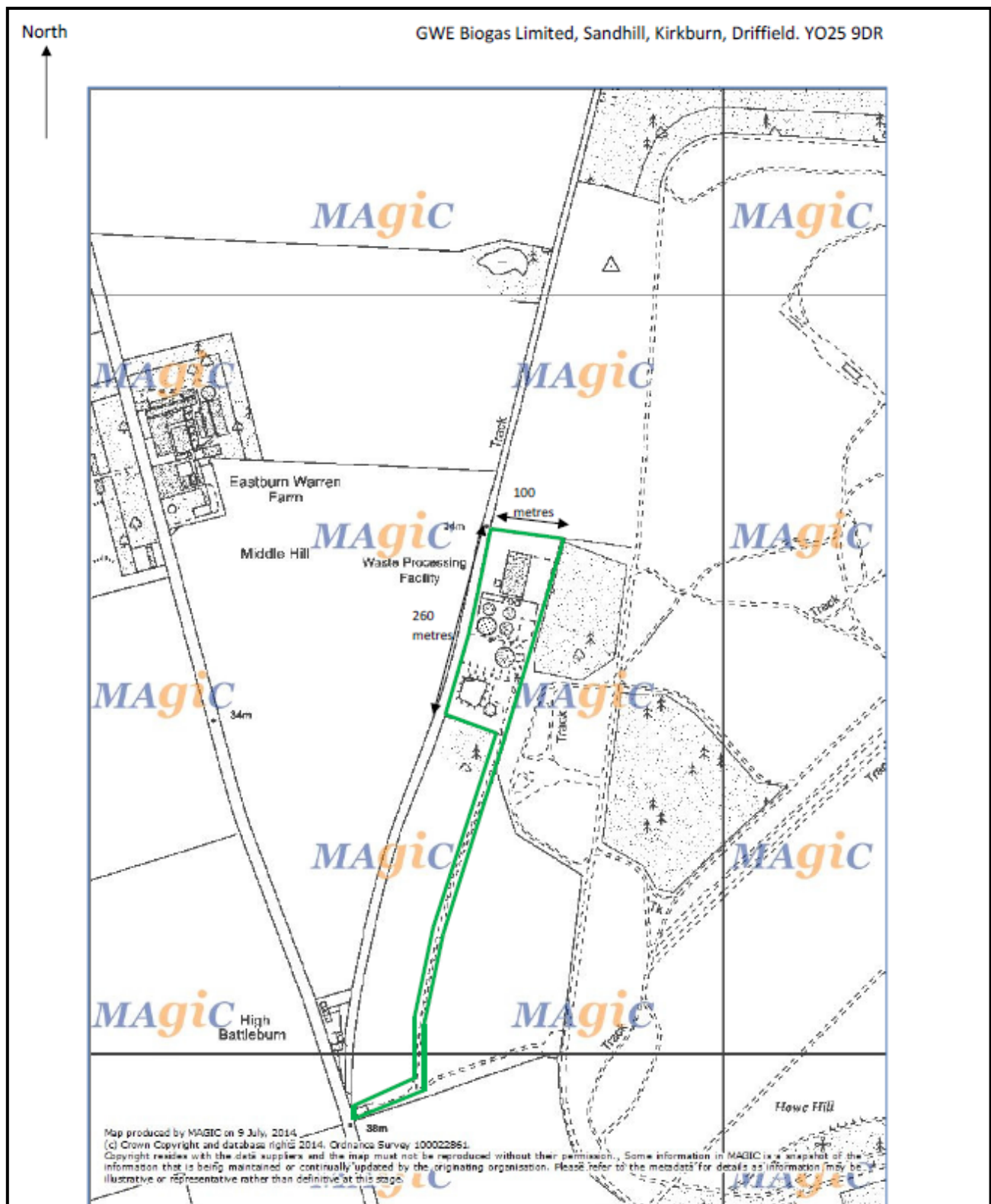
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

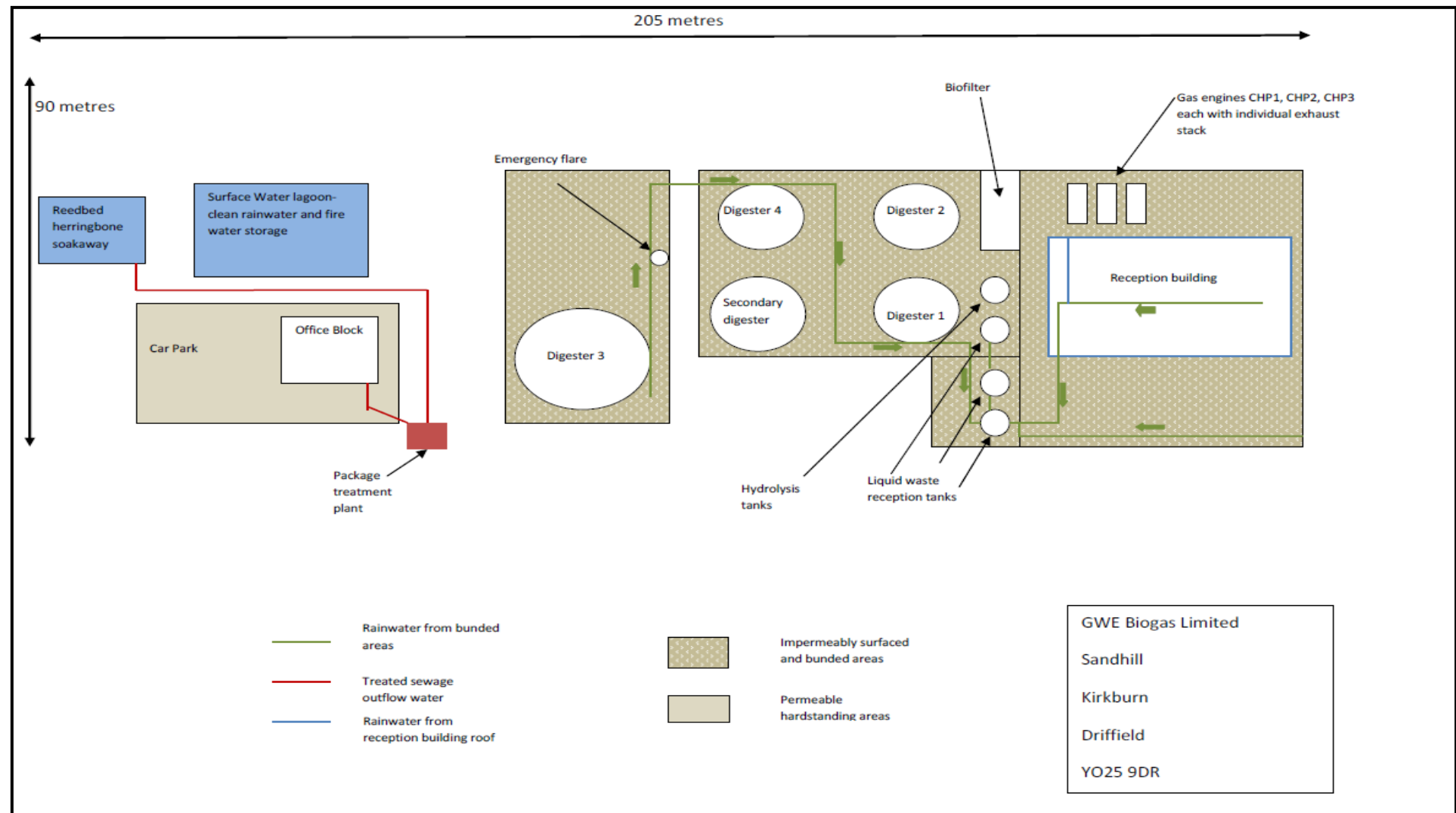
- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% or 5% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

## Schedule 7 – Site plan

Plan showing site location and boundary



Site plan showing layout and emission points



END OF PERMIT.

<b>Permit Number:</b>	<b>EPR/TP3835KE</b>	<b>Operator:</b>	<b>GWE Biogas Limited</b>
<b>Facility:</b>	<b>Sandhill Biogas Plant</b>	<b>Form Number:</b>	<b>Air1 / 21/08/14</b>

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

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
A1	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	500 mg/m <sup>3</sup>	Hourly average		BS EN 14792		
	Sulphur dioxide	350 mg/m <sup>3</sup>			BS EN 14791		
	Carbon monoxide	1400 mg/m <sup>3</sup>			BS EN 15058		
	Total VOCs	1000 mg/m <sup>3</sup>			BS EN 12619:2013		
A2	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	500 mg/m <sup>3</sup>	Hourly average		BS EN 14792		
	Sulphur dioxide	350 mg/m <sup>3</sup>			BS EN 14791		
	Carbon monoxide	1400 mg/m <sup>3</sup>			BS EN 15058		
	Total VOCs	1000 mg/m <sup>3</sup>			BS EN 12619:2013		
A3	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	500 mg/m <sup>3</sup>	Hourly average		BS EN 14792		
	Sulphur dioxide	350 mg/m <sup>3</sup>			BS EN 14791		
	Carbon monoxide	1400 mg/m <sup>3</sup>			BS EN 15058		

	Total VOCs	1000 mg/m <sup>3</sup>			BS EN 12619:2013		
Flare stack	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	150 mg/m <sup>3</sup>	Hourly average		BS EN 14792		
	Carbon monoxide	50 mg/m <sup>3</sup>			BS EN 15058		
	Total VOCs	10 mg/m <sup>3</sup>			BS EN 12619:2013		

[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] an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency 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 .....

Date.....

(Authorised to sign as representative of Operator)

<b>Permit Number:</b>	<b>EPR/TP3835KE</b>	<b>Operator:</b>	<b>GWE Biogas Limited</b>
<b>Facility:</b>	<b>Sandhill Biogas Plant</b>	<b>Form Number:</b>	<b>Water usage1 / 21/08/14</b>

**Reporting of Water Usage for the year** \_\_\_\_\_

<b>Water source</b>	<b>Usage (m<sup>3</sup>/year)</b>	<b>Specific usage (m<sup>3</sup>/unit output)</b>
Mains water		
Site borehole		
River abstraction		
<b>TOTAL WATER USAGE</b>		

Operator's comments:

<b>Permit Number:</b>	<b>EPR/TP3835KE</b>	<b>Operator:</b>	<b>GWE Biogas Limited</b>
<b>Facility:</b>	<b>Sandhill Biogas Plant</b>	<b>Form Number:</b>	<b>Energy usage1/ 21/08/14</b>

### Reporting of Energy Usage for the year 2014

Energy source	Energy usage		Specific usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity*	MWh		
Natural Gas	MWh		
Gas Oil	tonnes		
Recovered Fuel Oil	tonnes		
<b>TOTAL</b>	-		

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

Operator's comments:
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Signed .....

Date.....

(Authorised to sign as representative of Operator)

<b>Permit Number:</b>	<b>EPR/TP3835KE</b>	<b>Operator:</b>	<b>GWE Biogas Limited</b>
<b>Facility:</b>	<b>Sandhill Biogas Plant</b>	<b>Form Number:</b>	<b>Performance1 / 21/08/14</b>

**Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY**

<b>Parameter</b>	<b>Units</b>
CHP engine usage	hours
CHP engine efficiency	%
Biogas usage	tonnes or m <sup>3</sup>
Emergency flare operation	hours
Electricity exported	MWh
Raw materials used	tonnes or m <sup>3</sup>

Operator's comments:
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Signed .....

Date.....

(Authorised to sign as representative of Operator)