Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

United Utilities Water Limited

Leigh WwTW Sludge Treatment Facility
Hope Carr Lane
Leigh
Lancashire
WN7 3XB

Permit number

EPR/NP3601LR

Leigh WwTW Sludge Treatment Facility
Permit number EPR/NP3601LR

Introductory note

This introductory note does not form a part of the permit

The Industrial Emissions Directive (IED) came into force on 7 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. The schedule of waste management activities includes the recovery of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment, but excludes activities covered by the Urban Waste Water Treatment Regulations (UWWTR). However, UK environmental regulators concluded that the biological treatment of waste sewage sludge is not an activity covered by the UWWTR and is therefore within the scope of the IED. The BAT Conclusions for Waste Treatment (the BREF) was published on 17 August 2018 following a European Union wide review of BAT, implementing decision (EU) 2018/1147 of 10 August 2018. BAT applies to new waste sewage sludge treatment not covered by the UWWTR. The operations at Leigh WwTW Sludge Treatment Facility are existing but will be brought into environmental regulation for the first time and are required to operate using BAT.

Overview

Leigh Sludge Treatment Facility (STF) is located to the south of Leigh. The facility is in the grounds of the wider Leigh Waste Water Treatment Works (WwTW). The sludge treatment consists of screening and thickening of sludge, thermal hydrolysis via a thermal hydrolysis plant (THP), and subsequent anaerobic digestion (AD) of the thickened sludge in a primary digester. Biogas produced from the process is combusted in two combined heat and power (CHP) engines and a dual fuel boiler. Centrate (waste water produced from sludge dewatering) is treated in a liquor treatment plant (LTP) prior to discharge back to the WwTW (which does not form part of the permit boundary). The biological treatment of the sludge via AD is a Section 5.4 Part A (1)(b)(i) scheduled activity of the above regulations. Relevant supporting activities are considered directly associated activities (DAAs). The biological treatment and disposal of liquors in the LTP is a Section S5.4 A(1)(a)(i) scheduled activity of the above regulations as the treatment exceeds 50 tonnes per day.

Brief description of the process

Sewage sludge produced at Leigh WwTW (indigenous sludge) is received from the primary settlement tank, while sewage sludge produced at United Utilities satellite sites (imported sludge) is received in a wet well. Both indigenous and imported sludge is then passed through one of two raw sludge screens before combining in a screened sludge tank. Indigenous surplus activated sludge (SAS) is also accepted for treatment and directly enters the screened sludge tank. Screenings are deposited in a skip for appropriate off-site disposal.

The screened sludge is pumped through one of two thickening centrifuges where polyelectrolyte mix is added. Excess water is passed to the centrate buffer tank, dosed with antifoam, then onto the centrate balancing tank and hence to the LTP.

The thickened sludge is pumped into a cake silo (thickened sludge storage tank). It is pretreated by the THP, cooled via a sludge cooler, and pumped into the AD primary digester tank.

Once AD is complete, the sludge is displaced from the digester into the degassing tank, before being directed to the digested sludge tank. The digested sludge is pumped to one of two dewatering centrifuges which is dosed with polyelectrolyte mix, to thicken the sludge into a cake. Excess water is passed to the digested sludge centrate buffer tank, dosed with antifoam, then onto the centrate balancing tank and hence to the LTP.

The sludge cake from the centrifuge then falls into a covered cake storage building. Any leachate produced from cake storage is discharged back to the WwTW as an indirect emission. The digestate cake is spread to land for agricultural benefit in accordance with the Sludge (Use in Agriculture) Regulations 1988.

Biogas produced during the AD process is stored on site in a gas holder prior to being combusted in two CHP engines with an aggregated thermal input of 2.6 MWth. There is also a 1.16 MWth dual fuel boiler which provides steam for the THP. In the event of an emergency or during planned maintenance of the engines excess biogas is diverted to a flare to be combusted.

Odorous air from the raw sludge screens, screened sludge tank, sludge thickening centrifuges, thickened sludge cake silo, degassing tank, digested sludge storage tank, dewatering centrifuges, centrate buffer tanks and centrate balancing tank are collected and treated within an odour control unit (OCU) which discharges to air from a stack.

Point source emissions to air are from the OCU (emission point A4); CHP engines (emission points A1 and A2); boiler (emission point A3); pressure vacuum relief valves (PRVs) (fitted to the digester and gas holder) (emission points A6 and A7); and the emergency flare (emission point A5).

There are indirect emissions to the River Glaze through an internal drainage system that combines discharges at emission point T1 before passing to Leigh WwTW. The WwTW does not form part of the permit boundary. These indirect emissions consist of condensate from the CHPs and biogas lines (W1); boiler blowdown (W2); OCU wastewater from the bio-scrubber (W3); centrate from the thickening and dewatering centrifuges via the LTP (W7); liquor from the digested sludge cake in cake storage building (W8); and surface water drainage (W9).

There is a biofilter within 250m of a sensitive receptor, and this permit includes bioaerosol monitoring requirements.

There are five ecological sites within the relevant screening distances:

- Rixton Clay Pits Special Area of Conservation (SAC)
- Manchester Mosses SAC
- Hope Carr Nature Reserve Local Wildlife Site (LWS)
- Pennington Flash LWS and Local Nature Reserve (LNR); and
- the Flashes of Wigan and Leigh National Nature Reserve (NNR).

United Utilities operate an Environment Management System (EMS) which is certified to ISO14001.

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

Status log of the permit		
Description	**Date**	**Comments**
Application EPR/NP3601LR/A001	Duly made 22/01/2024	Application for an anaerobic digestion facility and liquor treatment plant with the combustion of the resultant biogas at a waste sewage sludge treatment site.
Permit determined	28/06/2024	Permit issued to Operator Name.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/NP3601LR

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

United Utilities Water Limited ("the operator"),

whose registered office is

Haweswater House
Lingley Mere Business Park
Lingley Green Avenue
Great Sankey
Warrington
WA5 3LP

company registration number 02366678

to operate an installation at

Leigh WwTW Sludge Treatment Facility
Hope Carr Lane
Leigh
Lancashire
WN7 3XB

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

Name	Date
Rebecca Warren	**28/06/2024**

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").

2.1.2 The activities shall be undertaken in accordance with best available techniques.

2.1.3 All process plant and equipment shall be commissioned, operated and maintained and shall be fully documented and recorded in accordance with the manufacturer's recommendations.

2.1.4 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

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

2.3 Operating techniques

2.3.1 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.

(c) the facility has sufficient free capacity to store and treat the waste.

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.

2.3.7 Waste pre-acceptance and acceptance procedures shall be undertaken in accordance with best available techniques.

2.3.8 For the following activities referenced in schedule 1, table S1.1 (AR5):

(a) each MCP must be operated in accordance with the manufacturer's instructions and records must be made and retained to demonstrate this.

(b) the operator must keep periods of start-up and shut-down of each MCP as short as possible.

(c) there must be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993.

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 the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.

3.1.2 The limits given in schedule 3 shall not be exceeded.

3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour but including ammonia) 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 Subject to condition 3.2.4, below, all liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container have been agreed in writing with the Environment Agency.

3.2.4 Condition 3.2.3, above, shall apply unless the operator strictly complies in full with IC3 below.

3.2.5 The operator shall implement a leak detection and repair (LDAR) programme to detect and mitigate the release of volatile organic compounds, including methane from diffuse sources.

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 tables S3.1 and S3.2;

(b) process monitoring specified in tables S3.3 and S3.4;

(c) bioaerosols monitoring specified in table S3.5 and S3.6.

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 tables S3.1, S3.2, S3.3, S3.4, S3.5, S3.6 and S3.7 unless otherwise agreed in writing by the Environment Agency.

3.6 Bioaerosols

3.6.1 The operator shall take all appropriate measures, to prevent or where that is not practicable to minimise the release of bioaerosols. Emissions of bioaerosols from the operational activities shall not exceed the emission action levels specified in table S3.5, and S3.6.

3.6.2 The operator shall where the emission action levels are exceeded:

(a) notify the Environment Agency and investigate and take remedial action;

(b) submit to the Environment Agency for approval within the period specified, a bioaerosols management plan which identifies and minimises the risks of pollution from bioaerosols; and

(c) implement the bioaerosols management plan from the date of approval and revise the plan periodically, unless otherwise agreed in writing by the Environment Agency.

3.7 Pests

3.7.1 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.

3.7.2 The operator shall:

(a) only use approved products for pest control;

(b) treat pest infestations promptly;

(c) reject pest-infected incoming waste;

(d) 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;

(e) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.8 Fire prevention

3.8.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.8.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;

(b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.8.3 The operator shall undertake a DSEAR assessment and maintain an accident management plan.

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.

4.1.3 The operator shall maintain a record of the type and quantity of fuel used and the total annual hours of operation of each MCP.

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.

4.2.6 The operator shall keep records of non-waste materials leaving the site, including the type of material, the batch number, the date of export off-site and the tonnage exported on that date. These records shall be maintained for at least 2 years.

4.2.7 The operator shall submit an annual report detailing the efficiency of removal of non-digestible materials from feedstock prior to processing and the level of contamination in the final recovered digestate.

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 Following the detection of an issue listed in condition 4.3.1, the operator shall review and revise the management system and implement any changes as necessary to minimise the risk of re-occurrence of the issue.

4.3.4 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.

4.3.5 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:

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

In any other case:

(a) the death of any of the named operators (where the operator consists of more than one named individual);

(b) any change in the operator's name(s) or address(es); and

(c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.6 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) 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.

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

4.3.8 The operator shall notify the Environment Agency as soon as is practicable, in writing of any change of medium combustion plant.

4.4 Interpretation

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

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

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity and WFD Annex I and II operations**	**Limits of specified activity and waste types**
AR1	S5.4 A(1) (b) (i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment	R3: Recycling/reclamation of organic substances which are not used as solvents	From receipt of waste through to digestion and recovery of by-products (waste treated by anaerobic digestion). Anaerobic digestion of waste in one primary digestion tank followed by burning of biogas produced from the process. Anaerobic digestion shall be limited to 272 m^3/d. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR2	S5.4 A(1)(a)(i) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving biological treatment	D8: Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12	From the receipt of centrate waste waters from buffer tanks for the thickening centrifuge or dewatering centrifuge process through to biological treatment via one liquor treatment plant by activated sludge before discharge of waste waters to the waste water treatment works. Effluent treatment package plant consisting of Amtreat activated sludge reactor and settlement tank. The plant volume is 3,800 m^3 with a maximum capacity of 50 m^3/hour with electric boiler to maintain temperature for optimum nitrification.
Directly Associated Activity			
AR3	Storage of waste pending recovery or disposal	R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced)	Undertaken in relation to Activity AR1 or AR2. From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site. Storage of residual wastes from pre-treatment to despatch off-site for recovery.

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**
			Storage of waste in enclosed equipment and tanks fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR4	Physical treatment for the purpose of recycling	R3: Recycling/reclamation of organic substances which are not used as solvents	Undertaken in relation to Activity AR1 or AR2. From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery. Dilution of incoming wastes using final waste waters from the wastewater treatment works to aid pre-treatment and digestion only. Pre-treatment of waste in enclosed equipment and tanks fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system, including shredding, sorting, screening, compaction, baling, mixing and maceration. Pre-treatment of sewage sludge prior to anaerobic digestion by means of heat and pressure treatment (thermal hydrolysis) of waste. The THP consists of pulper reception vessel, four treatment reactors, flash tank and digester feed pump. Post-treatment of digestate in enclosed equipment and tanks fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system, including separation, screening to remove contraries, centrifuge or pressing and addition of thickening agents (polymers) or drying for use as a fertiliser or soil conditioner (drying for the purpose of use as a fuel is not permitted). Gas cleaning by biological or physical (carbon filtration) or chemical scrubbing.

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**
			Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR5	Steam and electrical power supply	R1: Use principally as a fuel to generate energy	Undertaken in relation to Activity AR1. From the receipt of biogas produced at the on-site anaerobic digestion process to combustion with the release of combustion gases. Combustion of biogas in two combined heat and power (CHP) engines with an aggregated thermal input of 2.6 MWth. Combustion of biogas/natural gas in one boiler with a thermal input of 1.16 MWth.
AR6	Emergency flare operation	D10: Incineration on land	Undertaken in relation to Activity AR1. From the receipt of biogas produced at the on-site anaerobic digestion process to incineration with the release of combustion gases. There shall be no venting or flaring of gas for disposal. Use of one auxiliary flare required only during periods of breakdown or maintenance of the CHP engines and/or auxiliary boiler.
AR7	Raw material storage	Storage of raw materials including lubrication oil, antifreeze, propane, ferric chloride, activated carbon, diesel.	From the receipt of raw materials to despatch for use within the facility.
AR8	Gas storage	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)	Undertaken in relation to Activity AR1. Storage of biogas produced from on-site anaerobic digestion of permitted waste in one stand-alone gas holder or roof space of digesters. From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for use within the facility.

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**
			Emissions of unburnt biogas shall be minimised.
AR9	Digestate storage	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)	Undertaken in relation to Activity AR1. From the receipt of processed digestate produced from the on-site anaerobic digestion process to despatch for use off-site. Storage of processed liquid digestate in 2 storage tanks. Storage of processed solid digestate in one building and on an impermeable surface with sealed drainage system.
AR10	Air abatement	Collection and treatment of air from the buildings or plant using abatement system – [biofilters, carbon filters] prior to release to atmosphere.	From the collection of air from site processes to treatment and release of treated air to atmosphere. Collection and treatment of air from the buildings, tanks or plant using abatement system consisting of two pumice media bio trickling filters and activated carbon treatment.
AR11	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 from non-operational areas only to re-use within the facility or discharge off-site.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	Sections 1.2, 1.4, 1.6 and 1.8 of the application document in response to section 3a – technical standards, Part B of the application form Best available techniques as described in the BAT Reference Document for Waste Treatment (the BREF) and BAT conclusions. Odour management plan reference OMP1 in response to section 5B, Table 3 – General Requirements, Part B of the application form. ADBA assessment tool. Leigh EPR Accident Management Plan, Oct 2023. Leigh Bioaerosol Risk Assessment, Oct 2023. Installation boundary, Appendix E Application Supporting Document, Oct 23.	06/11/2023

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
	Emission points plan, Appendix F Application Supporting Document, Oct 23. Process flow diagram, Appendix G Application Supporting Document, Oct 23. Site Condition Report, Section 11 Application Supporting document, Oct 23. Leigh Waste Characterisation and Acceptance Procedure, Oct 23. Leigh Leak Detection and Repair Plan, Oct 23 Leigh Secondary Containment and Modelling Assessment, Oct 23.	

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
Improvement condition for primary containment tanks		
IC1	The operator shall submit a written 'primary containment plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of an inspection and program of works undertaken by an appropriately qualified engineer and shall assess the extent, design specification and condition of primary containment systems (including associated pipework) where polluting liquids and solids are being stored, treated, and/or handled. The plan shall include, but not be limited to: • An assessment of the physical condition of all primary containment systems (storage and treatment vessels and associated pipework) using a Written Scheme of Examination and their suitability for providing primary containment when subjected to dynamic and static loads. • A program of works with timescales for the implementation of individual improvement measures necessary to demonstrate that the primary containment is fit for purpose or alternative appropriate measures to ensure all polluting materials will be contained on site. • A preventative maintenance and inspection regime. The plan shall be implemented in accordance with the Environment Agency's written approval.	12 months of permit issue or such other date as agreed in writing with the Environment Agency
Improvement condition to address methane slip emissions from gas engines burning biogas		
IC2	The operator shall submit a written plan for approval by the Environment Agency which establishes the methane emissions in the exhaust gas from engines burning biogas and or biomethane and compare these to the manufacturer's specification and benchmark levels. The plan shall develop proposals to assess the potential for methane slip and take corrective actions where emissions of methane above the manufacturer's specification are identified.	Within 6 months of issue of this permit or as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	The operator shall establish methane emissions in the exhaust gas and methane slip using the following standards: • EN ISO 25139 • EN ISO 25140	
Improvement condition for secondary containment design		
IC3	The operator shall submit a written 'secondary containment implementation plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the finalised designs and an implementation schedule for the identified secondary containment systems proposed in the document 'Leigh Secondary Containment Modelling Assessment, issue 3, Oct 2023'. The finalised design(s) and specifications shall be produced by appropriate competent individuals (qualified civil or structural engineer), in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance. The plan shall include but not be limited to the following components: • An updated BAT assessment with specific regard to BAT 19 of the Waste Treatment BREF to confirm the finalised designs based on the systems proposed in the document 'Leigh Secondary Containment Modelling Assessment, issue 3, Oct 2023' provided to meet BAT 19. • An assessment of the suitability for providing containment when subjected to the dynamic and static loads caused by catastrophic tank failure. • Finalised designs and specifications of the proposed secondary containment proposal completed by appropriate competent individuals. • A program of works with timescales for the commissioning of the secondary containment systems to comply with CIRIA C736 (2014) guidance, or equivalent. • An updated site and infrastructure plan. • A preventative maintenance and inspection regime. The plan shall be implemented in accordance with the Environment Agency's prior written approval.	6 months of permit issue or such other date as agreed in writing with the Environment Agency Implementation of all required and approved containment improvements must be completed by 31/03/2025.
Improvement conditions for establishing an inventory of liquid waste water discharged from anaerobic digestion and associated activities (AR1 – AR11)		
IC4a	The operator shall submit a sampling programme in relation to waste water streams and shall obtain the Environment Agency's written approval to it. The sampling programme shall be designed to fully characterise the waste waters discharged to Leigh Waste water Treatment Works (WwTW) from emission points W3 – Odour Control Unit (OCU) biotrickling filter wastewater discharge; W7 – outlet of the liquor treatment plant; W8 – leachate from cake storage building, and W9 - surface water drainage in table S3.2 of this permit. The programme shall include but not be limited to a methodology for a minimum of one 24-hour flow proportional sample a month, for each emission point, for a period of 12 months. The programme shall detail the sampling methods/standards used. Sampling methods shall be in accordance with BAT conclusion 20 of the Waste Treatment BREF. The	Within 6 months of issue of this permit

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	programme shall include the National Grid Reference (NGR) of the sampling point locations. The programme shall establish the characteristics of the liquid waste water streams and shall include as a minimum for each emission point: • Average values and variability of flow, pH, temperature and conductivity. • Average concentration and load values of all relevant substances and their variability. • Data on bioeliminability. The programme shall sample for all relevant substances and must include: • Hydrocarbon oil index (HOI) (mg/l) • Free cyanide (CN^-) (mg/l) • Adsorbable organically bound halogens (AOX) (mg/l) • Metals and metalloids; arsenic (expressed as As), cadmium (expressed as Cd), chromium (expressed as Cr), hexavalent chromium (expressed as Cr(VI)), copper (expressed as Cu), lead (expressed as Pb), nickel (expressed as Ni), mercury (expressed as Hg), zinc (expressed as Zn) (µg/l). The operator shall submit the collected monitoring data in writing to the Environment Agency according to agreed reporting periods. The sampling programme shall be produced in accordance with Environment Agency guidance: • Specific substances and priority hazardous substances – *Surface water pollution risk for your environmental permit* Surface water pollution risk assessment for your environmental permit - GOV.UK (www.gov.uk). • *Monitoring discharges to water: guidance on selecting a monitoring approach* Monitoring discharges to water: guidance on selecting a monitoring approach - GOV.UK (www.gov.uk) The monitoring programme shall be carried out and the monitoring data submitted in accordance with the Environment Agency's written approval.	
Improvement conditions for indirect discharges to water discharged from anaerobic digestion and associated activities (AR1 – AR11)		
IC4b	The operator shall submit a report for approval by the Environment Agency, following completion of the sampling programme approved under IC4a. The report shall include but not be limited to; a summary of the sample results, a completed H1 risk assessment(s) and modelling outputs where appropriate. The operator shall provide conclusions on whether the waste waters discharged from W3, W7, W8 and W9 will have any adverse impact on the receiving waters once discharged from Leigh WwTW. An assessment shall be made against the parameters specified in the relevant environmental standards as specified within Environment Agency guidance as follows:	Within 12 months of the Environment Agency's written approval of the sampling programme submitted under IC4a or such other date as agreed in writing with the

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	• Specific substances and priority hazardous substances – *Surface water pollution risk for your environmental permit* Surface water pollution risk assessment for your environmental permit - GOV.UK (www.gov.uk). • Sanitary substances – *H1 annex D2: assessment of sanitary and other pollutants in surface water discharges* 1076_14 H1 Annex D2 - Assessment of sanitary and other pollutants within Surface Water Discharges (publishing.service.gov.uk) The report shall include any proposals and/or additional measures required to prevent or minimise any significant emissions from the installation along with timescales for implementation.	Environment Agency
IC4c	The operator shall implement any improvements identified within the report approved under IC4b in accordance with the Environment Agency's written approval and provide written confirmation to the Environment Agency that the improvements have been completed.	Within 12 months of the report in relation to IC4b being approved by the Environment Agency or such other date as agreed in writing with the Environment Agency
Improvement condition for review of effectiveness of abatement plant		
IC5	The operator shall carry out a review of the abatement plant [odour control unit, emission point A4] on site, to determine whether the measures have been effective and adequate to prevent and where not possible minimise emissions released to air including but not limited to odour and ammonia. The operator shall submit a written report to the Environment Agency following this review for assessment and approval. The report shall include but not be limited to the following aspects: • Full investigation and characterisation of the waste gas streams. • Evidence that the pollutants of the waste gas stream will be controlled and/or abated either by the abatement plant or by the proposed abatement systems. • Abatement stack monitoring results (including but not limited to odour and ammonia). • Abatement process monitoring results (including but not limited to odour and ammonia). • Details of air quality quantitative impact assessment including modelling and a proposal for site-specific "action levels" (including but not limited to odour concentration, hydrogen sulphide and ammonia). • Odour monitoring results at the site boundary. • Records of odour complaints and odour related incidents.	6 months of permit issue or such other date as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	• Recommendations for improvement including the replacement or upgrading of the abatement plant. • Timescales for implementation of improvements to the abatement plant. The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.	

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
--	--

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	**Annual throughput shall not exceed 630,720 tonnes**
Exclusions	Wastes having any of the following characteristics shall not be accepted: • Biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • Wastes containing wood-preserving agents or other biocides and post-consumer wood. • Wastes containing persistent organic pollutants. • Wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019. • Manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013. • Pest infested waste.
Waste code	**Description**
19	**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**
19 02	**wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)**
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05 (sewage sludge only)
19 08	**wastes from waste water treatment plants not otherwise specified**
19 08 05	sludges from the treatment of urban waste water

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**
Existing medium combustion plant which are engines fuelled on biogas (1 MW to 5 MW)						
Point A1 on site plan in Schedule 7	CHP engine 1 stack [note 1, 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^3 [note 3]	Average over sample period	Annual	BS EN 14792
		Sulphur dioxide	350 mg/m^3 [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m^3 [note 3]			
		Carbon monoxide	1400 mg/m^3			BS EN 15058
		Total VOCs	No limit set	--	--	BS EN 12619
Point A2 on site plan in Schedule 7	CHP engine 2 stack [note 1, 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^3 [note 3]	Average over sample period --	Annual --	BS EN 14792
		Sulphur dioxide	350 mg/m^3 [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m^3 [note 4]			
		Carbon monoxide	1400 mg/m^3			BS EN 15058
		Total VOCs	No limit set			BS EN 12619
Existing medium combustion plant other than engines fuelled on biogas (1 MW to 5 MW)						
Point A3 on site		Oxides of Nitrogen	250 mg/m^3 [note 3]	Average over	Annual	BS EN 14792

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**
plan in Schedule 7	Dual fuel boiler stack [burning biogas] [note 1, 7]	(NO and NO_2 expressed as NO_2)		sample period		
		Sulphur dioxide	200 mg/m^3 [note 3]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
Existing medium combustion plant other than engines fuelled on natural gas (1 MW to 5 MW)						
Point A3 on site plan in Schedule 7	Dual fuel boiler stack [burning natural gas] [note 1, 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	250 mg/m^3 [note 3]	Average over sample period	Annual	BS EN 14792
		Carbon monoxide	No limit set [note 3]	Periodic	Every 3 years	MCERTS BS EN 15058
Point A4 on site plan in schedule 7	Channelled emissions such as odour abatement stack or vent(s) [note 5]	Hydrogen sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for sampling NIOSH 6013 for analysis
		Ammonia	20 mg/m^3	Average over sample period	Once every 6 months	EN ISO 21877
		Odour concentration	No limit set	--	Once every 6 months	BS EN 13725
		Hydrogen chloride (HCl)	5 mg/m^3 [note 6]	Average over sample period	Once every 6 months	EN 1911
		TVOC	20 mg/m^3 [note 6]			
Point A5 on site plan in schedule 7	Emergency flare stack [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	150 mg/m3	Average over sample period	[note 4]	BS EN 1472

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**
		Carbon monoxide	50 mg/m3			BS EN 15058
		Total VOCs	10 mg/m3			BS EN 12619
Pressure relief valve [Point A6 on site plan in schedule 7]	Primary Digester PVRV	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Pressure relief valve [Point A7 on site plan in schedule 7]	Gas holder PVRV	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Vents from tank(s)	Oil/Fuel Storage tank(s)	No parameter set	No limit set	--	--	--

Note 1 – These emission limits are based on normal operating conditions and load - temperature 0°C (273 K); pressure 101.3 kPa and oxygen 5% (for gas engines burning biogas) and oxygen 3% (for emergency flares and medium combustion plants other than engines and gas turbines burning biogas such as boilers).

Note 2 – This emission limit applies until 31 December 2029, unless the gas engine is replaced.

Note 3 – This emission limit applies from 1 January 2030, unless otherwise advised by the Environment Agency.

Note 4 – Monitoring to be undertaken in the event the emergency flare has been operational for more than 10 per cent of a year (876 hours). Record of operating hours to be submitted annually to the Environment Agency.

Note 5 – The monitoring of NH_3 and H_2S can be used as an alternative to the monitoring of the odour concentration.

Note 6 – Monitoring and limits only apply where the substance concerned is identified as relevant in the waste gas inventory IC5.

Note 7 – Monitoring of MCP shall not take place during periods of start up or shut down

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter [Note 1]**	**Limit (incl. unit) [Note 1]**	**Reference Period**	**Monitoring frequency [Note 2]**	**Monitoring standard or method**
W1	Condensate from CHP and CHP engine and Biogas Lines	--	--	--	--	--
W2	Boiler Blowdown	--	--	--	--	--

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter [Note 1]**	**Limit (incl. unit) [Note 1]**	**Reference Period**	**Monitoring frequency [Note 2]**	**Monitoring standard or method**
W3, W7, W8 and W9 on site plan in schedule 7 emission to River Glaze via Leigh WwTW	OCU wastewater, treated process water (from LTP), leachate from sludge cake building and site surface water drainage	Oil and grease	No visible oil or grease	--	Weekly	Visual assessment
		Benzene, toluene, ethylbenzene, xylene (BTEX)	--	Spot sample or flow-proportional composite sample	Once every month	EN ISO 15680
		Hydrocarbon oil index (HOI)	10 mg/l		Once every day	EN ISO 9377-2
		Free cyanide (CN^-)	0.1 mg/l			EN ISO 14403-1 or EN ISO 14403-2
		Adsorbable organically bound halogens (AOX)	1 mg/l			EN ISO 9562
		Arsenic (As)	0.1 mg/l	Spot sample or flow-proportional composite sample	Once every day	EN ISO 11885, EN ISO 17294-2 or EN ISO 15586
		Cadmium (Cd)	0.1 mg/l			
		Chromium (Cr)	0.3 mg/l			
		Copper (Cu)	0.5 mg/l			
		Lead (Pb)	0.3 mg/l			
		Nickel (Ni)	1 mg/l			
		Zinc (Zn)	2 mg/l			
		Mercury (Hg)	10 µg/l	Spot sample or flow-proportional composite sample	Once every day	EN ISO 17852 or EN ISO 12846
		Manganese (Mn)	--			EN ISO 11885, EN ISO 17294-2 or EN ISO 15586
		Hexavalent chromium (Cr(VI))	0.1 mg/l			EN ISO 10304-3 or EN ISO 23913
		PFOA and PFOS	--		Once every six months	--

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter [Note 1]**	**Limit (incl. unit) [Note 1]**	**Reference Period**	**Monitoring frequency [Note 2]**	**Monitoring standard or method**
Note 1 – Monitoring and limits only apply where the substance concerned is identified as relevant in the waste water inventory as determined by improvement condition IC4a and IC4b Note 2 – Monitoring frequency as specified unless the Environment Agency has agreed in writing other alternative appropriate monitoring frequencies.						

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Digester feed (digestion process)	pH	As described in site operating techniques	As described in site operating techniques	Process monitoring to be recorded using a SCADA system where relevant.
	Alkalinity			
	Temperature			
	Hydraulic loading rate			
	Organic loading rate			
	Volatile fatty acids concentration			
	Ammonia			
	Liquid /foam level			
Biogas in digester & biogas storage holders	Flow	Continuous	In accordance with EU weights and measures Regulations	Process monitoring to be recorded using a SCADA system where relevant. Gas monitors to be calibrated every 6 months or in accordance with the manufacturer's recommendations.
	Methane	Continuous	None specified	
	CO_2	Continuous	None specified	
	O_2	Continuous	None specified	
	Hydrogen sulphide	Daily	None specified	
	Pressure	Continuous	None specified	
Digestate batch	Volatile fatty acids concentration	One sample at the end of each batch (hydraulic retention time) cycle.	As described in site operating techniques	--
	Ammonia			
Digester and storage tank	Integrity checks	Weekly	Visual assessment	In accordance with design specification and

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
				tank integrity checks.
Digester	Agitation /mixing	Continuous	Systems controls	Records maintained in daily operational records.
	Tank capacity and sediment assessment	Once every 5 years from date of commission	Non-destructive pressure testing integrity assessment every 5 years or as specified by manufacturers technical specification.	In accordance with design specification and tank integrity checks.
Waste reception building or area; digester(s) and storage tank(s)	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Diffuse emissions from all sources identified in the Leak Detection and Repair (LDAR) programme	VOCs including methane	Every 6 months or otherwise agreed in accordance with the LDAR programme	'Sniffing' and/or Optical Gas Imaging techniques in accordance with BS EN 15446 & BS EN 17628	Monitoring points as specified in a DSEAR risk assessment and LDAR programme. Limit as agreed with the Environment Agency as a percentage of the overall gas production.
CHP engine stacks	VOCs including methane	Annually	BS EN 12619	Total annual VOCs emissions from the CHP engine(s) to be calculated and submitted to the Environment Agency.
	Exhaust gas temperature		Traceable to National Standards	--
	Exhaust gas pressure		Traceable to National Standards	--

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
	Exhaust gas water vapour content		BS EN 14790-1	Unless gas is dried before analysis of emissions.
	Exhaust gas oxygen		BS EN 14789	--
	Exhaust gas flow		BS EN 16911-1	--
Meteorological conditions	Wind speed, air temperature, wind direction	Continuous	Method as specified in management system	Conditions to be recorded in operational diary and records. Equipment shall be calibrated on a 4 monthly basis, in accordance with manufacturer's recommendations or as agreed in writing by the Environment Agency.
Emergency flare	Operating hours	Continuous	Recorded duration and frequency. Recording using a SCADA system or similar system	Date, time and duration of use of auxiliary flare shall be recorded.
	Quantity of gas sent to emergency flare			Quantity can be estimated from gas flow composition, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions.
Pressure relief valves and vacuum systems	Gas pressure	Continuous	Recording using a SCADA system	Continuous gas pressure shall be monitored.
	Re-seating	Weekly inspection	Visual	Operator must ensure that valves are re-seated after release in accordance with the manufacturer's design.

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
	Inspection, maintenance, calibration, repair and validation	Following foaming or overtopping or at 3 yearly intervals whichever is sooner	Written scheme of examination in accordance with condition 1.1.1	After a foaming event or sticking, build-up of debris, obstructions or damage, operator must ensure that pressure relief valve function remains within designed gas pressure in accordance with the manufacturer's design by suitably trained and qualified personnel.
	Inspection, calibration and validation report	In accordance with design and construction specifications or after over topping or foaming event	Written scheme of examination in accordance with condition 1.1.1	Operator must ensure that valves are re-seated after release, after a foaming event or sticking, build-up of debris, obstructions or damage. Operator must ensure that PRV function remains within designed operation gas pressure in accordance with the manufacturer's design by suitably trained/qualified personnel. Inspection, calibration and validation report. In accordance with industry Approved Code of Practice
Storage tanks	Volume	Daily	Visual or flow meter measurement	Records of volume must be maintained.

Table S3.4 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Odour abatement plant				
Closed biofilters				
Biofilters	Gas temperature – inlet and outlet	Daily	Temperature probe / Traceable to national standards	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content. Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations. Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Biofilter media moisture	Daily	Moisture meter, Grab test, oven drying or recognised industry method	
	Thatching /compaction	Weekly	Back pressure	
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter / EN 16911-1 and MID for EN 16911-1	
	pH (biofilter drainage effluent)	Daily	pH metre or litmus paper	
	Efficiency assessment	Annual	Media health, air-flow distribution and emission removal efficiency (BS EN 13725 for odour removal)	
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling NIOSH 6013 for analysis	Action levels to be agreed on completion of IC5 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Ammonia – inlet	Every 6 months or as agreed in writing by the	EN ISO 21877	Action levels to be agreed on

Table S3.4 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
		Environment Agency.		completion of IC5 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Odour concentration – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	BS EN 13725	Action levels to be agreed on completion of IC5 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
Carbon filters				
Carbon filter	Carbon bed temperature – inlet and outlet	Continuous	Temperature probe	Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations. Carbon filter(s) to be replaced in accordance with manufacturer's recommendations. Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	Moisture or humidity	Daily	Moisture meter	
	Back pressure	Weekly	Recognised industry method	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	

Table S3.4 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
				Environment Agency.
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling NIOSH 6013 for analysis	Action levels to be agreed on completion of IC5 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Ammonia – inlet	Every 6 months or as agreed in writing by the Environment Agency.	EN ISO 21877	Action levels to be agreed on completion of IC5 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Odour concentration – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	BS EN 13725	Action levels to be agreed on completion of IC5 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.

Table S3.5 Bioaerosols monitoring requirements – ambient monitoring					
Location or description of point of measurement	**Parameter**	**Bioaerosols action levels (CFU m^{-3})**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Upwind of the operational area, as described in the Technical Guidance Note M9 Downwind of the operational area, as described in the Technical Guidance Note M9	Total bacteria	1000 Note 1	Quarterly for the first year of operation and twice a year thereafter, unless another frequency is agreed in writing by the Environment Agency Note 2	In accordance with Technical Guidance Note M9 – Environmental monitoring of bioaerosols at regulated facilities.	As described in the Technical Guidance Note M9, including all the additional data requirements specified therein.
	Aspergillus Fumigatus	500 Note 1			
Note 1 – The bioaerosols action levels are only applicable at downwind sampling locations equivalent to the distance of the nearest sensitive receptor. Where these action levels are elevated, the operator must take action to mitigate the impact on sensitive receptors. Assessment of compliance will be based on risk and in line with guidance. Note 2. Where the bioaerosols action levels are exceeded, then monitoring remain quarterly until such time that it is demonstrated that the site has adequate mitigation for a 12 month period.					

Table S3.6 Bioaerosols monitoring requirements – point sources					
Location or description of point of measurement	**Parameter**	**Bioaerosols action levels (CFU m^{-3})**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Biofilter (stack)	Total bacteria	As per quantitative impact assessment	Quarterly for the first year of operation and twice a year thereafter, unless another frequency is agreed in writing by the Environment Agency	In accordance with Technical Guidance Note M9 – Environmental monitoring of bioaerosols at regulated facilities.	As described in the Technical Guidance Note M9, including all the additional data requirements specified therein.

Table S3.7 Emissions to sewer, effluent treatment plant or other transfers off-site – Monitoring points			
Effluents and discharge points	**Monitoring type**	**Monitoring point NGR**	**Monitoring point reference**
T1 on site plan in schedule 7 emission to River Glaze via Leigh WwTW from CHP engines and biogas line condensate discharge	Effluent monitoring	SJ 66298 98999	Point W1 in Schedule 7
T1 on site plan in schedule 7 emission to River Glaze via Leigh WwTW from boiler blowdown discharge	Effluent monitoring	SJ 66347 98967	Point W2 in Schedule 7
T1 on site plan in schedule 7 emission to River Glaze via Leigh WwTW OCU biofilter wastewater discharge	Effluent monitoring	SJ 66326 99067	Point W3 Schedule 7
T1 on site plan in schedule 7 emission to River Glaze via Leigh WwTW from LTP discharge	Effluent monitoring	SJ 66322 99148	Point W7 in Schedule 7
T1 on site plan in schedule 7 emission to River Glaze via Leigh WwTW from cake storage building leachate discharge	Effluent monitoring	SJ 66285 99130	Point W8 in Schedule 7
T1 on site plan in schedule 7 emission to River Glaze via Leigh WwTW from surface water drainage discharge	Effluent monitoring	SJ 66323 98993	Point W9 in Schedule 7

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 from CHP engines and boiler Parameters as required by condition 3.5.1.	A1, A2, A3	Every 12 months	1 January
Emissions to air from abatement systems for waste gas treatment plant Reporting only applies where the substance concerned is identified as relevant in the waste gas inventory IC5 Parameters as required by condition 3.5.1.	A4	Every 6 months	1 January, 1 July
Emissions to sewer Parameters as required by condition 3.5.1	W1, W2, W3, W7, W8 and W9	Upon completion of IC4a and IC4b	Upon completion of IC4a and IC4b
Process monitoring – digester tank integrity Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 5 years from the date of commissioning or as per the manufacturer's recommendation, whichever is sooner	1 January
Process monitoring – under and over pressure relief systems Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 12 months Yearly summary report of over-pressure and under-pressure events detailing mass balance release	1 January
Process monitoring – pressure relief systems - leak detection and repair (inspection, calibration and maintenance) Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 3 years	1 January
Process monitoring – leak detection and repair surveys Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 12 months LDAR report to be submitted annually	1 January
Process monitoring – use of emergency flare Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 12 months	1 January

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Total annual VOCs emissions from gas engines (calculated)	As specified in schedule 3 table S3.3	Every 12 months	1 January
Bioaerosols monitoring Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.5 and S3.6	Every 3 months or as agreed in writing by the Environment Agency	1 January, 1 April, 1 July, 1 October

Table S4.2 Annual production/treatment	
Parameter	**Units**
Electricity generated	MWh
Liquid digestate	m^3
Solid digestate	tonnes
Recovered outputs	tonnes or m^3

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Water usage	Annually	tonnes or m^3
Energy usage	Annually	MWh
Raw material usage	Annually	tonnes or m^3
Emergency flare operation	Annually	hours
Electricity exported	Annually	MWh
CHP engine usage	Annually	hours
CHP engine efficiency	Annually	%
Auxiliary boiler usage	Annually	hours

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	28/06/2024
Bioaerosols	As specified in the Technical Guidance Note M9 or other form as agreed in writing by the Environment Agency	--
Process monitoring	Form process 1 or other form as agreed in writing by the Environment Agency	28/06/2024
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	28/06/2024
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	28/06/2024
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	28/06/2024

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	28/06/2024
Waste returns	E-waste Return Form or other form as agreed in writing by the Environment Agency	--

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	

(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	
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	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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.

“appropriate abatement system” means the appropriate treatment technique for channelled emissions to air defined in 6.6.1 ‘Channelled emissions to air’ from the ‘Best Available Techniques (BAT) Reference Document for Waste Treatment’.

“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.

“Best available techniques” means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole:

(a) ‘techniques’ includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;

(b) ‘available techniques’ means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator;

(c) ‘best’ means most effective in achieving a high general level of protection of the environment as a whole.

“bioaerosols action levels” mean the acceptable bioaerosols concentrations at the nearest sensitive receptor, or at an equivalent distance downwind of the biowaste treatment operations, which are attributable to the biowaste treatment operations. The acceptable concentrations are respectively 1000 and 500 CFU m^{-3} for total bacteria and Aspergillus fumigatus. Where these action levels are elevated, the operator must take action to mitigate the impact on sensitive receptors.

“Biodegradable” means a material is capable of undergoing biological anaerobic or aerobic degradation leading to the production of CO_2, H_2O, methane, biomass, and mineral salts, depending on the environmental conditions of the process.

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

“BREF” means Best Available Techniques (BAT) Reference Document.

“Capacity” means the potential capacity and not historical or actual production levels or throughput. This means that the designed capacity is the maximum rate at which the site can operate. Biological treatment of waste usually takes place over more than one day, so the physical daily capacity can be calculated by dividing the maximum quantity of waste that could be subject to biological treatment at any one time by the minimum residence time. For in-vessel composting, the residence time for sanitisation should be calculated separately and then aggregated to the complete composting time. Further guidance ‘RGN2: Understanding the meaning of regulated facility Definition of regulated facility’ is available.

“channelled emissions” means the emissions of pollutants into the environment through any kind of duct, pipe, stack, etc. This also includes emissions from open top biofilters.

“combined heat and power” (CHP) or Cogeneration means the simultaneous generation in one process of thermal energy and electrical or mechanical energy.

“competent persons and resources” means that a technically competent person accredited to a relevant scheme must attend site and record their attendance, and that all roles and responsibilities are clearly stated in the management systems along with records of operatives’ training. See the guidance on the level of competence and duration of attendance

“direct discharge” means discharge to a receiving water body.

“diffuse emissions” mean non-channelled emissions (e.g. of dust, organic compounds, odour) which can result in ‘area’ sources (e.g. tanks) or ‘point’ sources (e.g. pipe flanges). This also includes emissions from open-air windrow composting.

“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.

“DSEAR” means the Dangerous Substances and Explosive Atmospheres Regulations 2002.

“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 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“existing medium combustion plant” means an MCP which was put into operation before 20 December 2018.

“generator” means any combustion plant which is used to generate electricity, excluding mobile, unless it is connected to the national grid.

“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.

“head of works” means the discharge location where imported wastes are discharged into the WwTW. The waste operations associated with the head of works is either via the direct discharge of tankered waste into the WwTW or the temporary storage of waste in a storage tank before discharge of waste into the WwTW. The waste water treatment works are operated under the requirements of the Urban Waste Water Treatment Directive.

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

“Indirect discharge” means a discharge to a sewer or off-site waste water treatment plant.

“Industrial Emissions Directive” and/or “IED” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“Leak detection and repair (LDAR) programme’’ means a structured approach to reduce fugitive emissions of organic compounds by detection and subsequent repair or replacement of leaking components. Currently, sniffing (described by EN 15446) and optical gas imaging methods are available for the identification of leaks as set out in BAT 14 and section 6.6.2 of the Waste Treatment BAT Conclusions.

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

“medium combustion plant” or ”MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“new medium combustion plant” means an MCP which was put into operation after 20 December 2018. This includes replacement MCP and Generators.

“operational area” means any part of a facility used for the handling, storing and treatment of waste.

“operator” means in relation to a regulated facility:

(a) the person who has control over the operation of the regulated facility,

(b) if the regulated facility has not yet been put into operation, the person who will have control over the regulated facility when it is put into operation, or

(c) if a regulated facility authorised by an environmental permit ceases to be in operation, the person who holds the environmental permit

“pests” means Birds, Vermin and Insects.

“PFOA” means Perfluorooctanoic acid.

“PFOS” means Perfluorooctanesulphonic acid.

“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.

“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.

“sanitisation” means the actively managed and intensive stage of composting, lasting for at least 5 days, characterised by high oxygen demand and temperatures of over 55^0C, during which biological processes, together with conditions in the composting mass, eradicate human and animal pathogens or reduce them to acceptably low levels. The operator also needs to meet ABPR requirements.

“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:

- no liquids will run off the surface otherwise than via the system
- all liquids entering the system are collected in a sealed sump, except where liquids may be lawfully discharged to foul sewer.

“specified generator” means a group of generators other than excluded between 1 and 50 megawatts or less than 50 megawatts as defined in Schedule 25B(2) of SI 2018 No.110 of the EPR.

“stable” and/or “stabilised” means the degree of processing and biodegradation at which the rate of biological activity has slowed to an acceptably low and consistent level and will not significantly increase under favourable, altered conditions.

“VOC” means Volatile organic compounds as defined in Article 3(45) of Directive 2010/75/EU – ‘volatile organic compound’ means any organic compound as well as the fraction of creosote, having at 293.15K a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use.

“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” and/or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

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:

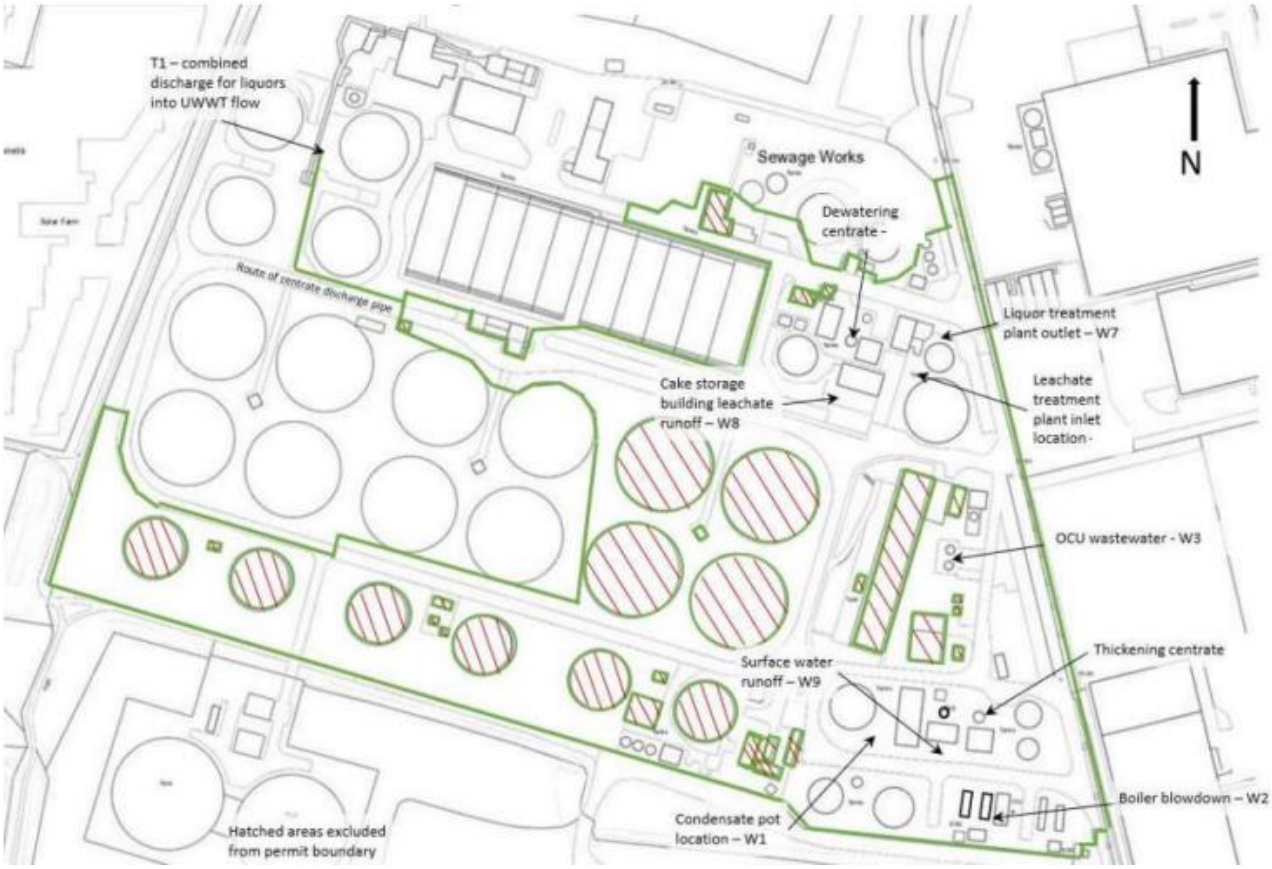
- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid fuels and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration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

“year” means a calendar year ending on 31 December.

Schedule 7 – Site plan

Air emission points

Emission points to water



Annex 1 of MCP

1. Rated thermal input (MW) of the medium combustion plant.	CHP 1 – 1.3 MWth CHP 2 – 1.3 MWth Boiler – 1.16 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	CHP 1 – Biogas CHP 2 – Biogas Boiler – Dual fuel natural gas / biogas
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	As above
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	CHP 1 & 2 and boiler operational <2018
5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code.	E 37.00
6. Expected number of annual operating hours of the medium combustion plant and average load in use.	CHP 1 – 1.3 MWth - 8,760 hours per year CHP 2 – 1.3 MWth - 8,760 hours per year Boiler – 1.16 MWth 8,760 hours per year
7. Where the option of exemption under Article 6(3) or Article 6(8) is used, a declaration signed by the operator that the medium combustion plant will not be operated more than the number of hours referred to in those paragraphs.	NA
8. Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.	Operator: United Utilities Water Limited Registered address: Haweswater House, Lingley Mere Business Park Lingley Green Avenue, Great Sankey, Warrington WA5 3LP Address of plant: Leigh WwTW Sludge Treatment Facility, Hope Carr Lane, Leigh, Lancashire, WN7 3XB

END OF PERMIT