Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Thames Water Utilities Limited

Beckton Sludge Treatment Centre
Beckton Sewage Treatment Works
Jenkins Lane
Barking
Essex
IG11 0AD

Variation application number

EPR/PB3238RK/V004

Permit number

EPR/PB3238RK

Beckton Sludge Treatment Centre
Permit number EPR/PB3238RK

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 Beckton Sludge Treatment Centre (STC) are existing but will be brought into environmental regulation for the first time and are required to operate using BAT.

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Current permit

The current permit allows for the operation of a Section 1.1 A (1) (a) Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts. The total site's capacity is 72.5 MWth.
This includes:

- 3 x existing CHP engines with a net rated thermal input of 4.7 MWth each, fired on biogas generated on site.
- 2 x existing auxiliary boilers with a net rated thermal input of 4.7 MWth each, fired on biogas generated on site or natural gas.
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Emergency standby diesel generators (emergency plant), including the following equipment:

- 4 x existing Perkins emergency standby engines with a net rated thermal input 3.8 MWth each.
- 5 x existing Finning CAT emergency standby engines with a net rated thermal input 5.2 MWth each.
- 1 x existing Finning CAT emergency standby engine with a net rated thermal input 1.6 MWth.
- 1 x new Perkins emergency standby engine with a net rated thermal input 4.8 MWth

Combustion equipment with net rated thermal input of less than 1 MW each that are aggregated to a net rated thermal input of approximately 1.4 MWth.

Changes introduced by this variation made by the operator

This variation amends the permit to add two scheduled activities (Section 5.4 Part A (1)(b)(i) and Section 5.4 A(1)(a)(ii)) as well as a waste activity for the import of waste to the head of works to become to a multi regime permit. This variation also includes an increase to the site boundary to accommodate the assets associated with the sludge Anaerobic Digestion (AD) operation, dewatering and waste operation.

The permit has been reviewed against the requirements of the Medium Combustion Plant Directive for 2025 and 2030 and relevant conditions and monitoring requirements have been added.

Brief description of the process

Beckton STC is located adjacent to the River Thames to the east of London in Barking. It is situated within an Air Quality Management Area (AQMA) for particulate matter smaller than 10 microns (PM10) and oxides of nitrogen (NOx). The installation is within a Flood Zone but the area benefits from flood defences. Beckton STC is in the grounds of the wider Beckton Wastewater Treatment Works (WwTW) which do not form part of this permit. The national grid reference for the site is TQ 44945 81690.

The site will accept up to 9,120,000 tonnes per annum of indigenous and imported waste sludge.

Sewage sludge produced at Beckton WwTW (indigenous sludge) can be received via three routes. Via route one indigenous surplus activated sludge (SAS) is pumped to the SAS buffer tanks (which are outside the scope of this permit) before the sludge is thickened within the SAS thickening plant. Once thickened sludge is passed to the SAS blending tank and from here it can be transferred to either the sludge buffer tanks, Primary Sludge blending tank, high energy blending tank, sludge screens, or the thermal hydrolysis plant (THP) high energy blending tank. From the sludge buffer tanks and high energy balance tanks sludge is transferred to the primary sludge blending tanks.

Liquor produced as part of the SAS thickening process is discharged to the WwTW (which does not form part of the permit boundary) via the liquor return pumping station 2, 3a or 3b by emission points T2, T3a, or T3b and is sampled at points S2, S3a or S3b.

The second route for acceptance of indigenous sludge is via the primary sludge buffer tanks. From here sludge can either be transferred to the primary sludge thickening plant, or the picket fence thickeners. From the primary sludge thickening plant sludge is transferred to the thickened primary sludge buffer tanks and then to the primary sludge blending tank.

The third route for acceptance of indigenous sludge is at the picket fence thickeners. From the picket fence thickeners sludge is transferred to the primary sludge blending tank. Liquor produced as part of route two and three is discharged to the WwTW via liquor return pumping station 1 by emission point T1 and is sampled at point S1.

From the Primary sludge blending tank sludge can take one of four routes. In the first route sludge is transferred off site to the sludge powered generator under permit EPR/ZP3833BK. The dewatering of sludge for disposal is a section 5.4 A(1)(a)(ii) scheduled activity of the above regulations. This allows for the disposal of non hazardous waste in a facility with a capacity of more than 50 tonnes per day as the incinerator under EPR/ ZP3833BK is designed for disposal only.

Through the second route sludge can be transfered back to the high energy blending tank, and for the third route sludge is transferred to the sludge screens where it is screened to remove contaries before being transferred to the undigested sludge transfer blending tank, then to the undigested sludge transfer buffer tank before being transferred off site to be accepted at Riverside STC for AD which is operated under permit EPR/GB3739DY.

The fourth route is via the THP process. The THP process consist of a THP high energy blending tank, two THP sludge blending tanks, two pre THP dewatering feed tanks, two THP feed silos, two THP pulper tanks, six THP reactor tanks, and two THP flash tanks. Imported sludge is received at the THP high energy blending tank. Liquor produced as part of the THP dewatering plant is discharged to the WwTW via liquor return pumping station 4 by emission point T4 and is sampled at point S4.

Once sludge has undergone the THP process it is transferred into one of six primary digesters where it then undergoes biological treatment in the form of AD. The treatment of sludge in a biological AD process is a

Section 5.4 Part A (1)(b)(i) scheduled activity of the above regulations. This variation adds the section 5.4 activity to the permit.

Biogas produced as part of the AD process is captured within the roof mounted double membraned biogas storage holders on top of each primary digester prior to being used for combustion in three combined heat and power (CHP) engines (with a thermal input of 4.7 MWth each), and two boilers (with a thermal input of 4.7 MWth each).The electrical energy and heat produced, is used to power on-site processes and provide heat to the digestion process.

In the event of emergency, biogas is flared in a waste gas burner.

Biogas condensate is produced from the CHP and boilers is discharged to site drainage system and returned to the WwTW via emission point T4 and sampled at point S4.

Following AD treatment, sludge is transferred to two digested sludge buffer tanks and then to the digested sludge dewatering plant to produce cake. Cake is stored on an impermeable surface within the cake barn before being exported offsite for land spreading under the Sludge (Use in Agriculture) Regulations (SUiAR) and undergoes quality assurance under the Biosolids Assurance Scheme (BAS). Liquor produced from the dewatering of sludge is discharged to the WwTW (which does not form part of the permit boundary) by emission point T5 and sampled at point S5.

The site also operates 2 odour control units (OCUs) these consist of:

- OCU 3 at emission point A28 consisting of a four stage biofilter followed by a chemical scrubber and then a two stage carbon filter. This OCU is connected to the sludge screens, primary sludge buffer tanks, primary sludge thickening plant, thickened primary sludge buffer tanks, undigested sludge transfer buffer tank, undigested sludge transfer blending tank, high energy blending tank, primary sludge blending tank and picket fence thickeners.
- OCU 4 at emission point A29 consisting of a two stage biological treatment system; a lava rock bio-trickling filter stage followed by two carbon filters. This OCU serves the THP sludge blending tanks, THP high-energy blending tank. pre-THP dewatering feed tanks, pre-THP dewatering plant and THP feed silo.

Waste waters produced from OCU 3 is are discharged to the liquor return pumping station 1 for treatment at the WwTW by emission point T1 and sampled at point S1. OCU 4 waste waters are discharged to the liquor return pumping station 4 for treatment at the WwTW by emission point T4 and sampled at point S4

This permit also allows a waste operation for the import of liquid waste to the head of works. Effluents and waste waters in the form of sludge and liquid only, will be delivered by tanker to the head of the works for treatment under the UWWTR. This activity involves the storage of liquid wastes and discharge to the main WwTW. The discharge is classed as an indirect emission to water. In this case, the River Thames. We have imposed improvement conditions in the permit to determine the impact on the River Thames from the tankered wastes imported and subsequently discharged to the WwTW.

There is one Special area of conservation (SAC) (Epping Forest), and one Ramsar and special protection area (SPA) (Lee Valley) within relevant screening distances of the installation.

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/PB3238RK/A001	Duly made 09/10/2013	Application for CHP plant
Additional information received	28/11/2013	Further site plan details
Permit determined EPR/PB3238RK	16/01/2014	Permit issued to Thames Water Utilities Limited
Variation application EPR/PB3238RK/V002	Duly made 24/11/2020	Application to vary the permit from a waste operation to an EPR Schedule 1, Section 1.1 Part A1(a) combustion installation
Additional information received	17/12/2020 22/12/2020	Amended application documents excluding elective operation of standby diesel generators from the scope of the application
Response to Schedule 5 Notice for further information issued 11/12/2020	26/02/2021 12/04/2021 27/04/2021 29/04/2021	Schedule 5 responses providing additional information regarding drainage, containment for fuel storage, integrity of underground fuel delivery pipes, operating scenarios for emergency standby plant generators and location of plant <1 MWth
Additional information received	26/02/2021	Response to request for information #1 providing additional information in relation to the Site Condition Report
Additional information received	11/02/2021	Response to request for information #2 providing an Acute Exposure Impact Assessment for the operation of the diesel engines
Variation EPR/PB3238RK/V002 determined (variation and consolidation)	28/06/2021	Varied permit issued to Thames Water Utilities Limited
Variation application EPR/PB3238RK/V003	Duly made 25/09/2023	Add a new 4.8 MWth gas oil fired standby generator, to provide power to the new and existing inlet works
Request for additional information sent 09/10/2023	12/10/2023	Air quality assessment/habitats (additional habitats assessment not required)
Further information provided	15/11/2023	Updated site plan
Variation EPR/PB3238RK/V003 determined (variation and consolidation)	30/11/2023	Varied permit issued to Thames Water Utilities Limited
Application EPR/PB3238RK/V004	Duly made 22/04/2024	Application to vary the permit add a section 5.4 A (1)(b)(i) installation activity and a waste operation for the temporary storage of digested cake.
Additional information received	12/02/2025	Updated containment options report, updated odour management plan and updated site emission plan.
Variation and consolidation determined EPR/PB3238RK/V004 (EAWML Billing ref. EAWML 400177)	26/03/2025	Variation and consolidation issued to Thames Water Utilities Limited.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/PB3238RK

Issued to

Thames Water Utilities Limited ("the operator")

whose registered office is

Clearwater Court
Vastern Road
Reading
Berkshire
RG1 8DB

company registration number **02366661**

to operate a regulated facility at

Beckton Sludge Treatment Centre
Beckton Sewage Treatment Works
Jenkins Lane
Barking
Essex
IG11 0AD

to the extent set out in the schedules.

The notice shall take effect from 26/03/2025

Name	Date
Maxine Evans	**26/03/2025**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated and varied permit issued 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 2016

Permit number

EPR/PB3238RK

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

Thames Water Utilities Limited ("the operator"),

whose registered office is

Clearwater Court
Vastern Road
Reading
Berkshire
RG1 8DB

company registration number **02366661**

to operate an installation and waste activities at

Beckton Sludge Treatment Centre
Beckton Sewage Treatment Works
Jenkins Lane
Barking
Essex
IG11 0AD

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

Name	Date
Maxine Evans	**26/03/2025**

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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR13), the operator shall:

(a) take appropriate measures to ensure that energy is used efficiently in the activities;

(b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR13), the operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

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

1.4.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

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

2 Operations

2.1 Permitted activities

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

2.1.2 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR13), 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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR13), 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 For the following activities referenced in schedule 1, table S1.1: AR1: Limited Operating Hours MCPs shall:

(a) not exceed 500 hours operation in a 12-month period as a rolling average over a 3-year period, for new MCPs and over a 5-year period for existing MCPs, and thereafter assessed annually; and

(b) not operate for more than 750 hours in any single year.

2.3.5 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2 tables S2.2 and S2.3; 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.

2.3.6 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.

2.3.7 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.

2.3.8 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR13), waste pre-acceptance and acceptance procedures shall be undertaken in accordance with best available techniques.

2.3.9 For the following activities referenced in schedule 1, table S1.1 (AR1):

(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 the combustion plant as short as possible.

(c) there shall 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.

2.5 Pre-operational conditions

2.5.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

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 adequate 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 IC8 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 tables S3.5 and S3.6

3.5.2 For the following activities referenced in schedule 1, table S1.1: AR1, the first monitoring measurements shall be carried out:

(a) within four months of the issue date of variation or the date when the MCP is first put into operation, whichever is later; and

(b) at any time for existing MCPs, but no later than the relevant compliance date.

3.5.3 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.

3.5.4 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.

3.5.5 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.

3.5.6 Monitoring of MCP shall not take place during periods of start up or shut down.

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 tables 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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR13), 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	Section 1.1 A (1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more	Combined Heat and Power (CHP) plant (Existing MCP) including the following equipment: - 3 x CHP engines, net rated thermal input of 4.7 MW each, fired on biogas generated on site. Existing MCP. - 2 x THP boilers, with net rated thermal input of 4.7 MW each, fired on biogas generated on site or natural gas. Existing MCP.	From receipt of biogas produced at the on-site anaerobic digestion process to combustion in three CHPs and two boilers with the release of combustion gases. Combustion of natural gas in two boilers with the release of combustion gases. Discharge of exhaust gases through emission points A1 to A5, and the generation of electricity, heat and steam, including discharge of boiler blowdown via the site drainage system to emission point T4. Permitted waste shall comprise biogas from sewage sludge digesters.
		Emergency standby diesel generators (emergency plant), including the following equipment: - 4 x Perkins engines – ASP4 standby generators, net rated thermal input 3.8 MW each. Existing MCP. - 5 x Finning CAT engines – Power House standby generators, net rated thermal input 5.2 MW each. Existing MCP. - 1 x Finning CAT engine – Fine Screen standby generator. Net rated thermal input 1.6 MW. Existing MCP. note 1 - 1x FG Wilson Perkins standby generator for inlet works, net rated thermal input 4.8 MW. New MCP note 1 -	From receipt of gas oil to discharge of exhaust gases through emission points A7 to A17 and A33 note 1, for maintenance operations and the generation of electricity during emergency power outages. The operational hours of this activity shall not exceed the specifications set out in condition 2.3.4 of this permit. Maintenance and testing operations shall not exceed 50 hours/year/generator and shall comply with the testing schedule described in the operating techniques documents referred to in table S1.2 of this permit.

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**
		Combustion equipment with net rated thermal input less than 1 MW each, aggregated net rated thermal input of 1.4 MWth, including the following equipment: - 1 x Perkins 2000-80 – Detritor standby generator, net rated thermal input 0.8 MW. - 1 x Cummings B Series, 4 Cylinder Emergency Lighting standby generator, net rated thermal input 0.1 MW - 2 x Potterton NXR3 – Admin Block boilers, net rated thermal input 0.2 MW each. 1 x Remeha Qunita Pro 115 – Operations Building boiler, net rated thermal input 0.1 MW	From receipt of gas oil and natural gas to discharge of exhaust gases through emission points A18, **note 1** to A20, and the generation of electricity and hot water.
AR2	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 six tanks followed by burning of biogas produced from the process. Anaerobic digestion shall be limited to 2,181 tonnes per day. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR3	S5.4 A (1) (a) (ii): Disposal of non hazardous waste in a facility with a capacity of more than 50 tonnes per day	D 9 - Physico-chemical 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 D 1 to D 12 (e.g. evaporation, drying, calcination, etc.)	From receipt of the waste to the physical and chemical treatment and transfer off site for disposal by incineration. Physical and chemical treatment of waste within the following plant: - 1 x SAS thickening plant - 1 x SAS blending tank - 6 x Sludge buffer tanks - 1 x Primary sludge blending tank

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**
			- 4 x Picket fence thickeners - 1 x Primary sludge thickening plant - 2 x Thickened primary sludge buffer tanks - 1 x High energy blending tank The total volume of waste to be exported for disposal shall not exceed 90,500 tonnes per annum. Waste types suitable for acceptance are limited to those specified in Table S2.2.
Directly Associated Activity			
AR4	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) D 15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced) (*3)	Undertaken in relation to Activity AR2 and AR3. From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site, anaerobic digestion offsite, and disposal via incineration. Storage of residual wastes from pre-treatment to despatch off-site for recovery. 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.
AR5	Physical treatment for the purpose of recycling	R3: Recycling/reclamation of organic substances which are not used as solvents	Undertaken in relation to Activity 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

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**
			drainage system, including shredding, sorting, screening, compaction, baling, mixing and maceration. Pre-treatment for anaerobic digestion off site shall be limited to 2,007,500(t)pa of the total throughput of table S2.3 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). Heat treatment (thermal hydrolysis) of waste in seventeen tanks for the purpose of recovery. Tanks are comprised of 1 x THP high energy blending tank, 2 x THP sludge blending tanks,2 x pre THP dewatering feed tanks, 2 x THP feed silos, 2 x THP pulper tanks, 6 x THP reactor tanks and 2 x THP flash tanks. Gas cleaning by biological or physical (carbon filtration) or chemical scrubbing. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR6	Emergency flare operation	D10: Incineration on land	Undertaken in relation to Activity AR2. 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 auxiliary boilers.

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**
AR7	Raw material storage	Storage of raw materials including lubrication oil, antifreeze, ferric chloride, activated carbon, diesel.	Undertaken in relation to Activity AR1 AR2 and AR3. 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 AR2. Storage of biogas produced from on-site anaerobic digestion of permitted waste in six roof mounted double membraned biogas storage holders on top of each primary digester. From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for use within the facility. 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 AR2. 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 two storage tanks Storage of processed solid digestate in Cake Barn and on an impermeable surface with sealed drainage system.
AR10	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water	Undertaken in relation to Activities AR1, AR2 and AR3 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.
AR11	Air abatement	Collection and treatment of air from the buildings or plant using abatement system – [biofilters, carbon filters and chemical scrubber], 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 – [5 x biofilters, 4x carbon filters, 1 x chemical scrubber]

AR12	Oil Storage	Storage of oil from receipt onto site, storage in oil storage tanks, oil dump	Undertaken in relation to Activity AR1 and AR2
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**
		tanks and transfer through oil pipelines	From receipt of raw materials to dispatch for use.
AR13	Water Treatment	Demineralisation plant	Undertaken in relation to Activity AR1. From supply of raw water to production of demineralised boiler feed water for steam production, including discharge of effluents to the site drainage system (emission point S4).

Activity reference	**Description of activities for waste operations**	**Limits of activities**
AR14 – Blending of waste for discharge to the WwTW .	D13: D13 Blending or mixing prior to submission to any of the operations numbered D1 to D12	From the receipt of waste sludges and waste liquids via tanker at the *head of the works* for treatment. Treatment operations shall be limited to the blending and mixing of waste. This treatment is limited to blending and mixing without significantly altering the nature of the waste. Blending and mixing shall not be undertaken to achieve a reaction or a dilution of contaminants. Subject to any other requirements of this permit wastes shall be stored for no longer than 1 year prior to disposal. The discharge of tankered waste shall take place on an impermeable surface with a sealed drainage system. Waste types as specified in Table 2.3.

Note 1: Emissions to air from the new gas oil fired standby generator are at a new emission point A33. This will replace the existing gas oil fired standby generator for the current inlet works, with emissions to air from existing emission point A17. Emission point A17 will be retained in the permit solely to facilitate the transitioning from the existing to the new generator.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application EPR/PB3238RK/A001	Application Forms Part B2 and B4 and supporting information	09/10/2013
Application EPR/PB3238RK/A001	Section 3 of Supporting technical information – In-process controls	09/10/2013
Application EPR/PB3238RK/A001	Section 4, 12 of Supporting technical information – Emission Controls and associated table, Section 4, page 4-12; Emission Monitoring and Records and associated table, Section 12, page 3-8	09/10/2013

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application EPR/PB3238RK/A001	Section 5, 10 of Supporting technical information – Management Techniques and associated table, Section 5, page 7-10; Accidents, Section 10; and associated Accident Management Plan: Beckton, July 2013 version 1.0	09/10/2013
Application EPR/PB3238RK/A001	Sections 6, 7, 8 of Supporting technical information – Raw Materials and associated table, Section 6 page 5; Waste handling and associated table, Section 7 page 2; Waste recovery and disposal and associated table, Section 8, page 1	09/10/2013
Application EPR/PB3238RK/A001	Sections 9 of Supporting technical information – Energy and associated table, Section 9, page 7-8	09/10/2013
Application EPR/PB3238RK/A001	Section 11 of Supporting technical information – Noise and associated table, Section 11, page 2	09/10/2013
Application EPR/PB3238RK/A001	Section 13 of Supporting technical information – Closure and associated Beckton Site Closure Plan, Final 30 July 2013 and Beckton Site Condition Report, Final 30 July 2013	09/10/2013
Variation application EPR/PB3239RK/V002	All Supporting Information Documents referenced in response to Parts C2 and C3 of the Application Form Excluding document titled 'Beckton Combustion Facility Environmental Permit Variation Application Supporting Information', dated May 2020	24/11/2020
Additional information EPR/PB3238RK/V002	Revised application document titled 'Beckton Combustion Facility Environmental Permit Variation Application Supporting Information', dated December 2020	17/12/2020
Schedule 5 Notice request dated 18/09/2020 EPR/PB3238RK/V002	Schedule 5 response providing additional information regarding drainage, containment for fuel storage, integrity of underground fuel delivery pipes, operating scenarios for emergency standby plant generators and location of plant <1MWth - Maintenance testing Schedule – 'Q7 – Maintenance testing for Beckton STW Combustion Plant EPR/PB3238RK/V002, 26-02-21'	26/02/2021 12/04/2021 27/04/2021 29/04/2021
Additional information request dated 06/01/2021 EPR/PB3238RK/V002	Response to request for information #1 providing additional information on in relation to the Site Condition Report	26/02/2021
Response to permit improvement condition IC4 in table S1.3 of this permit	Approved Air Quality Management Plan (AQMP), reference 5181760, version 4, dated January 2023 Note 1	30/01/2023
Variation application EPR/PB3239RK/V003	Supporting Information document, version 1.0, dated May 2023 Application form Part C2.5 including combustion plant spreadsheet	25/09/2023

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Variation and consolidation application EPR/PB3239RK/V004	Response to section 3a – technical standards, Part C3 of the application form. Best available techniques as described in the BAT Reference Document for Waste Treatment (the BREF) and BAT conclusions. Beckton Sludge Treatment Centre Environmental Permit Site Condition Report, dated December 2023. ADBA assessment, dated December 2023 Accident Prevention and Management Plan: Beckton STW, dated December 2023 Raw Materials, Water and waste Residue Efficiency Management Plan: Beckton STW, dated December 2023 Acceptance of Third-Party Waste Imports, dated 14/11/2023. Acceptance of TWUL Inter-Site Sludge, Cake and Sludge Liquors, dated 14/11/2023. Acceptance of TUWL Inter-site sludge, cake and sludge liquors, dated 26/11/2023 Leak Detection and Repair Plan (LDAR) – Beckton, dated 13/12/2023.	19/12/2023
Response to request for further information Notice dated 15/03/2024	Response to questions relating to dewatering activity, head of works activity, open tanks and stack dispersion.	27/03/2024
Response to request for further information Notice dated 12/04/2024	Response to question relating to dispersion stacks.	22/04/2024
Response to Schedule 5 Notice dated 15/01/2025	Response to questions relating to secondary containment and emission points. Beckton STC – Containment Options Report, dated January 2025 Asset Management Asset Standard Odour Management Plan Beckton STW, dated February, 2025. [excluding OCU monitoring frequency specified in section 5.1.2 – For agency approved monitoring frequency refer to the process monitoring table S3.4]	12/02/2025
Response to operator review	Figure 2 - Installation Boundary and Air Emission Points, Rev, P05 Process flow Diagram, Rev P04	19/03/2025

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	The operator shall submit a written report to the Environment Agency for written approval which includes a review all oil and fuel tanks and the containment infrastructure related to the site combustion plant. The report shall identify any deficiencies in the tanks and their containment compared against the requirements of CIRIA 736. It shall also include the latest oil and fuel tanks and containment inspection reports undertaken to meet COMAH requirements, it shall demonstrate, with evidence, how the recommendations and conclusions of the inspection reports have been addressed and which recommendations remain outstanding. The report shall set out proposals to address deficiencies, non-compliances, observations and outstanding recommendations identified from the comparison against CIRIA 736 and in the inspection reports. The report shall provide timescales for the implementation of these proposals. The operator shall undertake the work outlined in the report, in line with the timescales as agreed with the Environment Agency.	Complete
IC2	The operator shall submit a written report to the Environment Agency of an assessment of the risk of oil contaminating exposed soils in the event of an oil spill or as a result of either tank or pipework failure. The report shall include an assessment of the risks by considering the source, pathway and receptor, and shall identify the need for impermeable surfacing or other suitable mitigation as necessary. The report shall contain a plan showing the existing and if appropriate proposed site surfacing for the whole installation. The report shall set out proposals based upon the conclusions of the risk assessment to install impermeable surface or other identified mitigation measures and shall provide timescales for the implementation of these proposals. The operator shall undertake the work outlined in the report, in line with the timescales as agreed with the Environment Agency.	Complete
IC3	The operator shall complete a survey of the routing of all drains within the installation and provide the Environment Agency with detailed drainage plans. The drainage plans shall show both surface and foul water drainage arrangements, including discharge points. The drainage plans shall show the drainage network described for all areas within the installation boundary. They shall also show the drainage network connecting the installation to the Sewage Treatment Works and shall indicate the eventual discharge point.	Complete

IC4	The operator shall produce an Air Quality Management Plan in conjunction with the Local Authority outlining response measures to be taken in the event of a grid failure requiring the standby generators (activity reference: AR2 of Table S1.1, emission points A7 to A16) to operate. This should include but not be limited to the following considerations: The response should be tailored to reflect the predicted potential impact indicated by the air dispersion modelling at individual receptors; • Preventative and reactive actions to be implemented to limit the duration of an outage event as far as possible; • Specific timescales for response measures; • How local conditions during a grid failure might influence the response required, for example meteorological conditions or time of day; • Contingency for how the response will be carried out in the event scenario i.e. loss of power; and • Timescales for continued review of the management plan. The agreed Air Quality Management Plan shall be submitted to the Environment Agency for approval.	Complete (refer to table S1.2 of this permit)
IC5	Unless otherwise agreed in writing with the Environment Agency, after assessing the outcomes of improvement condition IC6 below, the operator shall submit a report to the Environment Agency verifying the predicted short-term nitrogen oxides concentrations at the boundary of the site during the simultaneous testing operations of the diesel standby generators (activity reference: AR2 of Table S1.1, emission points A7 to A16). The report shall include but is not limited to: • Monitoring of ambient air quality at the boundary of the site during all the testing scenarios using monitoring methods agreed in advance with the Environment Agency; • A comparison of modelled concentrations of nitrogen dioxide against monitored; • A demonstration that appropriate monitoring location(s) were selected at the boundary of the site, taking into account the modelled predictions and the weather conditions prevalent at the time of the monitoring; • Evidence to demonstrate that the monitoring team holds appropriate qualifications. The output of the verification exercise should be used to inform / revise the Air Quality Management plan if necessary.	Complete

IC6	The operator shall submit an assessment of options for reducing predicted short term nitrogen dioxide emissions impacts from the operation of the standby diesel generators (activity reference: AR2 of Table S1.1, emission points A7 to A16). This shall include but is not limited to: • A feasibility study of potential upgrades or other changes to infrastructure or operational regimes on site that could reduce emissions and/or increase dispersion; • Proposing appropriate changes in stack height, replacing horizontal emissions with vertical flues and other potential options for decreasing emissions or increasing dispersion to ensure testing and emergency scenarios emission levels do not exceed acceptable maximum levels specified in relevant guidance at sensitive receptors; • An updated air dispersion modelling study demonstrating how the proposed option(s), selected among those assessed, result in reduced levels of oxides of nitrogen at the sensitive receptors, compared against the environmental standards and acute exposure guidelines for NO_2 and NO; • Proposal of an appropriate timescale for improvements. The review and timescale for improvement shall be submitted to the Environment Agency in writing for approval.	Complete
IC7	The operator shall investigate the use of hydro-treated vegetable oil (HVO) fuel in the commissioning of the new standby generator associated with emission point A33. This shall include a test at the % load indicative of normal operation. A minimum of three MCERTS standard emissions tests shall be undertaken for oxides of nitrogen (NOx) during commissioning, with the results reported to the Environment Agency within four weeks of each test. Where the results are compliant with the 2g TA Luft (2,000 mg/m^3 (+/- 10%) NOx (as NO_2)) or EPA tier 2 at 5% oxygen at standard temperature 273 K and pressure 101.3 kPa, dry) and assuming no other operational issues are identified from use of this fuel during commissioning, a HVO fuel of an agreed specification shall become the normalised fuel for the facility following written agreement with the Environment Agency and in accordance with table S2.1 of this permit. In the event that NOx levels are above the 2g TA Luft, the operator shall propose, and implement, an agreed alternative solution of achieving BAT equivalence and associated action plan no later than within twelve months of the last emissions test, unless alternative timescales are agreed in writing with the Environment Agency. Once approved in writing, the plan shall be delivered in accordance with the agreed timescales.	Complete
Note 1: The requirements for IC5 shall be subject to the outcome of the improvements implemented by IC6 and subject to assessment and written approval by the Environment Agency.		
Improvement condition for secondary containment design		
IC8	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 'Beckton STC – Containment Options Report', dated January 2025. The finalised designs and specifications shall be produced by appropriate competent individuals (qualified civil or structural engineer), in accordance with the risk assessment	31/3/2025 Implementation of all required and approved containment improvements must

	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 demonstrate how the finalised designs based on the proposed secondary containment in the document 'Beckton STC – Containment Options Report', dated January 2025 meets 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.	be completed by 31/03/2025.
Improvement conditions for primary containment tanks		
IC9	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 conditions for establishing an inventory of liquid waste water discharged from anaerobic digestion and associated activities (AR1 – AR13)		
IC10a	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	Within 2 months of issue of this permit or such other date

	characterise the waste waters discharged to Beckton WwTW wastewater treatment works (WwTW) from emission points T1, T2, T3a, T3b, T4 and T5 and sampled at points S1, S2, S3a, S3b, S4 and T5 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 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.	as agreed in writing with the Environment Agency
Improvement conditions for indirect discharges to water discharged from anaerobic digestion and associated activities (AR1 – AR13)		
IC10b	The operator shall submit a report for approval by the Environment Agency, following completion of the sampling programme approved under IC10a. The report shall include but not be limited to; a	Within 15 months of the Environment Agency's written

	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 T1, T2, T3a, T3b, T4 and T5 and sampled at points S1, S2, S3a, S3b, S4 and S5 will have any adverse impact on the receiving waters once discharged from Beckton WwTW. An assessment shall be made against the parameters specified in the relevant environmental standards as specified within Environment Agency guidance as follows: • 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.	approval of the sampling programme submitted under IC10a or such other date as agreed in writing with the Environment Agency
IC10c	The operator shall implement any improvements identified within the report approved under IC10b in accordance with the Environment Agency's written approval and provide written confirmation to the Environment Agency that the improvements have been completed. (Note, approval of reports under this improvement condition does not preclude the need for permit variation application(s) to operate the improvements identified in the report and/or include any necessary emission limit values).	Within 6 months of the report in relation to IC10b being approved by the Environment Agency or such other date as agreed in writing with the Environment Agency
Improvement condition to address methane slip emissions from gas engines burning biogas		
IC11	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. The operator shall establish methane emissions in the exhaust gas and methane slip using the following standards: • EN ISO 25139 • EN ISO 25140	Within 6 months of permit issue or as such other agreed in writing with the Environment Agency
Improvement condition for review of effectiveness of abatement plant		

IC12	The operator shall carry out a review of the abatement plant at emission points A28 and A29 on site, to determine whether the measures have been effective and adequate to prevent, or where this is not possible to minimise, emissions released to air (including but not limited to odour and ammonia, Hydrogen chloride (HCl), and TVOC. 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 emission of pollutants in the waste gas stream is being prevented or where this is not possible minimised by the abatement plant. • Abatement stack monitoring results (including but not limited to odour, ammonia, HCl, and TVOC). • Abatement process monitoring results (including but not limited to odour, ammonia, HCl, and TVOC). • 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, ammonia, HCl, and TVOC). • Odour monitoring results at the site boundary. • Records of odour complaints and odour related incidents. • 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 any improvements in line with the timescales as approved by the Environment Agency. (Note that approval of reports under this improvement condition does not preclude the need for permit variation applications to implement the improvements identified in the report. Any variation may include the insertion of necessary emission limit values).	Within 6 months of permit issue or such other date as agreed in writing with the Environment Agency
Improvement condition for establishing an inventory of liquid waste water discharged from the Head of works waste operation activity (AR14)		
IC13a	The operator shall submit a sampling programme in relation to liquid/sludge waste streams that are to be discharged to emission points T6 and T7 and shall obtain the Environment Agency's written approval to it. The sampling programme shall be designed to fully characterise the liquid/sludge waste discharged to Beckton WwTW from emission points T6 and T7 in table S3.2 of the permit. The programme shall include but not be limited to a methodology for gathering a representative chemical pollutant suite of analysis of all incoming wastes that will be discharged to, emission points T6 and T7 for a period of 12 months.	**Submission of sampling programme** 3 months from the issue of this permit or such other date as may be agreed in writing with the Environment Agency

	A minimum of 12 spot samples from each waste producer shall be taken provided the liquid/sludge waste is appropriately mixed, homogeneous, and is representative of the specific waste stream being discharged. The programme shall detail the sampling methods/standards and limits of detection (LOD)/minimum reporting values (MRV) used. Waste Characterisation sampling methods shall be in accordance with guidance, *Non-hazardous and inert waste: appropriate measures for permitted facilities* and *Biological waste treatment: appropriate measures for permitted facilities,* and shall fully characterise the liquid/sludge waste streams, including as a minimum for each waste stream the: • Maximum, minimum and average values and variability of flow, pH, temperature and conductivity. Flow rates shall be based upon the capacity of the discharging holding tank, with clear evidence to demonstrate how this has been calculated. • Chemical names, the units of measurement, maximum, minimum and average concentration and load values of all substances that have an environmental quality standard (EQS) or ecotoxic properties, and their variability. • Total and dissolved metals data • Data on bioeliminability. • Information on the liquid/sludge waste stream source • National Grid Reference (NGR) of the sampling point. The sampling programme shall be produced in accordance with the following Environment Agency guidance: • Section 3 (Waste pre-acceptance, acceptance and tracking) of guidance 'Non-hazardous and inert waste: appropriate measures for permitted facilities' • Section 6 (Waste pre-acceptance, acceptance and tracking) of guidance *Biological waste treatment: appropriate measures for permitted facilities* • 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) • *Monitoring discharges to water: CEN and ISO monitoring methods* Monitoring discharges to water: CEN and ISO monitoring methods - GOV.UK (www.gov.uk)	**Quarterly sampling data results at three monthly intervals** Quarter 1 Initial sampling data results submitted 3 months from the date the Environment Agency approves the sampling programme, or other such date as may be agreed in writing with the Environment Agency Quarter 2 Sampling data results submitted 6 months from the date the Environment Agency approves the sampling programme, or other such date as may be agreed in writing with the Environment Agency Quarter 3 Sampling data results submitted 9 months from the date the Environment Agency approves the sampling programme, or other such date as may be agreed in writing with the Environment Agency Quarter 4

	The sampling programme shall be carried out as approved by the Environment Agency and the sampling data shall be submitted in accordance with the Environment Agency's written approval.	Final sampling data results submitted 12 months from the date the Environment Agency approves the sampling programme, or other such date as may be agreed in writing with the Environment Agency
Improvement conditions for indirect discharges to water discharged from the Head of works waste operation activity (AR14)		
IC13b	The operator shall submit a report for audit and approval by the Environment Agency, following completion of the sampling programme referred to in IC13a. The report shall include but shall not be limited to: • the raw data used to undertake the screening, • a summary of the sample results, • a completed H1 risk assessment or equivalent risk assessments and • modelling outputs where appropriate, in order to assess the impact from each individual liquid/sludge waste stream discharged to points T6 and T7. The operator shall provide conclusions on whether the liquid/sludge wastes discharged to T6 and T7 will have any adverse impact on the receiving waters once discharged from Beckton WwTW. An assessment shall be made against the parameters identified in IC13a and against the relevant environmental quality standards (EQS – or Predicted No Effect Concentrations (PNECs) for substances that have ecotoxic properties but no established EQS) as specified within Environment Agency guidance as follows: • 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). • H1 risk assessment tool ADMLC https://admlc.com/h1-tool/ The report shall include proposals for any additional measures/abatement required to prevent or minimise any significant emissions from the waste operation. The operator shall implement the proposals in the report in	Within 6 months of the submission of the final sampling data results submitted under IC13a or such other date as may be agreed in writing with the Environment Agency

	accordance with the timescales as approved in writing by the Environment Agency.	
IC13c	The operator shall submit a report that provides written confirmation to the Environment Agency that the proposed improvements identified within the report approved under IC13b have been implemented and completed in accordance with the Environment Agency's written approval. (Note, approval of reports under this improvement condition does not preclude the need for permit variation application(s) to operate the improvements identified in the report and/or include any necessary emission limit values).	Within 6 months of the report in relation to IC13b being submitted to the Environment Agency or such other date as may be agreed in writing with the Environment Agency
Improvement condition for monitoring digestate stability		
IC14	The operator shall submit a written report, with supporting evidence, on the stability of whole digestate, (i.e. prior to dewatering), and obtain the Environment Agency's written approval to it. The report shall assess whether biogas emissions from post digestion storage or treatment of digestate is likely to have been minimised. The report shall include but not be limited to: • An assessment of residual biogas potential in accordance with the OFW004-005 [N6] methodology specified by *BSI PAS 110: Producing Quality Anaerobic Digestate* or an equivalent methodology for assessing residual biogas potential of the digestate.	Within 6 months of permit issue or such other date as agreed in writing with the Environment Agency
Improvement condition for the abatement of dispersion stack		
IC15	The operator shall submit a written 'abatement plan' and obtain the Environment Agency's written approval to it. The plan shall contain the final designs and an implementation schedule for the installation of abatement plant at emission point A30 that meets the requirements of BAT 34 and BAT 53 of the Waste Treatment BREF. That plan shall also contain but not be limited to: The plan shall include a demonstration (whether by a detailed review of technical papers or by trial results) that all odorous chemical compounds and their loading rates expected in the relevant air streams have been considered in the design; and supporting evidence that the odorous compounds will be controlled and/or abated either by operating techniques or by the proposed abatement systems. Evidence that the abatement plant will be designed and installed in accordance with guidance, *Biological waste treatment: appropriate measures for permitted facilities.* A program of works with timescales for the commissioning of the abatement plant infrastructure. The operator shall install and commission the abatement plant in line with the timescales as approved by the Environment Agency. (Note, approval of reports under this improvement condition does not	Within 6 months of permit issue or such other date as agreed in writing with the Environment Agency

	preclude the need for permit variation application(s) to operate the improvements identified in the report and/or include any necessary emission limit values).	

Table S1.4 Pre-operational measures		
Reference	**Operation**	**Pre-operational measures**
Pre-operational condition to submit an assessment of the fate and impact of new waste streams not previously accepted, and that change the risk of the waste stream to be discharged under existing waste codes as specified in Table S2.3		
P01	AR14	Prior to accepting new waste streams under activity AR14 for existing permitted waste codes identified in table S2.3 for discharge into the head of works (emission points T6 and T7), the operator shall undertake an assessment of the fate and impact on the receiving waters by updating the environmental risk assessment established in IC13b, the additional measures/abatement implementation plan as approved under IC13b and in accordance with the sampling plan as approved under IC13a. Acceptance of the new liquid/sludge waste streams under existing waste codes shall only commence following submission of the above risk assessment and any recommendations for additional measure/abatement considered to be required, written approval from the Environment Agency and the submission of written confirmation to the Environment Agency that any additional measures/abatement considered to be required have been implemented and completed as approved.

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Gas Oil or an equivalent substitute to be agreed in writing with the Environment Agency	Gas Oil or an equivalent substitute to be agreed in writing with the Environment Agency
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Table S2.2 Permitted waste types and quantities for anaerobic digestion and dewatering for offsite disposal via incineration (AR2 – AR13)	
Maximum quantity	**Annual throughput shall not exceed 9,120,000 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 06	**wastes from anaerobic treatment of waste**
19 06 06	digestate from anaerobic treatment of animal and vegetable waste (digested 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
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (sewage sludge only) subjected to mechanical treatment only from a process that treats waste which are listed in this table, Table S2.2

Table S2.3 Permitted waste types and quantities for non-hazardous waste storage and treatment (Head of Works) (AR14)	
Maximum quantity	**Annual throughput shall not exceed 75,000 tonnes**
Exclusions	Wastes having any of the following characteristics shall not be accepted: • 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. • Hazardous waste. • Solid wastes (only wastes of liquid free flowing form shall be accepted).
Waste code	**Description**
16	**Wastes not otherwise specified in the list**
16 10	**16 10 aqueous liquid wastes destined for off-site treatment**
16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01

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 – 4.7MWth [Burning biogas] [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^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 – 4.7MWth [Burning biogas] [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^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 A3 on site plan in Schedule 7	CHP engine 3 – 4.7MWth [Burning biogas] [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^3	Average over sample period	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**
		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
Existing medium combustion plant other than engines fuelled on biogas (1 MW to 5 MW)						
Point A4 on site plan in Schedule 7	Boiler 1 – 4.7MWth [Burning biogas] [note 1]	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
		Sulphur dioxide	200 mg/m^3 [note 3]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
Point A5 on site plan in Schedule 7	Boiler 2 – 4.7MWth [Burning biogas] [note 1]	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
		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)						

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**
Point A4 on site plan in Schedule 7	Boiler 1 – 4.7MWth [Burning natural gas] [note 1]	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			BS EN 15058
Point A5 on site plan in Schedule 7	Boiler 2 – 4.7MWth [Burning natural gas] [note 1]	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			BS EN 15058
Emergency Flare						
Point A6 on site plan in Schedule 7	Emergency flare stack	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	150 mg/m^3	Average over sample period	[note 4]	BS EN 14792
		Carbon monoxide	50 mg/m^3			BS EN 15058
		Total VOCs	10 mg/m^3			BS EN 12619:2013
Existing medium combustion plant other than engines and gas turbines fuelled on gas oil (1 MW to 5 MW) operating for less than 50 hours per year						
Point A7 on site plan in Schedule 7	Emergency standby 3.8 MWth Perkins engines ASP4, [Burning gas oil] [note 1]	--	--	--	--	--
Point A8 on site plan in Schedule 7	Emergency standby 3.8 MWth Perkins engines ASP4, [Burning gas oil] [note 1]	--	--	--	--	--
Point A9 on site plan in Schedule 7	Emergency standby 3.8 MWth Perkins engines ASP4, [Burning gas oil] [note 1]	--	--	--	--	--
Point A10 on site plan in Schedule 7	Emergency standby 3.8 MWth Perkins engines ASP4, [Burning gas oil] [note 1]	--	--	--	--	--

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 other than engines and gas turbines fuelled on gas oil (greater than 5 MW) operating for less than 50 hours per year						
Point A11 on site plan in Schedule 7	Finning CAT engine, power house standby generators 5.2 MWth (Emergency standby) [Burning gas oil] [note 1]	--	--	--	--	--
Point A12 on site plan in Schedule 7	Finning CAT engine, power house standby generators 5.2 MWth (Emergency standby) [Burning gas oil] [note 1]	--	--	--	--	--
Point A13 on site plan in Schedule 7	Finning CAT engine, power house standby generators 5.2 MWth (Emergency standby) [Burning gas oil] [note 1]	--	--	--	--	--
Point A14 on site plan in Schedule 7	Finning CAT engine, power house standby generators 5.2 MWth (Emergency standby) [Burning gas oil] [note 1]	--	--	--	--	--
Point A15 on site plan in Schedule 7	Finning CAT engine, power house standby generators 5.2 MWth (Emergency standby) [Burning gas oil] [note 1]	--	--	--	--	--
Existing medium combustion plant other than engines and gas turbines fuelled on gas oil (1 MW to 5 MW) – operated for less than 50 hours						
Point A16 on site plan in Schedule 7	Finning CAT engine, power house standby generators 1.6 MWth (Emergency standby) [Burning gas oil] [note 1]	--	--	--	--	--
New medium combustion plant other than engines and gas turbines fuelled on gas oil – operated for less than 50 hours						
Point A17 on site plan in Schedule 7	Emergency standby 4.8 MWth Perkins engines [Burning gas oil] [note 1]	--	--	--	--	--
Existing combustion plant (less than 1 MW)						

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**
Point A18 on site plan in Schedule 7	Emergency standby generator, 0.1 MWth [Burning gas oil] [note 1]	--	--	--	--	--
Point A19 on site plan in Schedule 7	2 x 0.2 MWth boilers - Potterton admin block boilers, heating and hot water [Burning natural gas] [note 1]	--	--	--	--	--
Point A20 on site plan in Schedule 7	1 x 0.1 MWth boiler - Remeha Qunita, operations building boiler, heating and hot water [Burning natural gas] [note 1]	--	--	--	--	--
Pressure relief valves [Point A21 on site plan in schedule 7]	Thermal Hydrolysis Plant	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Pressure relief valves [Points A22, A23, A24, A25, A26 and A27 on site plan in schedule 7]	Biogas Storage Holders	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Point A28 on site plan in schedule 7	Channelled emissions such as odour abatement stack or vent(s) [note 6]	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
	Channelled emissions to air from treatment of water-based liquid waste	Hydrogen chloride (HCl)	5 mg/m^3 [note 5]	Average over sample period	Once every 6 months	EN 1911
		TVOC	20 mg/m^3 [note 5]	Average over	Once every 6 months	EN 12619

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**
				sample period		
Point A29 on site plan in schedule 7	Channelled emissions such as odour abatement stack or vent(s) [note 6]	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
	Channelled emissions to air from treatment of water-based liquid waste	Hydrogen chloride (HCl)	5 mg/m^3 [note 5]	Average over sample period	Once every 6 months	EN 1911
		TVOC	20 mg/m^3 [note 5]	Average over sample period	Once every 6 months	EN 12619
New medium combustion plant other than engines and gas turbines fuelled on gas oil – operated for less than 50 hours						
Point A33 on site plan in schedule 7	STW inlet Emergency standby generator - FG Wilson Perkins – 4.8 MWth [Burning gas oil] [note 1]	--	--	--	--	--
Vents from tank(s)	Oil/Fuel Storage tank(s)	No parameter set	No limit set	--	--	--

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**
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 – Monitoring and limits only apply where the substance concerned is identified as relevant in the waste gas inventory IC12. Note 6 – The monitoring of NH_3 and H_2S can be used as an alternative to the monitoring of the odour concentration subject to the outcome of IC12. Note 7: Gas oil or equivalent substitute in accordance with table S2.1 of this permit for emission points A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18 and A33 Note 8: Emissions to air from the new gas oil fired standby generator are at a new emission point A33. This will replace the existing gas oil fired standby generator for the current inlet works, with emissions to air from existing emission point A17. Emission point A17 will be retained in the permit solely to facilitate the transitioning from the existing to the new generator.						

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**
S1, S2, S3a, S3b, S4 and S5 on site plan in schedule 7 emission to River Thames via Beckton waste water treatment works	Primary Picket Fence Thickener Liquors, OCU3 Waste Water, Primary Sludge Thickener Liquors, SAS Thickener Liquors, Surface Water Run Off Pre THP Dewatering Liquors, OCU 4 Waste Water, Boiler Blowdown, Biogas Condensate and Digested Sludge Dewatering Liquors	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	Once every day	EN ISO 11885, EN ISO 17294-2 or
		Cadmium (Cd)	0.1 mg/l			
		Chromium (Cr)	0.3 mg/l			

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**
		Copper (Cu)	0.5 mg/l	composite sample		EN ISO 15586
		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 6 months	--
T6 and T7 on site plan in schedule 7 emission to River Thames via Beckton waste water treatment works	Discharge of tankered waste waters to the head of works	-- [Note 3]	-- [Note 3]	-- [Note 3]	-- [Note 3]	-- [Note 3]

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 IC10a and IC10b

Note 2 – Monitoring frequency as specified unless the Environment Agency has agreed in writing other alternative appropriate monitoring frequencies.

Note 3 – Emission limits and monitoring requirements to be set following completion of IC13a, IC13b.

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 digesters & 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			
Digesters and storage tanks	Integrity checks	Weekly	Visual assessment	In accordance with design specification and tank integrity checks.
Digesters	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	In accordance with design specification and tank integrity checks.

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**
			by manufacturers technical specification.	
Waste reception building or area; Digesters and storage tanks	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	--
	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,

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**
				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.
	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.

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, 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 and 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 at emission points A28 and A29 on site plan in schedule 7	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.
	Biofilter media moisture	Daily	Moisture meter, Grab test, oven drying or	

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**
			recognised industry method	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.
	Thatching /compaction	Weekly	Back pressure	
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	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 IC12 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 IC12 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 S3.4 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 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 IC12 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 filters at emission points A28 and A29 on site plan in schedule 7	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 filters 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 Environment Agency.
	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)	
	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 IC12 as approved in writing by the Environment Agency. Action levels to be achieved in

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**
				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 IC12 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 IC12 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.
Scrubbers (water/chemical/dry)				
Chemical Scrubber at emission point A28 on site plan in schedule 7	Gas temperature – inlet and outlet	Continuous	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
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	Moisture content or humidity – inlet and outlet (for dry scrubbers only)	Daily	Moisture meter	

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**
	Moisture content or humidity – outlet (for wet scrubbers if used before other abatement systems)	Daily	Moisture meter	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.
	Back pressure	Weekly	Pressure differential using sensors	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	
	pH scrubber solution (pre-abatement)	Continuous	pH meter	
	pH scrubber solution (post-abatement)	Continuous	pH meter	
	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 IC12 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 IC12 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour

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**
				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 stacks	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.
	Aspergillus Fumigatus	As per quantitative impact assessment			

Table S3.7 Emissions to sewer, effluent treatment plant or other transfers off-site – Monitoring points			
Effluent(s) and discharge point(s)	**Monitoring type**	**Monitoring point NGR**	**Monitoring point reference**
T1 on site plan in schedule 7 emission to River Thames via Beckton WwTW - Picket Fence Thickener Liquors, OCU3 Waste Water, Primary Sludge Thickener Liquors	Effluent monitoring	TQ 44859 81752	Point S1 [Discharge to WwTW] in Schedule 7
T2 on site plan in schedule 7 emission to River Thames via Beckton WwTW - SAS Thickener Liquors, Surface Water Run Off	Effluent monitoring	TQ 45068 81597	Point S2 [Discharge to WwTW] in Schedule 7
T3a on site plan in schedule 7 emission to River Thames via Beckton WwTW - SAS Thickener Liquors	Effluent monitoring	TQ 45055 81644	Point S3a [Discharge to WwTW] in Schedule 7
T3b on site plan in schedule 7 emission to River Thames via Beckton WwTW - SAS Thickener Liquors, Surface Water Run Off	Effluent monitoring	TQ 45091 81667	Point S3b [Discharge to WwTW] in Schedule 7
T4 on site plan in schedule 7 emission to River Thames via Beckton WwTW - Pre THP Dewatering Liquors, OCU 4 Waste Water, Boiler Blowdown, Biogas Condensate	Effluent monitoring	TQ 45007 81677	Point S4 [Discharge to WwTW] in Schedule 7
T5 on site plan in schedule 7 emission to River Thames via Beckton WwTW - Digested Sludge Dewatering Liquors	Effluent monitoring	TQ 45024 81675	Point S5 [Discharge to WwTW] in Schedule 7
T6 on site plan in schedule 7 emission to River Thames via Beckton WwTW - Cess/Domestic Waste Imports 1	Effluent monitoring	TQ 44147 82012	Point S6 [Discharge to WwTW] in Schedule 7
T7 on site plan in schedule 7 emission to River Thames via Beckton WwTW - Cess/Domestic Waste Imports 2	Effluent monitoring	TQ 44547 81927	Point S7 [Discharge to WwTW] 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 boilers Parameters as required by condition 3.5.1.	A1, A2, A3, A4 and A5	Every 12 months	1 January
Emissions to air (MCP) Parameters as required by condition 3.5.1.	A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A33	After 1500 operating hours have elapsed and no less frequent than every 5 years from date of acceptance of first monitoring measurements under condition 3.5.1	1 January
Emissions to air from odour abatement plant Parameters as required by condition 3.5.1.	A28, A29	Every 6 months	1 January, 1 July
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 IC12 Parameters as required by condition 3.5.1.	A28, A29	Every 6 months	1 January, 1 July
Emissions to sewer Parameters as required by condition 3.5.1	S1, S2, S3a, S3b, S4, S5, T6 and T7	Upon completion of IC10a, IC10b, IC13a and IC13b	Upon completion of IC10a, IC10b, IC13a and IC13b
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

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
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
Non-compostable contamination removal efficiency Parameters as required by conditions 2.3.4 and 2.3.7	--	Every 12 months Yearly report of detailing contamination removal efficiency and progress with plastic reduction contamination	1 January
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

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Electricity exported	Annually	MWh
CHP engine usage	Annually	hours
CHP engine efficiency	Annually	%
Auxiliary boiler usage	Annually	Hours
Hours run on biogas and run on natural gas per annum (for each boiler)	Annually	Hours
Gas oil usage and/or equivalent substitute fuel Note 2	Annually	Tonnes
Generators operation during emergency scenarios (emission points A7 - A16 and A33)	Annually	• Date and time of grid failure, • Number of generators operating immediately after the failure, • Number of generators operating two hours after failure, • Anticipated duration of the mains supply failure (hours)
Generators operation during emergency scenarios (emission points A7 – A16 and A33)	Within 24 hours if operation commences	• Date and time of grid failure, • Number of generators operating immediately after the failure, • Number of generators operating two hours after failure, Anticipated duration of the mains supply failure (hours)
Note 2 - Any equivalent substitute fuel to be agreed in accordance with table S2.1 of this permit.		

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	DD/MM/YYYY
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	DD/MM/YYYY
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	DD/MM/YYYY
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	DD/MM/YYYY
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	DD/MM/YYYY
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	DD/MM/YYYY
Waste returns	E-waste Return Form or other form as agreed in writing by the Environment Agency	--

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Generator operation during emergency scenario	Form ‘emergency scenario’ or other form as agreed in writing by the Environment Agency	28/06/2021
Performance of standby generators	Form performance 2 or other form as agreed in writing by the Environment Agency	28/06/2021

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 breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) 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.

“average over the sampling period” means the average value of three consecutive measurements of at least 30 minutes each or as agreed in writing with the Environment Agency.

“base load” means: (i) as a mode of operation, operating for >4000hrs pa; and (ii) as a load, the maximum load under ISO conditions that can be sustained continuously, i.e. maximum continuous rating.

“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.

“calendar monthly mean” means the value across a calendar month of all validated hourly means.

“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.

“Combustion Technical Guidance Note” means IPPC Sector Guidance Note Combustion Activities, version 2.03 dated 27th July 2005 published by Environment Agency.

“commissioning” means testing of the installation that involves any operation of combustion plant referenced in schedule 1, table S1.1 or as agreed with the Environment Agency.

“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

“compliance date” means 01/01/2025 for existing MCPs with net rated thermal input of greater than 5MWth or 01/01/2030 for existing MCPs with a net rated thermal input of less than or equal to 5MWth.

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

“compostable plastics” means waste containing packaging or non-packaging items (or both) with a valid certificate of conformity to EN 13432 or an equivalent standard for compostable and digestible items, the certificate issued by an independent certification body capable of fully biodegrading by a biological process to create compost or digest.

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

“composting batch” means an identifiable quantity of material that progresses through the composting system and when fully processed has similar characteristics throughout. For composting systems that operate on a continuous- or plug-flow basis, batches will be taken to mean a series of “portions of production”.

“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.

“emergency plant” means a plant which operates for the sole purpose of providing power at a site during an onsite emergency and/or during a black start and which does not provide balancing services or demand side response services.

“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.

“Energy efficiency” means the annual net plant energy efficiency, the value for which is calculated from the operational data collected over the year.

“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.

“first put into operation” means that the plant must have been fired with its design fuel up to its full load. This can be, but does not have to be, during commissioning.

“gas oil” includes diesel and is defined in Article 3(19) of the MCPD.

“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.

“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.

“limited operating hours MCP” means an MCP that meets the requirements of paragraph 8 of Part 2 of Schedule 25A of the Environmental Permitting Regulations.

“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.

“Natural gas” means naturally occurring methane with no more than 20% by volume of inert or other constituents.

“ncv” means net calorific value.

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

“operating hours” means the time, expressed in hours, during which a combustion plant is operating and discharging emissions into the air, excluding start-up and shut-down periods

“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.

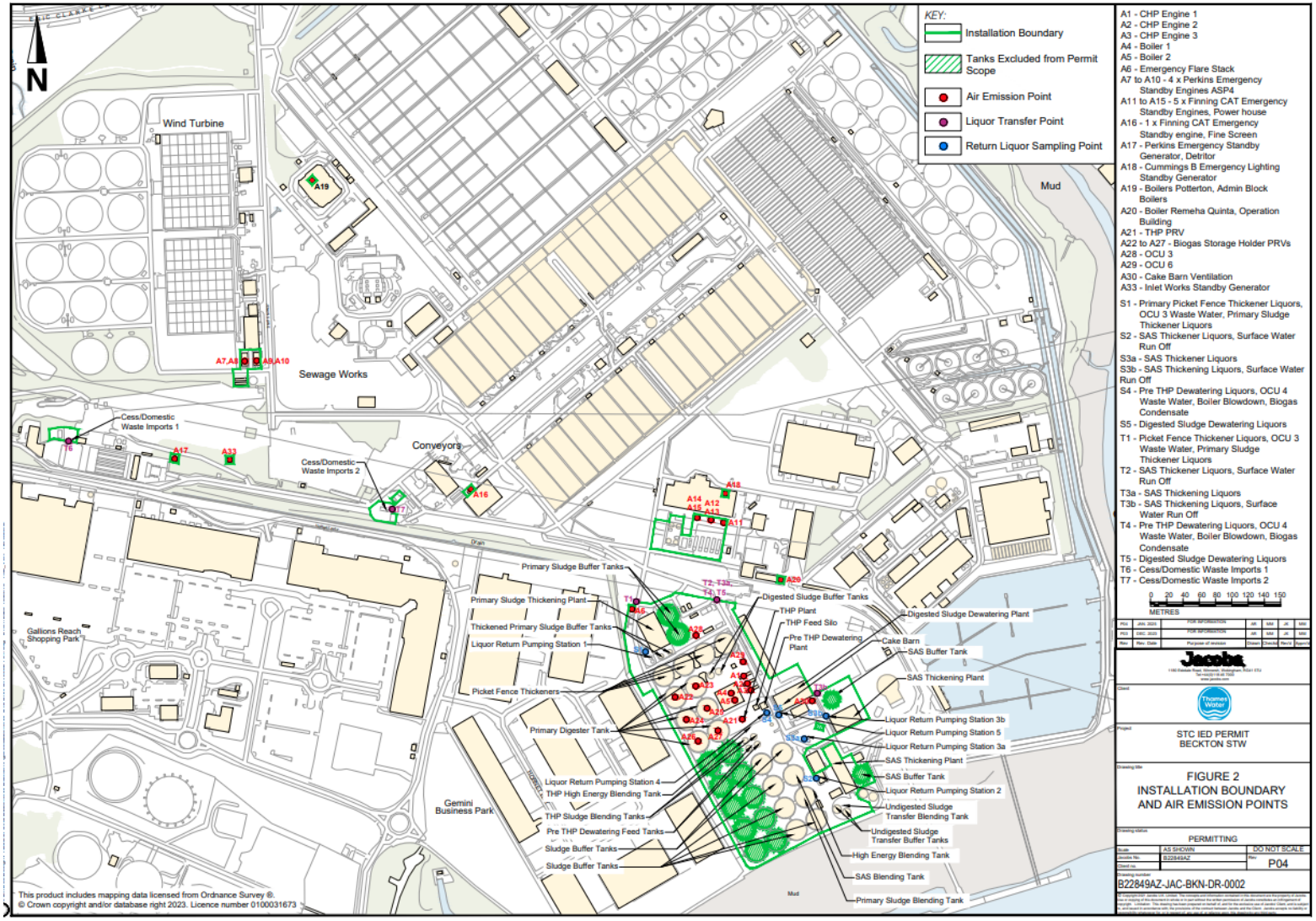
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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



Annex 1 of MCP

1. Rated thermal input (MW) of the medium combustion plant.	CHP engine 1 – 4.7 MWth CHP engine 2 – 4.7 MWth CHP engine 3 – 4.7 MWth Boiler 1 – 4.7 MWth Boiler 2 – 4.7 MWth ASP4 Emergency standby generator 1 – 3.8 MWth ASP4 Emergency standby generator 2 – 3.8 MWth ASP4 Emergency standby generator 3 – 3.8 MWth ASP4 Emergency standby generator 4 – 3.8 MWth Power House Emergency standby generator 1 – 5.2 MWth Power House Emergency standby generator 2 – 5.2 MWth Power House Emergency standby generator 3 – 5.2 MWth Power House Emergency standby generator 4 – 5.2 MWth Power House Emergency standby generator 5 – 5.2 MWth Fine screen Emergency standby generator – 1.6 MWth New STW inlet Emergency standby generator - 4.8 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	CHP engine 1 CHP engine 2 CHP engine 3 Boiler 1 Boiler 2 ASP4 Emergency standby generator 1 ASP4 Emergency standby generator 2 ASP4 Emergency standby generator 3 ASP4 Emergency standby generator 4 Power House Emergency standby generator 1 Power House Emergency standby generator 2 Power House Emergency standby generator 3 Power House Emergency standby generator 4 Power House Emergency standby generator 5 Fine screen Emergency standby generator New STW inlet Emergency standby generator
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	CHP engine 1 - Biogas (Gaseous fuels other than natural gas) CHP engine 2 - Biogas (Gaseous fuels other than natural gas) CHP engine 3 - Biogas (Gaseous fuels other than natural gas) Boiler 1 - Biogas (Gaseous fuels other than natural gas), Natural gas Boiler 2 - - Biogas (Gaseous fuels other than natural gas), Natural gas ASP4 Emergency standby generator 1 – Gas oil ASP4 Emergency standby generator 2 – Gas oil ASP4 Emergency standby generator 3 – Gas oil ASP4 Emergency standby generator 4 – Gas oil Power House Emergency standby generator 1- Gas oil Power House Emergency standby generator 2 - Gas oil Power House Emergency standby generator 3 - Gas oil Power House Emergency standby generator 4 - Gas oil Power House Emergency standby generator 5 - Gas oil Fine screen Emergency standby generator - Gas oil

	New STW inlet Emergency standby generator - Gas oil
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.	All apart from New STW inlet Emergency standby generator pre 2018.
5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code.	37.00
6. Expected number of annual operating hours of the medium combustion plant and average load in use.	CHP engine 1 - 8760 CHP engine 2 - 8760 CHP engine 3 - 8760 Boiler 1 - 8760 Boiler 2 - 8760 ASP4 Emergency standby generator 1 – less than 50 ASP4 Emergency standby generator 2 – less than 50 ASP4 Emergency standby generator 3 – less than 50 ASP4 Emergency standby generator 4 – less than 50 Power House Emergency standby generator 1– less than 50 Power House Emergency standby generator 2 – less than 50 Power House Emergency standby generator 3 – less than 50 Power House Emergency standby generator 4 – less than 50 Power House Emergency standby generator 5 – less than 50 Fine screen Emergency standby generator – less than 50 New STW inlet Emergency standby generator – less than 50
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.	N/A
8. Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.	**Company name and registered office:** Thames water Utilities Limited, Clearwater Court, Vastern Road, Reading, Berkshire, RG1 8DB **Address where the plant is located:** Beckton Sludge Treatment Centre, Beckton Sewage Treatment Works, Jenkins Lane, Barking Essex, IG11 0AD

END OF PERMIT