Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Severn Trent Water Limited

Wanlip Sewage Treatment Works
Fillingate
Wanlip
Leicester
LE7 4PF

Variation application number

EPR/AP3893CN/V004

Permit number

EPR/AP3893CN

Wanlip Sewage Treatment Works
Permit number EPR/AP3893CN

Introductory note

This introductory note does not form a part of the permit

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. Some of the conditions of the permit have been varied or removed and are subject to the right of appeal.

Changes introduced by this variation

The following notice gives notice of the variation to a multi-regime environmental permit, EPR/AP3893CN, to replace two lagoons with three post-digestion storage tanks. The post-digestion storage tanks have been introduced as both post-digestion assets for the installation anaerobic digestion operation as well as reception tanks for the 'import for dewatering' waste operation. The post-digestion storage tanks have been built with their own secondary containment bund. The biogas is transfered from the roof space of the tanks into the overall gas infrastructure.

Brief description of the process

Wanlip STW is located approximately 5.7km to the north of Leicester. The site covers about 33 hectares and treats the sewage of domestic customers, trade waste and accepts waste from smaller, lower capacity sewage treatment works.

Waste is imported by Severn Trent where it will undergo one of 3 treatment processes:

Anaerobic digestion (AD)

Both indigenous Urban Waste Water Treatment Regulations (UWWTR) derived sludge (from the waste water treatment works on site) and imported sludges can be accepted directly in to an anaerobic digestion treatment process. This biological treatment of this waste is regulated as an installation activity, S5.4 A(1)(b)(i).

Following approval by the operator, sludge waste is screened before being transferred to the pre-digestion holding tank, where it is blended with indigenous sludge and surplus activated sludge (SAS). Waste is thickened and passed through an Acid Phase Digester where it is normally retained for 2 days, with the actual retention time subject to potential change based on compliance with HACCP methodology. The waste is then passed to one of six primary digesters (21,600m3 total capacity) where it undergoes anaerobic treatment for 16 days. The retention time is subject to potential change based on compliance with HACCP methodology. The biogas produced is captured and transferred to a gas storage bag.

Biogas is combusted in three 2.6MWth and one 3.4MWth CHP engines. One of the 2.6MW engines was added in 2020, and the engines are managed so that only three engines will be operating at any one time and the permitted maximum thermal input of 8.6MWth will not be exceeded. The heat and power produced is either used on site or is exported to the grid. Two dual fuel boilers are also present on site and an auxiliary flare stack burns biogas which cannot be handled by the engines or boilers.

Following the primary digesters the digestate is transferred to one of three post-digestion storage tanks before being mixed with a polymer coagulant and dewatered by centrifuge. The retention time range is

subject to compliance with HACCP methodology. The supernatant liquor is directed back to the head of the STW for aerobic treatment. The sludge cake is transferred to a cake pad where it is conditioned to achieve pathogen kill. The sludge is analysed to check compliance with the Sludge (Use in Agriculture) Regulations 1989 before being spread to land.

Any liquid, site drainage or condensate produced is directed to the head of the STW.

Aerobic treatment (Waste operation)

Waste can be discharged directly to the head of the sewage treatment works. The waste will undergo aerobic treatment under the UWWTR. The biological treatment of this waste is not regulated by this permit, only its import. The final effluent released by the STW is regulated under a separate discharge consent.

Dewatering (Waste operation)

Digested sludge can be imported for dewatering purposes into the post digestion storage tanks. From there it shares the same facilities as the AD treatment process following the digestion of the waste.

Key sensitive receptors include nearby settlements. here are residential dwellings approximately 125 m from the southern boundary of the installation adjacent to the A46. There are 2 Local Nature Reserves within 2 km of the site including a Reedbed 0.1 km from the site, and at Birstall, 1.1 km south south-east of the site. There are 2 Air Quality Management Areas (AQMAs) within 5 km of the site: Syston AQMA is 2.6 km east of the site; and Leicester has an AQMA located 2.9 km south-east of the site. The River Soar is located approximately 50 m from the north-east boundary of the installation.

The operator has an EMS to ISO 14001 (Certificate E4230).

The schedules specify the changes made to the permit.

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

Status log of permit EPR/AP3893CN (anaerobic digestion facility)		
Description	**Date**	**Comments**
Application EPRAP3893CN (EAWML 43368)	29/04/1994	
Permit determined	14/11/1994	
Modification	30/07/1994	
Received notification of change of company registered office address	29/09/2010	Notification of change of company registered office address.
Issue of updated permit pages to show change of company registered office address	06/10/2010	Issue of updated permit pages.
Variation application received EPR/AP3893CN/V002	Duly made 29/09/2014	Application to vary and update the permit to modern conditions.
Additional information received	17/10/2016	Updated air dispersion modelling.
Variation determined EPR/AP3893CN (Billing ref: NP3732WZ)	19/05/2017	Varied and consolidated permit issued in modern condition format.
Application EPR/AP3893CN/V003 (variation and consolidation)	Environment Agency Initiated Variation	Statutory review of permit occasioned by Waste Treatment BAT Conclusions published on 17 August 2018.
Regulation 61 Notice sent to Operator	01/04/2021	Regulation 61 Notice requiring information for statutory review of permit.
Regulation 61 Notice response	30/12/2021	Response received from the operator.

Status log of permit EPR/AP3893CN (anaerobic digestion facility)		
Description	**Date**	**Comments**
Additional information received	15/07/2024	Further information regarding open topped tanks, emissions from odour control units, waste types and quantities, indirect emissions to water and sewer and secondary containment.
Additional information received	07/02/2025	Further information regarding boiler sizes and emission points.
Additional information received	17/02/2025	Further information regarding new and existing CHP engines
Environment Agency Water and Sewerage Companies Review Permit reviewed Variation determined EPR/AP3893CN/V003	18/03/2025	Varied and consolidated permit issued.
Application EPR/AP3893CN/V004 (variation and consolidation)	Duly made 29/04/2025	Application to remove lagoon and for the addition of three sludge tanks.
Additional information received	17/07/2025	Further information regarding secondary containment, tank inventory, tanker offload and pressure release valves.
Variation determined and consolidation issued EPR/AP3893CN/V004	06/08/2025	Variation issued to Severn Trent Water Limited.

Status log of permit EPR/VP3733LC (CHP permit)		
Description	**Date**	**Description**
Application VP3733LC (EAWML400048)	Duly made 18/04/2006	
Additional information received	16/0520/06	Confirmation of site boundary.
Additional Information	01/06/2006	
Additional Information	28/07/2006	
Schedule 4 Information Request	19/10/2006	
Additional Information	20/10/2006	
Additional Information	21/12/2006	
Permit determined EPR/VP3733LC	22/10/2007	Original permit issued to Severn Trent Water Limited
Agency variation determined EPR/VP3733LC/V002	28/03/2013	Agency variation determined to implement the changes introduced by IED
Variation application received EPR/VP3733LC/V003	Duly made 29/09/2014	Application to vary and update the permit to modern conditions and to consolidate with EPR/AP3893CN
Variation determined	19/05/2017	Now consolidated in to EPR/AP3893CN. Permit number EPR/VP3733LC ceases to exist.

End of introductory note

Permit

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 and consolidates

Permit number

EPR/AP3893CN

Issued to

Severn Trent Water Limited ("the operator"),

whose registered office is

Severn Trent Centre
2 St. John's Street
Coventry
CV1 2LZ

company registration number 02366686

to operate a regulated facility at

Wanlip Sewage Treatment Works
Fillingate
Wanlip
Leicester
LE7 4PF

to the extent set out in the schedules.

The notice shall take effect from 06/08/2025

Name	Date
[redacted]	**06/08/2025**

Authorised on behalf of the Environment Agency

Schedule 1 - conditions to be removed

The following conditions were removed as a result of the application made by the operator:

- Table S1.3 has been amended to remove the improvement condition for storage lagoon design including lagoon cover (IC22) as this is no longer relevant due to the removal of lagoon assets.

Schedule 2 - conditions to be amended

The following conditions were amended as a result of the application made by the operator:

- Table S1.1 has been updated to reflect the three new post-digestion storage tanks under AR7 and AR8, to amend the entry relating to the storage lagoons under AR8 and amend the entry relating to dewatering tanks under AR12.
- Table S1.2 has been updated to reflect the responses to requests for further information.
- Table S1.3 has been amended to correct table reference S3.3 to S3.2 in 'Improvement condition for establishing an inventory of liquid waste water discharged from anaerobic digestion and associated activities' (IC16a).
- Table S3.1 has been amended to include the pressure relief valves for the three post digestion storage tanks (A16-A18).
- Table S3.3 has been amended to remove the reference to the lagoons.
- Table S4.4 has been updated to reflcet the new date of the reporting forms.
- Schedule 7 – Site plan has been amended to reflect the removal of the lagoons and the addition of air emission points (A16-A18), whilst maintaining the current footprint of the site boundary.

Schedule 3 – conditions to be added

None

Schedule 4 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/AP3893CN

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/AP3893CN/V004 authorising,

Severn Trent Water Limited ("the operator"),

whose registered office is

Severn Trent Centre
2 St. John's Street
Coventry
CV1 2LZ

company registration number 02366686

to operate an installation and waste operations at

Wanlip Sewage Treatment Works
Fillingate
Wanlip
Leicester
LE7 4PF

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

Name	Date
[redacted]	**06/08/2025**

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 AR10), 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 AR10), 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 AR10), 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 AR10), waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

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

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

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

2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.4 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2 tables S2.2, S2.3 and S2.4; and

(b) it conforms to the description in the documentation supplied by the producer and holder.

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

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

(a) the nature of the process producing the waste;

(b) the composition of the waste;

(c) the handling requirements of the waste;

(d) the hazardous property associated with the waste, if applicable; and

(e) the waste code of the waste.

2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.3.7 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR10), waste pre-acceptance and acceptance procedures shall be undertaken in accordance with best available techniques.

2.3.8 For the following activities referenced in schedule 1, table S1.1 (AR4):

(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, S3.2, S3.3, S3.4 and S3.5.

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 IC13 below.

3.2.5 Subject to condition 3.2.6, below, all liquid wastes in storage tanks shall be fully enclosed, with emissions collected and directed to an appropriate abatement system, unless other appropriate measures to prevent or where that is not practicable, to minimise, emissions of waste gases from storage tanks have been agreed in writing with the Environment Agency.

3.2.6 Condition 3.2.5, above, shall apply unless the operator strictly complies in full with IC14 below.

3.2.7 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, S3.2 and S3.5;

(b) process monitoring specified in table S3.3;

(c) bioaerosols monitoring specified in table S3.4

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall

have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2, S3.3, S3.4 and S3.5 unless otherwise agreed in writing by the Environment Agency.

3.5.5 For the following activities referenced in Schedule 1 Table S1.1 (AR4):

(a) For existing MCP Monitoring measurements shall be carried out within four months of the issue date of this notice.

(b) In the case of new medium combustion plant, the first monitoring measurements shall be carried out within four months of the issue date of the permit or the date when the MCP is first put into operation, whichever is later.

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 table S3.4.

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.

4.2 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 AR10), 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.

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

(a) a decision by the Secretary of State not to re-certify the agreement;

(b) a decision by either the operator or the Secretary of State to terminate the agreement; and

(c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

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

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

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity and WFD Annex I and II operations**	**Limits of specified activity and waste types**
AR1	S5.4 A(1) (b) (i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment	R3: Recycling/reclamation of organic substances which are not used as solvents	From receipt of waste through to digestion and recovery of by-products (waste treated by anaerobic digestion). Anaerobic digestion of waste in one Acid Phase Digestion (APD) tank and/or six primary digestion tanks, followed by burning of biogas produced from the process. Anaerobic digestion shall be limited to 2,287 tonnes per day. Waste types suitable for acceptance are limited to those specified in Table S2.2.
Directly Associated Activity			
AR2	Storage of waste pending recovery or disposal	R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced)	Undertaken in relation to Activity AR1. From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site. Storage of residual wastes from pre-treatment to despatch off-site for recovery. 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.
AR3	Physical treatment for the purpose of recycling	R3: Recycling/reclamation of organic substances which are not used as solvents	Undertaken in relation to Activity AR1. From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery. Dilution of incoming wastes using final waste waters from the wastewater treatment works to aid pre-treatment and digestion only. Pre-treatment of waste in enclosed equipment and tanks fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system,

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**
			including shredding, sorting, screening, compaction, baling, mixing and maceration. 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). Biogas cleaning by biological or physical (carbon filtration) or chemical scrubbing. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR4	Steam and electrical power supply	R1: Use principally as a fuel to generate energy	Undertaken in relation to Activity AR1. From the receipt of biogas produced at the on-site anaerobic digestion process to combustion with the release of combustion gases. Combustion of biogas in four combined heat and power (CHP) engines with a maximum aggregated thermal input of 8.6MWth. Combustion of biogas may only take place in three of the CHP engines at any one time. Combustion of biogas and gas oil in 2 auxiliary boilers with an aggregated thermal input of 8.9MWth.
AR5	Emergency flare operation	D10: Incineration on land	Undertaken in relation to Activity AR1. From the receipt of biogas produced at the on-site anaerobic digestion process to incineration with the release of combustion gases. There shall be no venting or flaring of gas for disposal. Use of one auxiliary flare required only during periods of breakdown or

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**
			maintenance of the CHP engines and/or auxiliary boilers.
AR6	Raw material storage	Storage of raw materials including fuel oil, lubrication oil, water treatment chemicals, glycol, polymer (dry powder), ferrous chloride, ferric sulphate, antifoam, and lime.	From the receipt of raw materials to despatch for use within the facility.
AR7	Gas storage	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	Undertaken in relation to Activity AR1. Storage of biogas produced from on-site anaerobic digestion of permitted waste in one stand-alone gas bag and roof space of digesters and post-digestion storage tanks. 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.
AR8	Digestate storage	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	Undertaken in relation to Activity AR1. From the receipt of processed digestate produced from the on-site anaerobic digestion process to despatch for use off-site. Storage of processed liquid digestate in three post-digestion storage tanks. Storage of processed solid digestate in uncovered bays on an impermeable surface with sealed drainage system.
AR9	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water	From the collection of uncontaminated roof and site surface water from non-operational areas only to re-use within the facility or discharge off-site.
AR10	Air abatement	Collection and treatment of air from the buildings or plant using abatement system – biofilter and carbon filter - 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 – closed biofilter and activated carbon.

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**

Activity reference	**Description of activities for waste operations**	**Limits of activities**
AR11 – Blending of waste for discharge to the WwTW Head of Works	D13: Blending or mixing prior to submission to any of the operations numbered D 1 to D 12	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 without significantly altering the nature of the waste. Blending and mixing shall not be undertaken to achieve a reaction or a dilution of contaminants. Waste types as specified in Table S2.3.
AR12 – Treatment and temporary storage of digestate and digested cake	R3: Recycling/reclamation of organic substances which are not used as solvents 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)	From the receipt of digested sludge/sludge cake via tanker/tipper lorry at the post-digestion storage tanks for treatment and cake pad for storage. Treatment of digestate on an impermeable surface with sealed drainage system, including screening to remove contraries, maceration, centrifugation, or pressing and addition of thickening agents (polymers) or drying and, if necessary, mixing with lime to achieve pathogen kill. 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. Waste types as specified in Table S2.4.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application (VP3733LC)	The response to section 2.1 and 2.2 in the Application.	18/04/2006
Schedule 4 Notice Request dated 28/07/06 (VP3733LC)	Entire response, except question 5.	11/09/2006
Additional information requested 21/12/06 (VP3733LC)	Entire response	06/09/2007
Application EPR/AP3893CN/V002	Part C3 - Section 3a (technical standards). Part C3 – Section 3d, Table 6 (information of specific sectors)	30/09/2014

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Further information submitted for application EPR/AP3893CN/V002	Severn Trent Water's waste acceptance procedures document '*Standard Procedure, Business Services – Tankered Trade Waste (TTW)*', dated Jan 2016 (Ref TWSS004 TTW Approval Process v3) or subsequent variations as agreed in writing with the Environment Agency.	12/02/2016
Response to Regulation 61 Notice dated 01/04/2021 (EPR/AP3893CN/V003)	Compliance and operating techniques identified in response to BAT Conclusions 1 to 8, 10 to 24 and 33 to 38 in the Waste Treatment BREF published on 17 August 2018.	30/12/2021
Response to request for additional information dated 17/06/2024	Response to Question 2 relating to BATc 14d. Response to Question 6 relating to BATc 3. Response to Question 7 relating to monitoring emissions. Response to Question 8(b) and (c) relating to BATc 14 and BATc 34. Response to Question 9 relating to co-digestion Response to Question 14 relating to BATc3 Response to Question 15 relating to MCERTS accreditation Response to Question 17 relating to appropriate measures Response to Question 18 relating to MCERTS accreditation Response to Question 20 relating to discharges during storm conditions	15/07/2024
Response to request for additional information dated 27/01/2025	Figure 2 Installation Boundary and Air Emission Points B1958992-JAC-WNP-DR-0002, excluding 5 open tanks shown clustered around S1 Picket fence thickener sample point.	07/02/2025
Response to request for additional information dated 20/02/2025	Email providing identification of open tanks shown on drawing Figure 2 Installation Boundary and Air Emission Points B1958992-JAC-WNP-DR-0002 and confirmation that old sequencing batch reactor tanks are no longer in use.	05/03/2025
Application EPR/AP3893CN/V004	Section 2 - Technical description, Section 3 - Application Form Questions: Form C3, Form C2, Question 3d Management systems, Form C4, Form C6. Best available techniques as described in the BAT Reference Document for Waste Treatment (the BREF) and BAT conclusions. Digested Sludge Storage Tanks General Arrangments Sections & Details (version C03 – Jan 2025) Digested Sludge Storage Tanks General Arrangment Plan (version C02 – Jan 2025)	26/03/2025
Response to request for additional information dated 26/06/2025	Wanlip PFD (Apr 2025) Non-tech Summary (Apr 2025)	29/04/2025
Response to request for additional information dated 26/06/2025	Odour Management Plan (version 2 – July 2025). Wanlip Site Layout PDSS bund (version 2 – Jan 2025) Response to Question 3 relating to tanker offloading and reception. Response to Question 4 relating to secondary containment Response to Question 6 relating to IC correction.	11/07/2025

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Response to request for additional information dated 18/07/2025	Figure 2 installation boundary and air emission points (version P06 – July 2025)	22/07/2025

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1 (from ERP/VP3733LC)	The Operator shall submit a written Accident Management Plan for approval by the Environment Agency. The plan shall have regard to the requirements set out in section 2.8 of IPPC Sector Guidance Note for Combustion Activities V2.03, July 2005 The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the plan. The plan shall be implemented by the operator from the date of approval in writing by the Environment Agency.	Completed
IC2 (from ERP/VP3733LC)	The Operator shall review the installation's Environment Management System. Severn Trent Water plc EMS protocols shall be fully extended to the CHP installation, having regard to the requirements set out in section 2.3 of IPPC Sector Guidance Note for Combustion Activities V2.03, July 2005. Written evidence shall be supplied to the Agency for approval. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of this evidence.	Completed
IC3 (from ERP/VP3733LC)	The Operator shall develop a Site Closure Plan having regard to the requirements set out in Section 2.11 of the IPPC Sector Guidance Note for Combustion Activities V2.03, July 2005. Upon completion of the plan a summary of the document shall be submitted to the Agency in writing for approval. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the plan.	Completed
IC4 (from ERP/VP3733LC)	The Operator shall undertake an assessment of the containment measures. This shall include proposals to improve the collection and routing of the condensate to the site drainage system. The assessment shall take into account the requirements of section 2.2.9 of the Agency IPPC Guidance Note for Combustion Activities V2.03, July 2005 and Box 5 of the H7 Guidance – Application Site Report and Site Protection and Monitoring Programme. A written report summarising the findings shall be submitted to the Agency for approval. A timescale for the implementation of any improvements shall be agreed with the Agency in writing. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.	Completed

IC5 (from ERP/VP3733LC)	The Operator shall develop a monitoring plan to be submitted to the Agency in writing that shall detail the proposed methodologies to be used within the installation to carry out the monitoring of air emissions and performance measures identified within Tables S3.1, S4.1 and S4.4. The methodology for the monitoring of emissions to air from emission points A1, A2, A3 and A7 shall comply with the requirements of Agency monitoring guidance documents: • M1 – Sampling Requirements For Stack Emissions Monitoring; • M2 – Monitoring Of Stack Emissions To Air; and • Section 2.10 of Agency Combustion Technical Guidance Note. The plan shall be implemented by the operator from the date of approval in writing by the Agency.	Completed
IC6 (from ERP/VP3733LC)	The Operator shall review the level of NO_x and SO_2 emissions following completion of the monitoring exercise carried out in accordance with improvement condition IC5 to determine actual values for the releases to air. The Operator shall use these detailed release data to establish the actual impact on air quality through the use of an appropriate air dispersion model. The results of the review and modelling shall be submitted to the Agency in a written report.	Completed
IC7 (from ERP/VP3733LC)	The Operator shall undertake a review to identify all appropriate options for reducing the emissions to air to at least the benchmark standards in the Agency Technical Guidance Note for Combustion and to ensure that the releases to air do not result in a significant contribution to an exceedance of an Air Quality Objective or European Union Limit Value. Where an exceedance of an EU limit Value is predicted and the operations would provide a significant contribution to the exceedance then the review shall assess whether it is necessary to implement measures beyond indicative BAT in order to ensure that the contribution is minimised. The review shall include, but not be limited to, the primary and secondary measures for the reduction of the relevant pollutants listed in the Agency Technical Guidance Note for Combustion (or other appropriate guidance), identification of the most appropriate stack height for dispersion of the waste gases and either pre-treatment of fuel or abatement of releases to air post combustion as appropriate. Where measures can be undertaken to limit the impact on air quality in the short term whilst long term solutions are implemented then the report should include proposals for both short term and long term measures as appropriate. The operator shall submit a written report, for approval by the Environment Agency, detailing the elements of the review and its conclusions and shall include a programme for implementation of the appropriate measures, including a timetable for their implementation	Completed

IC8 (from ERP/VP3733LC)	The Operator shall complete the development of the installation Energy Management Plan, having regard to the requirements set out in 2.7 of the IPPC Sector Guidance Note for Combustion Activities. Written evidence shall be supplied for approval to the Agency. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the plan. The plan shall be implemented by the operator from the date of approval by the Environment Agency.	Completed
IC9 (from ERP/VP3733LC)	The Operator shall submit a commissioning report in writing to the Agency following the commissioning of the third CHP engine. This report shall include assessments of the efficiency of the engine and of the impact of its emissions in line with the provisions of IC6 together with measures to reduce such impacts, where appropriate, in line with the provisions of IC7.	Completed
IC10	The operator shall revise their w*aste acceptance procedures* as referred to in Table S1.2 of this permit and submit it to the Environment Agency for approval. The procedures shall detail 3 levels of assessment for determining if a waste is suitable to be accepted into the anaerobic digestion treatment process. The 3 levels of assessment shall refer to: • 'Group A wastes' - as listed in Table S2.2 of this permit; • 'Group B wastes' - as listed in Table S2.3 of this permit; • 'Group C wastes' - as listed in Table S2.4 of this permit. The revised procedures shall take in to account the requirements of: • sections 2.1.1 and 2.1.2 of *Sector Guidance Note IPPC S5.06 – Guidance for the Treatment of Hazardous and Non-Hazardous Waste;* and • *How to comply with your environmental permit, Additional Guidance for: Anaerobic Digestion – Reference LIT8737 – Report Version 1.0, November 2013.* • *Framework for Assessing Suitability of Wastes Going to Anaerobic Digestion, Composting and Biological Treatment* – Framework Guidance note, July 2013. Once approved the procedures shall be incorporated in to the document '*Standard Procedure, Business Services – Tankered Trade Waste (TTW)'* referred to in Table S1.2 (operating techniques) of this permit.	15/06/17 Superseded by improvement conditions included as part of variation V003
IC11	The operator shall submit an odour management plan to the Environment Agency for written approval. The plan shall take into account the appropriate measures for odour control specified in section 2.2.6 of Sector Guidance Note IPPC S5.06 – Guidance for the Treatment of Hazardous and Non-Hazardous Waste. The plan shall also incorporate all the required detailed information as specified in the Environment Agency's Horizontal Guidance H4 – Odour Management. The plan must contain dates for implementation of individual measures.	15/09/2017 Superseded by variation V003
IC12	The Operator shall submit a drainage plan to the Environment Agency. The plan shall detail surface water drainage and process water drainage, including imported effluent pipelines (details of the UWWT process are not necessary)	15/09/2017 Completed

Improvement condition for secondary containment design		
IC13	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 a secondary containment system for all liquids that could cause pollution from tanks, sumps and containers. The finalised design(s) and specifications shall be produced by appropriate competent individuals (qualified civil or structural engineer), in accordance with BAT 19 of the Waste Treatment BREF and the risk assessment methodology detailed within CIRIA C736 (2014) guidance or an equivalent standard that will provide an equivalent level of environmental protection. The plan shall include but not be limited to the following components: • 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 standard. • 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. (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).	31/03/2025 Implementation of all required and approved containment improvements must be completed by 31/03/2025.
Improvement conditions for enclosure of tanks storing (or treating) sewage sludge (tanks pre-digestion)		
IC14	The operator shall submit a written 'enclosure and 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 enclosures/covers and associated emission abatement systems in line with BAT 14 and BAT 53 for storage and treatment tanks pre-anaerobic digestion identified in Drawing B198992-JAC-WNP-DR-0002 Rev P02.1 submitted on 07/02/2025. The plan shall include evidence that the tank enclosures/covers will be designed and installed in accordance with guidance, *Biological waste treatment: appropriate measures for permitted facilities*, and provide evidence to demonstrate why the emission abatement system will be effective and meet the requirements of BAT 53.	31/03/2025 Implementation of all required and approved containment improvements must be completed by 31/03/2025.

	The plan shall be implemented in accordance with the Environment Agency's prior written approval. (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).	
Improvement conditions for primary containment tanks		
IC15	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 – AR10)		
IC16a	The operator shall submit a sampling programme in relation to waste water streams and shall obtain the Environment Agency's written approval to it. The sampling programme shall be designed to fully characterise the waste waters discharged to Wanlip wastewater treatment works (WwTW) from emission points S1, S2, S3 and S4 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(s) location(s). The programme shall establish the characteristics of the liquid waste water streams and shall include as a minimum for each emission point:	Within 2 months of issue of this permit or such other date as agreed in writing with the Environment Agency

	• Average values and variability of flow, pH, temperature and conductivity. • Average concentration and load values of all relevant substances and their variability. • Data on bioeliminability. The programme shall sample for all relevant substances and must include: • Hydrocarbon oil index (HOI) (mg/l) • Free cyanide (CN^-) (mg/l) • Adsorbable organically bound halogens (AOX) (mg/l) • Metals and metalloids; arsenic (expressed as As), cadmium (expressed as Cd), chromium (expressed as Cr), hexavalent chromium (expressed as Cr(VI)), copper (expressed as Cu), lead (expressed as Pb), nickel (expressed as Ni), mercury (expressed as Hg), zinc (expressed as Zn) (µg/l) The operator shall submit the collected monitoring data in writing to the Environment Agency according to agreed reporting periods. The sampling programme shall be produced in accordance with Environment Agency guidance: • Specific substances and priority hazardous substances – *Surface water pollution risk for your environmental permit* Surface water pollution risk assessment for your environmental permit - GOV.UK (www.gov.uk). • *Monitoring discharges to water: guidance on selecting a monitoring approach* Monitoring discharges to water: guidance on selecting a monitoring approach - GOV.UK (www.gov.uk) The monitoring programme shall be carried out and the monitoring data submitted in accordance with the Environment Agency's written approval.	
Improvement conditions for indirect discharges to water discharged from anaerobic digestion and associated activities (AR1 – AR10)		
IC16b	The operator shall submit a report for approval by the Environment Agency, following completion of the sampling programme approved under IC16a. The report shall include but not be limited to; a summary of the sample results, a completed H1 risk assessment(s) and modelling outputs where appropriate. The operator shall provide conclusions on whether the waste waters discharged from emission points S1, S2, S3 and S4 will have any adverse impact on the receiving waters once discharged from Wanlip 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).	Within 15 months of the Environment Agency's written approval of the sampling programme submitted under IC16a or such other date as agreed in writing with the Environment Agency

	• 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.	
IC16c	The operator shall implement any improvements identified within the report approved under IC16b 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 IC16b 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		
IC17	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	6 months of permit issue or such other date as agreed in writing with the Environment Agency
Improvement condition for establishing a Leak detection and repair programme		
IC18	The operator shall establish a site-specific leak detection and repair (LDAR) programme to detect and mitigate the release of volatile organic compounds, including methane from diffuse sources. The programme shall include, but not be limited to an LDAR survey, diffuse emissions source inventory and associated monitoring arrangements. The programme shall be submitted to the Environment Agency for approval. The programme shall take into account the appropriate measures for LDAR plans specified in Section 11.9 of *Environment Agency guidance, Biological waste treatment: appropriate measures for permitted facilities*. The operator shall also have regard to BS EN 17628 when designing the LDAR programme and consider the use of optical gas imaging cameras and/or application of 'sniffer' techniques according to BS EN 15446.	6 months of permit issue or such other date as agreed in writing with the Environment Agency

Improvement condition for review of effectiveness of abatement plant		
IC19	The operator shall carry out a review of the abatement plant consisting of 2 x BIOMOD 8000/10 in series and P2000 Peacemaker system discharging at emission point A7 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 and ammonia, hydrogen chloride (HCl), and TVOC). • Abatement process monitoring results (including but not limited to odour and ammonia, hydrogen chloride (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 and ammonia, hydrogen chloride (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).	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/sludge waste discharged from the Head of works waste operation (AR11)		
IC20a	The operator shall submit a sampling programme in relation to liquid/sludge waste streams that are to be discharged to emission point T1 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 Wanlip wastewater treatment works (WwTW) from emission point T1 (sampled at emissions point S5) in table S3.3 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 point T1 (sampled at emissions point S5) for a minimum 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 capability of the discharging tanker. • 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) 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.	**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** 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/installation activity (AR11)		
IC20b	The operator shall submit a report for audit and approval by the Environment Agency, following completion of the sampling programme referred to in IC20a. 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 emission point T1. The operator shall provide conclusions on whether the liquid/sludge wastes discharged to emission point T2 will have any adverse impact on the receiving waters once discharged from Wanlip WwTW. An assessment shall be made against the parameters identified in IC20a 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	Within 6 months of the submission of the final sampling data results submitted under IC20a or such other date as may be agreed in writing with the Environment Agency

	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 accordance with the timescales as approved in writing by the Environment Agency.	
IC20c	The operator shall submit a report that provides written confirmation to the Environment Agency that the proposed improvements identified within the report approved under IC20b 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 IC20b 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		
IC21	The operator shall submit a written report, with supporting evidence, on the stability of whole digestate (i.e. prior to dewatering) stored within the two storage lagoons 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.	6 months of permit issue or such other date as agreed in writing with the Environment Agency

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		
PO1	AR11	Prior to accepting new waste streams under activity AR11 for existing permitted waste codes identified in table S2.3 for discharge into the head of works (emission point T1 sampled at S5), the operator shall undertake an assessment of the fate and impact on the receiving waters by updating the environmental risk assessment established in IC20b, the additional measures/abatement implementation plan as approved under IC20b and in accordance with the sampling plan as approved under IC20a. 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**
--	--

Table S2.2 Permitted waste types and quantities for anaerobic digestion (AR1 – AR10)	
Maximum quantity	**Annual throughput shall not exceed 4,310,504 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
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 03	**other municipal wastes**
20 03 04	septic tank sludge

Table S2.3 Permitted waste types and quantities for non-hazardous waste storage and treatment (Head of Works) (AR11)	
Maximum quantity	**Annual throughput shall not exceed 500,000 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**
01	**Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals**
01 05	**drilling muds and other drilling wastes**
01 05 04	freshwater drilling muds and wastes
01 05 07	barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
02	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing**
02 01	**wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**
02 01 01	sludges from washing and cleaning
02 01 02	animal-tissue waste
02 01 03	plant-tissue waste
02 01 06	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
02 01 07	wastes from forestry
02 01 99	residues from commercial mushroom cultivation
02 02	**wastes from the preparation and processing of meat, fish and other foods of animal origin**
02 02 01	sludges from washing and cleaning
02 02 02	animal-tissue waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 03	**wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation**
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 02	wastes from preserving agents

02 03 03	wastes from solvent extraction
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges from on-site effluent treatment
02 04	**wastes from sugar processing**
02 04 01	soil from cleaning and washing beet
02 04 02	off-specification calcium carbonate
02 04 03	sludges from on-site effluent treatment
02 05	**wastes from the dairy products industry**
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 06	**wastes from the baking and confectionery industry**
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
02 06 03	sludges from on-site effluent treatment
02 07	**wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)**
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 03	wastes from chemical treatment
02 07 04	materials unsuitable for consumption or processing
02 07 05	sludges from on-site effluent treatment
03	**Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard**
03 03	**wastes from pulp, paper and cardboard production and processing**
03 03 02	green liquor sludge (from recovery of cooking liquor)
03 03 05	de-inking sludges from paper recycling
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10
04	**Wastes from the leather, fur and textile industries**
04 01	**wastes from the leather and fur industry**
04 01 01	fleshings and lime split wastes
04 01 05	tanning liquor free of chromium
04 01 07	sludges, in particular from on-site effluent treatment free of chromium
04 01 09	wastes from dressing and finishing
04 02	**wastes from the textile industry**
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10	organic matter from natural products (for example grease, wax)
04 02 15	wastes from finishing other than those mentioned in 04 02 14
04 02 17	dyestuffs and pigments other than those mentioned in 04 02 16

04 02 20	sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 22	wastes from processed textile fibres
05	**Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal**
05 01	**wastes from petroleum refining**
05 01 10	sludges from on-site effluent treatment other than those mentioned in 05 01 09
05 01 17	bitumen
05 07	**wastes from natural gas purification and transportation**
05 07 02	wastes containing sulphur
06	**Wastes from inorganic chemical processes**
06 03	**wastes from the MFSU of salts and their solutions and metallic oxides**
06 03 14	solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
06 05	**sludges from on-site effluent treatment**
06 05 03	sludges from on-site effluent treatment other than those mentioned in 06 05 02
06 06	**wastes from the MFSU of sulphur chemicals, sulphur chemical processes and desulphurisation processes**
06 06 03	wastes containing sulphides other than those mentioned in 06 06 02
07	**Wastes from organic chemical processes**
07 01	**wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals**
07 01 12	sludges from on-site effluent treatment other than those mentioned in 07 01 11
07 02	**wastes from the MFSU of plastics, synthetic rubber and man-made fibres**
07 02 12	sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 02 15	wastes from additives other than those mentioned in 07 02 14
07 02 17	waste containing silicones other than those mentionned in 07 02 16
07 03	**wastes from the MFSU of organic dyes and pigments (except 06 11)**
07 03 12	sludges from on-site effluent treatment other than those mentioned in 07 03 11
07 04	**wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides**
07 04 12	sludges from on-site effluent treatment other than those mentioned in 07 04 11
07 05	**wastes from the MFSU of pharmaceuticals**
07 05 12	sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 06	**wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics**
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 07	**wastes from the MFSU of fine chemicals and chemical products not otherwise specified**
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
08	**Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks**
08 01	**wastes from MFSU and removal of paint and varnish**
08 01 12	waste paint and varnish other than those mentioned in 08 01 11

08 01 14	sludges from paint or varnish other than those mentioned in 08 01 13
08 01 16	aqueous sludges containing paint or varnish other than those mentioned in 08 01 15
08 01 18	wastes from paint or varnish removal other than those mentioned in 08 01 17
08 01 20	aqueous suspensions containing paint or varnish other than those mentioned in 08 01 19
08 02	**wastes from MFSU of other coatings (including ceramic materials)**
08 02 01	waste coating powders
08 03	**wastes from MFSU of printing inks**
08 03 07	aqueous sludges containing ink
08 03 08	aqueous liquid waste containing ink
08 03 13	waste ink other than those mentioned in 08 03 12
08 03 15	ink sludges other than those mentioned in 08 03 14
08 04	**wastes from MFSU of adhesives and sealants (including water proofing products)**
08 04 14	aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13
08 04 16	aqueous liquid waste containing adhesives or sealants other than those mentioned in 08 04 15
10	**Wastes from thermal processes**
10 01	**wastes from power stations and other combustion plants (except 19)**
10 01 26	wastes from cooling-water treatment
10 02	**wastes from the iron and steel industry**
10 02 12	wastes from cooling-water treatment other than those mentioned in 10 02 11
10 08	**wastes from other non-ferrous thermal metallurgy**
10 08 20	wastes from cooling-water treatment other than those mentioned in 10 08 19
10 10	**wastes from casting of non-ferrous pieces**
10 10 14	waste binders other than those mentioned in 10 10 13
10 12	**wastes from manufacture of ceramic goods, bricks, tiles and construction products**
10 12 13	sludge from on-site effluent treatment
11	**Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy**
11 01	**wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)**
11 01 12	aqueous rinsing liquids other than those mentioned in 11 01 11
12	**Wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01	**wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01 17	waste blasting material other than those mentioned in 12 01 16
12 01 21	spent grinding bodies and grinding materials other than those mentioned in 12 01 20
16	**Wastes not otherwise specified in the list**

16 01	**end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)**
16 01 15	antifreeze fluids other than those mentioned in 16 01 14
16 03	**off-specification batches and unused products**
16 03 06	organic wastes other than those mentioned in 16 03 05
16 05	**gases in pressure containers and discarded chemicals**
16 05 05	gases in pressure containers other than those mentioned in 16 05 04
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
16 10	**aqueous liquid wastes destined for off-site treatment**
16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01
16 10 04	aqueous concentrates other than those mentioned in 16 10 03
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 01	**wastes from incineration or pyrolysis of waste**
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17
19 02	**wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)**
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 05	**wastes from aerobic treatment of solid wastes**
19 05 03	off-specification compost
19 06	**wastes from anaerobic treatment of waste**
19 06 03	liquor from anaerobic treatment of municipal waste
19 06 04	digestate from anaerobic treatment of municipal waste
19 06 05	liquor from anaerobic treatment of animal and vegetable waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste
19 07	**landfill leachate**
19 07 03	landfill leachate other than those mentioned in 19 07 02
19 08	**wastes from waste water treatment plants not otherwise specified**
19 08 01	screenings
19 08 02	waste from desanding
19 08 05	sludges from treatment of urban waste water
19 08 09	grease and oil mixture from oil/water separation containing only edible oil and fats
19 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	**wastes from the preparation of water intended for human consumption or water for industrial use**
19 09 02	sludges from water clarification

19 09 03	sludges from decarbonation
19 09 06	solutions and sludges from regeneration of ion exchangers
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
19 13	**wastes from soil and groundwater remediation**
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
19 13 06	sludges from groundwater remediation other than those mentioned in 19 13 05
19 13 08	aqueous liquid wastes and aqueous concentrates from groundwater remediation other than those mentioned in 19 13 07
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01	**separately collected fractions (except 15 01)**
20 01 08	biodegradable kitchen and canteen waste
20 01 25	edible oil and fat
20 01 30	detergents other than those mentioned in 20 01 29
20 02	**garden and park wastes (including cemetery waste)**
20 02 01	biodegradable waste
20 03	**other municipal wastes**
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 04	septic tank sludge
20 03 06	waste from sewage cleaning

Table S2.4 Permitted waste types and quantities for dewatering and temporary storage of digested sludge cake (AR12)	
Maximum quantity	**Annual throughput shall not exceed 55,000 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.
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 06	**wastes from anaerobic treatment of waste**

Table S2.4 Permitted waste types and quantities for dewatering and temporary storage of digested sludge cake (AR12)	
Maximum quantity	**Annual throughput shall not exceed 55,000 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.
Waste code	**Description**
19 06 06	digestate from anaerobic treatment of animal and vegetable waste (digested sewage sludge only)

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 NGR SK 59641 11629	CHP engine 1 stack [note 1] [note 7]	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 NGR SK 59634 11642	CHP engine 2 stack [note 1] [note 7]	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 NGR SK 59634 11642	CHP engine 3 stack [note 1] [note 7]	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	162 mg/m^3			BS EN 14791 or CEN TS 17021 or

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**
						by calculation based on fuel sulphur
		Carbon monoxide	1400 mg/m^3			BS EN 15058
		Total VOCs	No limit set	--	--	BS EN 12619
Point A15 on site plan in Schedule 7 NGR SK 59641 11629	CHP engine 4 stack [note 1] [note 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^3 [note 3]	Average over sample period	Annual	BS EN 14792
		Sulphur dioxide	350 mg/m^3 [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m^3 [note 3]			
		Carbon monoxide	1400 mg/m^3			BS EN 15058
		Total VOCs	No limit set	--	--	BS EN 12619
Existing medium combustion plant other than engines fuelled on biogas (1 MW to 5 MW)						
Point A5a on site plan in Schedule 7 NGR SK 59605 11675	Boiler 1 stack [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 A5b on site plan in Schedule 7 NGR SK 59604 11678	Boiler 2 stack [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

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**
						by calculation based on fuel sulphur
Existing medium combustion plant other than engines and gas turbines fuelled on gas oil (1 MW to 5 MW)						
Point A5a on site plan in Schedule 7 NGR SK 59605 11675	Boiler 1 stack [burning gas oil] [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	250 mg/m^3	Average over sample period	Annual	BS EN 14792
		Carbon monoxide	No limit set			BS EN 15058
Point A5b on site plan in Schedule 7 NGR SK 59604 11678	Boiler 2 stack [burning gas oil] [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	250 mg/m^3	Average over sample period	Annual	BS EN 14792
		Carbon monoxide	No limit set			BS EN 15058
Other emission sources						
Point A4 on site plan in schedule 7 NGR SK 59535 11728	Emergency flare stack [note 1]	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
Point A6 on site plan in schedule 7 NGR SK 59537 11748	Biogas storage pressure relief valve	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Points A8, A9, A10, A11, A12 & A13 on site plan in schedule 7 NGR SK 59539 11820 NGR SK 59558 11829	Primary digester pressure relief valves	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--

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**
NGR SK 59554 11791 NGR SK 59573 11800 NGR SK 59565 11765 NGR SK 59585 11776						
Point A14 on site plan in schedule 7 NGR SK 59587 11731	Acid phase digester pressure release valve	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Points A16, A17 and A18 on site plan in schedule 7 NGR SK 59495 11752 NGR SK 59483 11748 NGR SK 59476 11769	Post-digestion storage tank pressure release valves	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Point A7 on site plan in schedule 7 NGR SK 59656 11740	Channelled emissions such as odour abatement stack or vent(s) – OCU 1 [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
Point A7 on site plan in schedule 7 NGR SK 59656 11740	Channelled emissions to air from treatment of water-based liquid waste – OCU 1	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
Vents from tank(s)	Oil/Fuel Storage tank(s)	No parameter set	No limit set	--	--	--
Note 1 – These emission limits are based on normal operating conditions and load - temperature 0°C (273 K); pressure 101.3 kPa and oxygen 5% (for gas engines burning biogas) and oxygen 3% (for emergency flares and medium combustion plants other than engines and gas turbines burning biogas such as boilers). Note 2 – This emission limit applies until 31 December 2029, unless the gas engine is replaced.						

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 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 IC19.						
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 IC19.						
Note 7 – Only three of CHP engines 1 (A1), 2 (A2), 3 (A3) or 4 (A15) may be in operation at any one time, with a maximum aggregated thermal input of 8.6MWth.						

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, S3 and S4 on site plan in schedule 7 emission to River Soar via Wanlip waste water treatment works	Site surface water/water from bunded areas/ treated waste waters/centrate/ condensate/ boiler blowdown waters	Oil and grease	No visible oil or grease	--	Weekly	Visual assessment
		Benzene, toluene, ethylbenzene, xylene (BTEX)	--	Spot sample or flow-proportional composite sample	Once every month	EN ISO 15680
		Hydrocarbon oil index (HOI)	10 mg/l		Once every day	EN ISO 9377-2
		Free cyanide (CN^-)	0.1 mg/l			EN ISO 14403-1 or EN ISO 14403-2
		Adsorbable organically bound halogens (AOX)	1 mg/l			EN ISO 9562
		Arsenic (As)	0.1 mg/l	Spot sample or flow-proportional composite sample	Once every day	EN ISO 11885, EN ISO 17294-2 or EN ISO 15586
		Cadmium (Cd)	0.1 mg/l			
		Chromium (Cr)	0.3 mg/l			
		Copper (Cu)	0.5 mg/l			
		Lead (Pb)	0.3 mg/l			
		Nickel (Ni)	1 mg/l			
		Zinc (Zn)	2 mg/l			
		Mercury (Hg)	10 µg/l	Spot sample or	Once every day	EN ISO 17852 or

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**
				flow-proportional composite sample		EN ISO 12846
		Manganese (Mn)	--			EN ISO 11885, EN ISO 17294-2 or EN ISO 15586
		Hexavalent chromium (Cr(VI))	0.1 mg/l			EN ISO 10304-3 or EN ISO 23913
		PFOA and PFOS	--		Once every six months	--
S5 on site plan in schedule 7 emission to River Soar via Wanlip 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 IC16a and IC16b. 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 IC20a and IC20b.						

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			
	Flow	Continuous	In accordance with EU	Process monitoring to be recorded using

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**
Biogas in digester [& biogas storage holders]			weights and measures Regulations	a SCADA system where relevant. Gas monitors to be calibrated every 6 months or in accordance with the manufacturer's recommendations.
	Methane	Continuous	None specified	
	CO_2	Continuous	None specified	
	O_2	Continuous	None specified	
	Hydrogen sulphide	Daily	None specified	
	Pressure	Continuous	None specified	
Digestate batch	Volatile fatty acids concentration	One sample at the end of each batch (hydraulic retention time) cycle.	As described in site operating techniques	--
	Ammonia			
Digester(s) and storage tank(s)	Integrity checks	Weekly	Visual assessment	In accordance with design specification and tank integrity checks.
Digester(s)	Agitation /mixing	Continuous	Systems controls	Records maintained in daily operational records.
	Tank capacity and sediment assessment	Once every 5 years from date of commission	Non-destructive pressure testing integrity assessment every 5 years or as specified by manufacturers technical specification.	In accordance with design specification and tank integrity checks.
Waste reception building or area; Digester(s) and storage tank(s)	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Diffuse emissions from all sources identified in the Leak Detection and Repair (LDAR) programme	VOCs including methane	Every 6 months or otherwise agreed in accordance with the LDAR programme	'Sniffing' and/or Optical Gas Imaging techniques in accordance with BS EN 15446 &	Monitoring points as specified in a DSEAR risk assessment and LDAR programme. Limit as agreed with the Environment Agency as a

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**
			BS EN 17628	percentage of the overall gas production.
CHP engine stack(s)	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, 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.

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**
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.
	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

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**
Storage tanks	Volume	Daily	Visual or flow meter measurement	Records of volume must be maintained.
Odour abatement plant				
Closed biofilters				
Biofilter 1	Gas temperature – inlet and outlet	Daily	Temperature probe / Traceable to national standards	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content. Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations. Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Biofilter media moisture	Daily	Moisture meter, Grab test, oven drying or recognised industry method	
	Thatching /compaction	Weekly	Back pressure	
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	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 IC19 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Ammonia – inlet	Every 6 months or as agreed in writing by the	EN ISO 21877	Action levels to be agreed on completion of IC19

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**
		Environment Agency.		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 IC19 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)				
Scrubber 1	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 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.
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	Moisture content or humidity – inlet and outlet (for dry scrubbers only)	Daily	Moisture meter	
	Moisture content or humidity – outlet (for wet scrubbers if used before other abatement systems)	Daily	Moisture meter	
	Back pressure	Weekly	Pressure differential using sensors	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for	

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**
			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 IC19 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 IC19 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	Carbon bed temperature – inlet and outlet	Continuous	Temperature probe	Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations. Carbon filter(s) to be replaced in accordance with
	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	

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**
			EN 13725 for odour removal)	manufacturer's recommendations. Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling NIOSH 6013 for analysis	Action levels to be agreed on completion of IC19 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 IC19 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 IC19 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2

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**
				and the odour management plan.

Table S3.4 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 S3.5 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**
S1 on site plan in schedule 7 emission to River Soar via Wanlip waste water treatment works	Effluent monitoring	SK 59942 11491	Point S1 [Discharge to WwTW] in Schedule 7
S2 on site plan in schedule 7 emission to River Soar via Wanlip waste water treatment works	Effluent monitoring	SK 59615 11729	Point S2 [Discharge to WwTW] in Schedule 7

Table S3.5 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**
S3 on site plan in schedule 7 emission to River Soar via Wanlip waste water treatment works	Effluent monitoring	SK 59626 11697	Point S3 [Discharge to WwTW] in Schedule 7
S4 on site plan in schedule 7 emission to River Soar via Wanlip waste water treatment works	Effluent monitoring	SK 59512 11822	Point S4 [Discharge to WwTW] in Schedule 7
S5 on site plan in schedule 7 emission to River Soar via Wanlip waste water treatment works	Effluent monitoring	SK 59793 11302	Point S5 [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, A5a, A5b and A15	Every 12 months	1 January
Emissions to air from odour abatement plant Parameters as required by condition 3.5.1.	A7	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 IC19 Parameters as required by condition 3.5.1.	A7	Every 6 months	1 January, 1 July
Emissions to sewer Parameters as required by condition 3.5.1	S1, S2, S3, S4 and S5	Upon completion of IC16a, IC16b, IC20a and IC20b	Upon completion of IC16a, IC16b, IC20a and IC20b
Process monitoring – digester tank integrity Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 5 years from the date of commissioning or as per the manufacturer's recommendation, whichever is sooner	1 January
Process monitoring – under and over pressure relief systems Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 12 months Yearly summary report of over-pressure and under-pressure events detailing mass balance release	1 January
Process monitoring – pressure relief systems - leak detection and repair (inspection, calibration and maintenance) Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 3 years	1 January
Process monitoring – leak detection and repair surveys Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 12 months LDAR report to be submitted annually	1 January

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
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
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 S3.4	Every 3 months or as agreed in writing by the Environment Agency	1 January, 1 April, 1 July, 1 October

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

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

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Form air 1 or other form as agreed in writing by the Environment Agency	06/08/2025
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	06/08/2025
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	06/08/2025

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	06/08/2025
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	06/08/2025
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	06/08/2025
Waste returns	E-waste Return Form or other form as agreed in writing by the Environment Agency	--

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

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

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

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

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

Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

“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.

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

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

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

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

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

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

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

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

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

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

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

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

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

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

“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 1 – 2.6 MWth CHP 2 – 2.6 MWth CHP 3 – 2.6 MWth CHP 4 – 3.4 MWth Boiler 1 – 4.45 MWth Boiler 2 – 4.45 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	CHP engines fuelled on biogas Boilers fuelled on biogas and gas oil
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Gaseous fuels other than natural gas 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.	CHPs 1, 2 & 4 - 2017 CHP 3 – July 2020 Boilers 1 & 2 – 2014
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 1 - 8,760 hours per year CHP 2 - 8,760 hours per year CHP 3 - 8,760 hours per year CHP 4 - 8,760 hours per year NOTE - Only two of CHP engines 1 (A1), 2 (A2) or 3 (A3) may be in operation at any one time Boiler 1 – 4,000 hours per year Boiler 2 – 4,000 hours per year
7. Where the option of exemption under Article 6(3) or Article 6(8) is used, a declaration signed by the operator that the medium combustion plant will not be operated more than the number of hours referred to in those paragraphs.	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:** Severn Trent Water Limited Severn Trent Centre, 2 St John's Street, Coventry, CV1 2LV **Address where the plant is located:** Wanlip Sewage Treatment Works, Fillingate, Wanlip, Leicester LE7 4PF

END OF PERMIT