

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Duranta Teesside Limited

Teesside AD Power Plant
Forty Foot Road
Middlesbrough
TS2 1HG

Variation application number

EPR/YP3236RW/V004

Permit number

EPR/YP3236RW

Teesside AD Power Plant

Permit number EPR/YP3236RW

Introductory note

This introductory note does not form a part of the notice

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

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

Changes introduced by this variation notice/statutory review

The Industrial Emissions Directive (IED) came into force on 7 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. Article 21(3) of the IED requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. The BAT Conclusions for Waste Treatment (the BREF) was published on 17 August 2018 following a European Union wide review of BAT, implementing decision (EU) 2018/1147 of 10 August 2018.

The scope of the permit review also covers the assessment of:

- the bioaerosols monitoring and compliance with M9 bioaerosols monitoring requirements;
- the design and construction of secondary containment and storage lagoons;
- the available storage facilities and measures to reduce ammonia emissions from storage; and
- information on existing medium combustion plant and/or specified generators on site.

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for biowaste treatment. The opportunity has also been taken to consolidate the original permit and subsequent variations.

Brief Description of the process

This anaerobic digestion plant is located on an industrial estate in a loop of the river Tees in Middlesbrough, Cleveland. The plant is designed to treat up to 120,000 tonnes of food waste, agricultural wastes and green waste per year. The process is largely controlled by an automated Supervisory Control and Data Acquisition (SCADA) system that has been used widely on other similar plants. The waste is mixed and then fermented by mesophilic bacteria in two 5800m³ fermenter vessels before transfer via a 4820m³ post fermentation vessel, macerator (to reduce the particle size to less than 12mm) and pasteurisation treatment to two 8068m³ digestate storage vessels. The process is designed to comply with the Animal By-Products Regulations (ABPR) and to produce digestate that will meet the requirements of the Anaerobic Digestate Quality Protocol (including meeting Publicly Available Specification 110).

Biogas (approximately 53% methane) is collected in membrane roofs on the post fermentation and digestate vessels, cleaned and compressed and then burnt in four gas engines to generate up to 5.1MWe of electricity for export to the national grid (and some use on site). Heat produced will also be used on site or dissipated by a cooling system. These Combined Heat and Power units vent to atmosphere through a 28m stack. If the gas engines are unavailable the excess gas will be flared. Potentially odorous sulphur compounds in the biogas are minimised by introducing a controlled small quantity of air into the fermenters and post fermenter vessels to promote microbiological oxidation. Remaining hydrogen sulphide is removed from the biogas using carbon absorption before combustion. The pasteurised digestate will be tankered off site for use as fertiliser on land. This permit does not authorise the spreading of digestate on land.

Emissions to air including odour from building and vessel extraction are abated by a range of biofilters and carbon absorption units. There are no process discharges to water or sewer. Site surface water is collected in a sump linked to a 100m³ underground collection tank and then pumped automatically to a third 8068m³ storage tank. The water is continuously monitored at all stages for dissolved oxygen content to indicate the presence of any process materials with a significant Biochemical Oxygen Demand (BOD). If the final tank content dissolved oxygen concentration is satisfactory the contents are drained under gravity to the road sewer and thence to the River Tees as a manually activated operation.

The closest potential ecologically sensitive receptors are the Teesmouth and Cleveland Coast SPA/RAMSAR and Tees and Hartlepool Foreshore and Wetlands SSSI at 1.5km and Linthorpe Cemetery Local Nature reserve (1.8km) and Teesaurus Park wildlife site (0.6km).

The site operates its own environmental management system that includes weighbridge and visual checks of waste deliveries.

The schedules specify the changes made to the permit.

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

Status log of the permit		
Description	Date	Comments
Application received	Duly made 08/04/2014	Application for an anaerobic digestion facility and biogas combustion facility.
Schedule 5 notice issued	02/06/2014	Request for clarifications, confirmations and additional information.
Schedule 5 part response received	11/06/2014	Main response including Appendices B-E.
Schedule 5 part response received	17/06/2014	Main response Appendix A.
Schedule 5 response received	17/06/2014	Further design detail on slam-shut valve and biofilters.
Schedule 5 response received	16/07/2014	Spill Risk Assessment and DSEAR report.
Schedule 5 response received	23/07/2014	HAZOP report.
Schedule 5 response received	29/07/2014	Final response detailing change to passive site containment from slam-shut valve active containment approach.
Permit determined EPR/YP3433VR	20/10/2014	Permit issued to BioConstruct NewEnergy Ltd.
Application EPR/YP3433VR/V002 (variation)	Duly made 03/11/2015	Application to vary the permit to include a biogas upgrading plant and surface water emission point.
Additional information received	14/12/2015	Response to Schedule 5 notice.
Additional information received	05/01/2016	Revised site plan and additional information regarding site drainage.
Variation determined EPR/YP3433VR	14/01/2016	Varied permit issued.
Application EPR/YP3236RW/V004 (full transfer of permit EPR/YP3433VR)	Duly made 25/01/2016	Application to transfer the permit in full to Duranta Teesside Limited.

Status log of the permit		
Description	Date	Comments
Transfer determined EPR/YP3236RW (Billing ref: YP3236RW)	01/02/2016	Full transfer of permit complete.
Regulation 61 Notice sent to Operator	25/05/2019	Regulation 61 Notice requiring information for statutory review of permit.
Notified of change of Registered office	Duly Made 23/08/2019	Registered office changed to Duranta Energy Limited, Forty Foot Road, Middlesbrough, Cleveland, TS2 1HG
Variation issued EPR/YP3236RW	23/08/2019	Varied permit issued to Duranta Teesside Limited
Regulation 61 Notice response	21/04/2020	Response received from the operator.
Application EPR/YP3236RW/V004 (variation and consolidation)	Environment Agency Initiated Variation	Statutory review of permit occasioned by Waste Treatment BAT Conclusions published on 17 August 2018.
Environment Agency Biowaste Treatment Sector Review Permit reviewed Variation determined EPR/YP3236RW (Billing Ref: UP3802SE)	08/12/2021	Varied and consolidated permit issued.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

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

Permit number

EPR/YP3236RW

Issued to

Duranta Teesside Limited (“the operator”)

whose registered office is

Duranta Energy Limited
Forty Food Road
Middlesbrough
Cleveland
TS2 1HG

company registration number 08223985

to operate a regulated facility at

Teesside AD Power Plant
Forty Foot Road
Middlesbrough
TS2 1HG

to the extent set out in the schedules.

The notice shall take effect from 08 December 2021

Name	Date
Maxine Evans	08 December 2021

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/YP3236RW

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/YP3236RW/V004 authorising,

Duranta Teesside Limited (“the operator”),

whose registered office is

Duranta Energy Limited

Forty Food Road

Middlesbrough

Cleveland

TS2 1HG

company registration number 08223985

to operate an installation

Teesside AD Power Plant

Forty Foot Road

Middlesbrough

TS2 1HG

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

Name	Date
Maxine Evans	08 December 2021

Authorised on behalf of the Environment Agency

Conditions

Management

1.1 General management

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

1.2 Energy efficiency

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

1.3 Efficient use of raw materials

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

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

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

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

Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).
- 2.1.2 The activities shall be undertaken in accordance with best available techniques.
- 2.1.3 All process plant and equipment shall be commissioned, operated and maintained and shall be fully documented and recorded in accordance with the manufacturer’s recommendations.
- 2.1.4 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

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

2.3 Operating techniques

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

- 2.3.7 Waste pre-acceptance and acceptance procedures shall be undertaken in accordance with best available techniques.
- 2.3.8 For the following activities referenced in schedule 1, table S1.1 (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 each MCP as short as possible.
 - (c) there must be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993.

2.4 Improvement programme

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.
- 3.2.4 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.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1 and S3.2;
 - (b) process monitoring specified in tables S3.3 and S3.4;
- 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 and S3.2, unless otherwise agreed in writing by the Environment Agency.
- 3.5.5 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 shall not take place during periods of start-up or shut-down.

3.6 Pests

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.6.2 The operator shall:
- (a) 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.

Information

4.1 Records

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

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

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

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

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production/treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

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

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report

assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

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

4.2.6 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.

4.3 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 reoccurrence 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 the medium combustion plant.

4.4 Interpretation

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

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

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
AR1	S5.4 A(1) (b) (i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.	R3: Recycling/reclamation of organic substances which are not used as solvents	<p>From receipt of waste through to digestion and recovery of by-products (digestate).</p> <p>Anaerobic digestion of waste in an enclosed process followed by burning of biogas produced from the process.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p> <p>Acceptance of waste type 02 02 02 will be limited to less than 10 tonnes per day.</p>
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)	<p>From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site.</p> <p>Storage of residual wastes from pre-treatment to despatch off-site for recovery.</p> <p>Storage of waste in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with sealed drainage.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p> <p>Acceptance of waste type 02 02 02 will be limited to less than 10 tonnes per day.</p>

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
AR3	Physical treatment for the purpose of recycling	R3: Recycling/reclamation of organic substances which are not used as solvents	<p>From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery.</p> <p>Pre-treatment of waste in enclosed building and on impermeable surface with sealed drainage system including shredding, sorting, screening, compaction, baling, mixing and maceration.</p> <p>Post-treatment of digestate in an enclosed building and on an impermeable surface with sealed drainage system, including 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).</p> <p>Heat treatment (pasteurisation) of waste for the purpose of recovery.</p> <p>Gas cleaning by biological or chemical scrubbing.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p> <p>Acceptance of waste type 02 02 02 will be limited to less than 10 tonnes per day.</p>
AR4	Steam and electrical power supply	R1:Use principally as a fuel to generate energy	From the receipt of biogas produced at the on-site anaerobic digestion process to combustion with the release of combustion gases.

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
			<p>Combustion of biogas in four combined heat and power (CHP) engines with an aggregated thermal input of 7.626 MWth.</p> <p>Combustion of diesel in two auxiliary generators with an aggregated thermal input of 1.936 MWth. Auxiliary generators are classed as excluded generators and may only operate for the sole purpose of testing no more than 50 hours per year.</p>
AR5	Emergency flare operation	D10: Incineration on land	<p>From the receipt of biogas produced at the on-site anaerobic digestion process to incineration with the release of combustion gases.</p> <p>Use of one auxiliary flare required only during periods of breakdown or maintenance of the CHP engines, biogas upgrading plant.</p>
AR6	Gas upgrading	Upgrading of biogas to biomethane (including the removal of moisture and other substances such as carbon dioxide, hydrogen sulphide and Volatile organic compounds) for injection into the National Grid.	From the receipt of biogas produced at the on-site anaerobic digestion process to injection into the National Grid. This includes return of off-specification biogas for combustion to the on-site CHP engines and/or emergency flare.
AR7	Raw material storage	Storage of lubrication oil, antifreeze, Iron (III) chloride, iron hydroxide, activated carbon, microelements, defoaming agents, miscellaneous laboratory consumables, propane.	From the receipt of raw materials to despatch for use within the facility.
AR8	Gas storage	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection,	From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for combustion or injection into the grid.

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
		on the site where it is produced)	
AR9	Digestate storage	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	From the receipt of processed uncertified digestate produced from the on-site anaerobic digestion process to despatch for use off-site. Storage of digestate in two storage tanks and on an impermeable surface with a sealed drainage system.
AR10	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water in a sump from where it is pumped to an 8,000m ³ surface water tank.	From the collection of uncontaminated roof and site surface water from non-operational areas only to re-use within the facility or discharge off-site.
AR11	Air treatment	Collection and treatment of air from the buildings or plant using abatement system – biofilters, carbon filters and wet acid scrubbers prior to release to atmosphere.	From the collection of air from site processes to treatment and release of treated air to atmosphere.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Applications Form parts B2 and B3; Application documents sections and appendices (including all subsections figures and tables) 2.4, 2.5, 2.6, 2.7, 2.14, 2.15, 3.5, all of section 4; and appendices E (noise) section 3; F (Odour) sections 4, 5, 6 and 7; and H (Containment) sections 5.2 and 6.	08/04/2014
E-mail response to Schedule 5 Notice dated 02/06/2014	Response to questions 2, 3, and 5 to 10 and Appendices B and F.	11/06/2014
Further e-mail Responses to Schedule 5 Notice dated 02/06/14	Operation of biofilter. Spill Risk Assessment and DSEAR assessment report. HAZOP Report from 2013 completed (CHP Plant) June 2014 Final response detailing change to passive site containment from Slam-shut valve active containment approach.	17/06/2014 16/07/2014 23/07/2014 29/07/2014
E-mail letter dated 11/09/14 Applicant ref:	Additional information relating to remote secondary containment design. Outline details for below ground	11/09/2014

Table S1.2 Operating techniques		
Description	Parts	Date Received
405.04387.00001.14091 1 and attached figures 1 and 2	collection sump and pumping to remote secondary tank.	
E-mail letter dated 26/09/2014 Applicant ref: 405.04387.00001.14092 6	Response to request for information. Clarification and confirmation of a range of operational points arising from the application and subsequent discussions.	26/09/2014
E-mail letter and attachments dated 02/10/2014	The use of DO as a metric within the containment solution at Teesside AD facility, and for use in discharge of surface water run-off from the containment tank	02/10/2014
Variation application EPR/YP3433VR/V002	BAT statement GLBMP-002 (except reference to another company as the operator of the installation) in response to section 3a – technical standards, Part C3 of the application form.	03/11/2015
Additional information	Response to Schedule 5 question 2 – risk assessment for the storage of propane on site.	14/12/2015
Additional information	<ul style="list-style-type: none"> • Revised site plan which incorporates the point source emission to air from the biogas upgrading plant and point source emission to surface water; • Clarification of tests undertaken prior to the discharge of site surface water 	05/01/2016
Response to Regulation 61 Notice dated 25/05/2019	<ul style="list-style-type: none"> • Annex 1 Returns Spreadsheet • 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. 	Received 21/04/2020

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IP1	<p>The operator shall submit a post-commissioning report to the Environment Agency which shall include, but not be limited to:</p> <ul style="list-style-type: none"> • a review of performance of the facility against the conditions of this permit and the pre-commissioning report proposals; • details of procedures developed during commissioning for achieving and demonstrating satisfactory process control; • air emission monitoring results for stack emissions points A1-A5 as detailed in Table S3.1 (this includes the flare and is additional to the annual monitoring requirement for A1-A4); and • odour control and abatement systems performance. 	Completed
IP2	<p>Following a period of optimum operation of the facility, the operator shall conduct a Process Hazard Review to ensure design and operability intent is maintained and there is as low as is reasonably practicable (ALARP) risk when operating the plant.</p> <p>A report of the review shall be written and submitted to the Environment Agency. Where areas for improvement are identified, the report shall include proposals for improvement and timescales for their implementation.</p>	08/12/2022 or other date as agreed in writing with the Environment Agency
IP3	<p>The operator shall supply written evidence to the Environment Agency of derivation of the methanol concentration and temperature limits for the glycerol waste accepted on site that will ensure its non-hazardous categorisation (for both flammability and toxicity) under WM2.</p>	08/12/2022 or other date as agreed in writing with the Environment Agency
IP4	<p>The operator shall provide a report to the Environment Agency detailing the findings of a noise survey conducted in accordance with BS4142:1997 (or replacement standard) designed for comparison with the predictive calculations presented in Appendix E of application EPR/YP3433VR/A001.</p> <p>The assessment shall cover, but not necessarily be limited to:</p> <ul style="list-style-type: none"> • a review of noise sources from the facility. Where any noise source(s) are identified as exhibiting tonal contributions, they shall be quantified by means of frequency analysis; and • Normal day, night and weekend operations. <p>If the assessment indicates that the plant might give rise to disturbance, then the report will include further investigation and studies undertaken to identify the specific source(s) of the problematic noise and measures proposed to mitigate the potential impact to acceptable levels in accordance with BS4142:1997 (or replacement standard).</p>	08/12/2022 or other date as agreed in writing with the Environment Agency
IP5	<p>The operator shall carry out an energy efficiency audit of the anaerobic digestion facility. The audit shall also include an evaluation of potential off-site utilisation by third parties of any excess/waste heat from the process. A written report shall be submitted to the Environment Agency detailing the findings of the audit and any improvements with a plan including timescales for their implementation.</p>	08/12/2022 or other date as agreed in writing with the Environment Agency

IP6	The operator shall install and operate the collection tanks, pumps, sensors and any other infrastructure changes for remote secondary containment in the manner and to the plan detailed in the Schedule 5 notice response and subsequent e-mails as referenced in the table S1.2 Operational Techniques. Where details are in conflict, the more recent submission takes precedence.	Completed.
IP7	<p>The operator shall carry out a monitoring study to verify the assumptions made in the application in relation to the releases of pollutants to air. The study shall include the monitoring of point source releases to air from the biogas upgrading plant emission point A8 during normal operation, having regard to the Environment Agency technical guidance M2 and to MCERTS standards. As a minimum, two separate monitoring campaigns in a year shall be completed (one monitoring survey six months following commissioning of the biogas upgrading plant).</p> <p>The pollutants to be monitored shall include:</p> <ul style="list-style-type: none"> • total volatile organic compounds; and • hydrogen sulphide. 	08/12/2022 or other date as agreed in writing with the Environment Agency
IP8	<p>Following the completion of IC7, the operator shall undertake an environmental impact assessment of all point source releases to air, using the information obtained through the emissions monitoring. The environmental impact assessment report and all associated monitoring reports and assessments shall be submitted in writing to the Environment Agency for review.</p> <p>The environmental impact assessment shall, as a minimum, include:</p> <ul style="list-style-type: none"> • reports showing details of the monitoring undertaken and the results obtained; • results of the assessment of long and short term impacts from the emissions in accordance with Environment Agency Guidance Note H1, Annex F – Air emissions • a completed H1 assessment software tool <p>If the H1 assessment shows potential long or short term impacts from the emissions, the operator shall propose an action plan to reduce the impacts of the substances identified.</p>	08/12/2022 or other date as agreed in writing with the Environment Agency
IP9	The operator shall submit a revised odour management plan to the Environment Agency in writing. The revised plan shall take into account the appropriate measures for odour control at the biogas upgrading plant. The plan shall incorporate the information specified in Horizontal Guidance H4 – Odour Management. The odour management plan shall be subject to a written approval by the Environment Agency following internal review.	08/12/2022 or other date as agreed in writing with the Environment Agency
Improvement condition for progress report to achieve BAT-AELs		
IP10	<p>The operator shall submit, for approval by the Environment Agency, a report setting out progress to achieving the Best Available Techniques Conclusion Associated Emission Levels (BAT-AELs) where BAT is currently not achieved, but will be achieved before 17 August 2022. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> 1) Current performance against the BAT-AELs. 2) Methodology for reaching the BAT-AELs. 	<p>Progress reports at three monthly intervals from date of permit issue:</p> <p>Initial plan: 08/03/2022</p> <p>Progress report: 08/06/2022</p>

	<p>3) Associated targets /timelines for reaching compliance by 17 August 2022.</p> <p>4) Any alterations to the initial plan (in progress reports).</p> <p>The report shall address the BAT Conclusions for Waste Treatment with respect to the following:</p> <ul style="list-style-type: none"> • BAT 20 Table 6.1 (compliance with BAT-AELs for direct discharges to a receiving water body) • BAT 34 Table 6.7 (compliance with BAT-AELs for channelled NH₃, odour, dust and TVOC emissions to air from the biological treatment of waste) <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>	<p>Progress report: 08/09/2022</p>
Improvement condition for progress report to achieve Narrative BAT		
<p>IP11</p>	<p>The operator shall submit, for approval by Environment Agency, a report setting out progress to achieving the 'Narrative' BAT where BAT is currently not achieved, but will be achieved before 17 August 2022. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> 1) Methodology for achieving BAT 2) Associated targets /timelines for reaching compliance by 17 August 2022 3) Any alterations to the initial plan (in progress reports). <p>The report shall address the BAT Conclusions for Waste Treatment with respect to BAT 1, 2, 3, 5, 8, 10, 11, 14, 15, 16, 17, 19, 21, 23, 34 and 38.</p>	<p>Progress reports at three monthly intervals from date of permit issue: Initial plan: 08/03/2022 Progress report: 08/06/2022 Progress report: 08/09/2022</p>
Improvement condition for primary containment		
<p>IP12</p>	<p>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 a qualified engineer, and shall assess the extent design specification and condition of primary containment systems where polluting liquids and solids are being stored, treated, and/or handled.</p> <p>The plan shall include:</p> <ul style="list-style-type: none"> • an assessment of the physical condition of all primary containment systems (storage and treatment vessels) using a Written Scheme of Examination and their suitability for providing primary containment when subjected to the dynamic and static loads caused by catastrophic tank failure; • 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; and • a preventative maintenance and inspection regime <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	<p>08/12/2022 or other date as agreed in writing with the Environment Agency</p>

Improvement condition for secondary containment design		
IP13	<p>The operator shall submit a written ‘secondary and tertiary 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 a competent structural engineer, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of secondary and tertiary containment systems where all polluting liquids and solids are being stored, treated, and/or handled.</p> <p>The inspection shall consider, but not be limited to, the storage vessels, bunds, loading and unloading areas, transfer pipework/pumps, temporary storage areas, and liners underlying the site.</p> <p>The plan shall include:</p> <ul style="list-style-type: none"> • an assessment of the physical condition of all secondary and/or tertiary containment systems, using a Written Scheme of Examination and their suitability for providing containment when subjected to the dynamic and static loads caused by catastrophic tank failure; • a program of works with timescales for the implementation of individual improvement measures necessary for the secondary and/or tertiary containment systems to comply with CIRIA C736 (2014) guidance, or equivalent. • a preventative maintenance and inspection regime <p>The plan shall be implemented in accordance with the Environment Agency’s written approval.</p>	08/12/2022 or other date as agreed in writing with the Environment Agency
Improvement condition for covering digestate storage tanks and operational storage capacity		
IP14	<p>The operator shall provide a written “digestate storage plan” and shall obtain the Environment Agency’s written approval to it. The plan shall contain the results of a review of the current storage of digestate produced from site operations. The review shall examine site contingency arrangements in the event of closed landspreading periods, extreme weather conditions, site closure, and disease outbreak.</p> <p>The storage plan shall include:</p> <ul style="list-style-type: none"> • Existing cover arrangements on storage tanks used to store digestate to minimise odour, ammonia and methane emissions. • Additional storage capacity on-site (at least 2 months storage) and storage capacity off-site. • Identification of alternative outlets for digestate – identify companies/permitted waste facilities that would be able to manage the digestate, taking into account their permits and capacity constraints. <p>The plan shall be implemented in accordance with the Environment Agency’s written approval.</p>	08/12/2022 or other date as agreed in writing with the Environment Agency
Improvement condition for review of effectiveness of abatement plant		

IP15	<p>The operator shall carry out a review of the abatement plant on site, in order to determine whether the measures have been effective and adequate to prevent and where not possible minimise emissions released to air including but not limited to odour and ammonia.</p> <p>The operator shall submit a written report to the Environment Agency following this review for assessment and approval.</p> <p>The report shall include but not limited to the following aspects:</p> <ul style="list-style-type: none"> • Full investigation and characterisation of the waste gas streams. • Abatement stack monitoring results (not limited to odour and ammonia) • Abatement process monitoring results (not limited to odour and ammonia) • Details of air quality quantitative impact assessment including modelling and a proposal for site-specific “action levels” (not limited to odour concentration, hydrogen sulphide and ammonia). • Odour monitoring results at the site boundary • Records of odour complaints and odour related incidents • Recommendations for improvement including the replacement or upgrading the abatement plant • Timescales for implementation of improvements to the abatement plant <p>The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.</p>	08/12/2022 or other date as agreed in writing with the Environment Agency
Improvement condition for review of abatement plant design		
IP16	<p>The operator shall submit to the Environment Agency a written review report of the design details of the site ventilation system and abatement plant and obtain the Environment Agency’s written approval to it.</p> <p>The report shall include but not limited to:</p> <ol style="list-style-type: none"> a) Ventilation design performance criteria for effective fugitive odorous emission control b) Design of the abatement systems that will ensure compliance with the odour condition 3.3. The report shall include a demonstration (whether by a detailed review of technical papers or by trial results) that all odorous chemical compounds and their loading rates expected in the relevant air streams have been considered in the design; and supporting evidence that the odorous compounds will be controlled and/or abated either by operating techniques or by the proposed abatement systems. c) Design alarms and triggers for each relevant scenario to alert the operator to the malfunction of both ventilation and abatement systems. The report should further list all relevant contingency mitigation actions to minimise risk of elevated odour pollution from the installation linked to each malfunction scenario and detail the actions to restore systems to normal operating conditions for effective odour control. 	08/12/2022 or other date as agreed in writing with the Environment Agency

	Ventilation and abatement systems should be designed by suitably qualified named engineers who can supervise and sign-off on construction quality assurance.	
Improvement condition for assessment of methane slip		
IP17	The operator shall establish the methane emissions in the exhaust gas from engines burning biogas and compare these to the manufacturer's specification and benchmark levels agreed in writing with the Environment Agency. The operator shall, as part of the methane leak detection and repair (LDAR) programme, develop proposals to assess the potential for methane slip and take corrective actions where emissions above the manufacturer's specification or appropriate benchmark levels are identified.	08/12/2022 or other date as agreed in writing with the Environment Agency

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
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Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	Annual throughput shall not exceed 120,000 tonnes
Exclusions	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> separately collected loads of plastic unless the whole load is certified compostable to BS EN13432 co-mingled green and food waste containing more than 5% w/w plastic, unless the plastic is certified compostable to BS EN 13432 food wastes containing more than 5% w/w plastic unless there is sufficient technology to remove non-compostable plastic prior to treatment from package food waste to a processing limit of 1% w/w or decreasing year on year by 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 Alien Invasive Species Regulations 2014 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
Waste code	Description
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01	sludges from washing and cleaning – vegetables, fruit and other crops
02 01 03	plant tissue waste
02 01 06	animal faeces, urine and manure (including spoiled straw) only
02 01 07	wastes from forestry
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 04	materials unsuitable for consumption or processing

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	Annual throughput shall not exceed 120,000 tonnes
Exclusions	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> separately collected loads of plastic unless the whole load is certified compostable to BS EN13432 co-mingled green and food waste containing more than 5% w/w plastic, unless the plastic is certified compostable to BS EN 13432 food wastes containing more than 5% w/w plastic unless there is sufficient technology to remove non-compostable plastic prior to treatment from package food waste to a processing limit of 1% w/w or decreasing year on year by 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 Alien Invasive Species Regulations 2014 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
Waste code	Description
02 03 05	sludges from on-site effluent treatment
02 04	wastes from sugar processing
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 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 04	materials unsuitable for consumption or processing
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 01	Wastes from wood processing and the production of panels and furniture
03 01 01	Waste bark and cork
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03	Wastes from pulp, paper and cardboard production and processing
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

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	Annual throughput shall not exceed 120,000 tonnes
Exclusions	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> • separately collected loads of plastic unless the whole load is certified compostable to BS EN13432 • co-mingled green and food waste containing more than 5% w/w plastic, unless the plastic is certified compostable to BS EN 13432 • food wastes containing more than 5% w/w plastic unless there is sufficient technology to remove non-compostable plastic prior to treatment from package food waste to a processing limit of 1% w/w or decreasing year on year by 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 Alien Invasive Species Regulations 2014 • 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
Waste code	Description
04 02	wastes from the textile industry
04 02 10	organic matter from natural products, e.g. grease, wax
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging – excludes laminates such as Tetrapaks and must conform to BS EN 13432 and not allowed if any non-biodegradable coating or preserving substance is present
15 01 03	untreated wooden packaging – not allowed if any non-biodegradable coating or preserving substance is present
15 01 05	composite packaging – must conform to BS EN 13432 and not allowed if any non-biodegradable coating or preserving substance is present
16	Wastes not otherwise specified in the list
16 10	aqueous liquid wastes destined for off-site treatment
16 10 02	liquor/leachate from a composting process that accepts waste input types listed in this table only
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 03	waste types listed within this table, Table S2.2, that have been mixed together only
19 02 06	sludge types from waste listed within this table, Table S2.2, that have been heat treated only
19 02 10	glycerol not designated as hazardous i.e. excludes EWC code 19 02 08
19 05	Wastes from aerobic treatment of solid wastes
19 05 01	Non-composted fraction of municipal and similar wastes
19 05 02	Non-composted fraction of animal and vegetable waste

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	Annual throughput shall not exceed 120,000 tonnes
Exclusions	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> • separately collected loads of plastic unless the whole load is certified compostable to BS EN13432 • co-mingled green and food waste containing more than 5% w/w plastic, unless the plastic is certified compostable to BS EN 13432 • food wastes containing more than 5% w/w plastic unless there is sufficient technology to remove non-compostable plastic prior to treatment from package food waste to a processing limit of 1% w/w or decreasing year on year by 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 Alien Invasive Species Regulations 2014 • 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
Waste code	Description
19 05 03	Off-specification compost
19 06	wastes from anaerobic treatment of waste
19 06 03	liquor from anaerobic treatment of municipal waste (from a process that treats wastes which are listed in this table only)
19 06 04	digestate from anaerobic treatment of source segregated biodegradable waste (from a process that treats wastes which are listed in this table only)
19 06 05	liquor from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only)
19 06 06	digestate from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only)
19 08	wastes from waste water treatment plants not otherwise specified
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 (from a process that treats wastes which are listed in this table only).
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 12	waste types listed in this table, Table S2.2, that have been subjected to mechanical treatment only (from a process that treats wastes which are listed in this table only).
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 01	paper and cardboard packaging – excludes laminates such as Tetrapaks and must conform to BS EN 13432 and not allowed if any non-biodegradable coating or preserving substance is present.
20 01 08	biodegradable kitchen and canteen waste
20 01 25	edible oil and fat
20 01 38	Wood other than that mentioned in 20 01 37
20 02	garden and park wastes (including cemetery waste)

Table S2.2 Permitted waste types and quantities for anaerobic digestion	
Maximum quantity	Annual throughput shall not exceed 120,000 tonnes
Exclusions	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> • separately collected loads of plastic unless the whole load is certified compostable to BS EN13432 • co-mingled green and food waste containing more than 5% w/w plastic, unless the plastic is certified compostable to BS EN 13432 • food wastes containing more than 5% w/w plastic unless there is sufficient technology to remove non-compostable plastic prior to treatment from package food waste to a processing limit of 1% w/w or decreasing year on year by 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 Alien Invasive Species Regulations 2014 • 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
Waste code	Description
20 02 01	biodegradable waste
20 03	other municipal wastes
20 03 01	mixed municipal waste – only separately collected biodegradable wastes of types listed within this table, Table S2.2
20 03 02	waste from markets – allowed only if source segregated biodegradable fractions e.g. plant material, fruit and vegetables

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Existing medium combustion plant which are engines fuelled on biogas (1 MW to 5 MW)						
A1 [Point A1 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236RW/V004]	CHP engine 1 - IR1 [note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500 mg/m ³	Average over sample period	Annual	BS EN 14792
		Sulphur dioxide	350 mg/m ³ [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m ³ [note 3]			
		Carbon monoxide	1400 mg/m ³			BS EN 15058
		Total VOCs	No limit set			--
A2 [Point A2 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236RW/V004]	CHP engine 2 - IR2 [note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500 mg/m ³	Average over sample period --	Annual --	BS EN 14792
		Sulphur dioxide	350 mg/m ³ [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m ³ [note 3]			
		Carbon monoxide	1400 mg/m ³			BS EN 15058
		Total VOCs	No limit set			
A3 [Point A3 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236RW/V004]	CHP engine 3 - IR3 [note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500 mg/m ³	Average over sample period	Annual	BS EN 14792
		Sulphur dioxide	350 mg/m ³ [note 2]			BS EN 14791 or CEN TS 17021 or
		Sulphur dioxide	162 mg/m ³ [note 3]			

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
A4 [Point A4 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236R W/V004]	CHP engine 4 – IR4 [note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500 mg/m ³	Average over sample period	Annual	BS EN 14792
		Sulphur dioxide	350 mg/m ³ [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m ³ [note 3]			
		Carbon monoxide	1400 mg/m ³			BS EN 15058
		Total VOCs	No limit set			BS EN 12619
A9 [Point A9 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236R W/V004]	Auxiliary generator stack	--	No limit set	--	--	--
A10 [Point A10 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236R W/V004]	Auxiliary spill containment generator stack	--	No limit set	--	--	--
A5 [Point A5 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236R W/V004]	Emergency flare stack [note 4]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	150 mg/m ³	Average over sample period	[note 5]	BS EN 14792
		Carbon monoxide	50 mg/m ³			BS EN 15058
		Total VOCs	10 mg/m ³			BS EN 12619

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A6 [Point A6 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236RW/V004]	Reception hall biofilter stack	Hydrogen sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for sampling
		Ammonia	20 mg/m ³	Average over sample period		NIOSH 6013 for analysis
		Odour concentration	No limit set	--		EN ISO 21877
A7 [Point A7 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236RW/V004]	Slurry tank carbon filter with stack	Hydrogen sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for sampling
		Ammonia	20 mg/m ³	Average over sample period		NIOSH 6013 for analysis
		Odour concentration	No limit set	--		EN ISO 21877
A11 [Point A11 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236RW/V004]	Offload connection carbon filter with stack	Hydrogen sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for sampling
		Ammonia	20 mg/m ³	Average over sample period		NIOSH 6013 for analysis
		Odour concentration	No limit set	--		EN ISO 21877
A12 [Point A12 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236RW/V004]	Pasteuriser plant scrubbers via a stack	Hydrogen sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for sampling
		Ammonia	20 mg/m ³	Average over sample period		NIOSH 6013 for analysis
		Odour concentration	No limit set	--		EN ISO 21877
A8 [Point A8 on site plan, 'Emission Points Plan' reference 21-1549-A-003 application EPR/YP3236RW/V004]	Biogas upgrading plant stack	VOCs including methane	No limit set	Leak detection and repair (LDAR) programme	In accordance with written management system	BS EN15446

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
Pressure relief valves	Digesters/ Digestate storage tanks	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Vents from tanks	Oil/Fuel Storage tanks	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 medium combustion plants other than engines and gas turbines burning biogas).

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

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

Note 4 – These emission limits are based on normal operating conditions and load - temperature 0°C (273K); pressure 101.3 kPa and oxygen 3%.

Note 5 – Following commissioning, 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.

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 on site plan in schedule 7 Emission via Road sewer to River Tees To be sampled from discharging tank.	Uncontaminated site surface water	Dissolved Oxygen	5 mg/l Minimum	Spot	Each release to off-site drain.	As agreed in writing with the Environment Agency
		Visual appearance	Clear and not significantly coloured	Spot	Each release to off-site drain.	As agreed in writing with the Environment Agency
SWO on site plan in schedule 4 of Notice EPR/YP3433V R/V002	Uncontaminated site surface water	Visual appearance	Clear and not significantly coloured	Spot	Each release to off-site drain.	As agreed in writing with the Environment Agency

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Digester feed (digestion process)	pH	As described in site operating techniques	As described in site operating techniques	Process monitoring to be recorded using a SCADA system where relevant.
	Alkalinity			
	Temperature			
	Hydraulic loading rate			
	Organic loading rate			
	Volatile fatty acids concentration			
	Ammonia			
	Liquid /foam level			
Biogas in digester	Flow	Continuous	In accordance with EU weights and measures Regulations	Process monitoring to be recorded using a SCADA system where relevant. Gas monitors to be calibrated every 6 months or in accordance with the manufacturer's recommendations.
	Methane	Continuous	None specified	
	CO ₂	Continuous	None specified	
	O ₂	Continuous	None specified	
	Hydrogen sulphide	Daily	None specified	
	Pressure	Continuous	None specified	
Digestate batch	Volatile fatty acids concentration	One sample at the end of each batch (hydraulic retention time) cycle.	As described in site operating techniques	--
	Ammonia			
Digesters and storage tanks	Integrity checks	Weekly	Visual assessment	--
All tanks greater than 600m ³ volume	Integrity checks	After 5 years from commissioning end and subsequently 3 yearly.	Internal inspection by a suitably qualified structural engineer.	
Digesters	Agitation /mixing	Continuous	Systems controls.	Records maintained in daily operational records.
	Tank capacity and sediment assessment	Once every 5 years from date of commission	Non-destructive pressure testing integrity	In accordance with design specification and

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
			assessment every 5 years or as specified by manufacturers technical specification	tank integrity checks.
Waste reception building or area; Digesters and storage tanks	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Diffuse emissions from all sources identified in the Leak Detection and Repair (LDAR) programme	VOCs including methane	Every 6 months or otherwise agreed in accordance with the LDAR programme	In accordance with the LDAR programme	Leak detection and repair (LDAR) programme in accordance with permit condition 3.2.4.
CHP engine stacks	VOCs including methane	Annually	BS EN 12619	Total annual VOCs emissions from the CHP engine(s) to be calculated and submitted to the Environment Agency.
	Exhaust gas temperature		Traceable to National Standards	--
	Exhaust gas pressure		Traceable to National Standards	--
	Exhaust gas water vapour content		BS EN 14790-1	Unless gas is dried before analysis of emissions.
	Exhaust gas oxygen		BS EN 14789	--
	Exhaust gas flow		BS EN 16911-1	--
Meteorological conditions	Wind speed, air temperature, wind direction	Continuous	Method as specified in management system	Conditions to be recorded in operational diary and records. Equipment shall be calibrated on a 4 monthly basis, in accordance with manufacturer's recommendations or as agreed in

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
				writing by the Environment Agency.
Emergency flare	Operating hours	Continuous	Recorded duration and frequency. Recording using a SCADA system or similar system	Date, time and duration of use of auxiliary flare shall be recorded.
	Quantity of gas sent to emergency flare			Quantity can be estimated from gas flow composition, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions.
Pressure relief valves and vacuum systems	Re-seating	Weekly inspection	Visual and gas pressure	Continuous gas pressure shall be monitored. Operator must ensure that valves are re-seated after release in accordance with the manufacturer's design.
	Maintenance	Written scheme of examination in accordance with condition 1.1.1	Written scheme of examination in accordance with condition 1.1.1	Continuous gas pressure shall be monitored. Operator must ensure that valves are re-seated after release in accordance with the manufacturer's design.
	Inspection calibration and validation report	In accordance with design and construction specifications or after over topping or foaming event		Operator must ensure that valves are re-seated after release, after a foaming event or sticking, build-up of debris, obstructions or damage.

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
				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 and guidance in relation to The Pressure Systems Safety Regulations 2000 (PSSR).
Storage tanks	Volume	Daily	Visual or flow metre measurement	750 mm freeboard must be maintained for storage lagoons and 300 mm for storage tanks.

Table S3.4 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Odour abatement plant				
Closed biofilters				
Reception biofilter	Gas temperature – inlet and outlet	Daily	Temperature probe / Traceable to national standards	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content.
	Biofilter media moisture	Daily	Moisture meter or recognised industry method	
	Thatching /compaction	Weekly	Back pressure	Odour abatement plant shall be managed in accordance with
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter / EN	

Table S3.4 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
			16911-1 and MID for EN 16911-1	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.
	pH (biofilter drainage effluent)	Daily	pH metre	
	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 IC9 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 IC9 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 IC9 as approved in writing by the Environment Agency.

Table S3.4 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
				Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
Scrubbers (chemical)				
Pasteuriser tank scrubbers (two vessels)	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.
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter / EN 16911-1 and MID for EN 16911-1	
	Moisture content or humidity – inlet and outlet (for dry scrubbers only)	Daily	Moisture meter	Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations.
	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 odour removal)	Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	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 IP15 as approved in writing by the Environment Agency.
				Action levels to be achieved in accordance with permit condition

Table S3.4 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
				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 IP15 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				
Slurry tank and Offload connection 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.
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	Moisture or humidity	Daily	Moisture meter	
	Back pressure	Weekly	Recognised industry method	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	Carbon filter(s) to be replaced in accordance with manufacturer's recommendations. Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the 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 IP15 as approved in writing by the Environment Agency.

Table S3.4 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
				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 IP15 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 IP15 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.3 and the odour management plan.

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 Parameters as required by condition 3.5.1.	A1, A2, A3 and A4	Every 12 months	1 January, 1 April, 1 July, 1 October
Emissions to air from odour abatement plant Parameters as required by condition 3.5.1.	A6, A7, A11 and A12	Every 6 months	1 January, 1 July
Emissions to water and land Parameters as required by condition 3.5.1	W1	Every 12 months	1 January
Process monitoring Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3 and S3.4	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

Table S4.2 Annual production/treatment	
Parameter	Units
Electricity generated	MWh
Biomethane generated	tonnes or m ³
Whole digestate	tonnes
Non-waste outputs	tonnes

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
Biomethane exported	Annually	tonnes or m ³
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	08/12/2021
Process monitoring	Form process 1 or other form as agreed in writing by the Environment Agency	08/12/2021
Water	Form water 1 or other form as agreed in writing by the Environment Agency	08/12/2021
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	08/12/2021
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	08/12/2021
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	08/12/2021
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.

“ADQP” means Anaerobic Digestion Quality Protocol

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

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

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

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

“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.

“Biodegradable” means a material is capable of undergoing biological anaerobic or aerobic degradation leading to the production of CO₂, H₂O, 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.

“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.

“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.

“compost” means a 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 plastics that are certified to meet the standards of EN 13432, EN 14995 or equivalent and is capable of breaking down by microbial digestion to create compost.

“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”.

“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.

“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.

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

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

“maturation” means optional period of treatment or storage of separated fibre digestate under predominantly aerobic conditions.

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

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

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

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

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

“operator” means in relation to a regulated facility:

- (a) the person who has control over the operation of the regulated facility,
- (b) if the regulated facility has not yet been put into operation, the person who will have control over the regulated facility when it is put into operation, or
- (c) if a regulated facility authorised by an environmental permit ceases to be in operation, the person who holds the environmental permit

“pests” means Birds, Vermin and Insects.

“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.

“Representative internal” – means representative monitoring at a point internally of the windrows that will give a representative assessment of temperature. Note: Larger windrows will require more bespoke temperature equipment to adequately assess temperature profiles accurately.

“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°C, during which biological processes, together with conditions in the composting mass, eradicate human and animal pathogens or reduce them to acceptably low levels.

“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, 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.

“stabilisation stage” means the stage of composting following sanitisation, during which biological conditions in the composting mass, give rise to compost that is nominally stable.

“treated wood” means any wood that has been chemically treated (e.g. to enhance or alter the performance of the original wood). Treatments may include penetrating oils, tar oil preservatives, water-borne preservatives, organic-based preservatives, boron and organo-metallic based preservatives, boron and halogenated flame retardants and surface treatments (including paint and varnish).

“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” 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.

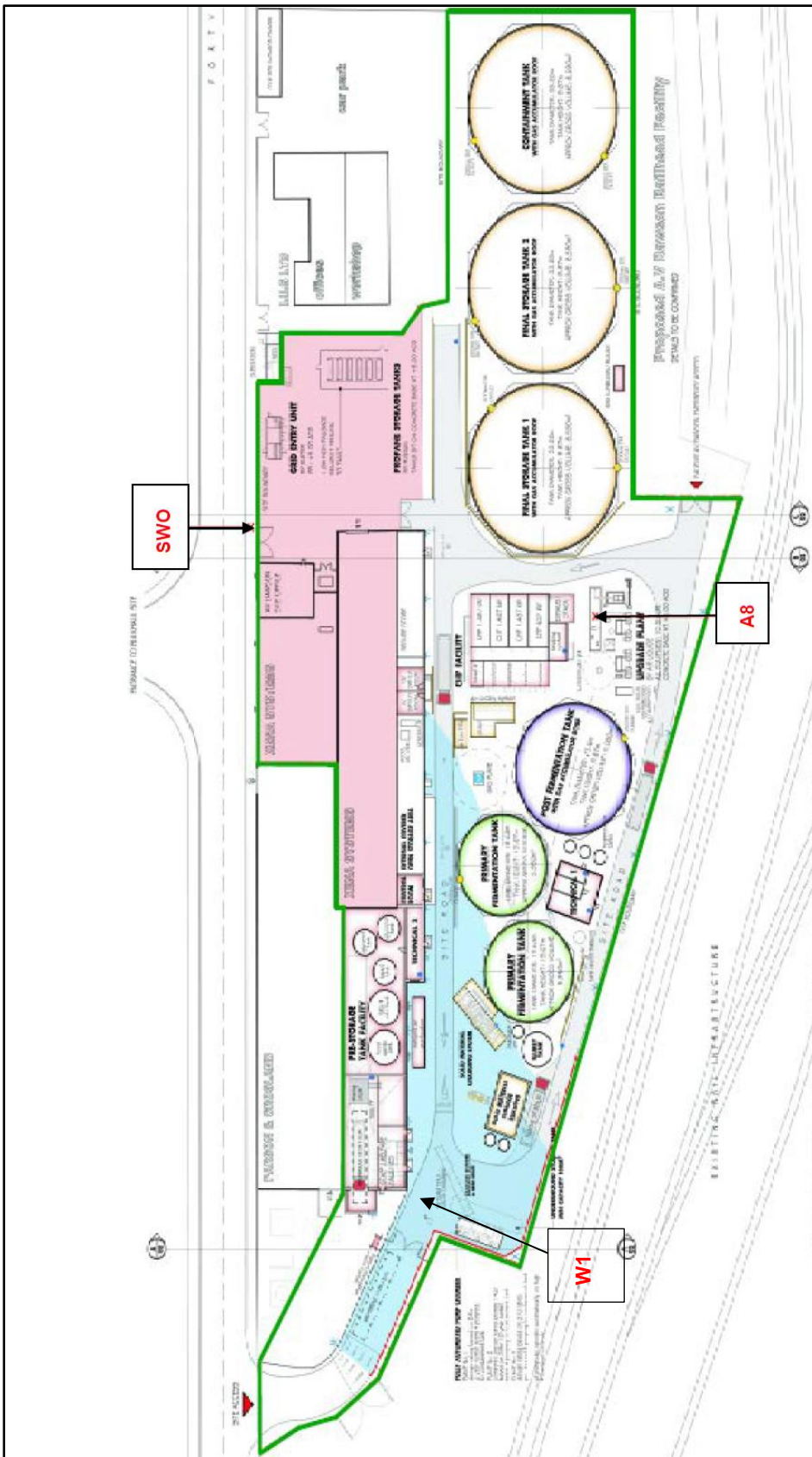
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- 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.

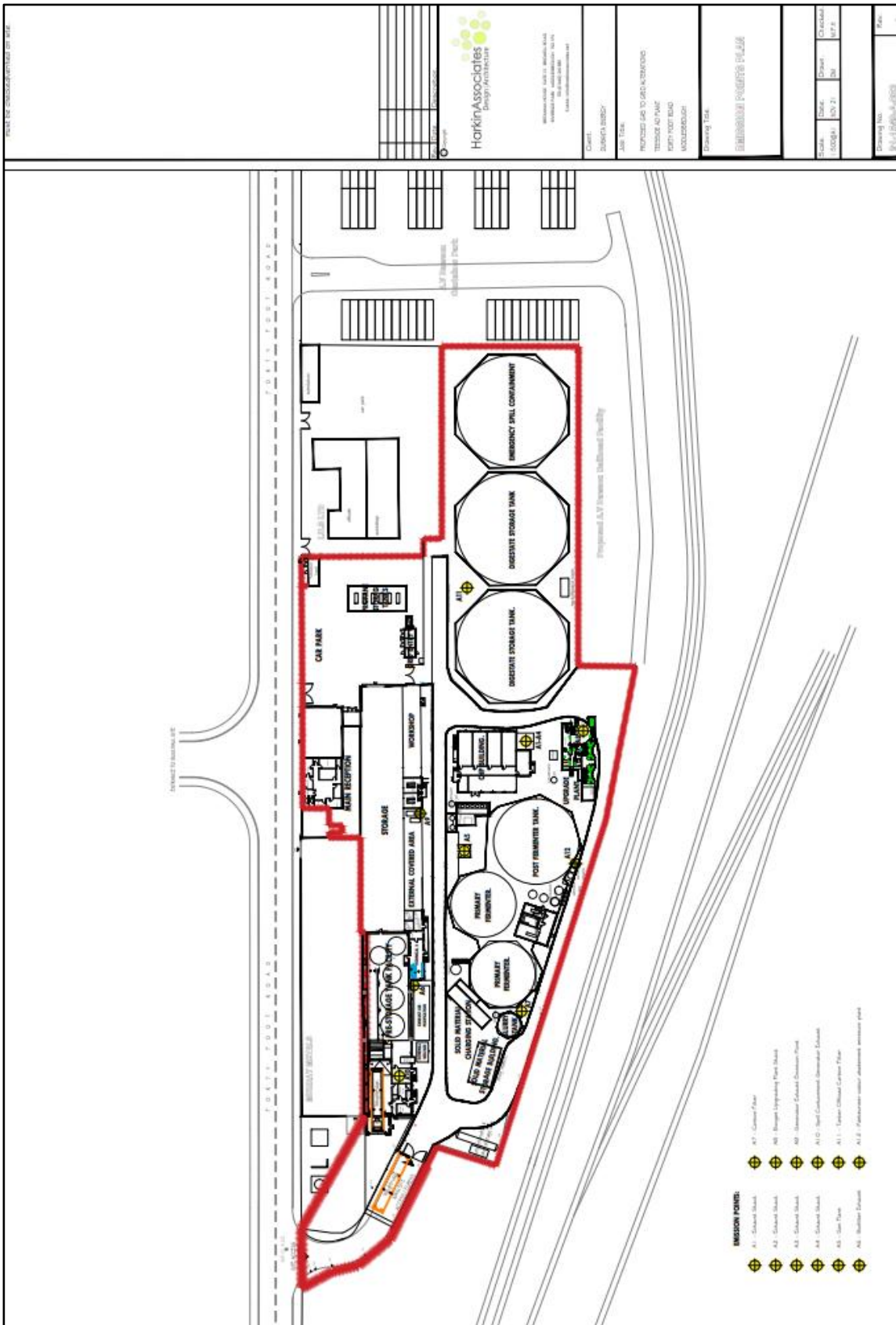
“year” means calendar year ending 31 December.

Schedule 7 – Site plan

Site boundary plan



Emission points plan



- EMISSION POINTS:**
- ⊕ A1 - Solid Tank
 - ⊕ A2 - Solid Tank
 - ⊕ A3 - Solid Tank
 - ⊕ A4 - Solid Tank
 - ⊕ A5 - Solid Tank
 - ⊕ A6 - Solid Tank
 - ⊕ A7 - Control Panel
 - ⊕ A8 - Sludge Thickening Tank
 - ⊕ A9 - Intermediate Clarifier
 - ⊕ A10 - Final Clarifier
 - ⊕ A11 - Clarifier
 - ⊕ A12 - Aeration tank

PLANT TO BE DEMONSTRATED BY REF:

HarkinAssociates
Design Architecture

10000 14th Street, Suite 100
Edmonton, Alberta T6C 0K8
Canada

CLIENT: **DRIVING TEST**

JOB TITLE: **PROPOSED USE TO DEVELOP/REDEVELOP TRUCKS AND FLEET PARKING FOOT ROAD MOUNTED/ROUGH**

DATE: **05/08/24**

DRAWN BY: **DA**

CHECKED BY: **UT**

SCALE: **1:100**

DRAWING NO.: **24-1006-008**

Annex 1 of MCP

<p>1. Rated thermal input (MW) of the medium combustion plant.</p>	<p>CHP engine 1 – 2.206 MWth CHP engine 2 – 2.206 MWth CHP engine 3 – 2.206 MWth CHP engine 4 – 1.008 MWth Auxiliary generator 1 – 0.366 MWth Auxiliary generator 2 – 1.57 MWth</p>
<p>2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).</p>	<p>Combined heat and power engines Diesel generators</p>
<p>3. Type and share of fuels used according to the fuel categories laid down in Annex II.</p>	<p>Biogas (CHP engine) Diesel (Auxiliary generators)</p>
<p>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.</p>	<p>CHP engines – March 2015 Auxiliary generators – 2014</p>
<p>5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code).</p>	<p>D35.1.1</p>
<p>6. Expected number of annual operating hours of the medium combustion plant and average load in use.</p>	<p>CHP engine – 8,760 hours Auxiliary boilers – <50 hours</p>
<p>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.</p>	<p>--</p>
<p>8. Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.</p>	<p>Operator address Duranta Energy Limited Forty Foot Road Middlesbrough Cleveland TS2 1HG Site address Teesside AD Power Plant Forty Foot Road Middlesbrough TS2 1HG</p>

END OF PERMIT