



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

BWSC Generation Services UK Ltd
Kent Renewable Energy CHP Plant
Discovery Park
Ramsgate Road
Sandwich
Kent
CT13 9ND

Variation application number

EPR/MP3304PJ/V002

Permit number

EPR/MP3304PJ

Kent Renewable Energy CHP Plant

Permit number EPR/MP3304PJ

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 2 of the notice 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.

Article 21(3) of the Industrial Emissions Directive (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. We have reviewed the permit for this installation against the revised BAT Conclusions for the large combustion plant sector published on 17th August 2017. Only activities covered by this BAT Reference Document have been reviewed and assessed.

This variation makes the below changes following the review under Article 21(3) of the IED and the consolidation of the Environmental Permitting Regulations that came into force on the 4 January 2017:

- Revised emission limits and monitoring requirements for emissions to air applicable from 17 August 2021 in table S3.1a;
- Improvement condition ICO3 has been updated requiring the operator to provide an Environmental Management System (EMS) that is compliant with the requirements of BAT Conclusion 1 and that sets out Other Than Normal Operating procedures (OTNOC) in accordance with BAT Conclusion 10;
- Improvement condition ICO9 has been added requiring a plan characterising the fuel to be in place by 2021 in order to meet the requirements of BAT9;
- Permit condition 2.3.7 has been included in the permit with corresponding improvement condition ICO10 requiring the operator to submit a report in relation to potential black start operation of the plant;
- An interim periodic ammonia limit has been introduced into table S3.1 as a result of work on improvement condition IC06;
- We have removed condition 3.7.1 which relates to Fire Prevention Measures. This is not required as it will be covered in the EMS; and
- We have included an emergency diesel generator used during shut down and for emergency power in the permit in S1.1, S3.1 and S3.1a.
- The minimum start-up and shut-down criteria have been included in table S1.5 following completion of improvement condition IC01.

The rest of the installation is unchanged and continues to be operated as follows:

- Kent Renewable Energy Partnership CHP Plant is located on the Discovery Park Industrial Estate at grid reference TR 33502 59850. The north east side of the installation is located adjacent to the River Stour which is within the boundary of a SAC, SPA and SSSI. The remaining three sides are surrounded by industrial units.
- The Combined Heat and Power (CHP) Biomass Plant will burn virgin biomass in the form of round logs, brash or pre-chipped fuel. The facility is also permitted to burn clean untreated waste wood biomass. The facility (LCP462) has a designed net thermal input of 78MW, which equates to a net calorific value of 250,000 tonnes of biomass per year. The amount of waste wood biomass shall not exceed 37,500 tonnes per year (15% of the total tonnage).

- Logs will be delivered to a yard area on-site. Waste wood will be delivered pre-chipped and will be transferred directly into the fuel storage bunker.
- The combustion of biomass will take place on a water cooled vibrating grate system within a single boiler. Steam generated within the boiler evaporator will be transferred to and further heated within the superheater prior to being fed to the steam turbine generator to produce electricity. Electricity produced will be exported to the National Grid, Distribution Network Operator or private wire, although a small portion will provide the parasitic load of the CHP plant. The CHP plant has also been designed to supply steam for use by nearby industrial operations. The cooling system used at this installation is a finned-tube air cooled condenser.
- Air emissions from the plant discharge via a 75m stack.
- If during the final design and optimisation process it is identified that emission limits for NO₂ and/or SO₂ cannot be achieved then Selective Non-Catalytic Reduction (SNCR) and/or Dry Sorbent Injection will be installed on the site. The design of the facility will make provision for the installation of SNCR and acid gas abatement should they be required. A bag filter will be installed from the outset.
- An air quality assessment has been undertaken and dispersion modelling results indicate that there are not likely to be any significant effects at human or habitat receptors.
- A noise assessment has been undertaken which details the noise effects from the operation of the CHP plant. The results of the assessment indicate that predicted noise levels from the site will be acceptable and will not cause nuisance to nearby receptors.
- Surface waters from the yards and roadways will be discharged via the surface water drains to the Discovery Park Waste Water Treatment Plant, which subsequently discharges to the River Stour.
Process
- There are three Special Areas of Conservation (SAC), one Special Protection Area (SPA) and one Ramsar within 10km of the installation. There is one Site of Special Scientific Interest (SSSI), one National Nature Reserve (NNR), one Local Nature Reserve (LNR) and one Local Wildlife Site (LWS) within 2km of the installation.

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

Status log of the permit		
Description	Date	Comments
Application EPR/LP3034RD/A001	Duly made 23/02/2016	Application for 78 MW net thermal input Biomass Power Station.
Additional information received	22/03/2016	Response to Schedule 5 question 1 including an addendum to the air quality assessment regarding acid deposition at habitat sites.
Additional information received	29/09/2016	Response to questions in Schedule 5 number 2 in relation to the Fire Prevention Plan.
Additional information received	15/04/2016	Response to questions in Schedule 5 number 3 including an updated BAT assessment in relation to the choice of cooling system and an addendum to the air quality assessment in relation to potential impacts when operation of the plant during a breakdown or malfunction of abatement equipment.
Additional information received	29/04/2016	Response to Request for Information number 1 providing process contributions for NO ₂ , SO ₂ and NH ₃ in relation to Ash Level and South Richborough Pasture Local Wildlife Site. In addition to a justification for the choice of meteorological data used in the air modelling.

Status log of the permit		
Description	Date	Comments
Additional information received	03/05/2016	Response to Request for Information number 2 providing an assessment of the likelihood of an exceedance of short term PM ₁₀ in the event of malfunction or breakdown of the abatement equipment.
Additional information received	09/05/2016	Response to Request for Information number 3 providing process contributions for nitrogen deposition and acidification in relation to Ash Level and South Richborough Pasture Local Wildlife Site.
Additional information received	08/06/2016 10/06/2016	Response to Request for Information number 4 Cost Benefit Analysis of cooling system options.
Permit determined EPR/LP3034RD	16/06/2016	Permit issued to Kent Renewable Energy Partnership Limited.
Part Surrender application EPR/LP3034RD/S002 Variation and consolidation application EPR/LP3034RD/V003	Duly made 17/08/2017	Applications to vary and update the permit to amend the installation boundary/site layout and reposition the main stack. In addition a change of company name, site name and registered officer is also made.
Additional information received	09/01/2018	Response to Schedule 5 request providing site plan drawing to show revised installation boundary and emission points.
Variation determined EPR/LP3034RD	31/01/2018	Varied and consolidated permit issued to Kent Renewable Energy Limited.
Application EPR/MP3304PJ/T001 (full transfer of permit EPR/LP3034RD)	Duly made 14/05/2019	Application to transfer the permit in full to BWSC Generation Services UK Ltd.
Transfer determined EPR/MP3304PJ	08/08/2019	Full transfer of permit complete.
Regulation 61 Notice sent to the Operator	01/05/2018	Issue of a Notice under Regulation 61(1) of the EPR. Environment Agency initiated review and variation to vary the permit under IED to implement Chapter II following the publication of the revised Best Available Techniques (BAT) Reference Document for large combustion plant.
Regulation 61 Notice response.	31/10/2018	Response received from the Operator.
Additional information received	08/04/2020	Compliance and operating techniques identified in response to BAT Conclusions 1, 2, 4, 6, 7, 9, 10, 12, 13,,16, 17, 24, 25, 26 and 27.
Additional information received	20/04/2020	Compliance and operating techniques identified in response to BAT Conclusions 4, 6, 7, 9 and 24
Additional information received	21/04/2020	Capacity of the Emergency Diesel Generator and outline of operational criteria.
Additional information received	27/04/2020	Site plan - location of emergency diesel generator.
Variation determined EPR/MP3304PJ/V002 (Billing ref: UP3706BM)	16/06/2020	Varied and consolidated permit issued.

End of introductory note

The Environmental Permitting (England and Wales) Regulations 2016

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

Permit number

EPR/MP3304PJ

Issued to

BWSC Generation Services UK Ltd (“the operator”)

whose registered office is

**3 The Point
Lions Way
Sleaford
Lincolnshire
NG34 8GG**

company registration number 08366245

to operate a regulated facility at

**Kent Renewable Energy CHP Plant
Discovery Park
Ramsgate Road
Sandwich
Kent
CT13 9ND**

to the extent set out in the schedules.

The notice shall take effect from 16/06/20

Name	Date
Maxine Evans	16/06/20

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/MP3304PJ

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/MP3304PJ/V002 authorising,

BWSC Generation Services UK Ltd (“the operator”),

whose registered office is

3 The Point

Lions Way

Sleaford

Lincolnshire

NG34 8GG

company registration number 08366245

to operate a regulated facility at

Kent Renewable Energy CHP Plant

Discovery Park

Ramsgate Road

Sandwich

Kent

CT13 9ND

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

Name	Date
Maxine Evans	16/06/20

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

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

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) take appropriate measures to ensure the efficiency of energy generation at the permitted installation is maximised;
 - (c) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (d) take any further appropriate measures identified by a review.
- 1.2.2 The operator shall review the viability of Combined Heat and Power (CHP) implementation at least every 4 years, or in response to any of the following factors, whichever comes sooner:
- (a) new plans for significant developments within 15 km of the installation;
 - (b) changes to the Local Plan;
 - (c) changes to the BEIS UK CHP Development Map or similar; and
 - (d) new financial or fiscal incentives for CHP.

The results shall be reported to the Agency within 2 months of each review, including where there has been no change to the original assessment in respect of the above factors.

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;
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

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

2.2 The site

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

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 For the following activities referenced in schedule 1, table S1.1: LCP462. The activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” dated December 2015 or any later version unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 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.
- 2.3.4 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.5 For the following activities referenced in schedule 1, table S1.1: LCP462. The end of the start up period and the start of the shutdown period shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.5.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP462. The following conditions apply where there is a malfunction or breakdown of any abatement equipment:
- Unless otherwise agreed in writing by the Environment Agency:

- (i) if a return to normal operations is not achieved within 24 hours, the operator shall reduce or close down operations [, or shall operate the activities using low polluting fuels]; do not include the text in brackets where natural gas is the only LCP fuel;
- (ii) the cumulative duration of breakdown in any 12-month period shall not exceed 120 hours; and
- (iii) the cumulative duration of malfunction in any 12-month period shall not exceed 120 hours.

2.3.7 The emission limit values from emission point A1 listed in tables S3.1 and S3.1a of Schedule 3 following the issue of a Black Start Instruction by the National Grid shall be disregarded for the purposes of compliance whilst that instruction remains effective and in accordance with the report submitted in response to improvement condition ICO10.

2.3.8 Waste shall only be accepted if:

- (a) it is of a type and quantity listed in schedule 2 table S2.2; and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

2.3.9 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.

2.3.10 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.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

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

2.5 Pre-operational conditions

2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

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

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

3.1.3 The emission values from emission point A1 in schedule 3 tables S3.1 and S3.1a, measured during periods of abatement equipment malfunction and breakdown shall be disregarded for the purposes of compliance with Tables S3.1 and S3.1a emission limit values.

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

3.2 Emissions of substances not controlled by emission limits

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

3.3 Odour

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

3.4 Noise and vibration

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

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1, S3.1a and S3.2; and
 - (b) process monitoring specified in table S3.3.
- 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 continuous), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.1a and S3.2 unless otherwise agreed in writing by the Environment Agency.

3.6 Monitoring for Large Combustion Plant

- 3.6.1 All monitoring required by this permit shall be carried out in accordance with the provisions of Annex V of the Industrial Emissions Directive and the Large Combustion Plant Best Available Techniques Conclusions.
- 3.6.2 If the monitoring results for more than 10 days a year are invalidated within the meaning set out in condition 3.6.7, the operator shall:
- (a) within 28 days of becoming aware of this fact, review the causes of the invalidations and submit to the Environment Agency for approval, proposals for measures to improve the reliability of the continuous measurement systems, including a timetable for the implementation of those measures; and
 - (b) implement the approved proposals.
- 3.6.3 Continuous measurement systems on emission points from the LCP shall be subject to quality control by means of parallel measurements with reference methods at least once every calendar year.
- 3.6.4 Unless otherwise agreed in writing by the Environment Agency in accordance with condition 3.6.5 below, the operator shall carry out the methods, including the reference measurement methods, to use and calibrate continuous measurement systems in accordance with the appropriate CEN standards.
- 3.6.5 If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall be used, as agreed in writing with the Environment Agency.
- 3.6.6 Where required by a condition of this permit to check the measurement equipment, the operator shall submit a report to the Environment Agency in writing, within 28 days of the completion of the check.
- 3.6.7 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3, table(s) S3.1 and S3.1a; the Continuous Emission Monitors shall be used such that:
- (a) for the continuous measurement systems fitted to the LCP release points defined in table(s) S3.1 and S3.1a the validated hourly, monthly, yearly and daily averages shall be determined from the measured valid hourly average values after having subtracted the value of the 95% confidence interval;

- (b) the 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%;
- (c) the 95% confidence interval for dust releases of a single measured result shall be taken to be 30%;
- (d) the 95% confidence interval for carbon monoxide releases of a single measured result shall be taken to be 10%;
- (e) an invalid hourly average means an hourly average period invalidated due to malfunction of, or maintenance work being carried out on, the continuous measurement system. However, to allow some discretion for zero and span gas checking, or cleaning (by flushing), an hourly average period will count as valid as long as data has been accumulated for at least two thirds of the period. Such discretionary periods are not to exceed more than 5 in any one 24-hour period unless agreed in writing. Where plant may be operating for less than the 24-hour period, such discretionary periods are not to exceed more than one quarter of the overall valid hourly average periods unless agreed in writing; and
- (f) any day, in which more than three hourly average values are invalid shall be invalidated.

4 Information

4.1 Records

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

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

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

4.2 Reporting

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

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

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

- (d) where condition 2.3.6 applies, the cumulative duration of breakdown and cumulative duration of malfunction in any 12 month period.
- 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, if during that quarter the total amount accepted exceeds 100 tonnes of non-hazardous waste or 10 tonnes of hazardous waste.
- 4.2.6 Within 10 days of the notification of abatement equipment malfunction or breakdown (condition 2.3.6) the operator shall submit an Air Quality Risk Assessment as outlined in the IED Compliance Protocol (condition 2.3.2).

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.
 - (d) of any malfunction or breakdown of abatement equipment relating to condition 2.3.6, the operator shall notify the Environment Agency within 48 hours unless notification has already been made under (a) to (c) above.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), 4.3.1 (b)(i) where the information relates to the breach of a condition specified in the permit, or 4.3.1 (d) where the information relates to malfunction or breakdown of abatement equipment shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

- 4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- Where the operator is a corporate body other than a registered company:
- (c) any change in the operator's name or address; and
 - (d) any steps taken with a view to the dissolution of the operator.
- In any other case:
- (e) the death of any of the named operators (where the operator consists of more than one named individual);
 - (f) any change in the operator's name(s) or address(es); and
 - (g) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) the Environment Agency shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
- (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.
- 4.3.8 The operator shall inform the Environment Agency in writing of the closure of any LCP within 28 days of the date of closure.

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	Limits of specified activity
AR1	Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP462: Combined heat and power (CHP) production of steam and electricity in an appliance with a net thermal input of 78 megawatts. Emergency Diesel Generator 0.477MWth	From receipt of raw materials to discharge of exhaust gases and wastes, and the generation of electricity, steam and heat for export. Including despatch of wastes offsite for recovery/disposal. The specified activity also includes abatement of exhaust gases and handling of raw materials and wastes arising from abatement plant. Emergency diesel generator use in the event of site blackout, to shut down plant in an emergency, for critical supplies (control system, emergency lighting) or testing of the emergency generator.
	Directly Associated Activity		
AR2	Directly associated activity	Preparation of Biomass by Screening, metals removal, chipping and blending	From receipt of Biomass to delivery to burner feed and despatch of wastes arising.
AR3	Directly associated activity	Chipping of round logs, brush and oversize woodchip, re-chipping of pre-chipped material derived from virgin timber to a suitable size for combustion.	From receipt of logs, brush and chipped material to delivery to burner feed.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/LP3034RD/A001	Section 3a – technical standards, Part B3 of the application form and all referenced supporting information in the application.	Duly Made 23/02/2016
Schedule 5#1 Notice Request dated 07/03/16	Response to questions in Schedule 5#1 including an addendum to the air quality assessment regarding acid deposition at habitats sites.	22/03/2016
Schedule 5#2 Notice Request dated 09/03/16	Response to questions in Schedule 5#2 request in relation to the Fire Prevention Plan.	29/03/2016
Schedule 5#3 Notice Request dated 30/03/16	Response to questions in Schedule 5#3 request providing an updated BAT assessment in relation to the choice of cooling system and an addendum to the air quality assessment in relation to potential impacts when operating the plan during a breakdown or malfunction of abatement equipment.	15/04/2016
Additional Information Request dated 14/04/16	Response to Request for Information #1 providing process contributions for NO ₂ , SO ₂ and NH ₃ in relation to Ash Level and South Richborough Pasture Local Wildlife Site. In addition to a justification for the choice of meteorological data used in the air modelling.	29/04/2016
Additional Information Request dated 21/04/16	Response to Request for Information #2 providing an assessment of the likelihood of an exceedence for short term PM ₁₀ in the event of malfunction or breakdown of the abatement equipment.	03/05/2016
Additional Information Request dated 28/04/16	Response to Request for Information #3 providing process contributions for Nitrogen Deposition and Acidification in relation to Ash Level and South Richborough Pasture Local Wildlife Site.	09/05/2016
Additional Information Request dated 07/06/16	Response to Request for Information #4 providing a cost benefit analysis of cooling options.	08/06/2016 10/06/2016
CAR ref. LP3034RD/0305313	Log store 1 – changes to separation distances to 1.5m on two sides	19/04/2018
CAR ref. LP3034RD/0315576	Log store heights to be modified to 6m for all.	26/09/2018
Response to regulation 61(1) Notice – request for information dated 01/05/18 EPR/MP3304PJ/V002	Compliance and operating techniques identified in response to the BAT Conclusions for large combustion plant published on 17th August 2017.	31/10/2018
Additional information in response to regulation 61(1) Notice EPR/MP3304PJ/V002	Compliance and operating techniques identified in response to BAT Conclusions 1, 2, 4, 6, 7, 9, 10, 12, 13,,16, 17, 24, 25, 26 and 27.	08/04/2020
Additional information in response to regulation 61(1) Notice EPR/MP3304PJ/V002	Compliance and operating techniques identified in response to BAT Conclusions 4, 6, 7, 9 and 24.	20/04/2020
Additional information Request 21/04/20	Capacity of the Emergency Diesel Generator and outline of operational criteria.	21/04/2020
Additional information Requested 24/04/20	Site layout plan showing location of emergency diesel generator.	27/04/2020

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
Improvement Conditions IC1, IC2, IC4, IC5, IC7 and IC8 confirmed completed and therefore, deleted from the permit through variation EPR/MP3304PJ/V002		
IC03	<p>The Operator shall demonstrate to the Environment Agency that the Environment Management System is in the process of certification by an appropriate external body or provide a schedule by which the Environment Management System will be certified.</p> <p>The Environment Management system shall cover the requirements specified in BAT 1 of the Large Combustion Plant BAT conclusions document under points (i) – (xvi). It shall also set out OTNOC procedures as required under BAT10.</p>	Within 12 months of the date on which fuel is first burnt.
IC06	<p>If Selective Non Catalytic Reduction (SNCR) abatement is required, the Operator shall submit a written report to the Environment Agency for written approval describing the performance and optimisation of the SNCR system and the combustion settings applied to minimise oxides of nitrogen (NOx) emissions in line with the emission limit values described in this permit. The report shall include an assessment of the level of NOx emissions that can be achieved under optimum operating conditions.</p> <p>The report shall also provide details of the abatement optimisation (including dosing rates) for the control of acid gases.</p>	12 months from issue of variation EPR/MP3304PJ/V002
IC09	<p><u>BAT Conclusion 9</u></p> <p>The operator shall submit a procedure for approval outlining how the Biomass will be characterised in line with Best Available Techniques Conclusion 9 in order to improve general performance of combustion and to reduce emissions to air. This shall include characterisation of all substances/parameters as specified for Biomass under this BAT conclusion. The procedure must include, but is not limited to, the following elements:</p> <ul style="list-style-type: none"> i) Initial fuel characterisation; ii) Regular testing of the fuel quality to check that it is consistent with the initial characterisation and according to the plant design specifications; and <p>Subsequent adjustments of the plant settings as and when needed and practicable.</p>	01/06/2021

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
ICO10	<p>A written report shall be submitted to the Environment Agency for approval. The report shall contain an impact assessment demonstrating that there is no significant environmental risk associated with black start operations and propose a methodology for minimisation of environmental impact during such a period of operation and for reporting instances of black start operation.</p> <p>The plant can be operated as set out in condition 2.3.7 of the permit once the report has been approved by the Environment Agency. The methodology for operation and reporting set out in the report shall be implemented by the Operator from the date of approval by the Environment Agency.</p>	12 months from issue of variation EPR/MP3304PJ/V002

Table S1.4 Pre-operational measures	
Reference	Pre-operational measures
	Preoperational Conditions PO1 – PO4 confirmed completed and therefore, deleted from the permit through variation EPR/MP3304PJ/V002

Table S1.5 Start-up and Shut-down thresholds		
Emission Point and Unit Reference	“Minimum Start-Up Load” Load in MW and as percent of rated power output (%)	“Minimum Shut-Down Load” Load in MW and as percent of rated power output (%)
A1 LCP462	12 MWe; 40%	8 MWe; 26.6%

Schedule 2 – Raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Fuel for biomass boiler	Biomass logs, brash and chips derived from virgin timber, grade A waste biomass; or a combination of these.

Table S2.2 Permitted waste types and quantities for biomass combustion	
Maximum quantity	Up to 37,500 tonnes per annum of waste wood biomass at a rate not exceeding 15% of the total annual boiler feed. The waste codes and descriptions contained in this table allow only the burning of waste, which qualifies as biomass under point (b) (v) of point (31) of Article 3 of Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (Integrated Pollution Prevention and Control).
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 07	wastes from forestry
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 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 01	waste bark and wood
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 03	wooden packaging
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 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 07	Wood other than that mentioned in 19 12 06

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)- these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 462 Biomass Boiler fired on biomass	250 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 462 Biomass Boiler fired on biomass	275 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 462 Biomass Boiler fired on biomass	500 mg/m ³	95% of validated hourly averages within a calendar year.	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Sulphur Dioxide	LCP No. 462 Biomass Boiler fired on biomass	100 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Sulphur Dioxide	LCP No. 462 Biomass Boiler fired on biomass	110 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Sulphur Dioxide	LCP No. 462 Biomass Boiler fired on biomass	200 mg/m ³	95% of validated hourly averages within a calendar year.	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Particulate Matter	LCP No. 462 Biomass Boiler fired on biomass	20 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1 Point source emissions to air						
- emission limits and monitoring requirements shall apply until 16 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)- these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Particulate Matter	LCP No. 462 Biomass Boiler fired on biomass	22 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Particulate Matter	LCP No. 462 Biomass Boiler fired on biomass	40 mg/m ³	95% of validated hourly averages within a calendar year.	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Ammonia	LCP No. 462 Biomass Boiler fired on biomass	10 mg/m ³	Periodic over minimum 1-hour period	Periodic (Every 3 months in the first year, then every 6 months)	Procedural requirements of BS EN 14791
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Oxygen	LCP No. 462 Biomass Boiler fired on biomass	-	-	Periodic As appropriate to reference	BS EN 14789
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Water Vapour	LCP No. 462 Biomass Boiler fired on biomass	-	-	Periodic As appropriate to reference	BS EN 14790
Emergency diesel generator [Labelled 'Emergency diesel generator' on drawing 'Site Area Codes' submitted 27/04/20]	Emergency diesel generator	No parameter set	No limit set	-	-	-

Table S3.1a Point source emissions to air						
- emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 462 Biomass Boiler fired on biomass	250 mg/Nm ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 462 Biomass Boiler fired on biomass	275 mg/Nm ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 462 Biomass Boiler fired on biomass	500 mg/Nm ³	95% of validated hourly averages within a calendar year.	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 462 Biomass Boiler fired on biomass	225 mg/Nm ³	Yearly Average	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Sulphur Dioxide	LCP No. 462 Biomass Boiler fired on biomass	100 mg/Nm ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1a Point source emissions to air						
- emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Sulphur Dioxide	LCP No. 462 Biomass Boiler fired on biomass	110 mg/Nm ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Sulphur Dioxide	LCP No. 462 Biomass Boiler fired on biomass	200 mg/Nm ³	95% of validated hourly averages within a calendar year.	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Sulphur Dioxide	LCP No. 462 Biomass Boiler fired on biomass	100 mg/Nm ³	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Particulate Matter	LCP No. 462 Biomass Boiler fired on biomass	20 mg/Nm ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Particulate Matter	LCP No. 462 Biomass Boiler fired on biomass	22 mg/Nm ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Particulate Matter	LCP No. 462 Biomass Boiler fired on biomass	40 mg/Nm ³	95% of validated hourly averages within a calendar year.	Continuous	BS EN 14181

Table S3.1a Point source emissions to air						
- emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Particulate Matter	LCP No. 462 Biomass Boiler fired on biomass	15 mg/Nm ³	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Ammonia	LCP No. 462 Biomass Boiler fired on biomass	10 mg/Nm ³	Yearly average	Continuous	Procedural requirements of BS EN 14791
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Carbon monoxide	LCP No. 462 Biomass Boiler fired on biomass	250 mg/Nm ³	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Hydrogen chloride	LCP No. 462 Biomass Boiler fired on biomass	35 mg/Nm ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Hydrogen chloride	LCP No. 462 Biomass Boiler fired on biomass	15 mg/Nm ³	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Hydrogen fluoride	LCP No. 462 Biomass Boiler fired on biomass	<1.5 mg/Nm ³	Average over the sampling period	At least once per year	ISO 15713

Table S3.1a Point source emissions to air						
- emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Mercury	LCP No. 462 Biomass Boiler fired on biomass	5 µg/Nm ³	Average over the sampling period	At least once per year	EN13211
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Flow	LCP No. 462 Biomass Boiler fired on biomass	-	-	Continuous As appropriate to reference	EN ISO 16911
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Oxygen	LCP No. 462 Biomass Boiler fired on biomass	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Water vapour	LCP No. 462 Biomass Boiler fired on biomass	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Stack gas temperature	LCP No. 462 Biomass Boiler fired on biomass	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on Site Layout plan drawing Emission Points-- JER1187-PER-004, Rev B, Dated Nov 17]	Stack gas pressure	LCP No. 462 Biomass Boiler fired on biomass	-	-	Continuous As appropriate to reference	Traceable to national standards

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on Site Layout plan drawing Emission Points--JER1187-PER-004, Rev B, Dated Nov 17]	As required by the Method Implementation Document for BS EN 15259	LCP No. 462 Biomass Boiler fired on biomass	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
Emergency diesel generator [Labelled 'Emergency diesel generator' on drawing 'Site Area Codes' submitted 27/04/20]	Emergency diesel generator	No parameter set	No limit set	-	-	-

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site- emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 and S2 on Site Layout plan drawing Emission Points--JER1187-PER-004, Rev B, Dated Nov 17 to Discovery Park Waste Water Treatment Works via foul water sewer	-	Process Effluent	-	-	-	-
S3 Site Layout plan drawing Emission Points--JER1187-PER-004, Rev B, Dated Nov 17 to Discovery Park Waste Water Treatment Works via surface water sewer	-	Uncontaminated roof and surface water	-	-	-	-

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
LCP 462	Net total fuel utilisation	Once within 4 months after commissioning and then after each modification that could significantly affect these parameters	EN Standards or equivalent	-

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
Oxides of nitrogen	A1	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every year where there is a yearly average	1 January
Carbon monoxide	A1	Every year where there is a yearly average	1 January
Sulphur dioxide	A1	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every year where there is a yearly average	1 January
Hydrogen chloride	A1	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every year where there is a yearly average	1 January
Hydrogen fluoride	A1	Annually	1 January
Dust	A1	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every year where there is a yearly average	1 January
Mercury	A1	Annually	1 January
Ammonia	A1	Annually	1 January

Table S4.2 Resource Efficiency Metrics	
Parameter	Units
Electricity Exported	GWhr
Heat Exported	GWhr
Mechanical Power Provided	GWhr
Fossil Fuel Energy Consumption	GWhr
Non-Fossil Fuel Energy Consumption	GWhr

Table S4.2 Resource Efficiency Metrics	
Parameter	Units
Annual Operating Hours	hr
Water Abstracted from Fresh Water Source	m ³
Water Abstracted from Borehole Source	m ³
Water Abstracted from Estuarine Water Source	m ³
Water Abstracted from Sea Water Source	m ³
Water Abstracted from Mains Water Source	m ³
Gross Total Water Used	m ³
Net Water Used	m ³
Hazardous Waste Transferred for Disposal at another installation	t
Hazardous Waste Transferred for Recovery at another installation	t
Non-Hazardous Waste Transferred for Disposal at another installation	t
Non-Hazardous Waste Transferred for Recovery at another installation	t
Waste recovered to Quality Protocol Specification and transferred off-site	t
Waste transferred directly off-site for use under an exemption / position statement	t

Table S4.3 Large Combustion Plant Performance parameters for reporting to DEFRA		
Parameter	Frequency of assessment	Units
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	TJ
Total Emissions to Air of NO _x for each LCP	Annually	t
Total Emissions to Air of SO ₂ for each LCP	Annually	t
Total Emissions to Air of Dust for each LCP	Annually	t
Operating Hours for each LCP	Annually	hr

Table S4.4 Reporting Forms		
Media/ parameter	Reporting format	Agency recipient
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy Form as agreed in writing by the Environment Agency.	National and Area Office
LCP	Form IED HR1 – operating hours Form as agreed in writing by the Environment Agency.	National and Area Office
Air	Form IED CON 1 – continuous monitoring Form as agreed in writing by the Environment Agency.	Area Office
CEMs	Form IED CEM1 – Invalidation Log Form as agreed in writing by the Environment Agency.	Area Office

Table S4.4 Reporting Forms		
Media/ parameter	Reporting format	Agency recipient
LCP	Form IED BD1 - Cumulative annual rolling malfunction and breakdown hours Form as agreed in writing by the Environment Agency.	Area Office
Air	Form IED MF1 – pollutant concentrations when during any day with malfunction or breakdown of abatement plant Form as agreed in writing by the Environment Agency.	Area Office
Air	Form IED PM1 - discontinuous monitoring and load. Form as agreed in writing by the Environment Agency.	Area Office
Resource Efficiency	Form REM1 – resource efficiency annual report Form as agreed in writing by the Environment Agency.	National and Area Office
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency Form as agreed in writing by the Environment Agency.	Area Office

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

Part C Malfunction or Breakdown of LCP abatement equipment

Permit Number	
Name of operator	
Location of Facility	
LCP Number	
Malfunction or breakdown	
Date of malfunction or breakdown	

(a) Notification requirements for any malfunction and breakdown of abatement equipment as defined by the Industrial Emission Directive*.	
To be notified within 48 hours of abatement equipment malfunction and breakdown	
Time at which malfunction or breakdown commenced	
Time at which malfunction or breakdown ceased	
Duration of the breakdown event in hours and minutes	
Reasons for malfunction or breakdown	
Where the abatement plant has failed, give the hourly average concentration of all measured pollutants.	
Cumulative breakdown operation in current year (at end of present event)	
Cumulative malfunction operation in current year (at end of present event)	
Name**	
Post	
Signature **	
Date	

* See section 3.6 and Appendix E of ESI Compliance Protocol for guidance

** authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“Air Quality Risk Assessment” has the meaning given in Annex D of IED Compliance Protocol for Utility Boilers and Gas Turbines.

“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.

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

“average of samples obtained during one year” means the average of the values obtained during one year of the periodic measurements taken with the monitoring frequency set for each parameter.

“biomass” means:

- (a) vegetable matter from agriculture and forestry;
- (b) vegetable waste from the food processing industry, if the heat generated is recovered;
- (c) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;
- (d) cork waste; and
- (e) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating, and which includes in particular such wood waste originating from construction and demolition waste.

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

“Black Start” means the procedure to recover from a total or partial shutdown of the UK Transmission System which has caused an extensive loss of supplies. This entails isolated power stations being started individually and gradually being reconnected to other power stations and substations in order to form an interconnected system again.

“breakdown” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

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

“CEN” means Comité Européen de Normalisation.

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

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

“daily average” means the average over a period of 24 hours of validated hourly averages obtained by continuous measurements.

“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.

“DLN” means dry, low NO_x burners.

“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 or background concentration limit.

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

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

“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.

“hazardous property” has the meaning in Annex III of the Waste Framework Directive.

“hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

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

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“large combustion plant” or “LCP” is a combustion plant or group of combustion plants discharging waste gases through a common windshaft or stack, where the total thermal input is 50 MW or more, based on net calorific value. The calculation of thermal input, excludes individual combustion plants with a rated thermal input below 15MW.

“low polluting fuels” means biomass or coal with an average as-received sulphur content of less than 0.4% by mass as described in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

“malfunction” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

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

“MCR” means maximum continuous rating.

“MSDL” means minimum shut-down load as defined in Implementing Decision 2012/249/EU.

“MSUL” means minimum start-up load as defined in Implementing Decision 2012/249/EU.

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

“ncv” means net calorific value.

“Net total fuel utilisation” means the ratio between the net produced energy minus the imported electrical and/or thermal energy and the fuel energy input at the combustion unit boundary over a given period of time.

“operational hours” are whole hours commencing from the first unit ending start up and ending when the last unit commences shut down.

“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.

“SI” means site inspector.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

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 and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from gas turbine or compression ignition engine combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or
- in relation to emissions from combustion processes comprising a gas turbine with a waste heat boiler, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry, unless the waste heat boiler is operating alone, in which case, with an oxygen content of 3% dry for liquid and gaseous 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.

“yearly average” means the average over a period of one year of validated hourly averages obtained by continuous measurements.

Schedule 7 – Site plan



END OF PERMIT