



# Notice of variation and consolidation with introductory note

## The Environmental Permitting (England & Wales) Regulations 2016

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Medway Power Limited  
Medway Power Station  
Isle of Grain  
Rochester  
Kent  
ME3 0AG

### **Variation application number**

EPR/HP3939LN/V004

### **Permit number**

EPR/HP3939LN

# Medway Power Station

## Permit number EPR/HP3939LN

### 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 17<sup>th</sup> 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 1<sup>st</sup> July 2020 until 16 August 2021 at the end of the TNP in line with Chapter III and Annex V of IED in table S3.1;
- Revised emission limits and monitoring requirements for emissions to air applicable from 17 August 2021 in table S3.1a;
- Inclusion of process monitoring for energy efficiency in table S3.4;
- Permit condition 2.3.6 limits LCP218 and LCP219 firing on standby fuel distillate oil up to 10 days when gas supply is interrupted;
- Permit condition 2.3.9 has also been included in the permit with corresponding improvement condition IC14 requiring the operator to submit a report in relation to potential black start operation of the plant; and
- We have also removed the requirement to monitor for mercury and cadmium from Table S3.2.

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

Medway Power Station is operated by Medway Power Limited on behalf of Scottish and Southern Energy plc. The station is located in Medway at the western end of the Isle of Grain, approximately 650m north of the River Medway. The centre of the site is located at NGR TQ 587060 174060. The installation is located on a flood plain and covers an area of approximately 6 Ha. The land surrounding the power station has varied uses. Thamesport Container Terminal is to the south; to the north are a mineral railway line and the A228 road. Land to the east is used for industrial purposes and to the west for oil storage. The north-west is predominantly used for agricultural grazing land. The installation is located on a minor aquifer (sand and gravel layer). There are 11 Natura 2000 sites within a 10km radius of the site.

The installation boundary includes a gas deodorising station and slam shut valve which are operated by National Grid Gas plc. Whilst within the installation boundary, these activities are not covered by this permit.

Medway Power Station's main generation is by a single combined cycle power block comprising two 755MWth combined cycle gas turbines (CCGT) fitted with dry low NOX burners (256 MWe each), referenced as LCP218 and LCP219. Each combustion turbine (CT) has a dedicated Heat Recovery Steam Generator

(HRSG) which produces steam from exhaust gases from the CTs. This provides steam for one condensing steam turbine generator of 256 MWe. The maximum generating capacity is 720 MWe of which 700 MWe (limited by grid transmission capacity) is exported to the 400Kv National Grid at Grain Substation, the remainder providing energy for use on site. Each CT discharges combustion gases through a separate 65m high stack.

The plant is fired using natural gas and is maintained to use distillate oil as an alternative fuel in the event of an interruption to the gas supply. The plant is permitted to operate on this alternative fuel for up to 500 hours per year.

An auxiliary boiler provides steam to seal the steam turbine glands during start-up of the main plant and to allow heat and condensate to be recovered. It can be selected to start automatically should pressure in the steam system fall below 3 bar g. The plant is fuelled by natural gas with distillate fuel as an alternative, and has a maximum output of 6000 kg/hr steam.

There is a separate standalone black start facility comprising 6 diesel generators each 3.1 MWe powered by distillate fuel generating a total output of 18.6 MWe. This facility is used to provide black start capability to the National Grid by allowing the main plant to be started in the event of a failure of the national grid and also to provide auxiliary power during emergency situations, unplanned maintenance and once per year during planned maintenance outage.

There are 3 main point source emissions to air. The principal pollutants emitted are oxides of nitrogen (NOX), which results mainly from the reaction of oxygen and nitrogen from the atmosphere during the combustion process, and carbon monoxide. The alternative distillate fuel has a low sulphur content to minimise releases of sulphur dioxide when this fuel is used. Emissions of polluting exhaust gases from the chimneys are minimised by the use of the dry low NOX burners when using natural gas and water injection when using alternative fuel oil. Emissions are continuously monitored from points A1 and A2 for nitrogen dioxide and carbon monoxide. Dust is measured continuously during periods of distillate fuel firing.

The circulating water system provides continuous cooling water across the site. Cooling water is abstracted from the River Medway (maximum 64,800 m<sup>3</sup>/day) passes through a filtration system and is directed to the 12 cell wet evaporative cooling tower to replenish circulating water that has evaporated. The cooling tower can be operated in hybrid mode to reduce visible plumes. Blowdown is returned to the River Medway at a rate of up to 42,200 m<sup>3</sup> per day.

Heat energy is removed from the exhaust stream in the steam turbine condenser to form condensate. This condensate is used to feed the HRSG. Water lost as condensate is replaced with treated towns water from the demineralised water storage fed from the water treatment plant. Effluent from the ion exchange treatment units produced during regeneration is stored and on completion neutralised by controlled dosing in the neutralisation tank. Once neutralised this effluent is transferred to the effluent tank, other process waste streams that have undergone treatment/screening (sewage treatment and transfer via interceptor) are also transferred to this effluent tank where they are stored prior to discharge to the River Medway.

There are 3 point source emissions to surface water from the site but no emissions to sewer. W1 (cooling water including boiler blow down from HRSG and auxiliary boiler) and W2 (effluent tank consisting of water treatment plant effluent, treated site sewage effluent, condensate from the deodorising compound and site drainage) discharge to the River Medway at NGR TQ 868739 and NGR TQ 867739 respectively. W3 (surface water runoff and storm water from roofs and roadways) discharges via an interceptor to the River Medway at NGR TQ 873347.

Emissions are continuously monitored for flow, temperature and pH for emissions W1 and W2 and for other parameters on a spot basis. The permit requires visual checks to be carried out for emission W3.

The permitted activities are unlikely to give rise to any issues relating to noise and odour.

The installation is a lower tier COMAH site due to quantity of oil stored on site and has produced a high level Major Accident Prevention Policy.

The site's Environmental Management System has ISO 14001 certification.

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

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application HP3939LN	Duly made 28/03/2006	
Additional information received	6/11/2006	
Additional information received	10/11/2006	
Variation determined EPR/HP3939LN/V002	11/03/2013	Environment Agency Initiated Variation, to incorporate Eel Regulations improvement condition.
Permit determined	21/12/2006	
Regulation 60 Notice sent to the Operator	09/12/2014	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency Initiated review and variation to vary the permit under IED to implement the special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V.
Regulation 60 Notice response	31/03/2015	Response received from the Operator.
Additional information received	30/06/2015	Response to request for further information (RFI) dated 29/05/15.
Variation determined EPR/HP3939LN/V004	23/12/2015	Varied and consolidated permit issued in modern condition format. Variation effective from 01/01/2016.
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.	01/11/2018	Response received from the Operator.
Additional Information Received	29/11/2019 and 3/03/2020	Clarification of proposed annual average CO limit
Additional Information Received	04/06/2020	Compliance with Joint Environmental Programme (JEP) report – ‘Characterisation of power plant fuels for compliance with LCP BREF Conclusion BAT 9’
Variation determined EPR/HP3939LN/V004 (Billing ref: LP3907PE)	24/06/2020	Varied and consolidated permit issued. Effective from 01/07/2020

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/HP3939LN**

## Issued to

**Medway Power Limited** (“the operator”)

whose registered office is

**No.1 Forbury Place**

**43 Forbury Road**

**Reading**

**RG1 3JH**

company registration number 2537903

to operate a regulated facility at

**Medway Power Station**

**Isle of Grain**

**Rochester**

**Kent**

**ME3 0AG**

to the extent set out in the schedules.

The notice shall take effect from 01/07/2020.

<b>Name</b>	<b>Date</b>
<b>Daniel Timney</b>	<b>24/06/2020</b>

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/HP3939LN**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/HP3939LN/V004 authorising,

**Medway Power Limited** (“the operator”),

whose registered office is

**No.1 Forbury Place**

**43 Forbury Road**

**Reading**

**RG1 3JH**

company registration number 02537903

to operate a regulated facility at

**Medway Power Station**

**Isle of Grain**

**Rochester**

**Kent**

**ME3 0AG**

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

Name	Date
Daniel Timney	24/06/2020

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.

### 1.3 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: LCP218 and LCP 219. 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: black start diesel generators. The activities shall not operate for more than 500 hours per year.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP218 and LCP219 firing on standby fuel distillate oil may be used for periods of up to 10 days during times of interruption to the gas supply.
- 2.3.7 For the following activities referenced in schedule 1, table S1.1: LCP218 and LCP219. 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 S1.4.
- 2.3.8 For the following activities referenced in schedule 1, table S1.1: LCP218 and LCP219. The effective Dry Low NOx threshold shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.5.
- 2.3.9 The emission limit values from emission points A1, A2 and A3 listed in tables S3.1 and S3.1a and 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 IC14.

- 2.3.10 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.
- 2.3.11 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.

## **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, S3.2 and S3.3.
- 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.

### **3.3 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;
- (b) process monitoring specified in table S3.4.

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and 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 reports 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 2.3.5 applies the hours of operation in any year;
- (e) where condition 2.3.6 applies, the start date and time, and the days and hours of operation for each period of standby fuel operation;

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 For the following the following activities referenced in schedule 1, table S1.1: LCP218 and LCP 219. Unless otherwise agreed in writing with the Environment Agency, within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form IED RTA1, listed in table S4.4, the information specified on the form relating to the site's mass emissions.

## 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), 4.3.1 (b)(i) where the information relates to the breach of a condition 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 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.	<p>LCP218: Operation of a combined cycle gas turbine power plant (CCGT) burning gas to produce electricity.</p> <p>LCP219: Operation of a combined cycle gas turbine power plant (CCGT) burning gas to produce electricity.</p> <p>Medium Combustion Plant Auxiliary boiler (8 MWth), maximum output 6000 kg/hr, fired on gas; for production of steam</p> <p>6 Black start diesel generators each 3.1 MWe.</p> <p>Central heating boiler (2.4MWth)</p>	<p>From receipt of natural gas or gas oil to discharge of exhaust gases and the generation of electricity</p> <p>Provision of steam to seal glands during start up period</p> <p>Stand-alone power plant used to allow the main plant to be started in the event of failure of National Grid and for auxiliary generating capability during annual planned maintenance outage, unplanned maintenance and emergencies.</p> <p>Space heating boilers for administration block and warehouse.</p>



<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
	<b>Directly Associated Activity</b>		
AR2	Directly associated activity	Treatment of water in water treatment plant by filtration, demineralisation and polishing to produce up to 120 m <sup>3</sup> demineralised water per hour.	From receipt of mains water and supply of chemicals to discharge to effluent tank for treatment prior to discharge to River Medway
AR3	Directly associated activity	Filtration of abstracted water from the River Medway to the cooling tower and circulating water system	From abstraction from the River Medway, supply of chemicals and transfer to cooling tower circulating water system to return to the River Medway.
AR4	Directly associated activity	Plant drainage systems and effluent treatment and storage. Sumps and drains in process areas to effluent tank and surface water run off via interceptor.	Transfer of effluent streams to effluent tank for treatment prior to discharge to the River Medway. Transfer of surface and storm water discharges to the River Medway via interceptor
AR5	Directly associated activity	Distillate Oil storage. Maximum storage capacity 3300 tonnes	From receipt of raw material to dispatch for use.

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Receipt of additional information to the application	Section 2.4 Raw Materials	6/11/2006
Receipt of additional information to the application	Sections 2 Site Activities and 6 Acid Dosing Plant	10/11/2006
Response to regulation 60(1) Notice – request for information dated 09/12/2014	Compliance route(s) and operating techniques identified in response to questions 4 (LCP configuration), 5 (net thermal input), 6 (MSUL.MSDL), 9ii ( ), 10 (stand by fuels), 11 (monitoring requirements).	Received 31/03/2015

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 29/05/2015	Compliance route(s) and operating techniques identified in response to questions 1 (thermal input), 2 (MSUL/MSDL), 3 (ELVs)	30/06/2015
Response to regulation 61(1) Notice – request for information dated 01/05/2018 EPR/HP3939LN	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/HP3939LN/V004	Compliance and operating techniques identified in response to BAT Conclusions 42 and 44.	29/11/2019 and 03/03/2020
Additional information in response to regulation 61(1) Notice EPR/HP3939LN/V004	Compliance and operating techniques with Joint Environmental Programme (JEP) report – ‘Characterisation of power plant fuels for compliance with LCP BREF Conclusion BAT 9’ issued October 2019	04/06/2020

<b>Table S1.3 Improvement programme requirements</b>		
Improvement conditions IC1-IC13 have been removed from the permit through variation EPR/HP3939LN/V004 as they are complete.		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC14	<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 2.3.9 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 variation issue

<b>Table S1.4 Start-up and Shut-down thresholds</b>		
<b>Emission Point and Unit Reference</b>	<b>“Minimum Start-Up Load” Load in MW and as percent of rated power output (%)<sup>1</sup> or when two of the criteria listed below for the LCP or unit have been met.</b>	<b>“Minimum Shut-Down Load” Load in MW and as percent of rated power output (%)<sup>1</sup> or when two of the criteria listed below for the LCP or unit have been met.</b>
A1 LCP218	90 MW; 35% GT combustion enters fully pre-mix steady state (6.3 firing mode) Gas flowrate of 10kg/s or more	90 MW; 35% GT combustion leaves fully pre-mix steady state (6.3 firing mode) Gas flowrate of 10kg/s or less

<b>Table S1.4 Start-up and Shut-down thresholds</b>		
<b>Emission Point and Unit Reference</b>	<b>“Minimum Start-Up Load” Load in MW and as percent of rated power output (%)<sup>1</sup> or when two of the criteria listed below for the LCP or unit have been met.</b>	<b>“Minimum Shut-Down Load” Load in MW and as percent of rated power output (%)<sup>1</sup> or when two of the criteria listed below for the LCP or unit have been met.</b>
A1 LCP219	90 MW; 35% GT combustion enters fully pre-mix steady state (6.3 firing mode) Gas flowrate of 10kg/s or more	90 MW; 35% GT combustion leaves fully pre-mix steady state (6.3 firing mode) Gas flowrate of 10kg/s or less
1. Expressed as MWe from GT only, and as % of rated GT power output only (i.e. excluding the steam turbine)		

<b>Table S1.5 Dry Low NOx effective definition</b>	
<b>Emission Point and Unit Reference</b>	<b>Dry Low NOx effective definition Load in MW and as percent of rated power output (%)</b>
A1 LCP218	Load: 90 MW; 35%
A1 LCP219	Load: 90 MW; 35%

## Schedule 2 – Raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Gas oil	Not exceeding 0.1% w/w sulphur content

## Schedule 3 – Emissions and monitoring

**Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply from 1<sup>st</sup> July 2020 until 16<sup>th</sup> August 2021.**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)-these limits do not apply during start up or shut down</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A1 [Point A1 on site plan in Schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	50 mg/m <sup>3</sup>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	50 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	100 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Carbon Monoxide	100 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [Point A1 on site plan in Schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	125 mg/m <sup>3</sup>	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 from 1<sup>st</sup> July 2020 until 16<sup>th</sup> August 2021.**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)-these limits do not apply during start up or shut down</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	125 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	250 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Carbon Monoxide	50 mg/m <sup>3</sup>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Carbon Monoxide	50 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Carbon Monoxide	100 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Dust	20 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181

**Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply from 1<sup>st</sup> July 2020 until 16<sup>th</sup> August 2021.**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)-these limits do not apply during start up or shut down</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Sulphur dioxide	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Water Vapour	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Stack Gas Volume Flow	-	-	Continuous	BS EN 16911

**Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply from 1<sup>st</sup> July 2020 until 16<sup>th</sup> August 2021.**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)-these limits do not apply during start up or shut down</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	50 mg/m <sup>3</sup>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	50 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	100 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Carbon Monoxide	100 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181



**Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply from 1<sup>st</sup> July 2020 until 16<sup>th</sup> August 2021.**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)-these limits do not apply during start up or shut down</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	125 mg/m <sup>3</sup>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	125 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	250 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Carbon Monoxide	50 mg/m <sup>3</sup>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Carbon Monoxide	50 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Carbon Monoxide	100 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

**Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply from 1<sup>st</sup> July 2020 until 16<sup>th</sup> August 2021.**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)-these limits do not apply during start up or shut down</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Dust	10 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Sulphur dioxide	66 mg/m <sup>3</sup>	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Water Vapour	-	-	Continuous As appropriate to reference	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards

**Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply from 1<sup>st</sup> July 2020 until 16<sup>th</sup> August 2021.**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)-these limits do not apply during start up or shut down</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A2 [Point A2 on site plan in schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Stack Gas Volume Flow	-	-	Continuous	BS EN 16911
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 [Point A3 on site plan in Schedule 7]	Black start diesel generators	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	1650 mg/m <sup>3</sup>	Instantaneous	Annual spot	Permanent sampling access not required
A5 [Point A5 on site plan in Schedule 7]	Central heating boiler	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required
A6 [Point A6 on site plan in Schedule 7]	Warehouse boiler	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required
Storage tanks vents	Gaseous fuel and chemical storage tanks on site	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required
Gas line vents	Gas distribution pipelines on site	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required
Steam and pressure release valves	Process areas on site	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required

**Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17<sup>th</sup> August 2021**

Emission point ref. & location	Source	Parameter	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 plan in Schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	40 mg/m <sup>3</sup> DLN effective to baseload	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on site plan in Schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	50 mg/m <sup>3</sup> DLN effective to baseload	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	50 mg/m <sup>3</sup> DLN effective to baseload	Daily mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m <sup>3</sup> MSUL/MSDL to baseload			
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	100 mg/m <sup>3</sup> DLN effective to baseload	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup> DLN effective to baseload	Yearly Average	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup> DLN effective to baseload	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<sup>th</sup> August 2021**

Emission point ref. & location	Source	Parameter	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 plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup> DLN effective to baseload	Daily mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m <sup>3</sup> MSUL/MSDL to baseload			
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Carbon Monoxide	100 mg/m <sup>3</sup> DLN effective to baseload	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [Point A1 on site plan in Schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	125 mg/m <sup>3</sup>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	125 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	250 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Carbon Monoxide	50 mg/m <sup>3</sup>	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<sup>th</sup> August 2021**

Emission point ref. & location	Source	Parameter	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 plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Carbon Monoxide	50 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Carbon Monoxide	100 mg/m <sup>3</sup>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on distillate fuel	Dust	10 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Sulphur dioxide	66 mg/m <sup>3</sup>	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Water vapour	-	-	Continuous As appropriate to reference	BS EN 14181

**Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17<sup>th</sup> August 2021**

Emission point ref. & location	Source	Parameter	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 plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas	Stack Gas Volume Flow	-	-	Continuous	BS EN 16911
A1 [Point A1 on site plan in schedule 7]	LCP No. 218 Gas turbine fired on natural gas or distillate fuel	As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	40 mg/m <sup>3</sup> DLN effective to baseload	Yearly average	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	50 mg/m <sup>3</sup> DLN effective to baseload	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan]	LCP No. 219 Gas turbine	Oxides of Nitrogen	50 mg/m <sup>3</sup> DLN effective to baseload	Daily 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<sup>th</sup> August 2021**

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
in Schedule 7]	fired on natural gas	(NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	50 mg/m <sup>3</sup> MSUL/MSDL to baseload			
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	100 mg/m <sup>3</sup> DLN effective to baseload	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup> DLN effective to baseload	Yearly average	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup> DLN effective to baseload	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m <sup>3</sup> DLN effective to baseload	Daily mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m <sup>3</sup> MSUL/MSDL to baseload			
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Carbon Monoxide	100 mg/m <sup>3</sup> DLN effective to baseload	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<sup>th</sup> August 2021**

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	125 mg/m <sup>3</sup> DLN effective to baseload	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	125 mg/m <sup>3</sup>	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	250 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Carbon Monoxide	50 mg/m <sup>3</sup>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Carbon Monoxide	50 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Carbon Monoxide	100 mg/m <sup>3</sup>	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<sup>th</sup> August 2021**

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on distillate fuel	Dust	10 mg/m <sup>3</sup>	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Sulphur dioxide	66 mg/m <sup>3</sup>	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Water vapour	-	-	Continuous As appropriate to reference	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	Stack gas pressure	-	-	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<sup>th</sup> August 2021**

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
A2 [Point A2 on site plan in schedule 7]	LCP No. 219 Gas turbine fired on natural gas	Stack Gas Volume Flow	-	-	Continuous	BS EN 16911
A2 [Point A2 on site plan in Schedule 7]	LCP No. 219 Gas turbine fired on natural gas or distillate fuel	As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 [Point A3 on site plan in Schedule 7]	Black start diesel generators	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	1650 mg/m <sup>3</sup>	Instantaneous	Annual spot	Permanent sampling access not required
A5 [Point A5 on site plan in Schedule 7]	Central heating boiler	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required
A6 [Point A6 on site plan in Schedule 7]	Warehouse boiler	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required
Storage tanks vents	Gaseous fuel and chemical storage tanks on site	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required
Gas line vents	Gas distribution pipelines on site	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required
Steam and pressure release valves	Process areas on site	No parameters set	No limits set	Not applicable	Not applicable	Permanent sampling access not required

<b>Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location - site plan in Schedule 7</b>	<b>Parameter</b>	<b>Source</b>	<b>Limit (incl. unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
W1	Flow	Cooling tower (including boiler blow down)	42,200 m <sup>3</sup> per day	24 hour period beginning 00.01	Continuous	Permanent access not required
W1	Temperature	Cooling tower (including boiler blow down)	35°C	Instantaneous	Continuous	Permanent access not required
W1	Total Free Chlorine	Cooling tower (including boiler blow down)	0.2 mg/l	Instantaneous	Continuous	BS EN ISO 7393
W1	pH range	Cooling tower (including boiler blow down)	6-9	Instantaneous	Continuous	BS ISO 10523
W2	Flow	Effluent tank discharge	7,000 m <sup>3</sup> per week	Weekly period beginning 00.01 Monday	Continuous during discharge	Permanent access not required
W2	Temperature	Effluent tank discharge	35°C	Instantaneous	Continuous during discharge	Permanent access not required
W2	Total Suspended Solids	Effluent tank discharge	100 mg/l	For 95% of all measured values of periodic samples taken over one week	Every discharge	BS EN 872
W2	BOD	Effluent tank discharge	40mg/l	Weekly spot sample	Weekly	BS EN 1899
W2	Oil	Effluent tank discharge	3 mg/l	Weekly spot sample	Weekly	ISBN 011751 7283
W2	Cadmium	Effluent tank discharge	0.01 mg/l	Weekly spot sample	Weekly	BS EN 5961
W2	Mercury	Effluent tank discharge	0.005 mg/l	Weekly spot sample	Weekly	BS EN 12846
W2	pH range	Effluent tank discharge	6-9	Instantaneous	Continuous during discharge	BS ISO 10523
W2	Ammoniacal Nitrogen	Effluent tank discharge	20 mg/l	Weekly spot sample	Weekly	BS 6068 2.11 Or as agreed
W3	Oil or grease	Storm water and surface run off via interceptor	No visible traces	Instantaneous	Monthly	Permanent access not required

<b>Table S3.3 Annual limits (excluding start up and shut down except where otherwise stated).</b>				
<b>Substance</b>	<b>Medium</b>	<b>Limit (including unit)</b>		<b>Emission Points</b>
Dust, Sulphur dioxide and Oxides of nitrogen	Air	Assessment year	LCP TNP Limit	LCP218 & LCP219
		01/01/20-30/06/20	Emission allowance figure shown in the TNP Register as at 30 April the following year	

<b>Table S3.4 Process monitoring requirements</b>				
<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
LCP 218	Net electrical efficiency	After each modification which that could significantly affect these parameters	EN Standards or equivalent	
LCP 219	Net electrical efficiency	After each modification which 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.

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Oxides of nitrogen	A1, A2	Every 3 months	1 January, 1 April, 1 July, 1 October
Carbon Monoxide	A1, A2	Every 3 months	1 January, 1 April, 1 July, 1 October
Dust (when operating on distillate fuel)	A1, A2	Every 3 months	1 January, 1 April, 1 July, 1 October
Sulphur dioxide	A1, A2	Every 6 months	1 January, 1 July
Periodic monitoring for oxides of nitrogen	A3	Annual	1 January
Emissions to Water Parameters as required by condition 3.5.1	W1	Every 3 months	1 January, 1 April, 1 July, 1 October

Parameter	Units
Electricity Exported	GWhr
Heat Exported	GWhr
Mechanical Power Provided	GWhr
Fossil Fuel Energy Consumption	GWhr
Non-Fossil Fuel Energy Consumption	GWhr
Annual Operating Hours	hr
Water Abstracted from Fresh Water Source	m <sup>3</sup>
Water Abstracted from Borehole Source	m <sup>3</sup>
Water Abstracted from Estuarine Water Source	m <sup>3</sup>
Water Abstracted from Sea Water Source	m <sup>3</sup>
Water Abstracted from Mains Water Source	m <sup>3</sup>
Gross Total Water Used	m <sup>3</sup>
Net Water Used	m <sup>3</sup>
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

<b>Table S4.2 Resource Efficiency Metrics</b>	
<b>Parameter</b>	<b>Units</b>
Waste transferred directly off-site for use under an exemption / position statement	t

<b>Table S4.3 Large Combustion Plant Performance parameters for reporting to DEFRA</b>		
<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Units</b>
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	TJ
Total Emissions to Air of NO <sub>x</sub> for each LCP	Annually	t
Total Emissions to Air of SO <sub>2</sub> for each LCP	Annually	t
Total Emissions to Air of CO for each LCP	Annually	t
Total Emissions to Air of Dust for each LCP	Annually	t
Operating Hours for each LCP	Annually	hr
Operating Hours of the LCP's when firing on gas oil	Annually	hr
Operating hours for black start diesel generators	Annually	hr

<b>Table S4.4 Reporting forms</b>			
<b>Media/ parameter</b>	<b>Reporting format</b>	<b>Agency recipient</b>	<b>Date of form</b>
Air & Energy	Form IED AR1 – SO <sub>2</sub> , NO <sub>x</sub> and dust mass emission and energy	National and Area Office	As agreed in writing with the Environment Agency
Air	Form IED RTA1 – TNP quarterly emissions summary log	National and Area Office	As agreed in writing with the Environment Agency
LCP	Form IED HR1 – operating hours	National and Area Office	As agreed in writing with the Environment Agency
Air	Form IED CON 2 – continuous monitoring	Area Office	As agreed in writing with the Environment Agency
CEMs	Form IED CEM – Invalidation Log	Area Office	As agreed in writing with the Environment Agency

<b>Table S4.4 Reporting forms</b>			
<b>Media/ parameter</b>	<b>Reporting format</b>	<b>Agency recipient</b>	<b>Date of form</b>
Air	Form IED PM1 - discontinuous monitoring and load.	Area Office	As agreed in writing with the Environment Agency
Resource Efficiency	Form REM1 – resource efficiency annual report	National and Area Office	As agreed in writing with the Environment Agency
Water	Form water 1 or other form as agreed in writing by the Environment Agency	Area Office	As agreed in writing with 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	

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

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

<b>(c) Notification requirements for the detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</b>	
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.	

<b>Name*</b>	
<b>Post</b>	
<b>Signature</b>	
<b>Date</b>	

\* 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.

“background concentration” means such concentration of that substance as is present in:

for emissions to surface water, the surface water quality up-gradient of the site; or

for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“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.

“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.

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

“DLN” means dry, low NO<sub>x</sub> burners.

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

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

“emissions to land” includes emissions to groundwater.

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

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

“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.

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

“large combustion plant” or “LCP” is a combustion plant or group of combustion plants discharging waste gases through a common windshield 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.

“Mid-merit” means combustion plant operating between 1,500 and 4,000 hrs/yr.

“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 electrical efficiency” means the ratio between the net electrical output (electricity produced minus the imported energy) and the fuel/feedstock energy input (as the fuel/feedstock lower heating value) at the combustion unit boundary over a given period of time.

“non-emergency plant” means a plant which provides balancing services or demand side response services.

“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.

“SI” means site inspector.

“Standby fuel” means alternative liquid fuels that are used in emergency situations when the gas fuel which is normally used, is not available.

“TNP Register” means the register maintained by the Environment Agency in accordance with regulation 4 of the Large Combustion Plants (Transitional National Plan) Regulations 2015 SI2015 No.1973

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:

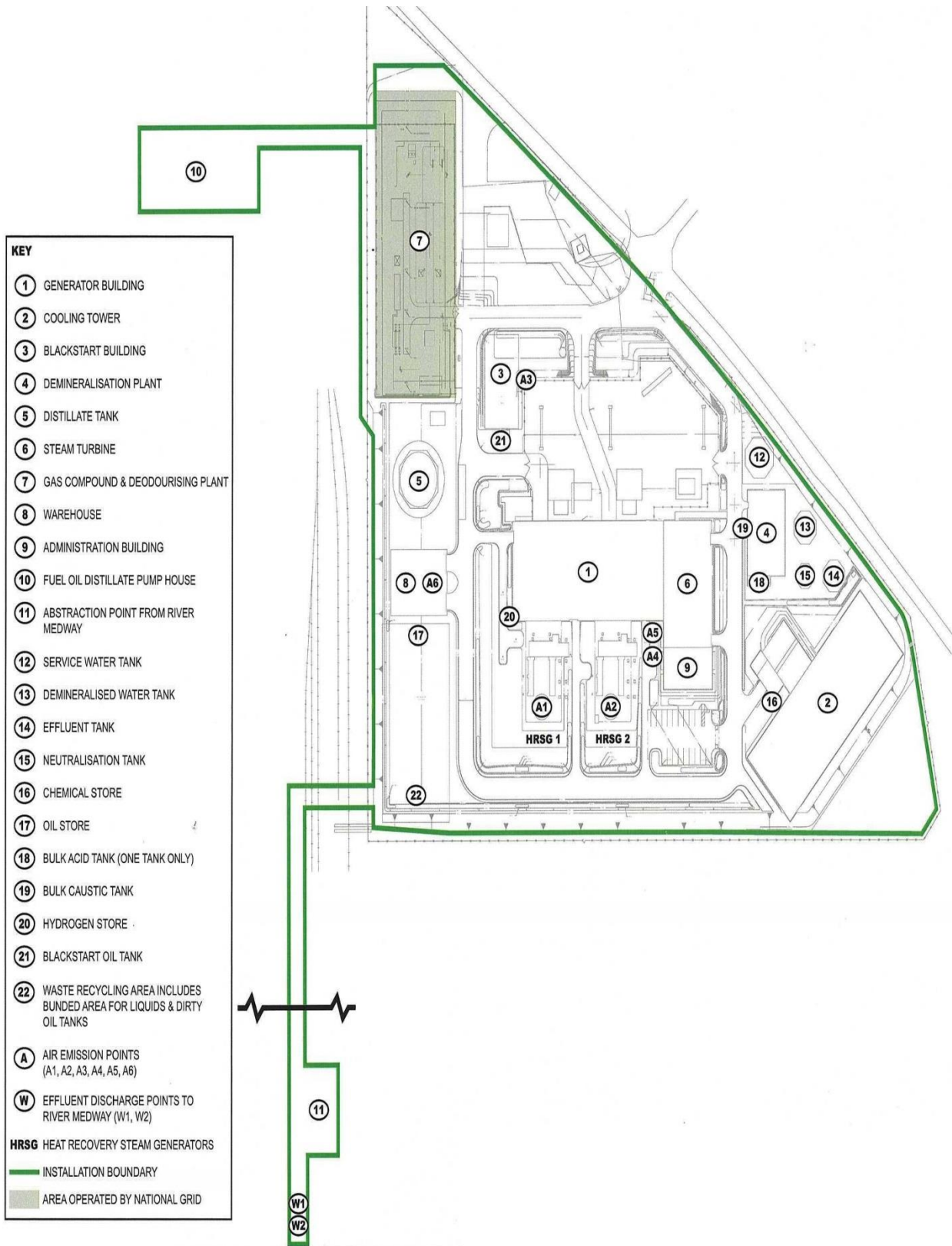
- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from gas turbine or compression ignition 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



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END OF PERMIT