

# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

---

E.ON UK CHP Limited  
Kemsley Paper Mill CHP  
Kemsley  
Sittingbourne  
Kent  
ME10 2SG

**Variation application number**

EPR/BJ7395IG/V011

**Permit number**

EPR/BJ7395IG

# Kemsley Paper Mill CHP

## Permit number EPR/BJ7395IG

### 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.

#### **This variation implements the following changes to the permit:**

- A new gas-fired Combined Heat and Power (CHP) plant known as K4;
- A new medium pressure (MP) auxiliary boiler known as the K4 boiler;
- Upgrades to the auxiliary package boiler plant;
- A new emergency diesel generator;
- A new water treatment plant;
- A new emission point to sewer referenced E2;
- Removal of references to LCP 206 which has been decommissioned; and
- Additional land included in the permit site boundary to facilitate a number of the above changes.

The new CHP plant shall supply electricity and steam to the adjacent Kemsley Paper Mill which is operated by DS Smith.

The DEFRA reference number for the new CHP is **LCP 681**.

The new natural gas fuelled CHP will be made up of a 143 MWth input gas turbine producing approximately 57 MW of electrical power, a heat recovery steam generator (HRSG), producing approximately 110 MWth of steam and a steam turbine, producing approximately 16 MW of electrical power. The CHP will be classed as a large combustion plant (LCP). The HRSG will be fitted with supplementary firing natural gas burners. During supplementary firing the combined thermal input is 196MWth. Exhaust gases will be emitted via a 70 metre high stack at emission point A8.

Mode 5 is the operation of the gas turbine and the HRSG without supplementary firing and Mode 6 is the operation of the gas turbine and the HRSG with supplementary firing.

A new natural gas fuelled MP auxiliary boiler with a thermal input of 11.86 MWth will produce MP steam. This is classified as a Medium Combustion Plant (MCP). Exhaust gases will emit via emission point A9.

Five of the six existing Low Pressure (LP) auxiliary boilers will be taken out of service and replaced by four new boilers (each approximately 17 MWth). The existing LP auxiliary boiler A with a thermal input of approximately 15.6 MW will remain in service. Following this modification the two banks of boilers (known as Package Boiler Bank 1 and Package Boiler Bank 2) will have a combined thermal input of <50 MWth for each bank and will be classed as MCP. They will operate to provide back up steam in the event of a planned or unplanned temporary shutdown of K3 (an adjacent energy from waste plant to the east of the main mill complex) or K4.

The steam produced is for the paper making process and is contained, de-pressurised and sent to the Paper Mill for use within the paper production process.

A new water treatment plant will provide treated water for steam production.

A new emission point (E2) to sewer from the new K4 area drains to the existing DS Smith drainage system and effluent treatment plant.

Once K4 is commissioned, K1 will be decommissioned. The existing LCP plant was previously operated under the Transitional National Plan (TNP) and therefore the Chapter III IED Annex V limits have been implemented through this variation.

**The existing installation continues to be operated as follows until LCP 681 is commissioned:**

**LCP 208** – K1: one 317 MWth gas turbine and HRSGs

**LCP 207** – three gas fired boilers totalling 71 MWth (will no longer be an LCP following commissioning of K4)

**2<sup>nd</sup> Boiler bank operation** – including existing boiler 6A and two new gas fired boilers totalling 49.6 MWth all emitting through the same windshield.

The operation of a CHP) Plant known as K1, fired on natural gas, to provide heat and power to the Kemsley Paper Mill Installation.

The CHP plant comprises a single Gas Turbine (GT) with two HRSGs producing high pressure steam from the hot turbine exhaust gases and a single steam turbine generating electricity from the steam. The steam exiting the steam turbine is used on the paper mills of the installation. Additional steam is available from a battery of six package boilers.

Around 80 MW of electricity and 200 MWth per hour of steam can be generated from the gas turbine, HRSG's and steam turbine equipment. The package boilers are capable of producing around 72 tonnes of low pressure steam for the paper mills. The gas turbine and the package boilers burn natural gas fuel. The HRSG's have a common 75 metre high chimney with two flues, one for each HRSG. The gas turbine also has a 30 metre high by-pass stack which is for use on infrequent occasions when either a HRSG is out of action, or the gas turbine is in a special start-up mode. The waste gases from the six package boilers release through separate flues in two 72 metre chimneys.

LCP 208 operates in Open Cycle for less than 500 hours/year and therefore no emission limit values apply to this mode of operation.

LCP 208 has the following operating modes available;

Mode 1 – GT and 2 HRSGs operating with, or without supplementary firing on either, or both HRSGs (Emission Point A1/A2);

Mode 2 – GT and 1 HRSG in operation with, or without supplementary firing (Emission Point A1, or A2, and A3);

Mode 3 – HRSGs only (auxiliary firing) (Emission Point A1 and/or A2);

Mode 4 – GT Only (Emission Point A3).

**The following activities will continue to be operated as follows both before and after the commissioning of LCP 681:**

Raw materials used at the site include natural gas and distillate fuel oil for fuels, water and water treatment chemicals, boiler wash chemicals, compressor wash chemicals, oils, greases and antifreeze.

De-ionised water is produced on-site as a feed stream for steam production, and also for the treatment of recovered condensate. Regeneration liquors are neutralised prior to discharge to the DS Smith operated effluent treatment plant.

Surface water is protected by interceptors and the site is designed to retain all fire fighting waters.

The site is adjacent to The Swale Site of Special, Scientific Interest (SSSI) and Ramsar site. The site also operates an environmental management system to control its impacts on the environment.

The schedules specify the changes made to the permit.

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

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application BJ7395 received (EPR/BJ7395IG/A001)	16/02/2001	Application for operation of a CHP Plant, Waste Incinerator and standby package boilers to provide heat and power to the Kemsley Paper Mill Installation
Permit determined EPR/BJ7395IG	18/04/2002	Permit issued

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Variation BX0407 determined EPR/BJ7395IG/V002	20/02/2004	Environment Agency initiated Variation to clarify regulation of the incineration plant
Variation DP3139SB determined EPR/BJ7395IG/V003	22/11/2004	Variation to introduce monitoring and reporting requirements for large combustion plant required for compliance with the revised Large Combustion Plant Directive (Directive 2001/80/EC).
Variation QP3032SJ determined EPR/BJ7395IG/V004	20/12/2005	Waste Incineration Directive (Directive EC 2000/76/EC) – application received 31/03/15.
Variation GP3836LU determined EPR/BJ7395IG/V005	08/12/2006	Variation to clarify regulation of the incineration plant and address surface water discharges – application received 26/05/2006.
Variation CP3036MH determined EPR/BJ7395IG/V006	25/01/2008	Variation to increase quantity of DFO allowed to be burned in the package boilers.
Variation EPR/BJ7395IG/V007 determined	05/01/2012	Environment Agency initiated variation for the Paper and Pulp Sector Review.
Variation EPR/BJ7395IG/V008 Determined	24/07/2013	Environment Agency initiated variation to implement the changes introduced by the Industrial Emissions Directive (Directive 2010/75/EU).
Regulation 60 Notice sent to the Operator	08/12/2014	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. The permit is also updated to modern conditions.
Regulation 60 Notice response	27/03/2015	Response received from the Operator.
Additional information received	25/09/2015	Response to request for further information dated 14/08/2015.
Variation determined EPR/BJ7395IG/V009	23/12/2015	Varied and consolidated permit issued in modern condition format. Variation effective from 01/01/2016.
Part surrender application EPR/BJ7395IG/S010	Duly made 02/09/2019	Application to surrender the Fluidised Bed Combustor and associated land.
Part surrender determined EPR/BJ7395IG	04/06/2020	Part surrender complete.
Variation application EPR/BJ7395IG/V011	Duly made 05/09/2019	Variation to permit a CHP plant (LCP 681).
Additional information received	30/09/2019	Updated modelling files and layout plan.
Additional information received	30/04/2020	Updated noise impact assessment.
Additional information received	04/06/2020	Confirmation of LCP 208 efficiency and operating modes of LCP 681.
Additional information received	26/06/2020	Additional information on applicable yearly emission limit for LCP 681 in Mode 6.

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Variation application determined EPR/BJ7395IG/V011 (Billing ref: AP3200PP)	30/06/2020	Variation and consolidation issued. Variation effective from 01/07/2020.

<b>Other Part A installation permits relating to this installation</b>		
<b>Operator</b>	<b>Permit number</b>	<b>Date of issue</b>
DS Smith Paper Limited	EPR/BJ7468IC	2002
WTI UK Ltd	EPR/XP3637VX	2011

End of introductory note

# Notice of variation and consolidation

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

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

### Permit number

EPR/BJ7395IG

### Issued to

**E.ON UK CHP Limited** (“the operator”)

whose registered office is

**Westwood Way**

**Westwood Business Park**

**Coventry**

**CV4 8LG**

company registration number 02684288

to operate a regulated facility at

**Kemsley Paper Mill CHP**

**Kemsley**

**Sittingbourne**

**Kent**

**ME10 2SG**

to the extent set out in the schedules.

The notice shall take effect from 30/06/2020.

Name	Date
Sifelani Mpofu	30/06/2020

Authorised on behalf of the Environment Agency

## **Schedule 1**

All conditions have been varied by the consolidated permit EPR/BJ7395IG/V011 as a result of the application made by the operator.

## **Schedule 2 – consolidated permit**

Consolidated permit issued as a separate document.

# Permit

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

### Permit number

**EPR/BJ7395IG**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BJ7395IG/V011 authorising,

**E.ON UK CHP Limited** (“the operator”),

whose registered office is

**Westwood Way  
Westwood Business Park  
Coventry  
CV4 8LG**

company registration number 02684288

to operate an installation at

**Kemsley Paper Mill CHP  
Kemsley  
Sittingbourne  
Kent  
ME10 2SG**

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

Name	Date
Sifelani Mpofu	30/06/2020

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.

## **1.5 Multiple operator installations**

- 1.5.1 Where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator(s) of the installation of the same information.

## **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 red with a white background on the site plan at schedule 7 to this permit, which is within the area edged in green on the site plan that represents the extent of the installation covered by this permit and those of the other operators of the installation.

### **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: LCP 681, LCP 207 and LCP 208. 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: LCP 681 and LCP 208, the end of the start up period and the start of the shutdown period shall conform to the specifications set out in schedule 1, table S1.5.
- 2.3.6 For activity AR2 (LCP 208 Emission Point A3) referenced in schedule 1, table S1.1, the activities shall not operate for more than 500 hours per year in open cycle mode.
- 2.3.7 For the following activities referenced in schedule 1, table S1.1: LCP 681. The effective Dry Low NO<sub>x</sub> threshold shall conform to the specifications set out in Schedule 1, table S1.6.

- 2.3.8 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.
- 2.3.9 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 operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

# **3 Emissions and monitoring**

## **3.1 Emissions to water, air or land**

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 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.
- 3.1.4 Total annual emissions from the LCP emission points set out in schedule 3 tables S3.1, of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.

## **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, S3.2, S3.3 and S3.4; and
  - (b) process monitoring specified in table S3.5.
- 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, S3.2 and S3.3 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 S3.1; 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 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 annual production /treatment data 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; and
- (d) where condition 2.3.6 applies the hours of operation in open cycle in any year.

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 activities referenced in schedule 1, table S1.1: LCP207 and LCP208. 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, 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 “without delay”, 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 Part A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	<p><b>New operations:</b></p> <p><b>Large Combustion Plant</b>  <b>LCP 681:</b> Combined heat and power for production of steam and electricity.            Single 143 MWth Gas Turbine, Heat Recovery Steam Generator and Steam Turbine. During supplementary firing the combined thermal input is 196 MWth.</p> <p><b>Medium Combustion Plant</b>            One 11.86 MWth auxiliary boiler (K4 boiler).</p> <p><b>Medium Combustion Plant (each boiler bank &lt;50 MWth)</b>            Package Boilers for production of steam:            Package Boiler bank 1:            Boilers A (15.6 MWth), B and C (each approximately 17 MWth).            Package Boiler bank 2: Boilers D and E (each approximately 17 MWth).</p> <p>Emergency diesel generator &lt;1MWth</p>	<p>LCP 681 shall not commence operation until LCP 208 has ceased operation.</p> <p>From receipt of natural gas to discharge of exhaust gases, and electrical power delivered to substation. Steam from the CHP and Package Boilers to supply the paper mill.</p> <p>LCP 681 Mode 5 – no supplementary firing of HRSG.</p> <p>LCP 681 Mode 6 – supplementary firing of HRSG.</p> <p>Diesel generator operating for less than 500 hours per year.</p>
AR2		<p><b>Existing operations:</b></p> <p><b>Large Combustion Plant</b>  <b>LCP 208:</b> Combined heat and power for production of steam and electricity.            Single Gas Turbine, Two Heat Recovery Steam Generators, Steam Turbine operated in Modes 1,2,3,4.</p> <p><b>Large Combustion Plant</b>  <b>LCP 207:</b> Package Boilers for production of steam (Boilers D,E,F)</p>	<p>From receipt of natural gas to discharge of exhaust gases, and electrical power delivered to substation. Steam from the CHP and Package Boilers to supply the paper mill.</p> <p>LCP 208 Mode 4 - for emergency use only</p> <p>LCP 208 Mode 3 - only when the Gas Turbine is not in use.</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>		
AR3	Treatment of Water	Water treatment plant for the conditioning of incoming water and treatment of recovered condensate.	Receipt of water from the supply lagoon for the production of boiler water.
AR4	Surface Water Drainage	Discharge of site drainage via oil interceptors.	Drainage system from roof and hardstanding until discharge to surface waters or to adjacent Paper Mill drainage system.
AR5	Storage of diesel	Storage of diesel for use in emergency diesel generator and fire pump.	Receipt of diesel, storage in tank to input to the emergency generator.

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application BJ7395	The response to questions 2.3 given in pages 20-29 of the application. The response to questions 2.7 given in pages 31-33 of the application.	16/02/2001
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 14/08/2015	Further clarification on operation of plant. All Parts	Dated 25/09/2015
Application for variation EPR/BJ7395IG/V011	Application forms C2 and C3 and referenced supporting documentation including: <ul style="list-style-type: none"> <li>• 'Supporting information' document, dated 10 May 2019.</li> <li>• Site Drainage Strategy Layout, dated March 2019.</li> <li>• 'Emission Points' plan, dated April 2019.</li> </ul> Excluding noise impact assessment.	10/05/2019
Additional information received for application for variation EPR/BJ7395IG/V011	Updated noise impact assessment dated April 2020.	30/04/2020
Additional information received for application for variation EPR/BJ7395IG/V011	Clarification on operating modes of LCP 681.	10/05/2019

**Table S1.3 Improvement programme requirements**

Improvement conditions IC1 – IC5 have been deleted from the permit through variation EPR/BJ7395IG/V011 as are either complete or superseded.		
Reference	Requirement	Date
IC 6	<p>The Operator shall submit a report in writing to the Environment Agency for acceptance. The report shall define and provide a written justification of the “minimum start up load” and “minimum shut-down load”, for each unit within LCP681 as required by the Implementing Decision 2012/249/EU in terms of:</p> <ul style="list-style-type: none"> <li>i. The output load (i.e. electricity, heat or power generated) (MW); and</li> <li>ii. This output load as a percentage of the rated thermal output of the combustion plant (%).</li> </ul> <p>And / Or</p> <ul style="list-style-type: none"> <li>iii. At least three criteria (operational parameters and / or discrete processes as detailed in the Annex) or equivalent operational parameters that suit the technical characteristics of the plant, which can be met at the end of start-up or start of shut-down as detailed in Article (9) 2012/249/EU.</li> </ul>	Within 12 months of the date on which fuel is first burnt in LCP 681
IC 7	<p>The operator shall provide a report in writing to the Environment Agency for acceptance which provides the net rated thermal input for LCP 681. Evidence to support this figure, in order of preference, shall be in the form of:-</p> <ul style="list-style-type: none"> <li>a) Performance test results* during contractual guarantee testing or at commissioning (quoting the specified standards or test codes);</li> <li>b) Manufacturer’s contractual guarantee value;</li> <li>c) Published reference data, e.g., Gas Turbine World Performance Specifications (published annually);</li> <li>d) Design data, e.g., nameplate rating of a boiler or design documentation for a burner system;</li> <li>e) Operational efficiency data as verified and used for heat accountancy purposes;</li> <li>f) Data provided as part of Due Diligence during acquisition.</li> </ul> <p>*Performance test results shall be used if these are available.</p>	Within 12 months of the date on which fuel is first burnt in LCP 681
IC 8	<p>The Operator shall submit a written report to the Environment Agency on the commissioning of LCP 681. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions.</p>	Within 4 months of the completion of commissioning of LCP 681
IC 9	<p>The Operator shall submit a report in writing to the Environment Agency for approval. The report shall define an output load or operational parameters and provide a written justification for when the dry low NO<sub>x</sub> operation is effective. The report shall also include the NO<sub>x</sub> profile through effective dry low NO<sub>x</sub> to 70% and then to full load.</p>	Within 4 months of the completion of commissioning of LCP 681

<b>Table S1.3 Improvement programme requirements</b>		
Improvement conditions IC1 – IC5 have been deleted from the permit through variation EPR/BJ7395IG/V011 as are either complete or superseded.		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC10	The Operator shall propose achievable emission limit values (ELV) for NO <sub>x</sub> and CO expressed as a daily mean of validated hourly averages from Minimum start-up load (MSUL) to baseload. This shall be supported by a summary of emissions data. Justification shall be submitted to the Environment Agency for approval in the form of a written report.	Within 6 months of the completion of commissioning of LCP 681

<b>Table S1.4 Pre-operational measures for future development</b>		
<b>Reference</b>	<b>Operation</b>	<b>Pre-operational measures</b>
PO1	Commissioning of LCP 681	Prior to the commencement of commissioning of LCP 681, the Operator shall provide a written commissioning plan, including timelines for completion, for approval by the Environment Agency. The commissioning plan shall include the expected emissions to the environment during the different stages of commissioning, how the duration of combined emissions from the existing and proposed plant will be minimised, the expected durations of commissioning activities and the actions to be taken to protect the environment. Commissioning shall be carried out in accordance with the commissioning plan as approved.
PO2	Operation of LCP 681	The Operator shall submit a Noise Management Plan for approval, for control of noise from the activities specified in table S1.1 of this permit which will occur once LCP 681 is commissioned.

<b>Table S1.5 Start-up and Shut-down thresholds</b>		
<b>Emission Point and Unit Reference</b>	<b>“Minimum Start -Up load” Load in MW and/or steam flow rate in kg/s and/or when two of the criteria listed below for LCP 208</b>	<b>“Minimum Shut-Down load” Load in MW and/or steam flow rate in kg/s and/or when two of the criteria listed below for the LCP 208</b>
A8 LCP 681	To be agreed in writing by the Environment Agency, following the outcome of improvement condition <b>IC 6 in table S1.3 of this permit.</b>	To be agreed in writing by the Environment Agency, following the outcome of improvement condition <b>IC 6 in table S1.3 of this permit.</b>
A1/A2 and A3 when Mode 2 LCP 208	Gas Turbine and / or Boiler(s) A or B on; Steam Flow from Boilers A and / or B is greater than 5kg/s or; Gas Turbine Load greater than 24 MW	Gas Turbine load less than 24 MW; Steam Flow from A and / or B Boilers less than 5kg/s Gas Turbine and / or Boilers A and B off

<b>Table S1.6 Dry Low NOx effective definition</b>	
<b>Emission Point and Unit Reference</b>	<b>Load in MW and as percent of rated power output (%) or when two of the criteria listed below for the LCP or unit have been met, whichever is soonest</b>
A8 LCP 681	To be agreed in writing by the Environment Agency, following the outcome of improvement condition <b>IC 9 in table S1.3 of this permit.</b>

## Schedule 2 – Raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
-	-

## Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air						
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/A2 & A3 (when Mode 2) [Points A1, A2, A3 in Figure 1 of the application]	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	<b>LCP No. 208 Modes 1, 2, 3</b>  Gas turbine and HRSG A&B fired on natural gas	75 mg/m <sup>3</sup> 70% to baseload	Monthly mean of validated hourly averages	Continuous	BS EN 14181
	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )		82.5 mg/m <sup>3</sup> 70% to baseload	Daily mean of validated hourly averages	Continuous	BS EN 14181
	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )		150 mg/m <sup>3</sup> 70% to baseload	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
	Carbon monoxide		100 mg/m <sup>3</sup> 70% to baseload	Monthly mean of validated hourly averages	Continuous	BS EN 14181
	Carbon monoxide		110 mg/m <sup>3</sup> 70% to baseload	Daily mean of validated hourly averages	Continuous	BS EN 14181
	Carbon monoxide		200 mg/m <sup>3</sup> 70% to baseload	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

Table S3.1 Point source emissions to air						
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
	Sulphur dioxide		-	-	6 monthly by calculation	Agreed in writing with the Environment Agency
	Duct survey		-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 [Point 2. in 'Emission Points' Plan of the application, dated April 2019]	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	<b>LCP No. 208 Mode 4</b>  Gas turbine fired on natural gas in Open Cycle	-	-	Concentration by calculation, every 2 years	Agreed in writing with the Environment Agency
	Carbon monoxide		-	-	Concentration by calculation, every 2 years	Agreed in writing with the Environment Agency
	Sulphur dioxide		-	-	Concentration by calculation, every 2 years	Agreed in writing with the Environment Agency
A4 [Point 3. in 'Emission Points' Plan of the application, dated April 2019]	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	<b>Medium Combustion Plant: Package Boiler Bank 1 (Two new boilers)</b>  Boiler plant fired on natural gas	100 mg/m <sup>3</sup>	-	Annually	BS EN 14792
	Carbon monoxide		No limit set	-	Annually	BS EN 15058



Table S3.1 Point source emissions to air						
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
	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	<b>Medium Combustion Plant: Package Boiler Bank 1</b>  (One existing Boiler: Boiler 6A)  Boiler plant fired on natural gas	200 mg/m <sup>3</sup>	-	Annually	BS EN 14792
	Carbon monoxide		No limit set	-	Annually	BS EN 15058
A5 [Point 4. in 'Emission Points' Plan of the application, dated April 2019]	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	<b>LCP 207</b>  Boiler plant fired on natural gas	110 mg/m <sup>3</sup>	-	Every 6 months Note 1	BS EN 14792
	Carbon monoxide		110 mg/m <sup>3</sup>	-	Every 6 months Note 1	BS EN 15058
	Sulphur dioxide		35 mg/m <sup>3</sup>	-	Every 6 months Note 1	Concentration by calculation
	Dust		5 mg/m <sup>3</sup>	-	Every 6 months Note 1	Concentration by calculation
	Duct Survey		-	-	Pre-operation and when there is a significant operational change Note 1	BS EN 15259
	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	<b>Medium Combustion Plant: Package Boiler Bank 2</b>	100 mg/m <sup>3</sup>	-	Annually	BS EN 14792

Table S3.1 Point source emissions to air						
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
	Carbon monoxide	Boiler plant fired on natural gas	No limit set	-	Annually	BS EN 15058
A8 [Point 6. in 'Emission Points' Plan of the application, dated April 2019]	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	<b>LCP No. 681</b> Gas turbine and HRSG fired on natural gas (Modes 5 and 6)	30 mg/m <sup>3</sup> Note 2 DLN effective to baseload Note 3	Yearly average	Continuous	BS EN 14181
			35 mg/m <sup>3</sup> Note 4 DLN effective to baseload Note 3			
	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 Note 3	Monthly mean of validated hourly averages	Continuous	BS EN 14181
	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 Note 3	Daily mean of validated hourly averages	Continuous	BS EN 14181
			To be confirmed following completion of IC09 MSUL/MSDL to baseload Note 5			
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 Note 3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181		
A8	Carbon monoxide	<b>LCP No. 681</b>	30 mg/m <sup>3</sup> Note 2 DLN effective to baseload Note 3	Yearly average	Continuous	BS EN 14181

Table S3.1 Point source emissions to air						
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
[Points 6. in 'Emission Points' Plan of the application, dated April 2019]		Gas turbine and HRSG fired on natural gas (Modes 5 and 6)	100 mg/m <sup>3</sup> Note 4 DLN effective to baseload Note 3			
	Carbon monoxide		100 mg/m <sup>3</sup> DLN effective to baseload Note 3	Monthly mean of validated hourly averages	Continuous	BS EN 14181
	Carbon monoxide		110 mg/m <sup>3</sup> DLN effective to baseload Note 3	Daily mean of validated hourly averages	Continuous	BS EN 14181
			To be confirmed following completion of IC 9 MSUL/MSDL to baseload Note 5			
Carbon monoxide	200 mg/m <sup>3</sup> DLN effective to baseload Note 3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181		
A8 [Points 6. in 'Emission Points' Plan of the application, dated April 2019]	Sulphur dioxide	<b>LCP No. 681</b>  Gas turbine and HRSG fired on natural gas	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency

<b>Table S3.1 Point source emissions to air</b>						
<b>Emission point ref. &amp; location</b>	<b>Parameter</b>	<b>Source</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>
A9 [Points 7. in 'Emission Points' Plan of the application, dated April 2019]	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	K4 auxiliary boiler fired on natural gas	100 mg/m <sup>3</sup>	Hourly average	Annually	BS EN 14792
	Carbon monoxide		No limit set	Hourly average	Annually	BS EN 15058
A10 [Points 8. in 'Emission Points' Plan of the application, dated April 2019]	No parameters set	Emergency diesel generator	No limit set	-	-	-
A1, A2, A3 and A8 [LCP 681 and LCP 208]	Flow	Gas turbines and HRSGs fired on natural gas	-	-	Continuous As appropriate to reference	EN ISO 16911
A1, A2, A3 and A8 [LCP 681 and LCP 208]	Oxygen	Gas turbines and HRSGs fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A1, A2, A3 and A8 [LCP 681 and LCP 208]	Water vapour	Gas turbines and HRSGs fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A1, A2, A3 and A8 [LCP 681 and LCP 208]	Stack gas temperature	Gas turbines and HRSGs fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards

<b>Table S3.1 Point source emissions to air</b>						
<b>Emission point ref. &amp; location</b>	<b>Parameter</b>	<b>Source</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, A2, A3 and A8 [LCP 681 and LCP 208]	Stack gas pressure	Gas turbines and HRSGs fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A1, A2, A3 and A8 [LCP 681 and LCP 208]	As required by the Method Implementation Document for BS EN 15259	Gas turbines and HRSGs fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A5 [LCP 207]	Flow	Gas turbines, HRSGs and Package Boilers fired on natural gas	-	-	Continuous or periodic As appropriate to reference Note 1	EN ISO 16911
A5 [LCP 207]	Oxygen	Package Boilers fired on natural gas	-	-	Continuous or periodic As appropriate to reference Note 1	BS EN 14181
A5 [LCP 207]	Water vapour	Package Boilers fired on natural gas	-	-	Continuous As appropriate to reference Note 1	BS EN 14181
A5 [LCP 207]	Stack gas temperature	Package Boilers fired on natural gas	-	-	Continuous As appropriate to reference Note 1	Traceable to national standards

<b>Table S3.1 Point source emissions to air</b>						
<b>Emission point ref. &amp; location</b>	<b>Parameter</b>	<b>Source</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>
A5 [LCP 207]	Stack gas pressure	Package Boilers fired on natural gas	-	-	Continuous As appropriate to reference Note 1	Traceable to national standards
A5 [LCP 207]	As required by the Method Implementation Document for BS EN 15259	Package Boilers fired on natural gas	-	-	Pre-operation and when there is a significant operational change Note 1	BS EN 15259

Note 1: This monitoring requirement and any associated limit does not apply following reduction in thermal input for each of the package boiler banks below 50 MWth and is therefore no longer an LCP.

Note 2: This limit is applicable to LCP 681 operating in mode 5 which is the gas turbine in operation with the HRSG without supplementary firing.

Note 3: This ELV applies between the effective dry low NO<sub>x</sub> threshold and baseload once IC 9 has been completed. Effective dry low NO<sub>x</sub> thresholds are defined in Table S1.6, until IC 9 has been completed compliance with ELVs will be based on 70% to baseload.

Note 4: This yearly average limit is applicable to LCP 681 operating in mode 6 which is the gas turbine in operation with the HRSG supplementary firing.

Note 5: This ELV applies when the load varies between MSUL/MSDL and base load during the daily reference period. MSUL and MSDL are defined in Table S1.5.

<b>Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</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	pH	K1 CHP surface water, via interceptor	6-9	Instantaneous	Monthly spot sample	-
	Oil & grease		No visible oil or grease in the discharge	Instantaneous	Monthly spot sample	Visual

<b>Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b> <b>Note 1</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>
E1	Flow (m <sup>3</sup> )	Boiler blowdown, neutralised ion exchange regeneration liquors, compressor wash, overflows, cooling waters, collected surface waters, raw waters and demineralised waters.	No limit set	Instantaneous	Continuous	As agreed in writing with the Environment Agency
	pH			Instantaneous	Continuous	-
E2	pH	K4 CHP surface water, via interceptor	6-9	Instantaneous	Monthly spot sample	-
	Oil & grease		No visible oil or grease in the discharge	Instantaneous	Monthly spot sample	Visual
Note 1: The point of reception at Kemsley Effluent Treatment Plant for this transfer is the Clarified Effluent Tank.						

<b>Table S3.4 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>
Oxides of nitrogen	Air	Assessment year	LCP TNP Limit	LCP 208 (Emission Points A1, A2, A3)  LCP 207 (Emission Point A5)
		01/01/20-30/06/20	Emission allowance figure shown in the TNP Register as at 30 April the following year	

<b>Table S3.5 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 681	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.

<b>Table S4.1 Reporting of monitoring data</b>			
<b>Parameter</b>	<b>Emission or monitoring point/reference</b>	<b>Reporting period</b>	<b>Period begins</b>
Oxides of nitrogen	A1, A2, A3, A8	Every 3 months	1 January, 1 April, 1 July, 1 October
Oxides of nitrogen	A4, A5, A9	Every year	1 January
Oxides of nitrogen	A3 (open cycle operation)	Every 2 years	1 January
Carbon monoxide	A1, A2, A3, A8	Every 3 months	1 January, 1 April, 1 July, 1 October
Carbon monoxide	A4, A5 until they cease to be LCP, A9	Every year	1 January
Carbon monoxide	A3 (open cycle operation)	Every 2 years	1 January
Sulphur dioxide	A1, A2, A3, A8	Every 6 months	1 January, 1 July
Sulphur dioxide	A4, A5 until they cease to be LCP	Every year	1 January
Sulphur dioxide	A3 (open cycle operation)	Every 2 years	1 January
Dust	A4, A5 until they cease to be LCP	Every year	1 January
Emissions to Water Parameters as required by condition 3.5.1	W1	Every 6 months	1 January, 1 July
Emissions to Sewer Parameters as required by condition 3.5.1	E1, E2	Every 6 months	1 January, 1 July

<b>Table S4.2 Annual production/treatment</b>	
<b>Parameter</b>	<b>Units</b>
Thermal energy produced e.g. steam	MWhrs
Waste heat utilised by the installation	MWhrs
Power Generation	MWhrs

<b>Table S4.3 Large Combustion Plant Performance parameters for reporting to DEFRA and other Performance parameters</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 Dust for each LCP	Annually	t
Operating Hours for each LCP (Load Factor)	Annually	hr

<b>Table S4.4 Reporting forms</b>		
<b>Media/ parameter</b>	<b>Reporting format</b>	<b>Agency recipient</b>
Air & Energy	Form IED AR1 – SO <sub>2</sub> , NO <sub>x</sub> 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 RTA1 – TNP quarterly emissions summary log	National and Area Office
Air	Form IED CON 2 – continuous monitoring. Form as agreed in writing by the Environment Agency	Area Office
CEMs	Form IED CEM – invalidation Log. 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
Air	Form Air1 - monitoring of MCP plant. Form as agreed in writing by the Environment Agency.	Area Office
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency. Form as agreed in writing by the Environment Agency.	Area Office
Water	Form water 1 or other form as agreed in writing by the Environment Agency	Area Office
Sewer (transfers to effluent treatment plant)	Form sewer 1 or other 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	

<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.

“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.

“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.

“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.

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

“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.

“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.

“SI” means site inspector.

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.

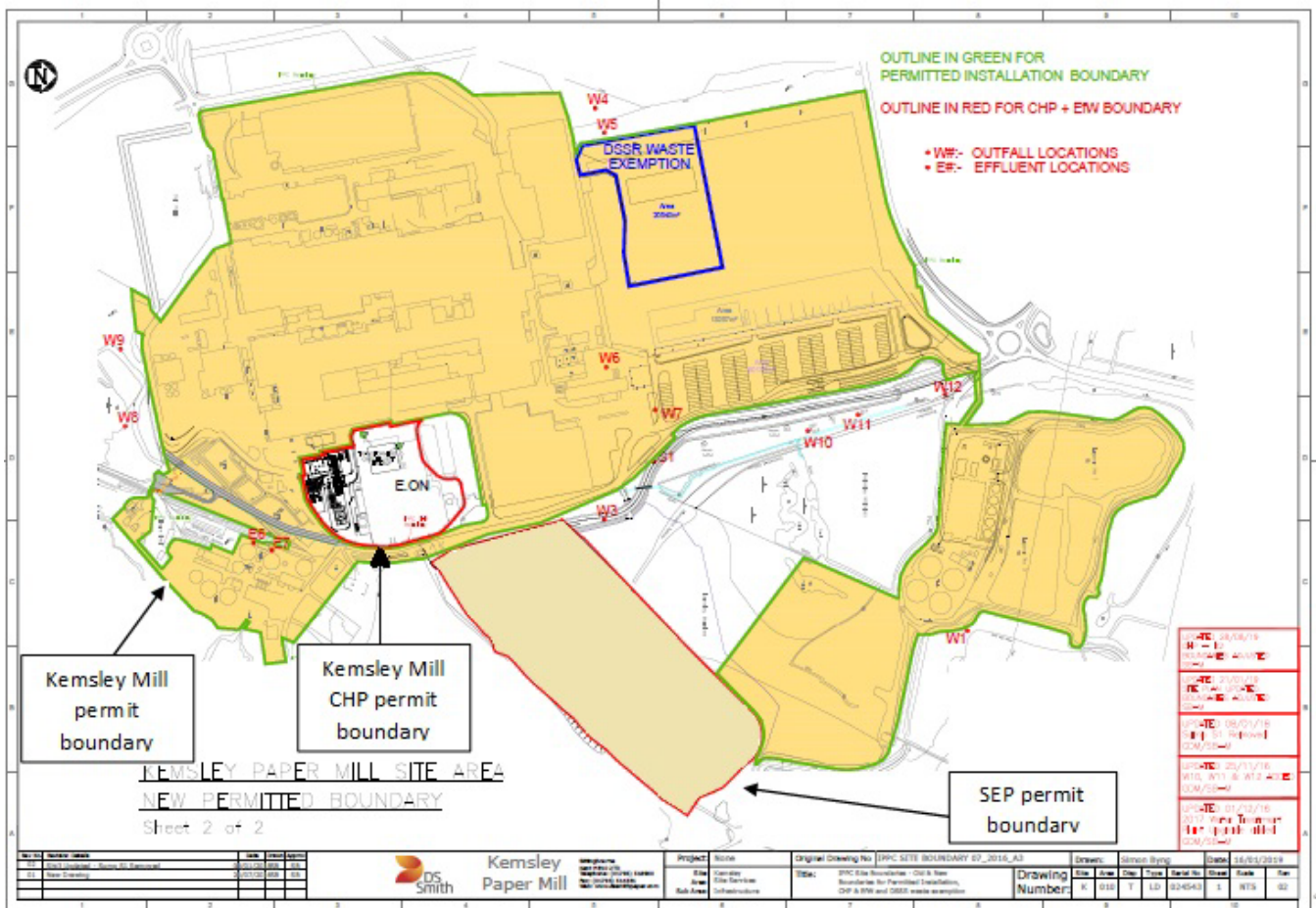
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- 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



© Crown Copyright. All rights reserved. Environment Agency, 100026380, 2020.

END OF PERMIT