



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

RWE Generation UK Plc
Little Barford Power Station
Little Barford
St Neots
Cambridgeshire
PE19 6YT

Variation application number

EPR/AP3630LG/V006

Permit number

EPR/AP3630LG

Little Barford Power Station

Permit number EPR/AP3630LG

Introductory note

This introductory note does not form a part of the notice.

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

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

Article 21(3) of the Industrial Emissions Directive (IED) requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. We have reviewed the permit for this installation against the revised BAT Conclusions for the large combustion plant sector published on 17th August 2017. Only activities covered by this BAT Reference Document have been reviewed and assessed.

Outline any key changes made as a result of the permit review.

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:

- The Operator chose to operate the LCPs on site under the Transitional National Plan (TNP) compliance route. The TNP ends on 30 June 2020, after which the emission limits set out in Chapter III of IED will be applicable to the plant;
- Revised emission limits and monitoring requirements for emissions to air applicable from 17 August 2021 in line with the BAT Conclusions have been included in table S3.1a; and
- Inclusion of process monitoring for energy efficiency in table S3.4.

Permit condition 2.3.9 has been included in the permit with corresponding improvement condition IC15 requiring the operator to submit a report in relation to potential black start operation of the plant.

Improvement conditions 1 to 12 (IC1 to IC12) were previously marked as complete and have been removed from the permit. IC13 and IC14 were also complete and have been removed from the permit.

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

Little Barford Power Station is an electricity generating station, located in St Neots, Cambridgeshire and operated by RWE Generation UK PLC. The site covers an area of 15.8 ha centred at National Grid Reference TL 1858 5776.

The site lies on the B1043, just south of the town of St Neots in a predominantly rural area on the Bedfordshire, Cambridgeshire border. To the west of the site lies the River Ouse and Wyboston Leisure Park. To the east of the site there is a railway line. The nearest residential areas are the southern outskirts of St Neots located to the north of the site.

Little Barford Power Station is a 720 MW(e) combined cycle gas turbine (CCGT) power station comprising of two gas turbines. Each gas turbine drives an electrical generator. Hot gases from the gas turbine pass through associated heat recovery steam generators, which produce steam to supply a single steam turbine which in turn drives a generator. The gas turbines can operate in a 2 + 1 configuration or a 1 + 1

configuration venting exhaust gases into a dedicated stack. Boiler feed water is obtained on site by de-ionisation of towns mains water in the onsite water treatment plant.

The gas turbines each have a thermal input of 644MWth and are normally fuelled by natural gas. The gas is supplied via an underground pipeline from an "Above Ground Installation" operated by National Grid Gas plc whom hold a separate Part A installation permit, reference number BP3138LN. Gas oil can be used as standby liquid fuel and is stored on site in a concrete bunded partially buried storage tank.

To minimise waster abstraction a re-circulating column water system is employed. Cooling of the water is achieved by passing it through low-profile mechanical induced draught cooling towers.

A 'black-start' facility situated on the southern section of the western site comprises of a 58MWth gas-oil fired open cycle gas turbine (OCGT) to provide start-up power in the event that none is available from the national grid. This OCGT is also used for a short term operation reserve power to the grid. The plant is considered 'non-emergency' in relation to the BAT Conclusions due to the service it provides to the National Grid.

The schedules specify the changes made to the permit.

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

Status log of the permit		
Description	Date	Comments
Application EPR/AP3630LG/A001 received	Duly made 31/03/2006	
Additional information received	14/07/2006	
Additional information received	11/09/2006	Additional information received with regards to the design and condition of surfacing and bunding.
Additional information received	11/09/2006	Additional information received with regards to fuel switching requirements
Permit determined EPR/AP3630LG	20/12/2006	Permit issued to RWE npower Plc
Variation application / consolidation EPR/AP3630LG/V002	03/02/2011	Mid life upgrade to gas turbine from 648 MW(th) to 670MW(th).
Variation / consolidation determined EPR/AP3630LG/V002	22/03/2011	
Variation of application determined EPR/AP3630LG/V003	11/03/2013	Environment Agency initiated variation, to incorporate Eel Regulations improvement condition
Notified of change to company name	13/11/2014	Name changed to RWE Generation UK Plc
Variation of application issued EPR/AP3630LG/V004	02/12/2014	Varied permit issued to RWE Generation UK PLC.

Status log of the permit		
Description	Date	Comments
Regulation 60 Notice sent to the Operator	31/10/2014	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	21/04/2015	Response received from the Operator.
Additional information request	17/06/2015	Further information requested
Additional information received	26/06/2015	Response to further queries received
Additional information received	30/11/2015	Response received from operator regarding draft variation
Variation determined EPR/AP3630LG/V005 (Billing ref: YP3738AN)	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	31/10/2018	Response received from the Operator.
Variation determined EPR/AP3630LG/V006 (Billing ref: EP3906PX)	24/01/2020	Varied and consolidated permit issued. Effective from 24/01/2020

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
National Grid Gas Plc	EPR/BP3138LN	20/12/2006

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/AP3630LG

Issued to

RWE Generation UK Plc (“the operator”)

whose registered office is

Windmill Hill Business Park

Whitehill Way

Swindon

Wiltshire

SN5 6PB

company registration number **03892782**

to operate a regulated facility delete as applicable at

Little Barford Power Station

Little Barford

St Neots

Cambridgeshire

PE19 6YT

to the extent set out in the schedules.

The notice shall take effect from 24/01/2020

Name	Date
Sifelani F Mpfu	24/01/2020

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/AP3630LG

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/AP3630LG/V006 authorising,

RWE Generation UK Plc (“the operator”),

whose registered office is

Windmill Hill Business Park

Whitehill Way

Swindon

Wiltshire

SN5 6PB

company registration number **03892782**

to operate a regulated facility at

Little Barford Power Station

Little Barford

St Neots

Cambridgeshire

PE19 6YT

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

Name	Date
Sifelani F Mpofo	24/01/2020

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 green on the site plan at schedule 7 to this permit, which is within the area edged in red on the site plan that represents the extent of the installation covered by this permit and those of 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 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 272 and LCP 273. Standby fuel gas oil may be used for periods of up to 10 days during times of interruption to the gas supply.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP 394. The activities shall not operate for more than 500 hours per year.
- 2.3.7 For the following activities referenced in schedule 1, table S1.1: LCP 272 and LCP 273. 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: LCP 272 and LCP 273. 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 point(s) A1, A2 and A3 listed in tables S3.1 and S3.1a of Schedule 3 following the issue of a Black Start Instruction by the National Grid shall be disregarded

for the purposes of compliance whilst that instruction remains effective and in accordance with the report submitted in response to improvement condition IC15.

- 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 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Total annual emissions from the LCP emission points set out in schedule 3 table S3.1 of a substance listed in schedule 3 table S3.3 shall not exceed the relevant limit in table S3.3.
- 3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

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

- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

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

3.4 Noise and vibration

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

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1, S3.1a and S3.2; and
 - (b) process monitoring specified in table S3.4
- 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 report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the resource efficiency metrics set out in schedule 4 table S4.2;
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- (d) where condition(s) 2.3.5 and 2.3.6 apply the hours of operation 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: LCP 272 and 273. 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 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 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP 272 Production of electricity and steam in 644 MWth CCGT 1A fitted with DLN	From receipt of natural gas or gas oil to discharge of exhaust gases and the generation of electricity
		LCP 273 Production of electricity and steam in 644 MW(th) CCGT 1B fitted with DLN	Gas oil can be used as standby fuel only.
		LCP 394 OCGT burning gas oil for blackstart and short term operation reserve to grid. Net rated thermal input 58 MWth	From receipt of natural gas or gas oil to discharge of exhaust gases and the generation of electricity. Operating hours for LCP 394 are limited up to 500 hours per year.
		2.33 MWth emergency diesel generator	From receipt of fuel to generation of electricity and release of emission to air (handling and storage of fuels in a designated tank for emergency use or routine operational and maintenance testing only)
		0.75 MWth diesel fired pump	Handling and storage of fuel in a designated tank for emergency use or routine operational and maintenance testing only
Directly Associated Activity			
AR2	Directly associated activity	Gas oil storage	From receipt of raw materials to dispatch for use.
AR3	Directly associated activity	Water treatment plant	From receipt of raw materials to dispatch to chemical effluent and waste treatment.

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR4	Directly associated activity	Evaporative cooling	From abstraction of cooling water to discharge cooling water urge to the River Great Ouse.
AR5	Directly associated activity	Surface water drainage	Handling and storage of site drainage until discharge to the site surface water system.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to section B2.1 and B2.2 in the Application	31/03/06
Receipt of additional information to the application	Response to the request for further information with regards to: the design and condition of site surfacing, bunding, prevention or environmental impacts from spillages during delivery and unloading, nature of the SDX sump, underground fuel pipelines, storage requirements for containers, venting of natural gas, cooling tower improvements, visibility of the plume, boiler blowdown, techniques to reduce energy consumption and identification and impacts from other diesel fired plant.	14/07/06
Receipt of additional information to the application	Response to the request for further information with regards to the design and condition of the site surfacing and bunding	11/09/06
Receipt of additional information to the application	Response to the request for further information with regards to fuel switching requirements.	11/09/06
Receipt of additional information to the application	Further information supplied to describe short term operational reserve (STOR) requirements	22/11/10
Variation application EPR/AP3630LG/V002	Responses to section 3, 4, 5 and 6 of application form part C	03/02/11
Response to regulation 60(1) Notice – request for information dated 31/10/14	Compliance routes and operating techniques identified in response to questions 2 (2.2: compliance route), 4 (2.4: LCP configuration), 5 (2.5: net rated thermal input), 6 (2.6: MSUL/MSDL), 9/iii (proposed ELV's, application, ELV between MSUL/MSDL and 70% load), 11 (monitoring requirements) Excluding compliance route Article 30 (2) Annex V Part 1 – 500 hour emergency operation for LCP 272 and 273 and related operating techniques, which was subsequently withdrawn by the operator.	21/04/15

Table S1.2 Operating techniques		
Description	Parts	Date Received
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 17/06/15	Operating techniques identified in response to questions 6	26/06/15
Receipt of additional information to the regulation 60(1) Notice.	Confirmation of the compliance routes chosen for LCP 272, 273 and 394	21/12/15
Response to regulation 61(1) Notice – request for information dated 01/05/18 EPR/ AP3630LG/V006	Compliance and operating techniques identified in response to the BAT Conclusions for large combustion plant published on 17th August 2017.	31/10/18

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
Improvement conditions 1 – 14 have been removed from the permit through variation EPR/AP3630LG/V006 as they are complete.		
IC15	<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.</p> <p>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 (EPR/AP3630LG/V006)

Table S1.4 Start-up and Shut-down thresholds		
Emission Point and Unit Reference	“Minimum Start-Up Load” Load in MW and as percent of rated power output (%)	“Minimum Shut-Down Load” Load in MW and as percent of rated power output (%)
A1 LCP 272	95 MWe; 40% of rated power output	95 MWe; 40% of rated power output
A2 LCP 273	95 MWe; 40% of rated power output	95 MWe; 40% of rated power output
A3 LCP 394	0.5 MWe; 2.9% of rated power output	0.5 MWe; 2.9% of rated power output

Table S1.5 Dry Low NOx effective definition	
Emission Point and Unit Reference	Dry Low NOx effective definition 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
A1 LCP 272	Load: 120MW; 50%
A2 LCP 273	Load: 120MW; 50%

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
Mercury concentration in the raw materials used within the installation	Discharges of mercury as a result of the impurities of raw materials used in the water treatment plant shall be controlled by ensuring that impurity levels are the minimum available in the commercial product.
Cadmium concentration in the raw materials used within the installation	Discharges of cadmium as a result of the impurities of raw materials used in the water treatment plant shall be controlled by ensuring that impurity levels are the minimum available in the commercial product.

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021						
Emission point ref. & location	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. 272 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	50 mg/m ³ 70% to base load ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m ³ 70% to base load ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m ³ MSUL/MSDL to base load ^{2, 3}			
			100 mg/m ³ 70% to base load ¹	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 272 Gas turbine fired on natural gas	Carbon Monoxide	100 mg/m ³ 70% to base load ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			100 mg/m ³ 70% to base load ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			100 mg/m ³ MSUL/MSDL to base load ^{2, 3}			

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 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
			200 mg/m ³ 70% to base load ¹	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	LCP No. 272 Gas turbine fired on natural gas	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. 272 Gas turbine fired on Natural gas	Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
		Water vapour	-	-	Continuous As appropriate to reference	BS EN 14181
		Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
		Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards
		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. 273 Gas turbine fired on	Oxides of Nitrogen	50 mg/m ³ 70% to base load ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
	Natural gas	(NO and NO ₂ expressed as NO ₂)	50 mg/m ³ 70% to base load ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m ³ MSUL/MSDL to base load ^{2, 3}			
			100 mg/m ³ 70% to base load ¹	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [point A2 on site plan in schedule 7]	LCP No. 273 Gas turbine fired on Natural gas	Carbon Monoxide	100 mg/m ³ 70% to base load ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			100 mg/m ³ 70% to base load ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			100 mg/m ³ MSUL/MSDL to base load ^{2, 3}			
			200 mg/m ³ 70% to base load ¹	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 until 16 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. 273 Gas turbine fired on Natural gas	Sulphur dioxide	-	-	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. 273 Gas turbine fired on Natural gas	Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
		Water vapour	-	-	Continuous As appropriate to reference	BS EN 14181
		Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
		Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards
		As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A1 and A2 [Points A1 and A2 on site plan in schedule 7]	LCP No 272 and 273 gas Turbine fired on Gas Oil	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	-	-	Concentration by calculation every 4380 operational hours or 2 years whichever is sooner.	Agreed in writing with the Environment Agency.
		Carbon Monoxide	-	-	Concentration by calculation every 4380 operational hours or 2 years whichever is sooner.	Agreed in writing with the Environment Agency.

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 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
		Sulphur dioxide	-	-	Concentration by calculation every 4380 operational hours or 2 years whichever is sooner.	Agreed in writing with the Environment Agency.
		Dust	-	-	Concentration by calculation every 4380 operational hours or 2 years whichever is sooner.	Agreed in writing with the Environment Agency.
A3 [Point A3 on site plan in schedule 7]	LCP No. 394 Gas oil	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	-	-	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
		Dust	-	-	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
Fire pump	Diesel fire pump (for emergency use only)	No parameters set	-	-	-	Permanent sampling access not required
Emergency generator	Diesel generator (for emergency use only)	No parameters set	-	-	-	Permanent sampling access not required

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 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
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Note 1: This ELV applies when the load is >70% throughout the reference period.

Note 2: 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 S1.4.

Note 3: Emission limits covering MSUL/MSDL to base load shall apply from 01 July 2020

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan in Schedule 7]	LCP No. 272 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	40 mg/m ³ When DLN is effective ¹	Yearly average	Continuous	BS EN 14181
			50 mg/m ³ When DLN is effective ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m ³ When DLN is effective ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m ³ MSUL/MSDL to base load ²			
			100 mg/m ³ When DLN is effective ¹	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [point A1 on site plan in schedule 7]	LCP No. 272 Gas turbine fired on natural gas	Carbon Monoxide	30 mg/m ³ When DLN is effective ¹	Yearly average	Continuous	BS EN 14181
			100 mg/m ³ When DLN is effective ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			100 mg/m ³ When DLN is effective ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			100 mg/m ³ MSUL/MSDL to base load ²			
			200 mg/m ³ When DLN is effective ¹	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan in schedule 7]	LCP No. 272 Gas turbine fired on natural gas	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. 272 Gas turbine fired on Natural gas	Flow	-	-	Continuous As appropriate to reference	EN ISO 16911 and M2
		Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
		Water vapour	-	-	Continuous As appropriate to reference	BS EN 14181
		Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
		Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards
		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. 273 Gas turbine fired on Natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	40 mg/m ³ When DLN is effective ¹	Yearly average	Continuous	BS EN 14181
			50 mg/m ³ When DLN is effective ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m ³ When DLN is effective ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m ³ MSUL/MSDL to base load ²			

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
			100 mg/m ³ When DLN is effective ¹	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [point A2 on site plan in schedule 7]	LCP No. 273 Gas turbine fired on Natural gas	Carbon Monoxide	30 mg/m ³ When DLN is effective ¹	Yearly average	Continuous	BS EN 14181
			100 mg/m ³ When DLN is effective ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			100 mg/m ³ When DLN is effective ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			100 mg/m ³ MSUL/MSDL to base load ²			
			200 mg/m ³ When DLN is effective ¹	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	LCP No. 273 Gas turbine fired on Natural gas	Sulphur dioxide	-	-	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. 273 Gas turbine fired on Natural gas	Flow	-	-	Continuous As appropriate to reference	EN ISO 16911 and M2
		Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
		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 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
		Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
		Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards
		As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A1 and A2 [Points A1 and A2 on site plan in schedule 7]	LCP No 272 and 273 gas Turbine fired on Gas Oil	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	-	-	Concentration by calculation every 4380 operational hours or 2 years whichever is sooner.	Agreed in writing with the Environment Agency
		Carbon Monoxide	-	-	Concentration by calculation every 4380 operational hours or 2 years whichever is sooner.	Agreed in writing with the Environment Agency
		Sulphur dioxide	-	-	Concentration by calculation every 4380 operational hours or 2 years whichever is sooner.	Agreed in writing with the Environment Agency
		Dust	-	-	Concentration by calculation every 4380 operational hours or 2 years whichever is sooner.	Agreed in writing with the Environment Agency
A3 [Point A3 on site plan in schedule 7]	LCP No. 394 Gas oil	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	400 mg/m ³	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
		Sulphur dioxide	66 mg/m ³	-	Concentration by calculation, every 2 years	Agreed in writing with the Environment Agency
		Dust	10 mg/m ³	-	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
Fire pump	Diesel fire pump (for emergency use only)	No parameters set	-	-	-	Permanent sampling access not required
Emergency generator	Diesel generator (for emergency use only)	No parameters set	-	-	-	Permanent sampling access not required

Note 1: This ELV applies when the load is > Effective-DLN, as specified in Table S1.5, throughout the reference period.

Note 2: 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 S1.4 of this permit.

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
RD1 on site plan in schedule 7 emission to the River Great Ouse	Total suspended solids	Surface water from oil storage area via oily water separator	100 mg/ml	Spot sample	Monthly	SCA blue book 105 ISBN 011751957X Note 1

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
RD1 on site plan in schedule 7 emission to the River Great Ouse	Oil or grease	Surface water from oil storage area via oily water separator	10 mg/ml	Spot sample	Monthly	SCA blue book 77 ISBN 0117517283 Note 1
RD2 on site plan in schedule 7 emission to the River Great Ouse	Total suspended solids	Surface water via oily water separator	100 mg/ml	Spot sample	Monthly	SCA blue book 105 ISBN 011751957X Note 1
RD2 on site plan in schedule 7 emission to the River Great Ouse	Oil or grease	Surface water from oil storage area via oily water separator	10 mg/ml	Spot sample	Monthly	SCA blue book 77 ISBN 0117517283 Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Flow	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	330 m ³ /hr		Continuous	Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	pH	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	6-9		Continuous	SCA blue book 14 ISBN 0117514284 Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Temperature	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	30°C		Continuous	Note 1

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
RD3 on site plan in schedule 7 emission to the River Great Ouse	Free chlorine	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	100µg/l		Continuous	Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Total suspended solids	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	-	Spot sample	Monthly	SCA blue book 105 ISBN 011751957X Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Biological oxygen demand	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	20 mg/ml	Spot sample	Monthly	SCA blue book 130 ISBN 0117522120 Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Ammonia	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	-	Spot sample	Monthly	SCA blue book 48 ISBN 0117516139 Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Mercury and its compounds, expressed as mercury (Total Hg)	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	0.002 mg/l	Spot sample	Monthly	BS EN ISO 17852 Note 1

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
RD3 on site plan in schedule 7 emission to the River Great Ouse	Cadmium and its compounds, expressed as cadmium (Total Cd)	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	0.01 mg/l	Spot sample	Monthly	BS 6068-2.89 Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Sulphate	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	1000 mg/l	Spot sample	Monthly	SCA blue book 136 ISBN 0117522406 Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Chloroform	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	15µg/l	Spot sample	Monthly	Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Bromoform	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	5µg/l	Spot sample	Monthly	Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Dibromochlor	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	10µg/l	Spot sample	Monthly	Note 1

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
RD3 on site plan in schedule 7 emission to the River Great Ouse	Bromodichloromethane	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	10µg/l	Spot sample	Monthly	Note 1
RD3 on site plan in schedule 7 emission to the River Great Ouse	Oil/Grease	Cooling water purge, water treatment plant, boiler blowdown and SDX effluent	10mg/l	Spot sample	Monthly	SCA blue book 77 ISBN 0117517283 Note 1

Note 1: Alternative monitoring method as agreed in writing with the Environment Agency

Table S3.3 Annual limits (excluding start up and shut down except where otherwise stated).				
Substance	Medium	Limit (including unit)		Emission Points
Oxides of nitrogen	Air	Assessment year	LCP 272 and LCP 273 TNP Limit	LCP 272 & LCP 273
		01/01/16 and subsequent years until 31/12/19	Emission allowance figure shown in the TNP Register as at 30 April the following year	
		01/01/20 to 30/06/20		

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LCP 272 and LCP 273	Net electrical efficiency	After each modification which that could significantly affect these parameters	EN Standards or equivalent	-

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LCP 394	Net electrical efficiency	After each modification which that could significantly affect these parameters	By calculation	-

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Oxides of nitrogen	A1, A2	Every 3 months when fired on Natural Gas	1 January, 1 April, 1 July, 1 October
		Every year when fired on Natural Gas	1 January
		Every 4380 operational hours or 2 years, whichever is sooner when fired on Gas Oil	1 January
Carbon Monoxide	A1, A2	Every 3 months when fired on Natural Gas	1 January, 1 April, 1 July, 1 October
		Every year when fired on Natural Gas	1 January
		Every 4380 operational hours or 2 years, whichever is sooner when fired on Gas Oil	1 January
Sulphur dioxide	A1, A2	Every 6 months when fired on Natural Gas	1 January, 1 July
		Every 4380 operational hours or 2 years, whichever is sooner when fired on Gas Oil	1 January
Dust	A1, A2	Every 4380 operational hours or 2 years, whichever is sooner when fired on Gas Oil	1 January
Oxides of nitrogen	A3	Every 2 years	1 January
Carbon Monoxide	A3	Every 2 years	1 January
Sulphur dioxide	A3	Every 2 years	1 January
Dust	A3	Every 2 years	1 January
Emissions to water Parameters as required by condition 3.5.1	RD1, RD2 and RD3	Every 3 months	01/01/07

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

Table S4.3 Large Combustion Plant Performance parameters for reporting to DEFRA		
Parameter	Frequency of assessment	Units
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	TJ
Total Emissions to Air of NO _x for each LCP	Annually	t
Total Emissions to Air of SO ₂ for each LCP	Annually	t
Total Emissions to Air of Dust for each LCP	Annually	t
Operating Hours for each LCP	Annually	hr
Operating hours for LCP 272 and 273, using standby fuel during interruptions to the natural gas supply.	Quarterly for each quarter the standby fuel is used.	hr

Table S4.4 Reporting forms		
Media/ parameter	Reporting format	Agency recipient
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy. Form as agreed in writing by the Environment Agency.	National and Area Office
Air	Form IED RTA1 – TNP quarterly emissions summary log.	National and Area Office
LCP	Form IED HR1 – operating hours. Form as agreed in writing by the Environment Agency.	National and Area Office
Air	Form IED CON 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
Resource Efficiency	Form REM1 – resource efficiency annual report. Form as agreed in writing by the Environment Agency.	National and Area Office
Water	Form water 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	

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

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

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

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

Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“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.

“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 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_x 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.

“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



END OF PERMIT