Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Spalding Energy Company Limited

Spalding Power Station
West Marsh Road
Spalding
Lincolnshire
PE11 2BB

Variation application number

EPR/BK0701IW/V005

Permit number

EPR/BK0701IW

Spalding Power Station
Permit number EPR/BK0701IW

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 against the document.

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

- Revised emission limits and monitoring requirements for emissions to air applicable from 17 August 2021 in table S3.1a;
- Inclusion of the definition of dry low NOx effective in table S1.5; and
- Inclusion of process monitoring for energy efficiency in table S3.4.

During the review we also amended the monitoring requirement for the auxiliary boilers on site at emission point A3. These boilers are not classified as large combustion plant. Monitoring for the boilers was previously specified as continuous but after review against the requirements of the Medium Combustion Plant Directive, this has been amended to periodic.

Upgrade works on site resulted in the thermal input for each gas turbine increasing from 783.6MWth to 838MWth and the total station electrical output increasing from 860MW to 920MW which has been reflected in the permit. Both gas turbines were modified so that they can operated in low part load (LPL). The start up and shut down thresholds have also been updated to reflect these changes.

Permit condition 2.3.7 has been included in the permit with corresponding improvement condition IC02 requiring the operator to submit a report in relation to potential black start operation of the plant.

The permit has been amended to reflect that this site takes the surface water run off from neighbouring site Spalding Energy Expansion Limited PR/AP3732KC. This uncontaminated surface water will discharge through the same emission point to surface water.

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

The LCP numbers in accordance with the most recent DEFRA LCP references are:

- LCP 331; and
- LCP 332.

This is a combined cycle gas turbine (CCGT) combustion installation with the primary purpose of generating electricity for local use and the National Grid. The plant has a nominal capacity of 920 MWe for export. The CCGT comprises two gas turbines with heat recovery steam generators that supply one steam turbine. Each Gas Turbine (GT) has a net thermal input of 838MWth. Two auxiliary boilers are installed to facilitate start up. These do not operate together but release through the same release point.

Both gas turbines were modified so that they can operated in low part load (LPL).

Natural gas and air are supplied to each gas turbine; the air is compressed prior to combustion. The heat of combustion results in hot flue gas which drives the gas turbine which is linked to a generator. The turbine exhaust gases pass to two dedicated waste heat boilers (Heat Recovery Steam Generators, HRSGs) which produce steam. Duct firing, involving the combustion of some additional natural gas with the turbine exhaust gases, increases the steam-raising power of the HRSGs. The boiler exhaust gases are released to atmosphere via two separate stacks (A1 and A2) both of which are 78m in height. The principal releases being oxides of nitrogen, carbon dioxide, carbon monoxide, water vapour and excess combustion air.

The combined boiler steam flows are passed to a steam turbine to generate additional electricity. The turbine exhaust steam is condensed using air cooled heat exchangers and returned to the boilers. The boiler water circuit has a continuous blowdown to prevent build up of dissolved solids (principally calcium, magnesium and sodium) which can cause scaling/corrosion and lead to efficiency losses, this water is discharged to an Anglian Water sewer.

The two auxiliary (steam-raising) natural gas fired boilers (approximately 10.69MWth and 3.76MWth in size) have their own stack (A3) and are installed to produce low pressure steam, at a rate of 13.5 tonne per hour, to keep the HRSGs and the steam turbine warm when the CCGT Power Plant is not running. The steam from the auxiliary boiler also improves start-up time by maintaining a steam supply to the steam turbine seals thus allowing the plant to maintain a vacuum in the air cooled condenser during periods when steam is not available from the HRSGs. Keeping these parts of the plant warm whilst it is not fully operational enables electricity to be generated more quickly when it is turned back on. Using an auxiliary boiler also has other benefits for emissions, efficiency and maintenance:

- The faster ramp-up rate reduces the time required to achieve normal operation emission limits for nitrogen oxides and carbon monoxide.
- Less energy is required to take the Installation to electricity generation from a warm rather than a cold start.
- The number of cold starts, which create more emissions, falls.
- Keeping the steam turbine warm aids maintenance and safety; there is a reduction in the stress on the turbine blades caused by extreme variations in temperature.

Make-up boiler water circuit is required to replace blowdown and any system condensate loss. The demand will be met by potable water which is treated to remove dissolved solids, minimising process blowdowns and hence water consumption and effluent loadings to sewer (S1). A reverse osmosis unit is used to remove most of the dissolved solids followed by a finishing de-ionisation stage. Effluent from the de-ioniser stage and the reverse osmosis plant will be discharged to sewer.

Releases to water from the process are discharged via one outfall (W1) into the River Welland. The discharge comprises only clean process water (steam turbine condensate during start up) and surface water arising during rainfall.

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 BK0701	Received 12/03/2001	
Permit BK0701	Determined 24/08/2001	
Variation application	Received 18/12/2003	
Supplementary information Annex E, F, N, Annex L Supplementary letter	Received 27/05/2004 Received 11/06/2004 Dated 08/07/2004	

Status log of the permit		
Description	**Date**	**Comments**
Variation BX1870	Determined 19/07/2004	
Variation determined EPR/BK0701IW/V003	11/03/2013	Environment Agency Initiated Variation, to incorporate Eel Regulations improvement condition.
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	31/03/2015	Response received from the Operator.
Additional information received	11/06/2015	Response to request for further information (RFI) dated 08/06/2015
Variation determined EPR/BK0701IW/V004 (Billing ref: RP3538AL)	21/12/2015	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	13/10/2018	Response received from the Operator.
Further information received	15/01/2020	Clarification on points within the Regulation 61 response including energy efficiency and details of changes to thermal input and water discharge routes for inclusion in the permit review.
Further information received	01/05/2020	Confirmation of dry low NOx effective definition.
Variation determined EPR/BK0701IW/V005 (Billing ref: BP3703BL)	01/05/2020	Varied and consolidated permit issued.

End of introductory note

The Environmental Permitting (England and Wales) Regulations 2016

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

Permit number

EPR/BK0701IW

Issued to

Spalding Energy Company Limited ("the operator")

whose registered office is

Ugland House
PO Box 309
George Town
Cayman Islands B.W. Indies
Cayman Islands

company registration number FC019668

to operate a regulated facility at

Spalding Power Station
West Marsh Road
Spalding
Lincolnshire
PE11 2BB

to the extent set out in the schedules.

The notice shall take effect from 01/05/2020

Name	Date
Sifelani Mpofu	**01/05/2020**

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/BK0701IW

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BK0701IW/V005 authorising,

Spalding Energy Company Limited ("the operator"),

whose registered office is

Ugland House
PO Box 309
George Town
Cayman Islands B.W. Indies
Cayman Islands

company registration number FC019668

to operate a regulated facility at

Spalding Power Station
West Marsh Road
Spalding
Lincolnshire
PE11 2BB

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

Name	Date
Sifelani Mpofu	**01/05/2020**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

1.2.1 The operator shall:

(a) take appropriate measures to ensure that energy is used efficiently in the activities;

(b) take appropriate measures to ensure the efficiency of energy generation at the permitted installation is maximised;

(c) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(d) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

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

1.4.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities;

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

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

2 Operations

2.1 Permitted activities

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

2.2 The site

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

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 For the following activities referenced in schedule 1, table S1.1: LCP331 and LCP332. 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: LCP331 and LCP332. 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.

2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP331 and LCP332. The effective Dry Low NOx threshold shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.5.

2.3.7 The emission limit values from emission points A1 and A2 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 IC02.

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.

3 Emissions and monitoring

3.1 Emissions to water, air or land

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

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

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

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(a) point source emissions specified in tables S3.1, S3.1a, S3.2 and S3.3; 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, tables 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.

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.

4.3 Notifications

4.3.1 In the event:

(a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform the Environment Agency,

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents;

(b) of a breach of any permit condition the operator must immediately—

(i) inform the Environment Agency, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

(c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1(a)(i), 4.3.1 (b)(i) where the information relates to the breach of a condition specified in the permit shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

(a) any change in the operator's trading name, registered name or registered office address; and

(b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

(c) any change in the operator's name or address; and

(d) any steps taken with a view to the dissolution of the operator.

In any other case:

(e) the death of any of the named operators (where the operator consists of more than one named individual);

(f) any change in the operator's name(s) or address(es); and

(g) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

(a) a decision by the Secretary of State not to re-certify the agreement;

(b) a decision by either the operator or the Secretary of State to terminate the agreement; and

(c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.3.8 The operator shall inform the Environment Agency in writing of the closure of any LCP within 28 days of the date of closure.

4.4 Interpretation

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

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

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR1	Section 1.1 A (1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP331: Producing electricity by combusting natural gas in a combined cycle gas turbine of 838MWth.	From receipt of raw materials to generation of electricity, and release of emissions to air through stack A1 using air cooling.
		LCP332: Producing electricity by combusting natural gas in a combined cycle gas turbine of 838MWth.	From receipt of raw materials to generation of electricity, and release of emissions to air through stack A2 using air cooling.
		Producing low pressure steam from auxiliary boilers approximately 10.69MWth and 3.76MWth in size.	From receipt of raw materials to generation of low pressure steam and release to air through stack A3.
	Directly Associated Activity		
AR2	Directly associated activity	Water Treatment for Steam Generation	From receipt of raw materials to onward use to CCGTs and Auxiliary Boilers.
AR3	Directly associated activity	Surface water drainage	Handling and storage of site drainage from the Spalding Power Station site until discharge into the River Welland. and Surface water receipt from The Spalding Energy Expansion Limited (SEEL) Power Station (Permit EPR/P3732KC) until discharge to the River Welland.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	The response to questions 2.4 given in Annex G of the application.	12/03/2001
PPC Application	Annex D, E, F, G, H, I , J, P, K, N & O of the application document in response to Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 & 2.11 of the application form	18/12/2003

Receipt of additional information to the application	Annex E, F, N	27/05/2004
Receipt of additional information to the application	Annex L	11/06/2004
Receipt of additional information to the application	Supplementary Letter	08/07/2004
Response to regulation 60(1) Notice – request for information dated 31/10/2014	Compliance route and operating techniques identified in response to question 2.	31/03/2015
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 08/06/2015	Operating techniques identified in response to questions 6 (start up and shut down).	11/06/2015
Response to regulation 61(1) Notice – request for information dated 01/05/18 EPR/BK0701IW/V005	Compliance and operating techniques identified in response to the BAT Conclusions for large combustion plant published on 17th August 2017 in the form of a spreadsheet excluding dry low NOx definition.	13/10/2018
Additional information in response to regulation 61(1) Notice EPR/BK0701IW/V005	Email containing clarification of operating techniques including energy efficiency and changes to the site surface water drainage setup.	15/01/2020
Additional information received EPR/BK0701IW/V005	Email clarifying dry low NOx definition.	01/05/2020

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC01	For LCPD LCP 274 and 275 (now LCP 331 and 332 under IED). Annual emissions of dust, sulphur dioxide and oxides of nitrogen including energy usage for the year 01/01/2015 to 31/12/2015 shall be submitted to the Environment Agency using form AAE1 via the NERP Registry. If the LPCD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.	Complete
IC02	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. The plant can be operated as set out in condition 2.3.7 of the permit once the report has been approved by the Environment Agency. The methodology for operation and reporting set out in the report shall be implemented by the Operator from the date of approval by the Environment Agency.	12 months from issue of variation EPR/BK0701IW/V005

Table S1.4 Start-up and Shut-down thresholds		
Emission Point and Unit Reference	**"Minimum start up load"**	**"Minimum shut-down load"**
A1: LCP331	90 MWe; 27% of rated power output.	90 MWe; 27% of rated power output.
A2: LCP332	90 MWe; 27% of rated power output.	90 MWe; 27% 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 (%)**
A1: LCP331	Load: 90 MWe; 27% of rated power output.
A2: LCP332	Load: 90 MWe; 27% of rated power output.

Schedule 2 – Raw materials and fuels

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

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A1 [Point A1 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP331 Gas turbine fired on natural gas	50 mg/m^3 70% to base load[1]	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			55 mg/m^3 70% to base load[1] 55 mg/m^3 MSUL/MSDL to base load[2]	Daily mean of validated hourly averages		
			90 mg/m^3 70% to base load[1]	95% of validated hourly averages within a calendar year		
	Carbon Monoxide	LCP331 Gas turbine fired on natural gas	45 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] 50 mg/m^3 MSUL/MSDL to base load[2]	Daily mean of validated hourly averages		
			50 mg/m^3 70% to base load[1]	95% of validated hourly averages within a calendar year		
A1 [Point A1 on site plan in schedule 7]	Oxygen	LCP331 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
	Water vapour		-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**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
A1 [Point A1 on site plan in schedule 7]	Sulphur dioxide	LCP331 Gas turbine fired on natural gas	-	-	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]	As required by the Method Implementation Document for BS EN 15259	LCP331 Gas turbine fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A2 [Point A2 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP332 Gas turbine fired on natural gas	50 mg/m^3 70% to base load[1]	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			55 mg/m^3 70% to base load[1] 55 mg/m^3 MSUL/MSDL to base load[2]	Daily mean of validated hourly averages		
			90 mg/m^3 70% to base load[1]	95% of validated hourly averages within a calendar year		
A2 [point A2 on site plan in schedule 7]	Carbon Monoxide	LCP332 Gas turbine fired on	45 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	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
		natural gas	50 mg/m^3 70% to base load[1] 50 mg/m^3 MSUL/MSDL to base load[2]	Daily mean of validated hourly averages		
			50 mg/m^3 70% to base load[1]	95% of validated hourly averages within a calendar year		
A2 [Point A2 on site plan in schedule 7]	Oxygen	LCP332 Gas turbine fired on natural gas	-	-	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
A2 [Point A2 on site plan in schedule 7]	Sulphur dioxide	LCP332 Gas turbine fired on natural gas	-	-	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]	As required by the Method Implementation Document for BS EN 15259	LCP332 Gas turbine fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 [Point A3 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Auxiliary Boilers	140 mg/m^3	Periodic	Yearly	BS EN 14792

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A3 [point A3 on site plan in schedule 7]	Carbon Monoxide	Auxiliary Boilers	100 mg/m^3	Periodic	Yearly	BS EN 15058
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.						

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A1 [Point A1 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP331 Gas turbine fired on natural gas	50 mg/m^3 DLN effective to base load[1]	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m^3 DLN effective to base load[1] 55 mg/m^3 MSUL/MSDL to base load[2]	Daily mean of validated hourly averages		
			90 mg/m^3 DLN effective to base load[1]	95% of validated hourly averages within a calendar year		
			40 mg/m^3 DLN effective to base load[1]	Yearly average		
	Carbon Monoxide	LCP331 Gas turbine fired on	45 mg/m^3 DLN effective to base load[1]	Monthly mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
		natural gas	50 mg/m^3 DLN effective to base load[1] 50 mg/m^3 MSUL/MSDL to base load[2]	Daily mean of validated hourly averages		
			50 mg/m^3 DLN effective to base load[1]	95% of validated hourly averages within a calendar year		
			30 mg/m^3 DLN effective to base load[1]	Yearly average		
A1 [Point A1 on site plan in schedule 7]	Flow	LCP331 Gas turbine fired on natural gas	-	-	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
A1 [Point A1 on site plan in schedule 7]	Sulphur dioxide	LCP331 Gas turbine fired on natural gas	-	-	At least every 6 months	Concentration by calculation, as 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	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A1 [Point A1 on site plan in schedule 7]	As required by the Method Implementation Document for BS EN 15259	LCP331 Gas turbine fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A2 [Point A2 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 332 Gas turbine fired on natural gas	50 mg/m^3 DLN effective to base load[1]	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m^3 DLN effective to base load[1] 55 mg/m^3 MSUL/MSDL to base load[2]	Daily mean of validated hourly averages		
			90 mg/m^3 DLN effective to base load[1]	95% of validated hourly averages within a calendar year		
			40 mg/m^3 DLN effective to base load[1]	Yearly average		
A2 [point A2 on site plan in schedule 7]	Carbon monoxide	LCP No. 332 Gas turbine fired on natural gas	45 mg/m^3 DLN effective to base load[1]	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			50 mg/m^3 DLN effective to base load[1] 50 mg/m^3 MSUL/MSDL to base load[2]	Daily mean of validated hourly averages		
			50 mg/m^3 DLN effective to base load[1]	95% of validated hourly averages within a calendar year		

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
			30 mg/m^3 DLN is effective to base load[1]	Yearly average		
A2 [Point A2 on site plan in schedule 7]	Flow	LCP332 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	EN ISO 16911
	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
A2 [Point A2 on site plan in schedule 7]	Sulphur dioxide	LCP332 Gas turbine fired on natural gas	-	-	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]	As required by the Method Implementation Document for BS EN 15259	LCP332 Gas turbine fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 [Point A3 on site plan in Schedule 7]	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	Auxiliary Boilers	140 mg/m^3	Periodic	Yearly	BS EN 14792
A3 [point A3 on site plan in schedule 7]	Carbon monoxide	Auxiliary Boilers	100 mg/m^3	Periodic	Yearly	BS EN 15058

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
Note 1: This ELV applies when DLN is effective as defined in Table S1.5 of this permit. 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.						

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**
W1 on site plan in schedule 7 emission to River Welland	Total suspended solids	Process water, minor floor wash downs and storm water	30 mg/ml	Instantaneous	Monthly	BS EN 872
W1 on site plan in schedule 7 emission to River Welland	pH	Process water, minor floor wash downs and storm water	6-9	Instantaneous	Monthly	BS6068-2.50
W1 on site plan in schedule 7 emission to River Welland	Oil or grease	Process water, minor floor wash downs and storm water and surface water from the Spalding Power Station and Surface water from The Spalding Energy Expansion Limited (SEEL) Power Station (Permit EPR/P3732KC)	No visible emission	Instantaneous	Daily	-

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
S1 on site plan in schedule 7 emission to Anglian Water West Marsh Road Sewage Treatment Works	-	Domestic Sewage and Process effluent	-	-	-	-

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**
LCP331 and LCP332	Net electrical efficiency	After each modification that could significantly affect these parameters	EN Standards or equivalent	-

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Oxides of nitrogen	A1, A2	Every 3 months Every year	1 January, 1 April, 1 July, 1 October 1 January
Carbon Monoxide	A1, A2	Every 3 months Every year	1 January, 1 April, 1 July, 1 October 1 January
Sulphur dioxide	A1, A2	Every 6 months	1 January, 1 July
Oxides of nitrogen	A3	Every year	1 January
Carbon monoxide			
Emissions to Water Parameters as required by condition 3.5.1	W1	Every 3 months	1 January, 1 April, 1 July, 1 October

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

Table S4.2 Resource Efficiency Metrics	
Parameter	**Units**
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 NOx for each LCP	Annually	t
Total Emissions to Air of SO2 for each LCP	Annually	t
Total Emissions to Air of Dust for each LCP	Annually	t
Operating Hours for each LCP	Annually	hr

Media/ parameter	**Reporting format**	**Agency recipient**	**Date of form**
Air & Energy	Form IED AR1 – SO_2, NO_x and dust mass emission and energy	National and Area Office	As agreed in writing with the Environment Agency
LCP	Form IED HR1 – operating hours	National and Area Office	
Air	Form IED CON 2 – continuous monitoring	Area Office	
CEMs	Form IED CEM – Invalidation Log	Area Office	
Air	Form IED PM1 – discontinuous monitoring for SO2, NOx, PM and load	Area Office	
Resource Efficiency	Form REM1 – resource efficiency annual report	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.

"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 Commité Européen de Normalisation.

"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.

"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.

“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.

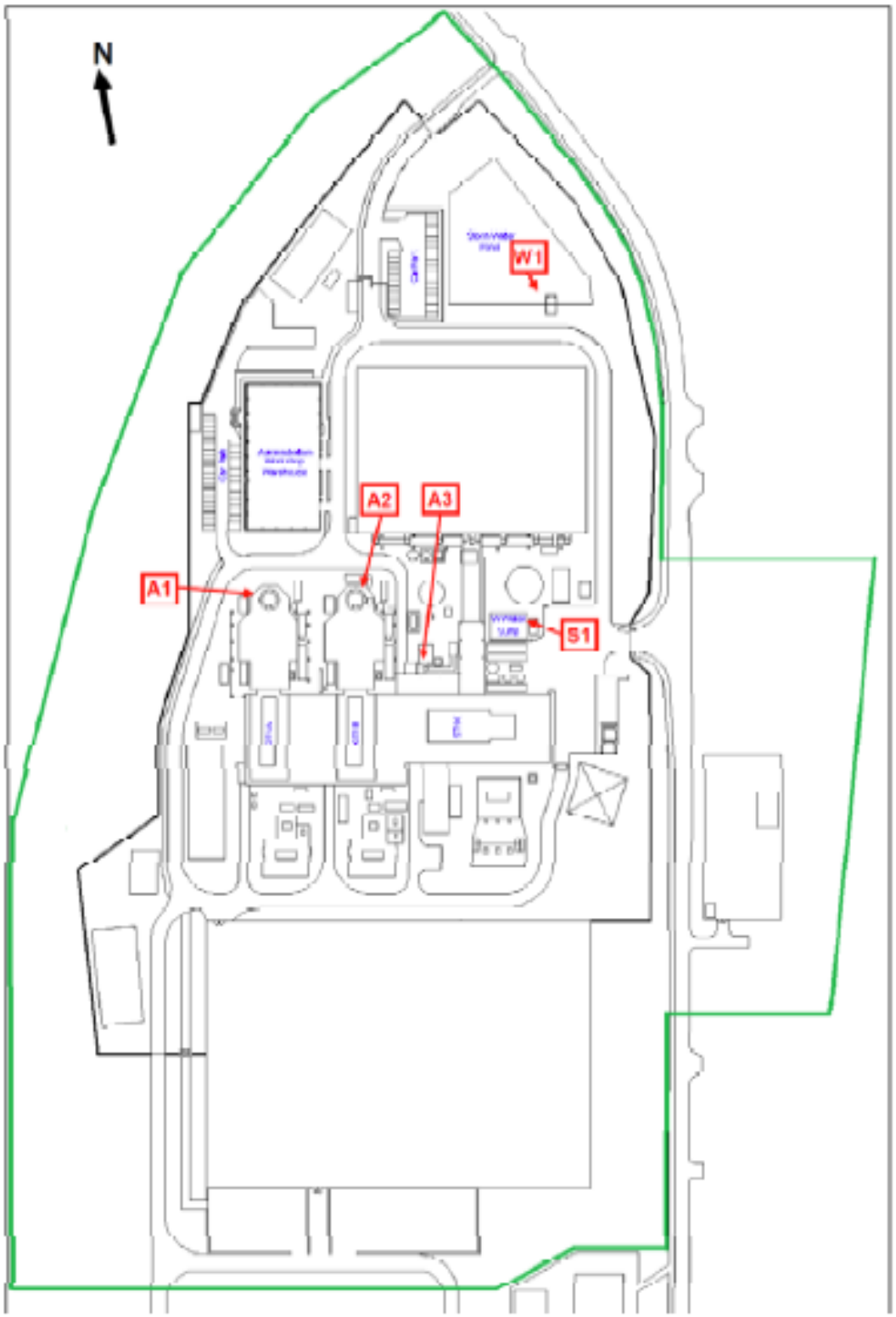
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- 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



END OF PERMIT