



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Winnington CHP Limited

Winnington Sodium Carbonate Manufacturing Site
Winnington
Northwich
Cheshire
CW8 4GX

Variation application number

EPR/EP3337NY/V003

Permit number

EPR/EP3337NY

Winnington Sodium Carbonate Manufacturing Site

Permit number EPR/EP3337NY

Introductory note

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

Under the Environmental Permitting (England & Wales) Regulations 2010 (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 1 of the notice specifies that all the conditions of the permit have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made and contains all conditions relevant to this permit.

The requirements of the Industrial Emissions Directive (IED) 2010/75/EU are given force in England through the Environmental Permitting (England and Wales) Regulations 2010 (the EPR) (as amended).

This Permit, for the operation of large combustion plant (LCP), as defined by articles 28 and 29 of the Industrial Emissions Directive (IED), is varied by the Environment Agency to implement the special provisions for LCP given in the IED, by the 1 January 2016 (Article 82(3)). The IED makes 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.

As well as implementing Chapter III of IED, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issued. It also modernises all conditions to reflect the conditions contained in our current generic permit template.

The Operator has chosen to operate this LCP under the Transitional National Plan (TNP) compliance route.

The variation notice uses updated LCP numbers in accordance with the most recent DEFRA LCP reference numbers. The old LCP reference number incorrectly covered both LCPs. The LCP references have changed as follows:

- LCP 169 is split and changed to LCP 117; and a new reference added:
- LCP 408.

The net thermal input of these LCP's is as follows: LCP 117 – 620.86MWth, arranged as two parallel CCGT trains with emissions venting through emission points A1 and A2 located within a common windshield of height 60m (comprising GT1A-139.42MWth, GT1B-139.42MWth, HRSG1A-171.01MWth, HRSG1B-171.01MWth). LCP408 – 389.02MWth, comprising three 130MWth package boilers D, E, F with emissions that vent through emission points A5, A6 and A7 and located within a common windshield of height 60m.. Both GT's can also operate in open cycle and emit gases through their relevant bypass stack emission points A3 or A4, height 35m.

The main features of the installation are as follows:-

- A Combined Heat and Power (CHP) plant which originally provided steam (400MW) and electricity (140MW) to the sodium carbonate production plant at the Winnington site, and a separate PPC installation to the East of Northwich (Lostock Sodium Carbonate Manufacturing Site) together with a small Sodium Bicarbonate plant on the same site, along a 5km pipeline. The Winnington sodium carbonate manufacturing plant is now largely closed and hence production of steam is mainly for the Lostock site. Around 98MW of electricity is now produced.
- Some electricity is exported to the National Grid
- The two Gas turbines are fired by natural gas, and each are equipped with a heat recovery steam generator, each flue passes into a single windshield forming the LCP. The steam generated is then passed through a single steam turbine which has been recently replaced in 2014 for a smaller unit to produce electricity. The residual steam is used within the sodium carbonate and Sodium Bicarbonate manufacturing processes and condensed steam as water is returned to the CHP for re-use

- One of the GTs can run in open cycle this type of use is limited to <500hr emergency operation.
- There are 3 boilers on standby in order to provide a steam supply in the event of the CCGT not being available. These can be run on natural gas or distillate (low sulphur) oil
- Emissions from the plant include combustion gases (mainly carbon and nitrogen oxides) to air. An effluent flow (mainly water treatment plant, boiler blowdown and cooling tower purge water) is directed via the sodium carbonate effluent treatment system, which is controlled by the permit holder (permit SP3630BE). The discharge is continuously monitored for pH and temperature. Some solid and liquid wastes are produced during normal operation and during routine maintenance. The plant also releases some heat and noise energy to the environment.

The schedules specify the changes made to the permit.

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

Status log of the permit		
Description	Date	Comments
Application SP3130BU	Duly made 31/08/05	
Additional information received	12/12/05	
Response to Schedule 4 Notice	Received 20/01/06	
Permit determined SP3130BU	30/06/06	Original permit issued to E.ON UK CHP Limited
Application EPR/EP3337NY/T001 (full transfer of permit EPR/SP3130BU)	Duly made 06/08/13	Application to transfer the permit in full to Winnington CHP Limited
Transfer determined EPR/EP3337NY	30/08/13	Full transfer of permit complete
Application EPR/EP3337NY/V002	Duly made 06/06/14	Application to vary permit to allow gas turbine to run open cycle for 500 hours per year.
Variation determined EPR/EP3337NY (Billing Ref: VP3532VV)	01/09/14	Varied permit issued.
Regulation 60 Notice sent to the Operator	09/12/14	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	31/03/15	Response received from the Operator.
Additional information received	03/07/15	Response to request for further information (RFI) dated 03/06/15.

Status log of the permit		
Description	Date	Comments
Additional information received	06/11/15	Confirmation of compliance route by operator.
Variation determined EPR/EP3337NY/V003 (PAS Billing ref: CP3934AC)	23/12/15	Varied and consolidated permit issued in modern condition format. Variation effective from 01/01/2016.

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
TATA Chemicals Europe Limited	EPR/SP3630BE	09/02/07
INEOS Enterprises Limited	EPR/BS5444IA	22/06/06
INEOS Technologies Limited	EPR/BP3639XN	05/02/08

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

Permit number

EPR/EP3337NY

Issued to

Winnington CHP Limited (“the operator”)

whose registered office is

**Mond House, Winnington
Northwich
Cheshire
CW8 4DT**

company registration number **08568552**

to operate a regulated facility at

**Winnington Sodium Carbonate Manufacturing Site
Winnington
Northwich
Cheshire
CW8 4GX**

to the extent set out in the schedules.

The notice shall take effect from 01/01/2016

Name	Date
Anne Nightingale	23/12/2015

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 2010

Permit number

EPR/EP3337NY

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/EP3337NY/V003 authorising,

Winnington CHP Limited (“the operator”),

whose registered office is

**Mond House, Winnington
Northwich
Cheshire
CW8 4DT**

company registration number **08568552**

to operate an installation/part of an installation at

**Winnington Sodium Carbonate Manufacturing Site
Winnington
Northwich
Cheshire
CW8 4GX**

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

Name	Date
Anne Nightingale	23/12/2015

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 recovered with a high level of energy efficiency and 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 cross hatched in blue, (excluding the triangular car park area) 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: LCP117 and LCP408. Without prejudice to condition 2.3.1, the activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” revision 1 dated February 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 Emergency generators/alarms/sirens/relief valves shall only be tested between the hours of 09.00 to 17.00hrs Monday to Friday and not on any Public Holiday.

2.3.5 The operator shall give at least two working days notice of any planned testing or operation of any plant described in condition 2.3.4 or any others which are likely to cause annoyance. If an emergency situation results in the operation of such equipment and is likely to cause annoyance, the operator shall inform the Agency without delay of the reasons for the emergency and the expected duration.

2.3.6 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.7 Activities referenced in schedule 1, table S1.1: LCP408 (Package boilers); the standby fuel, distillate fuel oil, may be used for periods of up to 10 days during times of interruption to the gas supply.

- 2.3.8 Activities referenced in schedule 1, table S1.1: LCP117 (GT 1A, GT 1B) shall not operate in open cycle mode for more than 500 hours per year.
- 2.3.9 Activities referenced in schedule 1, table S1.1: LCP117 and LCP408 shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.4 for the end of the start up period and the start of the shutdown period.
- 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 S3.1a, S3.1b, S3.1c, S3.1d, S3.2 and S3.3.
- 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 tables S3.1a, S3.1b, S3.1c and S3.1d, of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.
- 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 S3.1a, S3.1b, S3.1c, S3.1d, S3.2, and S3.3;

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continuous), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1a, S3.1b, S3.1c, S3.1d, and S3.2 unless otherwise agreed in writing by the Environment Agency.

3.6 Monitoring for the purposes of the Industrial Emissions Directive Chapter III

- 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.
- 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's shall be subject to quality control by means of parallel measurements with reference methods at least once every calendar year.
- 3.6.4 Unless otherwise agreed in writing by the Environment Agency in accordance with condition 3.6.5 below, the operator shall carry out the methods, including the reference measurement methods, to use and calibrate continuous measurement systems in accordance with the appropriate CEN standards.
- 3.6.5 If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall be used, as agreed in writing with the Environment Agency.
- 3.6.6 Where required by a condition of this permit to check the measurement equipment, the operator shall submit a report to the Environment Agency in writing, within 28 days of the completion of the check.
- 3.6.7 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3, table S3.1a, S3.1b, S3.1c, and S3.1d; the Continuous Emission Monitors shall be used such that:
- (a) for the continuous measurement systems fitted to the LCP release points defined in Table S3.1a, S3.1b, S3.1c, S3.1d, the validated hourly, monthly 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 (40 minutes). Such discretionary periods are not to exceed more than 5 in any one 24-hour period unless agreed in writing. Where plant may be operating for less than the 24-hour period, such discretionary periods are not to exceed more than one quarter of the overall valid hourly average periods unless agreed in writing; and
 - (f) any day, in which more than three hourly average values are invalid shall be invalidated.

4 Information

4.1 Records

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

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

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

4.2 Reporting

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

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

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the resource efficiency metrics set out in schedule 4 table S4.2;
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- (d) where condition 2.3.8 applies the hours of operation in any year; and
- (e) where condition 2.3.7 applies, the start date and time, and the days and hours of operation for each period of standby fuel operation.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 For the following activities referenced in schedule 1, table S1.1: LCP117 and LCP408. 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.

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
A1	Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	<p>LCP117: Operation of a natural gas fired combined heat and power (CHP) plant for production of steam and electricity comprising GT1A,HRSG1A,GT2A,HRSG2A</p> <p>LCP408: Operation of 3 natural gas fired boilers for production of steam comprising boilers D, E, F.</p> <p>LCP117: Operation of natural gas fired, gas turbine GT1A or GT1B in open cycle for <500hr/annum emergency operation for production of electricity.</p> <p>LCP117: Operation of fresh air fired heat recovery boiler HRSG1A, HRSG2A for production of steam and electricity. (Note it is not BAT to operate a WHRB in auxiliary mode other than in emergency and there is a credible plan for recovery of the GT)</p>	From receipt of natural gas or distillate gas oil to discharge of exhaust gases and wastes, and the generation of electricity and steam for use in the heat recovery boilers, steam turbine and for export.
	Directly Associated Activity		
A2	Directly associated activity	Operation of a diesel generator (A8), diesel fire pump (A9) and diesel engine gas turbine starter x2 (A10). All individually <1MWth.	From receipt of gas oil to discharge of exhaust gases and wastes.
A3	Directly associated activity	Surface water drainage	Handling and storage of site drainage until discharge to the site surface water system.
A4	Directly associated activity	Water treatment	From receipt of raw materials to dispatch to chemical effluent and dirty water system.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application SP3130BU	Sections 1.2, 1.4, 1.6 and 1.8 of the application document in response to section 3a – technical standards , Part B of the application form.	31/08/05
Additional information supplied	Items 1- 10	12/12/05
Response to Schedule 4 Notice	Item 1	20/01/06
Application EPR/EP3337NY/V002	Part C3 of the application Section 3 all parts	17/04/14
Response to regulation 60(1) Notice – request for information dated 09/12/14	Compliance route and operating techniques identified in response to questions 2 (compliance routes), 4 (configuration), 5 (net thermal input), 6 (MSUL/MSDL), 9ii (plant efficiency), 10 (monitoring derogation), 11 (monitoring). Excluding compliance route ELV and limited running for LCP117 and LCP408, and related operating techniques.	Received 31/03/15
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 03/06/15	Compliance route(s) and operating techniques identified in response to questions 5 (net thermal input), 6 (MSUL/MSDL), 9ii (plant efficiency), 11 (monitoring	Received 03/07/15
Receipt of additional information to the regulation 60(1) Notice.	Confirmation of the compliance routes chosen for LCP117 and LCP408 and thermal input of diesel generators.	Received 06/11/15

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC 1a	Prepare a formal structured accident management plan in line with the Agency's Combustion Sector Guidance Note with particular regard to Section 2.8. This shall include appropriate discussion with the other operators of the Winnington Sodium Carbonate manufacturing site in order to identify and address any hazards which have an impact on accidents occurring across permit boundaries. Prepare an action plan for any proposed improvements. Submit a report describing the methodology used, any actions arising and proposed timescales to the Agency.	Completed
IC 1b	The operator shall implement the accident management plan and the action plan of proposed improvements.	Completed
IC 2a	Complete a waste minimisation audit in line with the Agency's Combustion Sector Guidance Note with particular regard to Section 2.4.2. This shall include, but shall not be limited to, appropriate discussion with the other operators of the Winnington Sodium Carbonate manufacturing site in order to identify and address any opportunities for waste minimisation across permit boundaries. Prepare an action plan for any proposed improvements. Submit a report describing the methodology used and proposed timescales to the Agency.	Completed
IC 2b	The operator shall implement the action plan of proposed improvements.	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC 3a	Complete a water minimisation audit in line with the Agency's Combustion Sector Guidance Note with particular regard to Section 2.4.3. This shall include, but shall not be limited to, appropriate discussion with the other operators of the Winnington Sodium Carbonate manufacturing site in order to identify and address any opportunities for water minimisation across permit boundaries. Prepare an action plan for any proposed improvements. Submit a report describing the methodology used and proposed timescales to the Agency.	Completed
IC 3b	The operator shall implement the action plan of proposed improvements.	Completed
IC 4	A representative analytical survey of the effluents discharged via emission points W1 and W2 shall be carried out. This shall determine the typical ranges of levels of contaminants including ammonia, mercury, cadmium, available chlorine, suspended solids and oils. A report shall be submitted to the Agency to include the results of this survey.	Completed
IC 5a	Provide appropriate information to demonstrate whether the emission limit value for NO _x (300mg/m ³) in Table 2.2.2 for emission points A5, A6 and A7 can be achieved from January 2008. Otherwise include a proposal for actions to enable the plant to meet this limit. A report shall be submitted to the Agency.	Completed
IC 5b	The operator shall implement the action plan of proposed improvements (if a plan is proposed).	Completed
IC 6a	Develop a noise management plan in line with the Agency's Horizontal Guidance for Noise Part 2 Noise Assessment and Control with particular regard to Section 3.3.4 and Appendix 4. This shall include, but shall not be limited to, appropriate discussion with other operators of the Winnington Sodium Carbonate manufacturing site in order to identify and address any opportunities for improved control of noise across permit boundaries and to minimise the overall noise levels emitted by the Installation. In particular, noisy operations at start-up, shutdown and abnormal operation including venting of steam shall be reviewed. Proposals for appropriate noise surveys, with reference shall also be included. Prepare an action plan for any proposed improvements. Submit a report describing the noise management plan and any proposed timescales to the Agency.	Completed
IC 6b	The operator shall implement the noise management plan and the action plan of proposed improvements.	Completed
IC 7a	The operator shall review the requirements for compliance with the Agency's MCERTS monitoring certification system as described in Condition 2.10.4(Permit: EPR/EP337NY, transferred 30-08-13). The operator shall submit proposals to the Agency for achieving compliance with these standards for all monitoring required by this permit. This shall include equipment, procedures, operator training and maintenance of equipment amongst others.	Completed
IC 7b	The operator shall implement the proposals for achieving compliance with MCERTS.	

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC 8	<p>The operator shall submit to the Environment Agency justification for the circumstances under which it may be BAT to operate a combined cycle gas turbine (CCGTs) in open cycle mode in the balancing market or other operating regimes for over 500 hours. Parameters to consider should include:</p> <ul style="list-style-type: none"> ▪ Emissions to air and impact on human health ▪ Energy efficiency ▪ Cost benefit assessment comparing alternative technologies <p>The Environment Agency will use this information along with information from other industry and National Grid to determine generic BAT conditions for the open cycle operation of CCGTs in competition with closed cycle plants.</p> <p>The operator should have regard to the requirements of the balancing market (e.g. start up time requirements) and define a maximum run time beyond which the service should be provided by high efficiency plant.</p>	01/03/16
IC 9	The Operator shall submit a report on the feasibility of carrying out emissions monitoring during open cycle operation. The report shall include results from any monitoring that has been carried out during open cycle operation and how the results would relate to possible emission limit values.	Completed
IC10	For LCPD LCP 169 (now LCP 117 and 408 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 LCPD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.	28/01/16

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 (%) or steam flow rate in tonnes/hour and as percent of rated thermal output (%)	“Minimum Shut-Down Load” Load in MW and as percent of rated power output (%) or steam flow rate in tonnes/hour and as percent of rated thermal output (%)
A1 LCP117 (GT1A & HRSG1A)	28 MW; 70% of GT load	28MW; 70% of GT load
A2 LCP117 (GT1B & HRSG1B)	28 MW; 70% of GT load	28 MW; 70% of GT load
A3 LCP117 (GT1A – open cycle)	28 MW; 70% of GT load	28 MW; 70% of GT load

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 (%) or steam flow rate in tonnes/hour and as percent of rated thermal output (%)	“Minimum Shut-Down Load” Load in MW and as percent of rated power output (%) or steam flow rate in tonnes/hour and as percent of rated thermal output (%)
A4 LCP117 (GT1B-open cycle)	28 MW; 70% of GT load	28 MW; 70% of GT load
A5 LCP408 (Package boiler D)	30t/hr; 25%	30t/hr; 25%
A6 LCP408 (Package boiler E)	30t/hr; 25%	30t/hr; 25%
A7 LCP408 (Package boiler F)	30t/hr; 25%	30t/hr; 25%

Schedule 2 – Waste types, raw materials and fuels

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

Schedule 3 – Emissions and monitoring

Emission point ref. & location	Parameter	Source	Limit (including unit)- these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A1- GT1A & HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 GT1B & HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 117 CCGT fired on natural gas	60 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			66 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
			120 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1- GT1A & HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 GT1B & HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Carbon Monoxide	LCP No. 117 CCGT fired on natural gas	100 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
			110 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
			200 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1- GT1A & HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 GT1B & HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Sulphur dioxide	LCP No. 117 CCGT fired on natural gas	-	-	At least every six months	Concentration by calculation, as agreed in writing with the Environment Agency
A1- GT1A & HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 GT1B & HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Oxygen	LCP No. 117 CCGT fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1a Point source emissions to air from CCGT						
Emission point ref. & location	Parameter	Source	Limit (including unit)- these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A1- GT1A & HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 GT1B & HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Water Vapour	LCP No. 117 CCGT fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A1- GT1A & HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 GT1B & HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Stack gas temperature	LCP No. 117 CCGT fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A1- GT1A & HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 GT1B & HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Stack gas pressure	LCP No. 117 CCGT fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A1- GT1A & HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 GT1B & HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Stack Gas Volume Flow	LCP No. 117 Gas turbine fired on natural gas	-	-	Continuous	BS EN 16911 & TGN M2

Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A1- GT1A & HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 GT1B & HRSG1B [Point A2 on Drawing 2 in Schedule 7]	As required by the Method Implementation Document for BS EN 15259	LCP No. 117 CCGT fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259

Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down. <small>Note 1</small>	Reference period	Monitoring frequency	Monitoring standard or method
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 117 Heat Recovery Boiler fired on natural gas	120 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
			132 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
			240 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7] A1 HRSG1A	Carbon Monoxide	LCP No. 117 Heat Recovery Boiler fired on natural gas	100 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
			110 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
			200 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

Table S3.1b Point source emissions to air from natural gas fired Waste Heat Recovery Boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down. ^{Note 1}	Reference period	Monitoring frequency	Monitoring standard or method
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Sulphur dioxide	LCP No. 117 Heat Recovery Boiler fired on natural gas	35mg/m ³	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Dust	LCP No. 117 Heat Recovery Boiler fired on natural gas	5mg/m ³	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Oxygen	LCP No. 117 Heat Recovery Boiler fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Water Vapour	LCP No. 117 Heat Recovery Boiler fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Stack gas temperature	LCP No. 117 Heat Recovery Boiler fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards

Table S3.1b Point source emissions to air from natural gas fired Waste Heat Recovery Boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down. ^{Note 1}	Reference period	Monitoring frequency	Monitoring standard or method
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Stack gas pressure	LCP No. 117 Heat Recovery Boiler fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Stack gas volume flow	LCP No. 117 Heat Recovery Boiler fired on natural gas	-	-	Continuous	BS EN 16911 & TGN M2
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	As required by the Method Implementation Document for BS EN 15259	LCP No. 117 Heat Recovery Boiler fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A1 HRSG1A [Point A1 on Drawing 2 in Schedule 7] A2 HRSG1B [Point A2 on Drawing 2 in Schedule 7]	Operating hours	LCP No. 117 Heat Recovery Boiler fired on natural gas	-	-	Continuous	As agreed in writing with the Environment Agency

Note 1: It is not BAT to operate a WHRB in auxiliary mode other than in an emergency. Under emergency (abnormal) conditions, where the GT is taken off-line and where the operator has a credible plan to recover operation of the GT, the Regulator will permit the operation of the WHRB in auxiliary mode at 15% Oxygen reference conditions.

Table S3.1c Point source emissions to air from OCGT <500hr						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference Period	Monitoring frequency	Monitoring standard or method
<p>A3 GT1A – Bypass stack[Point A3 on Drawing 2 in Schedule 7]</p> <p>A4 GT1B – Bypass stack[Point A3 on Drawing 2 in Schedule 7]</p>	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 117 Gas turbine fired on natural gas	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
<p>A3 GT1A – Bypass stack[Point A3 on Drawing 2 in Schedule 7]</p> <p>A4 GT1B – Bypass stack[Point A3 on Drawing 2 in Schedule 7]</p>	Sulphur dioxide	LCP No. 117 Gas turbine fired on natural gas	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
<p>A3 GT1A – Bypass stack[Point A3 on Drawing 2 in Schedule 7]</p> <p>A4 GT1B – Bypass stack[Point A3 on Drawing 2 in Schedule 7]</p>	CO	LCP No. 117 Gas turbine fired on natural gas	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency

Table S3.1d Point source emissions to air from natural gas fired Package boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7] A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7] A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP408 Boiler plant fired on natural gas	300 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
			330 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
			330mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7] A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7] A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]	Carbon Monoxide	LCP408 Boiler plant fired on natural gas	100 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
			110 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
			200 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

Table S3.1d Point source emissions to air from natural gas fired Package boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
<p>A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7]</p> <p>A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7]</p> <p>A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]</p>	Sulphur dioxide	LCP No. 408 Boiler plant fired on natural gas	35mg/m ³	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
<p>A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7]</p> <p>A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7]</p> <p>A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]</p>	Dust	LCP No. 408 Boiler plant fired on natural gas	5mg/m ³	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency

Table S3.1d Point source emissions to air from natural gas fired Package boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
<p>A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7]</p> <p>A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7]</p> <p>A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]</p>	Oxygen	LCP408 Boiler plant fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
<p>A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7]</p> <p>A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7]</p> <p>A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]</p>	Water Vapour	LCP408 Boiler plant fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1d Point source emissions to air from natural gas fired Package boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7] A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7] A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]	Stack gas temperature	LCP408 Boiler plant fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7] A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7] A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]	Stack gas pressure	LCP408 Boiler plant fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards

Table S3.1d Point source emissions to air from natural gas fired Package boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
<p>A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7]</p> <p>A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7]</p> <p>A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]</p>	Stack gas volume flow	LCP408 Boiler plant fired on natural gas	-	-	Continuous	BS EN 16911 & TGN M2
<p>A5 Package Boiler D [Point A4 on Drawing 2 in Schedule 7]</p> <p>A6 Package Boiler E [Point A5 on Drawing 2 in Schedule 7]</p> <p>A7 Package Boiler F [Point A6 on Drawing 2 in Schedule 7]</p>	As required by the Method Implementation Document for BS EN 15259	LCP408 Boiler plant fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259

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 Drawing 2 in Schedule 7 (via outfall 5) to River Weaver Navigation	pH	Combined process effluent and contaminated drains	5 – 9.5 (Note 1)	-	Continuous	As described in the Application
W1 on Drawing 2 in Schedule 7 (via outfall 5) to River Weaver Navigation	Temperature	Combined process effluent and contaminated drains	40 ⁰ C (Note 2)	-	Continuous	As described in the Application
W2 on Drawing 2 in Schedule 7 (via outfall 5) to River Weaver Navigation	pH	Combined process effluent and contaminated drains	5 – 9.5 (Note 1)	-	Continuous	As described in the Application
W2 on Drawing 2 in Schedule 7 (via outfall 5) to River Weaver Navigation	Temperature	Combined process effluent and contaminated drains	40 ⁰ C (Note 2)	-	Continuous	As described in the Application

Note 1: The emission will comply if the measured pH is no more than 0.5 units outside the limit range for no longer than one hour.

Note 2: The emission limit will comply if the measured temperature is no more than 5⁰ C above the limit for no longer than one hour.

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 (W3 Foul sewer on Drawing 2 in Schedule 7) to United Utilities plc	-	Domestic Effluent	-	-	-	-

Table S3.4 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 TNP Limit	LCP117 – Winnington

Table S3.4 Annual limits (excluding start up and shut down except where otherwise stated).				
Substance	Medium	Limit (including unit)		Emission Points
		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	CHP CCGT. Emission points A1, A2, A3, A4 LCP408 - Winnington CHP Boiler Train. Emission points A5, A6, A7
		01/01/20-30/06/20		

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, A3, A4, A5, A6, A7	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every 6 months for periodic monitoring	1 January, 1 July
		Every 2 years for <500hr OC plant	1 January
Carbon Monoxide	A1, A2, A3, A4, A5, A6, A7	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every 6 months for periodic monitoring	1 January, 1 July
		Every 2 years for <500hr OC plant	1 January
Sulphur dioxide	A1, A2, A3, A4, A5, A6, A7	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every 6 months for periodic monitoring	1 January, 1 July
		Every 2 years for <500hr OC plant	1 January
Dust	A1, A2, A3, A4, A5, A6, A7	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every 6 months for periodic monitoring	1 January, 1 July
Emissions to Water Parameters as required by condition 3.5.1	W1	Every 6 months	1 January, 1 July
Operating hours WHRB 1A and 1B in auxiliary fresh air fire mode	A1, A2	Every 6 months	1 January, 1 July

Table S4.2: Resource Efficiency Metrics	
Parameter	Units
Electricity Exported	GW hr
Heat Exported	GW hr

Table S4.2: Resource Efficiency Metrics	
Parameter	Units
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 Chapter III Performance parameters for reporting to DEFRA		
Parameter	Frequency of assessment	Units
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	TJ
Total Emissions to Air of NO _x for each LCP	Annually	t
Total Emissions to Air of SO ₂ for each LCP	Annually	t
Total Emissions to Air of Dust for each LCP	Annually	t
Operating Hours for each LCP	Annually	hr

Table S4.4 Reporting forms				
Media/ parameter	Reporting format	Starting Point	Agency recipient	Date of form
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy	01/01/16	National	31/12/15
Air	Form IED RTA1 –TNP quarterly emissions summary log	01/01/16	National	31/12/15
LCP	Form IED HR1 – operating hours	01/01/16	National	31/12/15

Table S4.4 Reporting forms				
Media/ parameter	Reporting format	Starting Point	Agency recipient	Date of form
Air	Form IED CON 1 – continuous monitoring.	01/01/16	Area Office	31/12/15
Air	Form IED CON 2 – continuous monitoring	01/01/16	Area Office	31/12/15
CEMs	Form IED CEM – Invalidation Log	01/01/16	Area Office	31/12/15
Air	Form IED PM1 - discontinuous monitoring and load.	01/01/16	Area Office	31/12/15
Resource Efficiency	Form REM1 – resource efficiency annual report	01/01/16	National	31/12/15
Water	Form water 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15

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	
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.

“biomass” means:

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

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

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

“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.

“disposal”. Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“DLN” means dry, low NO_x burners.

“dynamic emission limit value” (DELV) means an emission limit that varies in accordance with Article 40 of the Industrial Emissions Directive.

“emissions to land” includes emissions to groundwater.

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

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“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.

“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.

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

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

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

“MCR” means maximum continuous rating.

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

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

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

“ncv” means net calorific value.

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

Pests” means Birds, Vermin and Insects.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“SI” means site inspector.

“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.

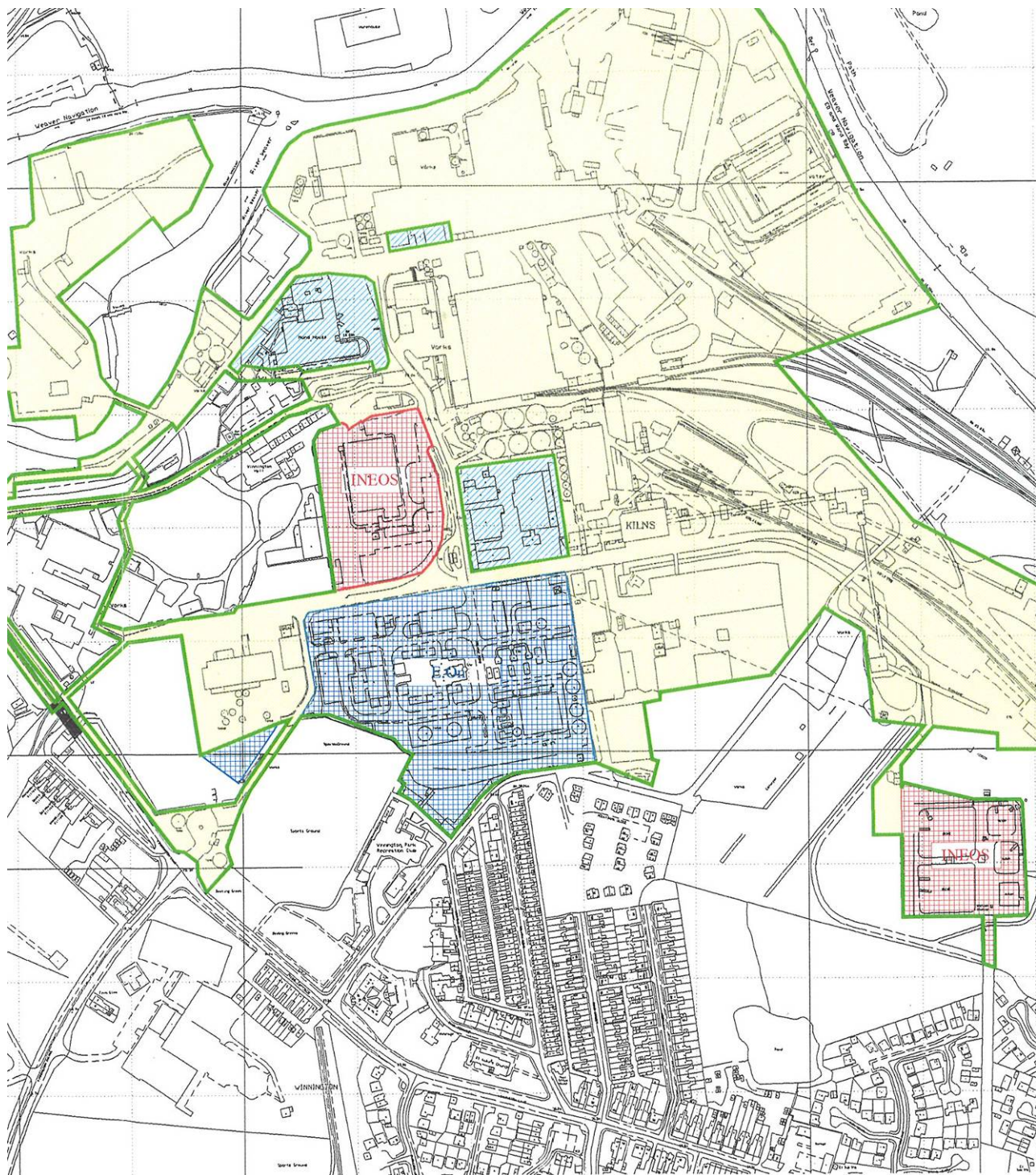
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- 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.

Schedule 7 – Site plan



	INSTALLATION BOUNDARY
LAND AREAS	
	BRUNNER MOND = 38.66 ha
	EXCLUDED ZONES = 1.72 ha
	Ineos = 1.21 ha (Brite Reservoir)
	Ineos = 1.43 ha (ECP)
	E-De = 3.76 ha (including triangular car park)

Drawing 2

Drawing 2

WINNINGTON CHP SITE PLAN
SHOWING LOCATION OF
CHEMICAL STORAGE, WASTE SKIPS
& ATMOSPHERIC EMISSIONS



END OF PERMIT