

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Lynemouth Power Limited
Lynemouth Power Station
Ashington
Northumberland
NE63 9NW

Variation application number

EPR/FP3137CG/V009

Permit number

EPR/FP3137CG

Lynemouth Power Station

Permit number EPR/FP3137CG

Introductory note

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

Under the Environmental Permitting (England & Wales) Regulations (EPR) 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.

The requirements of the Industrial Emissions Directive (IED) are given force in England through the EPR 2016. This permit, for the operation of large combustion plant (LCP), as defined by articles 28 and 29 of the IED, already implements the special provisions for LCP given in the IED. The IED makes special provisions for LCP under Chapter III and contains ELVs applicable to LCP, referred to in Article 30(2) and set out in Annex V.

This variation is required to assess the permit for compliance with the revised Best Available Techniques (BAT) Conclusions for the LCP sector published on 17 August 2017 including the incorporation of relevant BAT Associated Emission Levels (AELs) into the permit.

Schedule 2 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.

Purpose of this variation:

Review permit conditions

Article 21(3) of the 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 BAT Conclusions. We have reviewed the permit for this installation against the revised BAT Conclusions for the LCP sector published on 17 August 2017. Only activities covered by this BAT Reference Document have been reviewed and assessed.

Derogations

Article 15(4) of the IED enables the Environment Agency to allow derogations from BAT AELs stated in the BAT Conclusions under specific circumstances. Derogations from BAT AELs were requested for the BAT conclusions listed below. A brief explanation of each is included in the Annex to the conditions of this permit:

- **BAT 24** - Non time limited derogation from the oxides of nitrogen (NO_x) BAT AELs.
- **BAT 26** - Non time limited derogation from the dust BAT AELs.

Derogated limits are applicable until 31 March 2027 or until the next permit review, whichever is sooner.

Key changes made as a result of the permit review:

This variation makes the key changes set out below following the permit review under Article 21(3) of the IED:

- An improvement condition requiring the operator to demonstrate compliance with BAT Conclusion 4 relating to emissions of hydrogen chloride (HCl) by 17 August 2021.
- An improvement condition to determine appropriate longer-term emission limits for NO_x and dust, refer to the Annex to the conditions of this permit.
- An improvement condition for an update on the March 2027 timeline for the NO_x and dust derogations.
- Revised emission limits and monitoring requirements for emissions to air applicable at the end of the Transitional National Plan (TNP) on 01 July 2020 until 16 August 2021, in table S3.1a of this permit.

- Revised emission limits and monitoring requirements for emissions to air applicable from 17 August 2021, in table S3.1b of this permit.
- Inclusion of process monitoring for electrical efficiency in table S3.4 of this permit.

This variation makes the additional key changes set out below in accordance with IED Chapter II requirements:

- Inclusion of air emission points AU5 to AU25 to the relevant tables in Schedule 3 of this permit.
- Inclusion of an improvement condition to assess the impact of the emissions listed in the bullet above.

The main features of the installation are as follows:

Lynemouth Power Station is located adjacent to the North Sea on the Northumberland coast at National Grid Reference NZ 30498 89972. The nearest residential areas are the towns of Lynemouth, 800 m to the north-west and Newbiggin-by-the-Sea 1.4 km to the south. The Northumbrian Coast Special Area of Conservation (SAC) and Special Protection Area (SPA)/Ramsar sites are located 700 m to the south and 1.2 km to the north of the power station and coastal Sites of Special Scientific Interest (SSSIs) 500 m to the south and 1 km to the north of the site.

The power station falls under the following Schedule 1 listed activity descriptions:

Section 1.1 Part A(1)(a) - Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts.

Section 3.5 Part B(f) - Loading, unloading or storing pulverised fuel ash in bulk prior to further transportation in bulk.

Section 5.4 Part A(1) (b) (iii) - Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving treatment of slags and ashes.

The power station was commissioned in 1972, at which time it was designed to burn Northumberland coal and primarily provide power to a nearby aluminium smelter. With the closure of the smelter and the changes in coal fired plant economics, coal burning ceased in December 2015 to allow for the conversion of the plant to combust 100% biomass.

Conversion to biomass has been undertaken under the Transitional National Plan (TNP), with a resultant decrease in emissions to air primarily of oxides of nitrogen (NO_x), dust and sulphur dioxide (SO₂).

The power station is a LCP comprising three identical pulverised solid biomass-fuelled boilers with a net thermal input of 1050 MW (3 x 350 MW) providing electricity to the National Grid. The high pressure steam produced drives three steam turbine generators. Each generator unit is capable of having an output of 140 MWe, for a total gross output of 420 MWe.

A LCP is defined as a combustion plant discharging waste gases through a common windshield, where the total thermal input is 50 MW or more.

The boilers vent via three flues within a common windshield (stack height 114 metres) at emission points AU1, AU2 and AU3. The virgin biomass pellets are imported from various sources and delivered to site by train and road.

The conversion to 100% biomass required substantial changes to the original fuel handling and combustion systems; however building infrastructure, and major plant systems and components such as cooling water systems, boilers, turbines etc. have not been substantially modified from the existing plant, and as such, the plant is classed as an 'existing plant' under the IED.

Additional primary and secondary measures were implemented to improve the efficiency of biomass combustion and reduce emissions to air:

- Low NO_x burners (primary)
- Boosted Over Fire Air (BOFA) (primary)
- Upgrading of existing electrostatic precipitators (ESPs) to improve control of dust (secondary).

The efficient once-through cooling system uses cold water from the North Sea. Returning cooling water and treated boiler water are discharged to the North Sea via an outfall at emission point W3. The sewage treatment plant discharges via emission point W1.

Biomass ash is transferred to the adjacent ash storage lagoon (permit number EPR/FP3437CZ) until alternative uses are established, or treated at this site to meet an agreed specification prior to resale.

The installation has an Environmental Management System (EMS) accredited to ISO14001 and ESOS Regulations certified to ISO50001:2011.

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

Status log of the permit		
Description	Date	Comments
Application EPR/BL6861IT/A001	14/12/01	
Request for information dated 10/04/02	04/05/02	Response received
Request for information dated 20/05/02	14/06/02	Response received
Request for information dated 26/07/02	30/09/02	Response received
Site Report	24/10/02	Received
Noise Survey	01/11/02	Received
Permit issued EPR/BL6861IT	14/05/03	Determined
Variation Application (WP3830BQ) EPR/BL6861IT/V002	13/09/04	<ol style="list-style-type: none"> 1. Recycle third party anode butts. Additional storage buildings 2. Extension of introduction of new limit for HALE 3. Increase sulphur content of green anode
Additional information received	18/01/04	
Variation issued EPR/BL6861IT/V002	09/11/04	Determined
Variation Application (YP3631SV) EPR/BL6861IT/V003	25/07/05	<ol style="list-style-type: none"> 1. Modifications to potline emissions 2. Modification to A17 emission limits 3. Potline operating amperage 4. 12 monthly rolling average dust reporting 5. Specify areas for spent potline storage demolition and crushing/screening 6. Chlorine abatement plant
Variation issued EPR/BL6861IT/V003	10/08/05	Determined
Variation Application (Substantial) (UP3234LL) EPR/BL6861IT/V004	31/03/06	Extend installation boundary to include Power Station
Request for further information dated 15/06/06	17/08/06	Response received

Status log of the permit		
Description	Date	Comments
Request for further information dated 14/07/06	17/08/06	Response received
Request for further information dated 11/08/06	31/08/06	Response received
Response to request for further information	06/08/07	
Variation issued (Consolidated Permit) EPR/BL6861IT/V004	31/10/07	Determined
Variation Application (KP3935GM) EA/EPR/BL6861IT/V005	31/10/08	12 changes to various aspects of the permit
Response to request for further information	28/10/08	
Response to request for further information	13/02/09	
Variation issued EA/EPR/BL6861IT/V005	20/02/09	Determined
Variation Application (UP3332TT) EA/EPR/BL6861IT/V006	04/05/10	Administrative change to amend the permit holders registered office address
Variation issued EA/EPR/BL6861IT/V006	27/05/10	Determined
Variation determined (QP3236TF) EA/EPR/BL6861IT/V007	18/06/10	Environment Agency initiated variation to implement the requirements of the Pollution, Prevention and Control (Combustion Plants) (England) Directions 2007
Variation Application (SP3130HF) EA/EPR/BL6861IT/V008	08/09/10	Variation to amend the methodology & mass emissions reporting, removal of rolling reduction in emission limits, use of PFO and RALF
Variation issued EA/EPR/BL6861IT/V008	06/12/10	Determined
Variation Application (MP3434HF) EA/EPR/BL6861IT/V009	28/07/11	Conversion of the power station to 100% biomass fuel
Requests for further information 09/08/11 17/08/11 18/08/11 14/10/11	17/08/11 20/08/11 12/09/11 26/10/11	Received

Status log of the permit		
Description	Date	Comments
Variation issued EA/EPR/BL6861IT/V009	15/11/11	Determined
Transfer Application EPR/BL6861IT/T001	28/11/12	To transfer the power station section of permit EPR/BL6861IT, to Lynemouth Power Limited.
Transfer issued EPR/FP3137CG	18/12/12	Transfer of power station complete.
Environment Agency Initiated Variation EPR/FP3137CG/V002	11/03/13	Environment Agency initiated variation to add IC22, to ensure compliance with the Eels Regulations Determined
Variation Application EPR/FP3137CG/V003	24/04/14	Application to extend site boundary and include new coal storage area
Variation issued EPR/FP3137CG/V003	12/05/14	Determined
Environment Agency Initiated Variation determined EPR/FP3137CG/V004	29/09/14	Environment Agency initiated variation to add IC25, requiring a cost benefit appraisal to ensure compliance with the Eels Regulations. Effective from 01/10/14
Regulation 60 Notice sent to the Operator	31/10/14	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	Received
Request for further information dated 29/10/15	06/11/15	Response received Covering the following: 1. BAT justification for proposed dust ELV 2. listing all combustion activities >1 MWth 3. MSUL/MSDL data for coal during rolling biomass conversion programme 4. update on status of LLD declaration
Variation determined EPR/FP3137CG/V005	22/12/15	Varied and consolidated permit issued in modern condition format Variation effective from 01/01/16
Variation Application EPR/FP3137CG/V006	14/01/16	To change company registered office address to Lynemouth Power Station, Ashington, Northumberland, NE63 9NW
Variation issued EPR/FP3137CG/V006	03/02/16	Determined

Status log of the permit		
Description	Date	Comments
Environment Agency initiated Variation determined EPR/FP3137CG/V007 (Billing reference: XP3738YZ)	19/07/17	To include biomass related conditions
Variation Application EPR/FP3137CG/V008	05/01/18	To remove redundant water discharge points
Variation issued EPR/FP3137CG/V008 (Billing reference: SP3634JG)	21/02/18	Determined
Regulation 61 Notice sent to the Operator	01/05/18	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 LCP.
Regulation 61 Notice response	31/10/18	Received
Request for further information sent 12/03/19	18/03/19	Response received Covering the following: 1. BAT Conclusions 2, 3, 4, 9, 24 & 25 2. BAT AEEL
Additional information received	08/05/19	List of air emission points
Derogation requests		
Request for derogation from BAT Conclusions 24 (NOx) and 26 (dust)	15/11/18	Received
Email sent to Operator 03/12/18	05/12/18	Response received; clarification on NOx cost benefit analysis (CBA)
Email sent to Operator 10/12/18	17/12/18	Response received; clarification on NOx CBA
Updated NOx and dust CBA and explanatory addendum	11/01/19	Received
Additional information to clarify derogation from the annual average dust BAT AEL and ESP operating costs.	04/02/19	Received
DRAFT DECISION		
EPR/FP3137CG/V009	29/05/19	Statutory review of permit - BAT Conclusions published 17 August 2017 Varied and consolidated permit Consultation 30/05/19 to 27/06/19

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
Lynemouth Power Limited	EPR/FP3437CZ	18/12/12

End of introductory note

DRAFT

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/FP3137CG

Issued to

Lynemouth Power Limited (“the operator”)

whose registered office is

**Lynemouth Power Station
Ashington
Northumberland
NE63 9NW**

company registration number **07866585**

to operate a regulated facility at

**Lynemouth Power Station
Ashington
Northumberland
NE63 9NW**

to the extent set out in the schedules.

The notice shall take effect from [DD/MM/YYYY]

Name	Date
[name of authorised person] Type name, signature not needed	[DD/MM/YYYY]

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.

DRAFT

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/FP3137CG

This is the consolidated permit referred to in the variation and consolidation notice for application **EPR/FP3137CG/V009** authorising,

Lynemouth Power Limited (“the operator”),

whose registered office is

Lynemouth Power Station

Ashington

Northumberland

NE63 9NW

company registration number **07866585**

to operate a regulated facility at

Lynemouth Power Station

Ashington

Northumberland

NE63 9NW

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

Name	Date
[name of authorised person] Type name, signature not needed	[DD/MM/YYYY]

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.

1.2.2 The operator shall review the viability of Combined Heat and Power (CHP) implementation at least every 4 years, or in response to any of the following factors, whichever comes sooner:

- (a) new plans for significant developments within 15 km of the installation;
- (b) changes to the Local Plan;
- (c) changes to the DECC UK CHP Development Map or similar; and
- (d) new financial or fiscal incentives for CHP.

The results shall be reported to the Agency within 2 months of each review, including where there has been no change to the original assessment in respect of the above factors.

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: LCP 418. The activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” dated December 2015 or any later version unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.4 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.5 For the following activities referenced in schedule 1, table S1.1: LCP 418. The end of the start-up period and the start of the shut-down 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: LCP 418. The following conditions apply where there is a malfunction or breakdown of any abatement equipment:

Unless otherwise agreed in writing by the Environment Agency:

- (i) if a return to normal operations is not achieved within 24 hours, the operator shall reduce or close down operations, or shall operate the activities using low polluting fuels;
- (ii) the cumulative duration of breakdown in any 12-month period shall not exceed 120 hours; and
- (iii) the cumulative duration of malfunction in any 12-month period shall not exceed 120 hours.

2.3.7 Waste shall only be accepted if:

- (a) it is of a type and quantity listed in schedule 2 table S2.2; and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

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, S3.1b and S3.2.

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

3.1.3 The emission values from emission points AU1, AU2 and AU3 listed in schedule 3 tables S3.1, S3.1a and S3.1b measured during periods of abatement equipment malfunction and breakdown shall be disregarded for the purposes of compliance with tables S3.1, S3.1a and S3.1b emission limit values.

3.1.4 Total annual emissions from the LCP emission points set out in schedule 3 table S3.1 of a substance listed in schedule 3 table S3.3, shall not exceed the relevant limit in that table.

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

3.2 Emissions of substances not controlled by emission limits

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

3.2.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
- (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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

3.3 Odour

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

3.3.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

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

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1, S3.1a and S3.1b; 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 S3.1b 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, S3.1a, S3.1b; the Continuous Emission Monitors shall be used such that:
- (a) for the continuous measurement systems fitted to the LCP release points defined in tables S3.1, S3.1a and S3.1b, 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.

3.7 Pests

- 3.7.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.7.2 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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 2.3.6 applies, the cumulative duration of breakdown and cumulative duration of malfunction in any 12 month period.

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 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter, if during that quarter the total amount accepted exceeds 100 tonnes of non-hazardous waste or 10 tonnes of hazardous waste.
- 4.2.6 Within 10 days of the notification of abatement equipment malfunction or breakdown (condition 2.3.6) the operator shall submit an Air Quality Risk Assessment as outlined in the IED Compliance Protocol (condition 2.3.2).
- 4.2.7 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.
 - (d) of any malfunction or breakdown of abatement equipment relating to condition 2.3.6, the operator shall notify the Environment Agency within 48 hours unless notification has already been made under (a) to (c) above.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), 4.3.1 (b)(i) where the information relates to the breach of a condition specified in the permit, or 4.3.1 (d) where the information relates to malfunction or breakdown of abatement equipment shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

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

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

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

- (c) any change in the operator's name or address; and
- (d) any steps taken with a view to the dissolution of the operator.

In any other case:

- (e) the death of any of the named operators (where the operator consists of more than one named individual);
- (f) any change in the operator's name(s) or address(es); and
- (g) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

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

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

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

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

- (a) a decision by the Secretary of State not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

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

4.4 Interpretation

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

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "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 Part A(1)(a) Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	<p>LCP 418 Operation of three biomass-fired boilers 3 x 350 MWth, total of 1050 MWth to generate electricity for export to the National Grid, and steam for adjacent businesses, as required.</p> <p>Other combustion activities Two liquefied petroleum gas (LPG)-fired boilers to provide hot water and heating. Each boiler is 860 kWth, discharging via a common windshield.</p>	<p>From the receipt, storage and handling of biomass, to the discharge of exhaust gases via abatement equipment, control of dust and wastes and the generation of electricity and steam for export.</p> <p>From the receipt, storage and handling of LPG, to the use in the boilers.</p>
AR2	Section 3.5 Part B(f) Loading, unloading or storing ash in bulk prior to further transportation in bulk.	Ash handling and storage	From removal of ash from the combustion process to dispatch from site.
AR3	Section 5.4 Part A(1)(b)(iii) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving treatment of slags and ashes.	Treating ashes	From receipt of ashes from the combustion process to dispatch of classified ashes for onward handling
	Directly Associated Activity		
AR4	Directly associated activity	Fuel storage	From receipt of fuel to dispatch for use.
AR5	Directly associated activity	Oil storage	From receipt of oil to dispatch for use.

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR6	Directly associated activity	Surface water drainage and process effluent	Handling and storage of site drainage and process effluent until discharge to controlled waters.
AR7	Directly associated activity	Boiler water treatment	From receipt of raw materials to dispatch to effluent system.
AR8	Directly associated activity	Use of North Sea water to condense steam	From pumping, filtering and chemical treatment of water, its use on the condensers, to the discharge into the North Sea.
AR9	Directly associated activity	Waste handling and storage	From waste generation, storage and monitoring to dispatch.
AR10	Directly associated activity	Ventilation air systems, dust collectors and air extract systems additional to those forming part of the Schedule 1 listed activities.	From point of arising of aerial discharges to entry into the atmosphere, including all discharge systems and abatement equipment.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/BL6861IT/A001	The response to questions 2.1, 2.2 and 2.3 given in sections 2.3, 2.3.2, 2.3.9, 2.3.10, 2.3.11, 2.3.12, 2.3.13 and 2.3.14 of the application	14/12/01
Response to Schedule 4 Part 1 Notice	Response to questions 2 and 4	13/05/02
Response to Schedule 4 Part 1 Notice	Responses to questions 6, 7, 8, 9, 10, 11 and 13	24/06/02
Response to Schedule 4 Part 1 Notice	Response to questions 1, 2 and 3	30/09/02
Variation Application EPR/BL6861IT/V002	Whole document	13/09/04
Variation Application EPR/BL6861IT/V003	Whole document	25/07/05
Application for Variation EPR/BL6861IT/V004	Responses to questions B2.1, B2.2 and B2.3	31/03/06
Receipt of additional information to the application	Whole document	17/08/06
Receipt of additional information to the application	Whole document	06/08/07
Variation Application EA/EPR/BL6861IT/V008	Whole document including additional variation application information dated August 2010 submitted with variation application SP3130HF	08/09/10
Supplementary information	Specification for HFO and gas oil fuel mix	12/11/10
Variation Application EA/EPR/BL6861IT/V009	Whole document. Variation for conversion of the power station to 100% biomass fuel (reference MP3434FW)	28/07/11
Requests for further information	Whole response relating to the biomass conversion.	17/08/11
Requests for further information	Whole response relating to the biomass conversion.	20/08/11
Requests for further information	Whole response relating to the biomass conversion.	12/09/11
Requests for further information	Whole response relating to the biomass conversion.	26/10/11
Transfer Application EA/EPR/FP3137CG/T001	Whole application to transfer the power station to Lynemouth Power Limited	28/11/12
Written agreement of minor change	Removal of requirement for MCERTS flow monitoring on emissions to controlled water	06/06/13
Written agreement of minor change	Revised Air Quality Management Plan	17/01/14
Variation Application EA/EPR/FP3137CG/V003	Whole document to extend boundary and include new coal storage area	24/04/14

Table S1.2 Operating techniques		
Description	Parts	Date Received
Response to Improvement Condition IC24 (site closure plan review)	Whole document	24/09/14
Response to Improvement Condition IC23 (SPMP review)	Whole document	30/09/14
Receipt of additional information to the Regulation 60(1) Notice requested by letter dated 31/10/2014	Compliance routes and operating techniques identified in response to questions 2 (TNP and LLD), 4 (configuration of LCP), 5 (net rated thermal input), 6 (MSUL/MSDL definition), 8 (site specific ELVs), 11 (monitoring).	31/03/15
Receipt of additional information to the Regulation 60(1) Notice requested by email dated 29/10/2015	BAT justification for PM ELVs, other combustion activities, MSUL/MSDL and additional LLD information.	06/11/15
Receipt of additional information to the Regulation 60(1) Notice.	Confirmation of the compliance routes chosen for LCP 418. LLD declaration was rescinded.	01/12/15
Written agreement of minor change	Proposal to commence ambient NOx monitoring during Q1/Q2 2016 to confirm the predicted reductions in emissions as a result of the conversion to biomass. Construction village effluent treatment proposals.	03/12/15
Variation Application EA/EPR/FP3137CG/V008	Whole document to remove emission points W2, W4 and W6.	05/01/18
Receipt of additional information to the application	Revised site plan	12/02/18
Biomass ash trial	Whole document	20/09/18
	Addendum	22/02/19
Fugitive emissions plan	Whole document	31/05/17
Response to regulation 61(1) Notice – request for information dated 01/05/18 EPR/FP3137CG/V009	Compliance and operating techniques identified in response to the BAT Conclusions for large combustion plant published on 17 August 2017.	31/10/18
Additional information in response to request for information sent 06/03/19 EPR/FP3137CG/V009	Compliance and operating techniques identified in response to BAT Conclusions 2, 3, 4, 9, 24, 25 and BAT AEEL.	18/03/19
Annex to conditions in Variation EPR/FP3137CG/V009	Operating techniques for BAT Conclusions 24 and 26. The derogated NOx and dust limits shall apply until 31 March 2027 or until the next permit review, whichever is sooner.	-

Table S1.3 Improvement programme requirements		
Ref. Note 1	Requirement	Date
IC 17	<p>The operator shall submit a written report to the Environment Agency on the commissioning of the installation. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this Permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions. This shall include:</p> <ul style="list-style-type: none"> • reporting of the emission values from the stack, measured during the commissioning phase, that are representative of normal operations; • confirmation of the energy efficiency data in PO 05 and supporting information; • identification of any changes to the operating techniques during the design, build and commissioning of this plant and their impact on the compliance with the permit; and • a clear demonstration of BAT (Best Available Techniques) with references to the most recent guidance. 	6 months after the completion of commissioning of the first main unit on solid biomass.
IC 18	<p>A written report shall be submitted to the Environment Agency at the reporting address for approval. The report shall include the results of noise surveys associated with the converted Power Station in accordance with the Combustion Technical Guidance Note and the Horizontal Guidance for Noise H3. Where appropriate, the report shall contain dates for the implementation of individual measures identified. The individual measures detailed in the report shall be designed and implemented by the operator from the date of approval or such other date as may be specified in that approval.</p>	6 months after the completion of commissioning of the first main unit on solid biomass.
IC 19	<p>A written report shall be submitted to the Environment Agency at the reporting address for approval. The report shall include the results of main boilers' stack sampling and/or monitoring, to demonstrate concentrations and mass flows of operational emissions of dust (PM₁₀ and PM_{2.5}), sulphur dioxide, oxides of nitrogen and hydrogen chloride to air and their comparison with amounts predicted in the application and in accordance with the monitoring protocol submitted under pre-operational measure PO 03 and agreed by the Environment Agency. A clear demonstration of BAT for air emissions shall be presented, including proposals for new site specific ELVs during the TNP.</p>	<p>Date of completion of biomass commissioning to be agreed with the Environment Agency.</p> <p>IC19 to be submitted within 1 month of the agreed end of commissioning date.</p>
IC 20	<p>A revised closure plan shall be submitted to the Environment Agency at the reporting address for approval. The plan shall take into consideration the biomass handling, storage and processing facilities in addition to any other changes made since the last update of the closure plan.</p>	6 months after the completion of commissioning of the first main unit on solid biomass.
IC 21	<p>A written report shall be submitted to the Environment Agency at the reporting address for approval. The report shall demonstrate how effectively the unit / power station energy efficiency predicted in the response to PO 05 has been met.</p> <p>The Operator shall also submit a Cost Benefit Analysis of the opportunities identified in a CHP-Ready report to expand provision of combined heat and power provided by the installation.</p>	6 months after the completion of commissioning of the first main unit on solid biomass.

Table S1.3 Improvement programme requirements		
Ref. Note 1	Requirement	Date
IC 26	<p>The Operator shall submit a report in writing to the Environment Agency for approval. The report shall define and provide a written justification of the “minimum start up load” (MSUL) and “minimum shut-down load” (MSDL), for each unit within the LCP as required by the Implementing Decision 2012/249/EU in terms of:</p> <ul style="list-style-type: none"> i. The output load (i.e. electricity, heat or power generated) (MW); and ii. This output load as a percentage of the rated thermal output of the combustion plant (%). <p>And / Or</p> <ul style="list-style-type: none"> iii. At least three criteria (operational parameters and / or discrete processes as detailed in the Annex) or equivalent operational parameters that suit the technical characteristics of the plant, which can be met at the end of start-up or start of shut-down as detailed in Article (9) 2012/249/EU. 	<p>Date of completion of biomass commissioning to be agreed with the Environment Agency.</p> <p>IC26 to be submitted within 1 month of the agreed end of commissioning date.</p>
IC 27	<p>The operator shall provide a report in writing to the Environment Agency for acceptance, which provides the net rated thermal input for LCP 418. The net rated thermal input is the ‘as built’ value unless the plant has been modified significantly resulting in an improvement of the plant efficiency or output that increases the rated thermal input (which typically requires a performance test to demonstrate that guaranteed improvements have been realised).</p> <p>Evidence to support this figure, in order of preference, shall be in the form of:-</p> <ul style="list-style-type: none"> a) Performance test results* during contractual guarantee testing or at commissioning (quoting the specified standards or test codes), b) Performance test results after a significant modification (quoting the specified standards or test codes), c) Manufacturer’s contractual guarantee value, d) Published reference data, e.g., Gas Turbine World Performance Specifications (published annually), e) Design data, e.g., nameplate rating of a boiler or design documentation for a burner system, f) Operational efficiency data as verified and used for heat accountancy purposes, g) Data provided as part of Due Diligence during acquisition. <p>*Performance test results shall be used if these are available.</p>	<p>Date of completion of biomass commissioning to be agreed with the Environment Agency.</p> <p>IC27 to be submitted within 3 months of the agreed end of commissioning date.</p>
IC 29	<p>The operator shall carry out an assessment of the impact on the environment of pulverised fuel ash and furnace bottom ash waste resulting from the burning of biomass. The assessment shall be carried out following the methodology agreed in accordance with pre operational condition PO 06. A report on the findings of the assessment shall be submitted in writing to the Environment Agency for approval.</p>	<p>Within 12 months from the first deposit in the landfill of ash waste resulting from the burning of biomass or other period agreed in writing with the Agency</p>

Table S1.3 Improvement programme requirements		
Ref. Note 1	Requirement	Date
IC 31	<p><u>BAT Conclusion 4</u></p> <p>The operator shall submit evidence to the Environment Agency for approval to demonstrate whether emissions of hydrogen chloride (HCl) from the plant are sufficiently stable in accordance with this BAT Conclusion. This shall include a site specific plan to demonstrate whether the emission remains sufficiently stable for the life of the plant.</p>	30/06/21
IC 32	<p><u>BAT Conclusions 24 & 26</u></p> <p>The operator shall submit a report to the Environment Agency for approval on the point source emissions of NOx and dust over the full range of biomass wood pellets to demonstrate the long term performance of the plant.</p> <p>The outcome of this shall be used to determine appropriate longer term NOx and dust limits at emission points AU1, AU2, AU3 in Table S3.1b of this permit.</p>	15 months from the completion of commissioning
IC 33	<p><u>BAT Conclusions 24 & 26</u></p> <p>The derogations from BAT Conclusion 24 & 26 are based on a timeline of March 2027. The operator shall update the Environment Agency on the operation of the installation and if necessary how compliance will be achieved beyond this date.</p>	31/10/25
IC 34	<p><u>Air emission points</u></p> <p>The Operator shall carry out an assessment of the impact of dust emissions from air emission points AU5 to AU25. The assessment shall use the Environment Agency H1 tool or equivalent. A report on the assessment shall be submitted to the Environment Agency for approval.</p> <p>In the event that the assessment shows that an environmental standard could be exceeded, the report shall include proposals for further investigative and improvement works.</p>	31/03/20
<p>Note 1: Completed ICs have been removed with numbering retained for ease of future reference. IC 30 whilst not complete, is also deleted. This IC relates to SNCR abatement which is not currently applicable to the installation. Refer to the NOx derogation in the Annex to this permit.</p>		

Table S1.4 Start-up and Shut-down thresholds when firing on biomass		
Emission Point and Unit Reference	“Minimum Start-Up Load” (MSUL) Load in MW and as percent of rated power output (%)	“Minimum Shut-Down Load” (MSDL) Load in MW and as percent of rated power output (%)
AR1 LCP 418 AU1	To be agreed in writing with the Environment Agency, following the outcome of improvement condition IC26 in table S1.3 of this permit	To be agreed in writing with the Environment Agency, following the outcome of improvement condition IC26 in table S1.3 of this permit
AR1 LCP 418 AU2	To be agreed in writing with the Environment Agency, following the outcome of improvement condition IC26 in table S1.3 of this permit	To be agreed in writing with the Environment Agency, following the outcome of improvement condition IC26 in table S1.3 of this permit
AR1 LCP 418 AU3	To be agreed in writing with the Environment Agency, following the outcome of improvement condition IC26 in table S1.3 of this permit	To be agreed in writing with the Environment Agency, following the outcome of improvement condition IC26 in table S1.3 of this permit

DRAFT

Schedule 2 – Raw materials and fuels

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

Table S2.2 Permitted waste types for use as fuels in the three biomass boilers (activity AR1 in table S1.1 of this permit)	
Limited to the relevant exempt biomass codes listed below that qualify as biomass under point (b) (v) of paragraph (31) of Article 3 of Directive 2010/75/EU of European Parliament and of the Council of 24 November 2010 on industrial emission (Integrated Pollution and Control) and are included in the application or otherwise approved in writing by the Environment Agency.	
Waste code	Description
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 07	wastes from forestry
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 03	wastes from wood processing and the production of panels and furniture
03 03 01	waste bark and wood

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air from biomass fired boilers >100MWth operating under the Transitional National Plan (TNP). Limits shall apply once all three units are fully commissioned on biomass. Applicable until 30 June 2020						
Emission point ref. & location ^{Note 1}	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down. ^{Note 2}	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP 418 Boiler plant fired on biomass	450 mg/Nm ³	Calendar monthly mean	Continuous	BS EN 14181
AU1, AU2, AU3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP 418 Boiler plant fired on biomass	550 mg/Nm ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
AU1, AU2, AU3	Sulphur Dioxide	LCP 418 Boiler plant fired on biomass	350 mg/Nm ³	Calendar monthly mean	Continuous	BS EN 14181
AU1, AU2, AU3	Sulphur Dioxide	LCP 418 Boiler plant fired on biomass	440 mg/Nm ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
AU1, AU2, AU3	Dust	LCP 418 Boiler plant fired on biomass	35 mg/Nm ³	Calendar monthly mean	Continuous	BS EN 14181
AU1, AU2, AU3	Dust	LCP 418 Boiler plant fired on biomass	42 mg/Nm ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
AU1, AU2, AU3	Oxygen	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	BS EN 14181
AU1, AU2, AU3	Water Vapour	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1 Point source emissions to air from biomass fired boilers >100MWth operating under the Transitional National Plan (TNP). Limits shall apply once all three units are fully commissioned on biomass. Applicable until 30 June 2020						
Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down. <small>Note 2</small>	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Stack gas temperature	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	Traceable to national standards
AU1, AU2, AU3	Stack gas pressure	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	Traceable to national standards
AU1, AU2, AU3	Stack gas volume flow	LCP 418 Boiler plant fired on biomass	-	-	Continuous	BS EN 16911 & TGN M2
AU1, AU2, AU3	As required by the Method Implementation Document for BS EN 15259	LCP 418 Boiler plant fired on biomass	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
AU5 to AU25	Dust <small>Note 3</small>	Biomass dust collection fabric filters	-	-	-	-
<p>Note 1: Boilers vent via three flues within a common windshield at emission points AU1, AU2 and AU3, defined as points A1, A2, and A3 on site plan A1/420/140.</p> <p>Note 2: Applicable to 30 June 2020 and in accordance with IC 19 in table S1.3 of this permit.</p> <p>Note 3: Refer to IC 34 in table S1.3 of this permit.</p>						

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 01 July 2020 (after the TNP) and until 16 August 2021						
Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP 418 Boiler plant fired on biomass	400 mg/Nm ³ MSUL/MSDL to base load <small>Note 2</small>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
AU1, AU2, AU3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP 418 Boiler plant fired on biomass	220 mg/Nm ³ MSUL/MSDL to base load <small>Note 2</small>	Daily mean of validated hourly averages	Continuous	BS EN 14181
AU1, AU2, AU3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP 418 Boiler plant fired on biomass	200 mg/Nm ³ MSUL/MSDL to base load <small>Note 2</small>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
AU1, AU2, AU3	Sulphur dioxide (SO ₂)	LCP 418 Boiler plant fired on biomass	400 mg/Nm ³ MSUL/MSDL to base load <small>Note 2</small>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 01 July 2020 (after the TNP) and until 16 August 2021						
Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Sulphur dioxide (SO ₂)	LCP 418 Boiler plant fired on biomass	220 mg/Nm ³ MSUL/MSDL to base load <small>Note 2</small>	Daily mean of validated hourly averages	Continuous	BS EN 14181
AU1, AU2, AU3	Sulphur dioxide (SO ₂)	LCP 418 Boiler plant fired on biomass	200 mg/Nm ³ MSUL/MSDL to base load <small>Note 2</small>	Monthly mean of validated hourly averages	Continuous	BS EN 14181
AU1, AU2, AU3	Dust	LCP 418 Boiler plant fired on biomass	40 mg/Nm ³ MSUL/MSDL to base load <small>Note 2</small>	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
AU1, AU2, AU3	Dust	LCP 418 Boiler plant fired on biomass	22 mg/Nm ³ MSUL/MSDL to base load <small>Note 2</small>	Daily mean of validated hourly averages	Continuous	BS EN 14181
AU1, AU2, AU3	Dust	LCP 418 Boiler plant fired on biomass	20 mg/Nm ³ MSUL/MSDL to base load <small>Note 2</small>	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 01 July 2020 (after the TNP) and until 16 August 2021						
Emission point ref. & location ^{Note 1}	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Oxygen	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	BS EN 14181
AU1, AU2, AU3	Water Vapour	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	BS EN 14181
AU1, AU2, AU3	Stack gas temperature	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	Traceable to national standards
AU1, AU2, AU3	Stack gas pressure	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	Traceable to national standards
AU1, AU2, AU3	Stack gas volume flow	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	BS EN 16911 & TGN M2
AU1, AU2, AU3	As required by the Method Implementation Document for BS EN 15259	LCP 418 Boiler plant fired on biomass	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
AU5 to AU25	Dust ^{Note 3}	Biomass dust collection fabric filters	-	-	-	-

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 01 July 2020 (after the TNP) and until 16 August 2021						
Emission point ref. & location ^{Note 1}	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>Note 1: Boilers vent via three flues within a common windshield at emission points AU1, AU2 and AU3, defined as points A1, A2, and A3 on site plan A1/420/140.</p> <p>Note 2: This limit applies when the load varies between MSUL/MSDL and base load during the daily reference period. MSUL and MSDL are defined in table S1.4 of this permit.</p> <p>Note 3: Refer to IC 34 in table S1.3 of this permit.</p>						

Table S3.1b Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location ^{Note 1}	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP 418 Boiler plant fired on biomass	400 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
AU1, AU2, AU3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP 418 Boiler plant fired on biomass	220 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Daily average ^{Note 3}	Continuous	BS EN 14181
AU1, AU2, AU3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP 418 Boiler plant fired on biomass	200 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Monthly mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1b Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location ^{Note 1}	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP 418 Boiler plant fired on biomass	200 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Yearly average ^{Note 3}	Continuous	BS EN 14181
AU1, AU2, AU3	Carbon monoxide (CO)	LCP 418 Boiler plant fired on biomass	^{Note 7} MSUL/MSDL to base load ^{Note 2}	Yearly average	Continuous	BS EN 14181
AU1, AU2, AU3	Sulphur dioxide (SO ₂)	LCP 418 Boiler plant fired on biomass	400 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
AU1, AU2, AU3	Sulphur dioxide (SO ₂)	LCP 418 Boiler plant fired on biomass	85 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Daily average	Continuous	BS EN 14181
AU1, AU2, AU3	Sulphur dioxide (SO ₂)	LCP 418 Boiler plant fired on biomass	200 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
AU1, AU2, AU3	Sulphur dioxide (SO ₂)	LCP 418 Boiler plant fired on biomass	50 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Yearly average	Continuous	BS EN 14181

Table S3.1b Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location ^{Note 1}	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Hydrogen chloride (HCl)	LCP 418 Boiler plant fired on biomass	12 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Daily average	Continuous ^{Note 4}	BS EN 14181
AU1, AU2, AU3	Hydrogen chloride (HCl)	LCP 418 Boiler plant fired on biomass	5 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Yearly average	Continuous ^{Note 4}	BS EN 14181
AU1, AU2, AU3	Hydrogen fluoride (HF)	LCP 418 Boiler plant fired on biomass	<1 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Average over the sampling period	Annually	Note 8
AU1, AU2, AU3	Dust	LCP 418 Boiler plant fired on biomass	40 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
AU1, AU2, AU3	Dust	LCP 418 Boiler plant fired on biomass	22 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Daily average ^{Note 3}	Continuous	BS EN 14181

Table S3.1b Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location ^{Note 1}	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Dust	LCP 418 Boiler plant fired on biomass	20 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
AU1, AU2, AU3	Dust	LCP 418 Boiler plant fired on biomass	20 mg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Yearly average ^{Note 3}	Continuous	BS EN 14181
AU1, AU2, AU3	Mercury (Hg)	LCP 418 Boiler plant fired on biomass	5 µg/Nm ³ MSUL/MSDL to base load ^{Note 2}	Average over the sampling period	Annually ^{Note 5}	BS EN 13211
AU1, AU2, AU3	Metals and metalloids except mercury (As, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn) ^{Note 6}	LCP 418 Boiler plant fired on biomass	-	Average over the sampling period	Annually	BS EN 14385
AU1, AU2, AU3	Oxygen	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	BS EN 14181
AU1, AU2, AU3	Water Vapour	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1b Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location ^{Note 1}	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
AU1, AU2, AU3	Stack gas temperature	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	Traceable to national standards
AU1, AU2, AU3	Stack gas pressure	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	Traceable to national standards
AU1, AU2, AU3	Stack gas volume flow	LCP 418 Boiler plant fired on biomass	-	-	Continuous As appropriate to reference	BS EN 16911 & TGN M2
AU1, AU2, AU3	As required by the Method Implementation Document for BS EN 15259	LCP 418 Boiler plant fired on biomass	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
AU5 to AU25	Dust ^{Note 9}	Biomass dust collection fabric filters	-	-	-	-

Table S3.1b Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location ^{Note 1}	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>Note 1: Boilers vent via three flues within a common windshield at emission points AU1, AU2 and AU3, defined as points A1, A2, and A3 on site plan A1/420/140.</p> <p>Note 2: This limit applies when the load varies between MSUL/MSDL and base load during the daily reference period. MSUL and MSDL are defined in table S1.4 of this permit.</p> <p>Note 3: These limits shall apply until 31 March 2027 or until the next permit review, whichever is sooner. Refer to the Annex of this permit for details of the NOx and dust derogations from BAT AEL limits. Longer-term limits shall be subject to the outcome of IC 32 in table S1.3 of this permit.</p> <p>Note 4: Monitoring frequency shall be subject to the outcome of IC 31 in table S1.3 of this permit.</p> <p>Note 5: If we agree that the Hg emission levels are proven to be sufficiently stable due to the low mercury content in the fuel, periodic measurements may be carried out by prior agreement with the Environment Agency. Periodic measurements shall only be required each time that a change of the fuel characteristics may have an impact on the emissions.</p> <p>Note 6: Arsenic (As), cadmium (Cd), cobalt (Co), chromium (Cr), copper (Cu), manganese (Mn), nickel (Ni), lead (Pb), antimony (Sb), selenium (Se), thallium (Tl), vanadium (V) and zinc (Zn).</p> <p>Note 7: The CO limit shall be set based on the outcome of improvement condition IC17 in table S1.3 of this permit and prior to 17 August 2021.</p> <p>Note 8: Monitoring standard to be agreed in writing with the Environment Agency.</p> <p>Note 9: Refer to IC 34 in table S1.3 of this permit.</p>						

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1	-	Sewage treatment plant	No limit set	-	-	-
W3	-	Cooling water	No limit set	-	-	-

Note 1: Shown on site plan A1/420/0237 Rev B2

Table S3.3 Annual limits (excluding start up and shut down except where otherwise stated). Applicable to 30/06/20 during the TNP				
Substance	Medium	Limit (including unit)		Emission Points
Dust, sulphur dioxide and oxides of nitrogen	Air	Assessment year	LCP TNP Limit	LCP 418
		01/01/16 and subsequent years until 31/12/19	Emission allowance figure shown in the TNP Register as at 30 April the following year	
		01/01/20-30/06/20		

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LCP 418	Net electrical efficiency	Once within 4 months after commissioning and then after each modification which that could significantly affect these parameters	EN Standards or equivalent	-

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1	AU1, AU2, AU3	Every 3 months for continuous monitoring (NO _x , CO, SO ₂ , dust, HCl ^{Note1})	1 January, 1 April, 1 July, 1 October
		Every year where there is an annual average	1 January
		Annually (HF, mercury, metals)	1 January
Note 1: Reporting period shall be subject to the outcome of IC 31 in table S1.3 of this permit.			

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	hour
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	tonnes
Hazardous Waste Transferred for Recovery at another installation	tonnes
Non-Hazardous Waste Transferred for Disposal at another installation	tonnes
Non-Hazardous Waste Transferred for Recovery at another installation	tonnes
Waste recovered to Quality Protocol Specification and transferred off-site	tonnes
Waste transferred directly off-site for use under an exemption / position statement	tonnes

Parameter	Frequency of assessment	Units
Thermal Input Capacity for LCP 418	Annually	MW
Annual Fuel Usage for LCP 418	Annually	TJ
Total Emissions to Air of NO _x for LCP 418	Annually	tonnes
Total Emissions to Air of SO ₂ for LCP 418	Annually	tonnes
Total Emissions to Air of Dust for LCP 418	Annually	tonnes
Operating Hours for LCP 418 (Load Factor)	Annually	hour

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 and Area office	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 and Area office	31/12/15
Air	Form IED CON 1 - continuous monitoring	01/01/16	Area Office	2019
CEMs	Form IED CEM - invalidation Log	01/01/16	Area Office	31/12/15
LCP	Form IED BD1 - cumulative annual rolling malfunction and breakdown hours	01/01/16	Area Office	31/12/15
Air	Form IED MF1 – pollutant concentrations during any day with malfunction or breakdown of abatement plant	01/01/16	Area Office	31/12/15
Resource Efficiency	Form REM1 - resource efficiency annual report	01/01/16	National and Area office	31/12/15
Water	Form water 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	08/09/10

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

Part C Malfunction or Breakdown of LCP abatement equipment

Permit Number	EPR/FP3137CG
Name of operator	Lynemouth Power Limited
Location of Facility	Lynemouth Power Station, Ashington, Northumberland
LCP Number	
Malfunction or breakdown	
Date of malfunction or breakdown	

(a) Notification requirements for any malfunction and breakdown of abatement equipment as defined by the Industrial Emission Directive*.	
To be notified within 48 hours of abatement equipment malfunction and breakdown	
Time at which malfunction or breakdown commenced	
Time at which malfunction or breakdown ceased	
Duration of the breakdown event in hours and minutes	
Reasons for malfunction or breakdown	
Where the abatement plant has failed, give the hourly average concentration of all measured pollutants.	
Cumulative breakdown operation in current year (at end of present event)	
Cumulative malfunction operation in current year (at end of present event)	
Name**	
Post	
Signature **	
Date	

* See section 3.6 and Appendix E of ESI Compliance Protocol for guidance

** 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.

“ash” or “ashes” means all ashes derived from the combustion process on the installation and includes pulverised fuel ash (PFA) and furnace bottom ash (FBA).

“average over the sampling period” means the average value of three consecutive measurements of at least 30 minutes each [or as agreed in writing with the Environment Agency].

“average of samples obtained during one year” means the average of the values obtained during one year of the periodic measurements taken with the monitoring frequency set for each parameter.

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

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

“BAT” means best available techniques

“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.

“breakdown” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

“calendar monthly mean” means the value across a calendar month of all validated hourly means.

“CEN” means Comité Européen de Normalisation.

“Combustion Technical Guidance Note” means IPPC Sector Guidance Note Combustion Activities, version 2.03 dated 27th July 2005 published by Environment Agency.

“commissioning” means testing of the installation that involves any operation of a Large Combustion Plant referenced in schedule 1, table S1.1, or as agreed with the Environment Agency.

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

“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.

“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.

“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.

“hazardous property” has the meaning in Annex III of the Waste Framework Directive.

“hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

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

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“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.

“malfunction” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

“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.

“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

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

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.

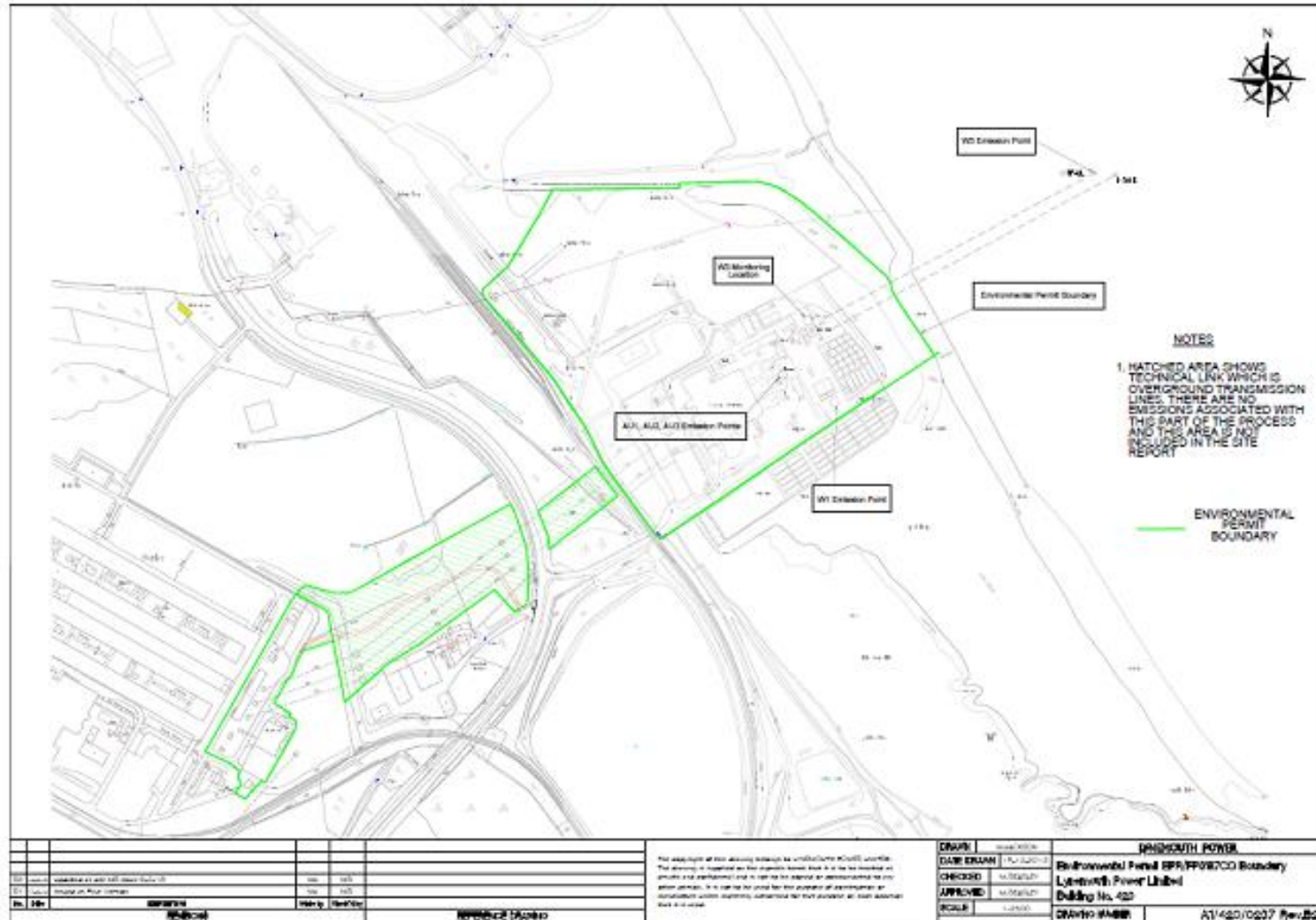
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- 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 non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

“year” means calendar year ending 31 December.

“yearly average” means the average over a period of one year of validated hourly averages obtained by continuous measurements.

Schedule 7 – Site plan



© Crown Copyright. All rights reserved. Environment Agency, 100026380, 2019.”

END OF PERMIT

Annex to conditions – Derogation under Industrial Emissions Directive

Derogation under Article 15(4) of Industrial Emissions Directive

DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

Operating Techniques

We have considered the Operator's proposed techniques and its comparison against other relevant techniques as described in the BAT Conclusions for Large Combustion Plant (LCP) published 17 August 2017. Our full reasoning is given in our decision document that accompanies this permit determination.

Permits must be reviewed and Operators must comply with BAT (Associated Emission Levels) AELs by 17 August 2021.

The Operator has requested derogations from BAT AELs for BAT Conclusions 24 and 26, based on the technical characteristics of the Installation. The proposed techniques will result in emissions for which the appropriate emissions limits are less stringent than those associated with the best available techniques as described in the BAT Conclusions.

A summary of the derogation requests are provided below.

BAT Conclusion 24

The Operator requested a derogation which is non time limited. The derogation will last until the next permit review or following the next update of the Best Available Techniques (BAT) Conclusions estimated to be 2025, at the earliest. The derogation is from BAT Conclusion 24, to prevent or reduce oxides of nitrogen (NO_x) emissions to air from the combustion of solid biomass. This is set out in the Large Combustion Plant (LCP) BAT Conclusions Document (EU) 2017/1442 of 31 July 2017, published 17 August 2017. This is made on the basis of the technical characteristics of the installation.

The Operator has also requested a derogation which is non time limited, from BAT Conclusion 26, to reduce dust emissions which has been considered completely separately to this derogation. The two derogations have been considered separately because the emissions of NO_x and dust have limited interaction and require separate abatement systems to be in place.

The Operator's application considered two options for meeting the NO_x BAT Associated Emission Level (AEL), which would both require the application of secondary abatement techniques. They already implement three out of the five primary techniques set out in the BAT Conclusion. They have rejected the remaining two primary techniques as they consider that they are not technically viable at the installation.

The Environment Agency has reviewed the request and concluded that:

- The Operator has supplied a valid derogation request against BAT Conclusion 24. The derogation request is based on technical characteristics of the installation. As a biomass conversion of an existing coal-fired installation, significant space and plant performance related constraints limit the performance of the BAT techniques, specifically Selective Non Catalytic Reduction (SNCR) and hence the ability to comply. The Operator has described two relevant options (secondary measures) for achieving the BAT AEL and justified the screening out of two options (primary measures). The two relevant options were taken forward to conduct a Cost Benefit Analysis (CBA) with the business as usual (BAU) and the proposed derogation options i.e. four options in total.
- The proposed Emission Limit Values (ELVs) are significantly below the current ELVs and are aligned with the Industrial Emissions Directive (IED) Annex V ELVs, until the next permit review or following the next update of the BAT Conclusions.

Proposed ELVs & IED Annex V ELVs

400 mg/Nm³, 95thile hourly averages over a year

220 mg/Nm³, daily average

200 mg/Nm³, monthly and annual average

Current ELVs

550 mg/Nm³, 95thile daily averages over a year

450 mg/Nm³, monthly average

- The Operator has provided a credible argument that the increased costs linked to the technical characteristics of the installation are disproportionate for achieving the BAT AEL. An appropriate range of options were reviewed and those identified as technically viable were considered further. A number of options were taken forward for CBA, were adequately described in the CBA and the cost of the BAT AEL and the Selective Catalytic Reduction (SCR) options were confirmed as disproportionate compared to the environmental benefits. The CBA using central case assumptions shows negative Net Present Values (NPV) for the BAT AEL of £41 million and for the SCR option of £154 million and therefore the cost of compliance is disproportionate compared to the environmental benefit achieved.
- There is no significant reduction in NO_x emissions from the installation through the adoption of additional secondary abatement and in any event, the impacts are screened out as insignificant for the proposed derogation and the BAT AEL options.
- Significant improvements to reduce NO_x emissions have already been implemented as part of the biomass project.
- The permit also includes improvement conditions requiring the emissions to be reviewed following combustion optimisation.

The Environment Agency is therefore minded to allow this derogation request subject to the following permit conditions:

- The permit includes conditions requiring the emissions to be reviewed following combustion optimisation. This will be reported via existing permit improvement conditions IC17 (Commissioning report) and IC19 (Stack sampling and demonstration of BAT for emissions to air).
- A further IC is set requiring a review of the emissions to assess the long-term plant performance over the full range of biomass wood pellets. The outcome of this will be used to determine appropriate longer term NO_x limits for the plant.
- The operating techniques for this BAT Conclusion are incorporated into the permit.

BAT Conclusion 26

The Operator requested a derogation which is non time limited. The derogation will last until the next permit review or following the next update of the Best Available Techniques (BAT) Conclusions estimated to be 2025, at the earliest. The derogation is from BAT Conclusion 26, to reduce dust and particulate-bound metal emissions to air from the combustion of solid biomass. This is set out in the Large Combustion Plant (LCP) BAT Conclusions Document (EU) 2017/1442 of 31 July 2017, published 17 August 2017. This is made on the basis of the technical characteristics of the installation.

The Operator's application considered the options for meeting the dust BAT Associated Emission Level (AEL), which requires the application of one or a combination of primary and secondary techniques. They already implement one of the primary techniques, choice of fuel, set out in the BAT Conclusion. They have rejected two primary techniques which are based on flue gas desulphurisation (FGD). They already have

electrostatic precipitators (ESPs) which are a secondary technique. They have rejected the bag filter secondary technique due to the unacceptable fire risk.

The Environment Agency has reviewed the request and concluded that:

The Operator has supplied a valid derogation request against BAT Conclusion 26. The derogation request is based on the technical characteristics of the installation. As a biomass conversion of an existing coal-fired installation, significant space and plant performance related constraints limit the performance of the BAT techniques, specifically upgrading the ESP and hence the ability to comply. The use of bag filters could present an unacceptable fire risk due to the high unburnt carbon content of biomass ash and the likelihood of sparks and hot embers in the flue gas.

The Operator has described one relevant option (secondary measure) for achieving the BAT AEL and justified the screening out of four options (primary and secondary measures). The relevant option was taken forward to conduct a Cost Benefit Analysis (CBA) with the business as usual (BAU) and the proposed derogation options i.e. three options in total.

Whilst the bag filters were not taken forward for CBA, costs were provided in the Operator's IED Article 15(4) Derogation Request report. As part of our assessment, we added this option into the CBA tool to assess disproportionality of costs and benefits for bag filters.

The proposed Emission Limit Values (ELVs) are significantly below the current ELVs and are aligned with the Industrial Emissions Directive (IED) Annex V ELVs. The proposed ELVs would be in place until the next permit review or following the next update of the BAT Conclusions.

Proposed ELVs & IED Annex V ELVs

40 mg/Nm³, 95%ile hourly averages over a year

22 mg/Nm³, daily average

20 mg/Nm³, monthly and annual average

Current ELVs

42 mg/Nm³, 95%ile daily averages over a year

35 mg/Nm³, monthly average

The Operator has provided a credible argument that the increased costs linked to the technical characteristics of the installation are disproportionate for achieving the BAT AEL. Whilst the Operator did not include bag filters in their assessment, we amended the CBA to include this option. An appropriate range of options were reviewed and those identified as technically viable were considered further. A number of options were taken forward for CBA, were adequately described in the CBA and the cost of the BAT AEL options were confirmed as disproportionate compared to the environmental benefits. The CBA using central case assumptions shows negative Net Present Values (NPV) for the upgraded ESPs of **£144** million and for the bag filter option of **£128** million and therefore the cost of compliance is disproportionate compared to the environmental benefit achieved.

There is no significant reduction in dust emissions from the installation by upgrading the ESPs or through the adoption of additional secondary abatement (bag filters) and in any event, the impacts are screened out as insignificant for the proposed derogation and the BAT AEL options.

Significant improvements to reduce dust emissions have already been implemented as part of the biomass project. The plant has been subject to a major overhaul and life extension works.

The permit also includes improvement conditions requiring the emissions to be reviewed following combustion optimisation.

The Environment Agency is therefore minded to allow this derogation request subject to the following permit conditions:

- The permit includes conditions requiring the emissions to be reviewed following combustion optimisation. This will be reported via existing permit improvement conditions IC17 (Commissioning

report) and IC19 (Stack sampling and demonstration of BAT for emissions to air).

- A further IC is set requiring a review of the emissions to assess the long-term plant performance over the full range of biomass wood pellets. The outcome of this will be used to determine appropriate longer term dust limits for the plant.
- The operating techniques for this BAT Conclusion are incorporated into the permit.

DRAFT