

Permitting decisions

Variation

We have decided to grant the variation for Great Ness Poultry Farm operated by Great Ness Poultry Limited.

The variation number is EPR/KP3130HL/V004.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision making process. It:

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision checklist](#) to show how all relevant factors have been taken into account

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice. The introductory note summarises what the variation covers.

Key issues of the decision

New Intensive Rearing of Poultry or Pigs BAT Conclusions document

The new Best Available Techniques (BAT) Reference Document (BREF) for the Intensive Rearing of poultry or pigs (IRPP) was published on the 21st February 2017. There is now a separate BAT Conclusions document which will set out the standards that permitted farms will have to meet.

The BAT Conclusions document is as per the following link

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D0302&from=EN>

Now the BAT Conclusions are published **all new housing within variation applications** issued after the 21st February 2017 must be compliant in full from the first day of operation.

There are some new requirements for permit holders. The conclusions include BAT Associated Emission Levels for ammonia emissions which will apply to the majority of permits, as well as BAT associated levels for nitrogen and phosphorous excretion.

For some types of rearing practices stricter standards will apply to farms and housing permitted after the new BAT Conclusions are published.

This variation determination includes a review only of BAT compliance for new housing introduced with this variation. A BAT review of existing housing compliance with BAT conclusions document is to be the subject of a sector permit review and is beyond the scope of this variation application permit determination.

New BAT conclusions review

There are 33 BAT conclusion measures in total within the BAT conclusion document dated 21st February 2017.

The Applicant has confirmed their compliance with all BAT conditions for the new housing, in their document reference Appendix 7: Technical Standards and dated 20/09/19.

The following is a more specific review of the measures the Applicant has applied to ensure compliance with the above key BAT measures.

BAT measure	Applicant compliance measure
BAT 3 - Nutritional management Nitrogen excretion	The Applicant has confirmed it will demonstrate it achieves levels of Nitrogen excretion below the required BAT-AEL of 0.6 kg N/animal place/year. Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 4 Nutritional management Phosphorous excretion	The Applicant has confirmed it will demonstrate it achieves levels of Phosphorous excretion below the required BAT-AEL of 0.25 kg P ₂ O ₅ animal place/year. Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 24 Monitoring of emissions and process parameters - Total nitrogen and phosphorous excretion	Table S3.3 Process monitoring requires the operator to undertake relevant monitoring that complies with these BAT conclusions
BAT 25 Monitoring of emissions and process parameters - Ammonia emissions	Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.

BAT measure	Applicant compliance measure
BAT 26 Monitoring of emissions and process parameters - Odour emissions	The odour management plan has not been reassessed as part of this variation as there are no changes to the activities likely to generate additional odour, see key issues below.
BAT 27 Monitoring of emissions and process parameters - Dust emissions	The dust management plan has not been reassessed as part of this variation as there are no changes to the activities likely to generate additional odour, see key issues below.
BAT 32 Ammonia emissions from poultry houses - Broilers	The BAT-AEL to be complied with is 0.08 kg NH3/animal place/year. The Applicant will meet this as the emission factor for broilers is 0.034 kg NH3/animal place/year. The Installation does not include an air abatement treatment facility, hence the standard emission factor complies with the BAT AEL.

More detailed assessment of specific BAT measures

Ammonia emission controls

A BAT Associated Emission Level (AEL) provides us with a performance benchmark to determine whether an activity is BAT.

Ammonia emission controls – BAT conclusion 32

The new BAT conclusions include a set of BAT-AEL's for ammonia emissions to air from animal housing for broilers.

For variations all new housing on existing farms will need to meet the BAT-AEL.

Industrial Emissions Directive (IED)

The Environmental Permitting (England and Wales) (Amendment) Regulations 2013 were made on the 20 February 2013 and came into force on 27 February 2013. These Regulations transpose the requirements of the IED.

This permit implements the requirements of the European Union Directive on Industrial Emissions.

Groundwater and soil monitoring

As a result of the requirements of the Industrial Emissions Directive, all permits are now required to contain a condition relating to protection of soil, groundwater and groundwater monitoring. However, the Environment Agency's H5 Guidance states **that it is only necessary for the operator to take samples** of soil or groundwater and measure levels of contamination where there is evidence that there is, or could be existing contamination and:

- The environmental risk assessment has identified that the same contaminants are a particular hazard; or
- The environmental risk assessment has identified that the same contaminants are a hazard and the risk assessment has identified a possible pathway to land or groundwater.

H5 Guidance further states that it is **not essential for the Operator** to take samples of soil or groundwater and measure levels of contamination where:

- The environmental risk assessment identifies no hazards to land or groundwater; or

- Where the environmental risk assessment identifies only limited hazards to land and groundwater and there is no reason to believe that there could be historic contamination by those substances that present the hazard; or
- Where the environmental risk assessment identifies hazards to land and groundwater but there is evidence that there is no historic contamination by those substances that pose the hazard.

The site condition report (SCR) for Great Ness Farm (dated 20/09/19) demonstrates that there are no hazards or likely pathway to land or groundwater and no historic contamination on site that may present a hazard from the same contaminants. **Therefore, on the basis of the risk assessment presented in the SCR, we accept that they have not provided base line reference data for the soil and groundwater at the site at this stage and although condition 3.1.3 is included in the permit no groundwater monitoring will be required.**

Odour

The odour management plan has not been reassessed as part of this variation as there are no changes to the activities likely to generate additional odour, and the change to the site boundary is not moving the farm closer to any of the sensitive receptors as the development is occurring in the opposite direction to all receptors within screening distance.

Noise

The noise management plan has not been reassessed as part of this variation as there are no changes to the activities likely to generate additional noise, and the change to the site boundary is not moving the farm closer to any of the sensitive receptors as the development is occurring in the opposite direction to all receptors within screening distance.

Dust and Bioaerosols

The dust and bio aerosol management plan has not been reassessed as part of this variation as there are no changes to the activities likely to generate additional dust or bio aerosols, and the change to the site boundary is not moving the farm closer to any of the sensitive receptors as the development is occurring in the opposite direction to all receptors within screening distance.

Biomass boilers

The applicant is varying their permit to include 2 biomass boilers with a net rated thermal input of 1.985 MW.

The Environment Agency has assessed the pollution risks and has concluded that air emissions from small biomass boilers are not likely to pose a significant risk to the environment or human health providing certain conditions are met. Therefore a quantitative assessment of air emissions will not be required for poultry sites where:

- the fuel will be derived from virgin timber, miscanthus or straw, and;
- the biomass boiler appliance and installation meets the technical criteria to be eligible for the Renewable Heat Incentive, and;
- the aggregate boiler net rated thermal input is less than or equal to 4 MWth, and no individual boiler has a net thermal input greater than 1 MWth, and;
- the stack height must be a minimum of 5 metres above the ground (where there are buildings within 25 metres the stack height must be greater than 1 metre above the roof level of buildings within 25 metres) and:
- there are no sensitive receptors within 50 metres of the emission point(s).

In line with the Environment Agency's document "Air Quality and Modelling Unit C1127a Biomass firing boilers for intensive poultry rearing", an assessment has been undertaken to consider the proposed addition of the biomass boilers.

For poultry sites which do not screen out through the above criteria, a further screening is applied:

- the aggregate boiler net rated thermal input is:
 - A. less than 0.5MWth, or;
 - B. less than 1MWth where the stack height is greater than 1 metre above the roof level of adjacent buildings (where there are no adjacent buildings, the stack height must be a minimum of 3 metres above ground), and there are:
 - no Special Areas of Conservation, Special Protection Areas, Ramsar sites or Sites of Special Scientific Interest within 500 metres of the emission point(s);
 - no National Nature Reserves, Local Nature Reserves, ancient woodlands or local wildlife sites within 100 metres of the emission point(s), or;
 - C. less than 2MWth where, in addition to the above criteria for less than 1MWth boilers, there are:
 - no sensitive receptors within 150 metres of the emission point(s).

In line with the Environment Agency’s May 2013 document “Biomass boilers on EPR Intensive Farms”, an assessment has been undertaken to consider the proposed addition of the biomass boilers.

The Environment Agency’s risk assessment has shown that the biomass boilers **do not** meet the requirements of criteria above as there is a sensitive receptor within 150m of the emission point, and therefore further assessment is required.

Environment Agency Modelling

An assessment has been undertaken by the Environment Agency using the Air Quality Monitoring and Assessment Unit (AQMAU) Screening Tool Version 5.2 and information provided by the applicant, to screen the 2 biomass boilers.

The screening tool was run to calculate the process contribution (PC) from the boilers at the most sensitive local receptor. The most sensitive local receptor was identified as Duckets Croft, 85m to the north west of the site. The biomass boilers were screened with the following input parameters:

Flue diameter	275 mm	275 mm
Stack height (from ground level)	7.5 m	7.5 m
Adjacent building height	6.5 m	6.5 m
Flue minimum temperature	150°C	150°C
Total thermal input capacity in MW	0.885 MW	1.100 MW
Exit velocity in m/sec	15.76	16.77
NO _x concentration in mg/Nm ³	152	152
CO concentration in mg/Nm ³	28	28
PM ₁₀ (dust) concentration in mg/Nm ³	34	34
The exact co-ordinates of the stacks	340168,318563	340171,318566
The exact co-ordinates of the centre of the farm	340323,318599	340323,318599
The exact co-ordinates of the worst case sensitive receptor	340106, 318620	340106, 318620

The AQMAU screening tool was used to assess the impact of carbon monoxide (CO), nitrogen dioxide (NO₂) and particulates (PM₁₀) emissions from the proposed boiler units on the nearby sensitive receptors. Sulphur dioxide (SO₂) has not been assessed due to the boiler fuel being clean woodchip which is likely to contain very little or no sulphur.

In this assessment the individual PC impact values were combined together by use of the AQMAU screening tool (to give a total cumulative PC from the two boilers) and compared to the relevant environmental standards in the following way. In line with Environment Agency guidance H1 Annex F, process contributions can be considered insignificant if:

- the long term process contribution is <1% of the long term environmental standard; and,

- the short term process contribution is <10% of the short term environmental standard.

Maximum off-site ground level impacts at the most significantly impacted human receptor locations (Duckets Croft) are summarised in the tables below.

Table 1 - Predicted Short Term Impacts

Pollutant	EQS / EAL $\mu\text{g}/\text{m}^3$	Process Contribution (PC) $\mu\text{g}/\text{m}^3$	PC as % of EQS / EAL [1] [2]	Back-ground Conc. $\mu\text{g}/\text{m}^3$ [3]	Predicted Environmental Concentration (PEC) $\mu\text{g}/\text{m}^3$	PEC as % of EQS/EAL [4]
NO ₂ (1 hr)	200	22.3	11%	9.26	31.56	16%
PM ₁₀ (24 hr)	50	1.4	3%			
CO (1 hr)	10,000	9	0.009%			

Note [1] Representative of worst case impact at Duckets Croft.

Note [2] Where the PC is demonstrated to be less than 10% of the short term EQS/EAL, a level below which we consider to indicate insignificant impact, further consideration of the PEC is not required.

Note [3] The background concentration is taken as twice the long term background level for Short Term Environmental Quality Standard (EQS) / Environmental Assessment Level (EAL) standards referenced to an hourly averaging value.

Note [4] The Predicted Environmental Concentration (PEC) was calculated for substances that are not screened out for short and long term environmental impact. PEC is the PC plus background. Where the PEC is demonstrated to be greater than 70% of the long term EAL, a level below which we consider to indicate as not being a significant impact, more detailed assessment is required.

Table 2 - Predicted Long Term Impacts

Pollutant	EQS / EAL $\mu\text{g}/\text{m}^3$	Process Contribution (PC) $\mu\text{g}/\text{m}^3$	PC as % of EQS / EAL [1] [2]	Back-ground Conc. $\mu\text{g}/\text{m}^3$	Predicted Environmental Concentration (PEC) $\mu\text{g}/\text{m}^3$	PEC as % of EQS/EAL [2]
NO ₂	40	2.5	6%	4.62	7.12	18%
PM ₁₀	40	0.55	1.3%	13.42	13.97	35%

Note [1] Representative of worst case impact at Duckets Croft.

Note [2] The Predicted Environmental Concentration (PEC) was calculated for substances that are not screened out for short and long term environmental impact. PEC is the PC plus background. Where the PEC is demonstrated to be greater than 70% of the long term EAL, a level below which we consider to indicate as not being a significant impact, more detailed assessment is required.

Screening out emissions which are insignificant

In accordance with Environment Agency guidance, the short term impact of PM₁₀ and CO emissions are considered insignificant as the PC from the boilers is <10% of the short term EQS/EAL.

The short term PC for NO₂ is >10% so it cannot be considered insignificant, however as the PECs are below the standard these are unlikely to be a significant contributor to or cause an exceedance of an ES.

The long term PC for NO₂ and PM₁₀ is >1% so in accordance with Environment Agency guidance it cannot be considered insignificant, however as the PECs are below the standard these are unlikely to be a significant contributor to or cause an exceedance of an ES.

Habitats

In accordance with the Environment Agency's Air Quality Technical Advisory Guidance 14: "for combustion plants under 5MW, no habitats assessment is required due to the size of combustion plant". Therefore this proposal is considered acceptable and no further assessment is required.

Ammonia

There are no Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramsar sites located within 5 kilometres of the installation. There are 3 Sites of Special Scientific Interest (SSSI) located within 5 km of the installation. There are also 5 Local Wildlife Sites (LWS), or Ancient Woodlands (AW) within 2 km of the installation.

Ammonia assessment – SSSI

The following trigger thresholds have been applied for assessment of SSSIs:

- If the process contribution (PC) is below 20% of the relevant critical level (CLe) or critical load (CLo) then the farm can be permitted with no further assessment.
- Where this threshold is exceeded an assessment alone and in combination is required. An in-combination assessment will be completed to establish the combined PC for all existing farms identified within 5 km of the SSSI.

Initial screening using the ammonia screening tool version 4.5 has indicated that emissions from Great Ness Farm will only have a potential impact on SSSIs with a precautionary CLe of $1\mu\text{g}/\text{m}^3$ if they are within 1733m of the emission source.

Beyond 1733m the PC is less than $0.2\mu\text{g}/\text{m}^3$ (i.e. less than 20% of the precautionary $1\mu\text{g}/\text{m}^3$ CLe) and therefore beyond this distance the PC is insignificant. In this case all SSSIs are beyond this distance (see table below) and therefore screen out of any further assessment.

Where the precautionary level of $1\mu\text{g}/\text{m}^3$ is used and the PC is assessed to be less than 20%, the site automatically screens out as insignificant and no further assessment of CLo is necessary. In this case the $1\mu\text{g}/\text{m}^3$ level used has not been confirmed by Natural England, but it is precautionary. It is therefore possible to conclude no likely damage to these sites.

Table 1 – SSSI Assessment

Name of SSSI	Distance from site (m)
River Severn at Montford	3,454
Shrawardine Pool	2,211
Lin Can Moss	3,677

Ammonia assessment - LWS/AW

The following trigger thresholds have been applied for the assessment of these sites:

- If the process contribution (PC) is below 100% of the relevant critical level (CLe) or critical load (CLo) then the farm can be permitted with no further assessment.

Initial screening using ammonia screening tool version 4.5 has indicated that emissions from Great Ness Farm will only have a potential impact on the LWS and AW sites with a precautionary CLe of $1\mu\text{g}/\text{m}^3$ if they are within 606m of the emission source.

Beyond 606m the PC is less than $1\mu\text{g}/\text{m}^3$ and therefore beyond this distance the PC is insignificant. In this case all LWS and AWs are beyond this distance (see table below) and therefore screen out of any further assessment.

Table 2 – LWS and AW Assessment

Name LWS/AW	Distance from site (m)
Cottage Plantation Pools LWS	1,001
The Cliffe LWS	1,977
Nesscliff, Great Ness LWS	1,555
Vales Wood AW	1,956
Nesscliff Hill AW	1,565

Decision checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
Consultation	
Consultation	<p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>The application was publicised on the GOV.UK website.</p> <p>We consulted the following organisations:</p> <ul style="list-style-type: none"> - Food Standards Agency - Shropshire Council Planning - Shropshire Council Environmental Health - Health and Safety Executive - Director of Public Health/ Public Health England <p>The comments and our responses are summarised in the consultation section.</p>
The facility	
The regulated facility	<p>We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility'.</p> <p>The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.</p> <p>All biomass boilers currently on site will be removed and replaced with 2 larger biomass boilers, with an aggregated thermal input of 1.985 MW. Due to the size of one of these boilers it is a Medium Combustion Plant and Schedule 25A of the EP Regulations apply. The small waste incineration plant are listed as installation activities in the EP Regulations Schedule 1, Part 2, Chapter 5, Section 5.1 Part B(a)(v). The plant incinerates clean waste wood with an individual unit capacity of 1 MW thermal input or greater, (~ 225 kg/hr of waste wood) but less than 3 tonnes per hour (~ 13.33 MW thermal input).</p> <p>This permit does not include the storage of waste. The operator is intending to store up to 125 tonnes of waste wood at any one time prior to incineration in accordance with Environment Agency Regulatory Position Statement 213.</p>
The site	
Extent of the site of the facility	The operator has provided plans which we consider are satisfactory, showing the extent of the site of the facility. The plan is included in the permit.
Site condition report	The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports.
Biodiversity, heritage,	The application is within the relevant distance criteria of a site of heritage,

Aspect considered	Decision
landscape and nature conservation	<p>landscape or nature conservation, and/or protected species or habitat.</p> <p>We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p>
Environmental risk assessment	
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p>
Operating techniques	
General operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>No changes have been made to the operating techniques table from the previous permit as a result of this variation.</p>
Odour management	The odour management plan has not been reassessed as part of this variation as we have determined that there is no change in the risk from odour.
Noise management	The noise management plan has not been reassessed as part of this variation as we have determined that there is no change in the risk from noise.
Permit conditions	
Updating permit conditions during consolidation	We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit(s).
Waste types	<p>We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.</p> <p>We are satisfied that the operator can accept these wastes for the following reasons:</p> <ul style="list-style-type: none"> • they are suitable for the proposed activities • the proposed infrastructure is appropriate; and • the environmental risk assessment is acceptable.
Emission limits	<p>ELVs [and/or] equivalent parameters or technical measures [based on BAT] have been set for the following substances.</p> <ul style="list-style-type: none"> - Total Nitrogen (N) excretion 0.6kg/animal place/year - Total Phosphorous (P₂O₅) excretion 0.25kg/animal place/year - Total Ammonia (NH₃) emissions 0.08kg/animal place/year

Aspect considered	Decision
	<p>ELVs for the biomass boilers which is subject to MCP requirements have been set for the following substances [based on MCP regulations]:</p> <ul style="list-style-type: none"> - Oxides of Nitrogen (NO and NO₂ expressed as NO₂), 500 mg/m³ - Carbon monoxide, 225 mg/Nm³ - Dust, 50 mg/m³ - TVOC, 30 mg/Nm³
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>These monitoring requirements have been imposed in order to comply with the relevant BAT measures. See key issues for further information.</p>
Reporting	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>These reporting requirements on monitoring data and performance parameters have been imposed in order to comply with the conditions of the permit.</p> <p>Refer to the key issues of the decision section of this decision document for further information. We made these decisions in accordance with BAT conclusion document dated 21st February 2017 and the MCP technical guidance;</p> <p><i>Medium Combustion Plan Guidance: https://www.gov.uk/guidance/medium-combustion-plant-and-specified-generator-permits-how-to-comply</i></p>
Operator competence	
Management system	<p>There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.</p>
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	<p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have</p>

Aspect considered	Decision
	been set to achieve the required legislative standards.

Consultation

The following summarises the responses to consultation with other organisations or our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from
Shropshire Council - local planning authority
Brief summary of issues raised
<p>The last amenity complaint received regarding the site was made in 2014 for odour, the Environment Agency were notified.</p> <p>Planning permission for buildings 5, 6 and 7, applied for in 2013, has as of the current time not been issued. It is understood that these buildings have been constructed and this matter is being pursued with the developer by the council.</p>
Summary of actions taken or show how this has been covered
<p>The changes made under this variation do not increase the risk from odour. The most recent odour complaint was more than 5 years ago. The odour management plan has not been reassessed.</p> <p>The status of planning permission for a permitted site is not a factor we are able to take into consideration in the determination of a permit</p>