

# Permitting decisions

## Bespoke permit

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We have decided to grant the permit for Grendon Manor Poultry Unit operated by Mr Massie Piggott and Mrs Jane Piggott (trading as MG & SJ Piggott).

The permit number is EPR/HP3803MJ.

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; and
- shows how we have considered the [consultation responses](#).

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

Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit 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 sets 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 installation farming permits issued after the 21<sup>st</sup> 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 (BAT-AELs) for ammonia emissions, which will apply to the majority of permits, as well as BAT-AELs for nitrogen and phosphorus excretion.

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

## New BAT Conclusions review

There are 34 BAT conclusion measures in total within the BAT conclusion document dated 21<sup>st</sup> February 2017.

The Applicant has confirmed their compliance with all BAT conditions for the new installations in their document reference 'Grendon Manor Poultry Unit', submitted with the application duly made on 23/05/22, which has been referenced in Table S1.2 Operating Techniques of the permit.

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

<b>BAT measure</b>	<b>Applicant compliance measure</b>
BAT 3 Nutritional management - Nitrogen excretion	The Applicant has confirmed it will demonstrate that the installation achieves levels of nitrogen excretion below the required BAT-AEL of 0.6 kg N/animal place/year by an estimation using manure analysis for total Nitrogen content.  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 - Phosphorus excretion	The Applicant has confirmed it will demonstrate that the installation achieves levels of phosphorus excretion below the required BAT-AEL of 0.25 kg P <sub>2</sub> O <sub>5</sub> animal place/year by an estimation using manure analysis for total phosphorus content.  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 phosphorus excretion	Table S3.3 concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 25 Monitoring of emissions and process	Table S3.3 of the permit concerning process monitoring requires the Operator to

BAT measure	Applicant compliance measure
parameters - Ammonia emissions	undertake relevant monitoring that complies with these BAT Conclusions.  The Applicant has confirmed they will report the ammonia emissions to the Environment Agency annually by multiplying the ammonia emissions factor for broilers by the number of birds on site.
BAT 26 Monitoring of emissions and process parameters - Odour emissions	The approved odour management plan (OMP) includes the following details for on odour monitoring: <ul style="list-style-type: none"> <li>• twice daily olfactory checks coinciding with stock inspections (normally 07.00-10.00 hrs and 16.00-18.00hrs), any abnormalities recorded and investigated</li> <li>• monitoring also to be carried out weekly, by means of “sniff testing” at the monitoring points by persons not involved directly with the operations at the installation.</li> <li>• Monitoring will be carried out weekly at the installation boundary</li> <li>• All records will be securely stored and held on site for inspection.</li> <li>• Monitoring will be by means of self-assessed “Sniff Testing” by person/persons not normally working on the poultry installation.</li> <li>• In the event of medium – very high odour scores being recorded the site staff will be alerted to implement contingency measures.</li> <li>• Retesting at the installation boundary will be conducted following any actions implemented to ensure the effectiveness of recorded actions implemented.</li> <li>• Monitoring procedure/frequency to be reviewed annually or in the event of a complaint.</li> </ul>
BAT 27 Monitoring of emissions and process parameters - Dust emissions	Table S3.3 concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.  The Applicant has confirmed they will report the dust emissions to the Environment Agency annually by multiplying the dust emissions factor for broilers by the number of birds on site.
BAT 32 Ammonia emissions from poultry houses - Broilers	The BAT-AEL to be complied with is 0.01 – 0.08 kg NH <sub>3</sub> /animal place/year. The Applicant will meet this as the emission factor for broilers is 0.034 kg NH <sub>3</sub> /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-AELs for ammonia emissions to air from animal housing for broilers.

'New plant' is defined as plant first permitted at the site of the farm following the publication of the BAT Conclusions.

All new bespoke applications issued after the 21<sup>st</sup> February 2017, including those where there is a mixture of old and new housing, will now need to meet the BAT-AEL.

## **Industrial Emissions Directive (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 Grendon Manor Poultry Unit (dated 28/10/21, supporting application duly made on 23/05/22) 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**

Intensive farming is by its nature a potentially odorous activity. This is recognised in our 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 guidance

([http://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/297084/geho0110brsb-e-e.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297084/geho0110brsb-e-e.pdf)).

Condition 3.3 of the environmental permit reads as follows:

"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."

Under section 3.3 of the guidance an Odour Management Plan (OMP) is required to be approved as part of the permitting process if, as is the case here, sensitive receptors (sensitive receptors in this instance excludes properties associated with the farm) are within 400m of the installation boundary. It is appropriate to require an OMP when such sensitive receptors have been identified within 400m of the installation to prevent or, where that is not practicable, to minimise the risk of pollution from odour emissions.

The risk assessment for the installation provided with the application lists key potential risks of odour pollution beyond the installation boundary. These activities are as follows:

- Manufacture and selection of feed
- Feed storage and delivery
- Ventilation
- Litter management
- Carcass storage and disposal
- Poultry house clean out

### Odour Management Plan Review

A revised odour management plan (OMP) has been provided by the operator as part of the application supporting documentation (received in response to a request for further information (sent 20/10/22) on 25/10/22).

The installation is located within 400m of 9 sensitive receptors from the installation boundary. The nearest sensitive receptor (the nearest point of their assumed property boundary) is approximately 345m north east of the installation boundary and approximately 385m from the nearest poultry house (the main source of odour). A further six of the receptors are more than 360m from the installation and close to or more than 400m from the nearest poultry house, and located to the north or north east. One receptor is approximately 360m to the south west of the installation, and one approximately 395m to the north west. There has been no history of odour complaints for the current operation. The prevailing wind is from the west (according to our air quality team during their audit of the ammonia modelling) therefore not predominantly in the direction of the receptors and the measures in place will minimise the risk of odour being a nuisance.

The operator is required to manage activities at the Installation in accordance with condition 3.3.1 of the Permit and its OMP. The OMP includes odour control measures for normal and abnormal operations and contingency measures, including manufacture and selection of feed, feed delivery and storage, ventilation and heating systems and dust, litter management, carcass disposal, house clean out, used litter storage and disposal, washing operations, fugitive emissions, dirty water management, water leaks/pipe failure, bird sickness, waste production and storage, chemical storage, variations in stocking density/bird growth and bird depletion.

In order to monitor odour emissions on site, there will be twice daily olfactory checks coinciding with stock inspections (normally 07.00-10.00 hrs and 16.00-18.00hrs), any abnormalities recorded and investigated.

The operator has confirmed in their OMP that it will be reviewed every year from permit issue date, prior to any major changes to operations (to ensure effectiveness) or following any complaint, any changes to OMP or other management plans to be documented dated and signed and Area Officer notified.

The Environment Agency has reviewed the OMP and considers it acceptable. We agree with the scope and suitability of key measures but this should not be taken as confirmation that the details of equipment specification design, operation and maintenance are suitable and sufficient. That remains the responsibility of the operator.

### Conclusion

Although there is the potential for odour pollution from the Installation, the operator's compliance with the permit and its OMP will minimise the risk of odour pollution beyond the Installation boundary. The risk of odour pollution at sensitive receptors beyond the Installation boundary is therefore not considered significant.

## **Noise**

Intensive farming by its nature involves activities that have the potential to cause noise pollution. This is recognised in our 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 guidance.

Under section 3.4 of this guidance, a Noise Management Plan (NMP) must be approved as part of the permitting determination if there are sensitive receptors within 400m of the installation boundary.

Condition 3.4 of the permit reads as follows:

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.

There are sensitive receptors within 400 metres of the installation boundary as stated above. The Operator has provided an NMP as part of the application supporting documentation, and further details are provided below.

The risk assessment for the installation provided with the application lists key potential risks of noise pollution beyond the installation boundary. These activities are as follows:

- Large and small vehicles travelling to and from the farm
- Large vehicle movement on site – including litter and dirty water removal
- Feed transfer from lorry to bins
- Ventilation fans
- Alarm system and standby generator
- Chickens – including catching and removal from site
- Personnel
- Repairs and servicing

#### Noise Management Plan Review

A revised noise management plan (NMP) has been provided by the operator as part of the application supporting documentation (received 25/10/22 in response to a request for further information dated 20/10/22).

Potential sources of noise have been included as identified in the risk assessment and listed above, and mitigation measures have been put in place.

The operator has confirmed in the NMP that it will be reviewed annually or following a substantiated noise complaint.

We are satisfied that the manner in which operations are carried out on the installation will minimise the risk of noise pollution.

#### Conclusion

We have assessed the NMP and the H1 risk assessment for noise and conclude that the Applicant has followed the guidance set out in EPR 6.09 Appendix 5 'Noise management at intensive livestock installations'. We are satisfied that all sources and receptors have been identified, and that the proposed mitigation measures will minimise the risk of noise pollution / nuisance.

## **Dust and Bioaerosols**

The use of Best Available Techniques and good practice will ensure minimisation of emissions. There are measures included within the permit (the 'Fugitive Emissions' conditions) to provide a level of protection. Condition 3.2.1 'Emissions of substances not controlled by an emission limit' is included in the permit. This is used in conjunction with condition 3.2.2 which states that in the event of fugitive emissions causing pollution following commissioning of the installation, the Operator is required to undertake a review of site activities, provide an emissions management plan and to undertake any mitigation recommended as part of that report, once agreed in writing with the Environment Agency.

In addition guidance on our website concludes that applicants need to produce and submit a dust and bioaerosol management plan beyond the requirement of the initial risk assessment, with their applications only if there are relevant receptors within 100 metres of their farm, e.g. the farmhouse or farm worker's houses. Details can be found via the link below:

[www.gov.uk/guidance/intensive-farming-risk-assessment-for-your-environmental-permit#air-emissions-dust-and-bioaerosols](http://www.gov.uk/guidance/intensive-farming-risk-assessment-for-your-environmental-permit#air-emissions-dust-and-bioaerosols).

There is one sensitive receptors within 100m of the installation boundary, located to the south of poultry house 1, approximately 55m from the boundary of the installation to the nearest point of their assumed property boundary and approximately 70m to the south of the poultry house. Given the location of the proposed new houses, it is also located to the east and north east of the new poultry houses 7 – 10, but these are more than 100m away.

As there is a receptor within 100m of the installation, the Applicant was required to submit a dust and bioaerosol management plan as detailed above.

In the guidance mentioned above it states that particulate concentrations fall off rapidly with distance from the emitting source. This fact, together with the proposed good management of the installation (such as keeping areas clean from build-up of dust and other measures in place to reduce dust and the risk of spillages) all reduce the potential for emissions impacting the nearest receptors. In addition, as the predominant wind is from the west (according to our air quality team during their audit of the ammonia modelling), the receptor is not directly downwind of nearest poultry houses with 100m, which in itself will reduce the impact from dust and bioaerosol emissions.

The Applicant has included measures in their dust and bioaerosol management plan to reduce dust, which will inherently reduce bioaerosols, for the following sources:

- Feed deliveries to silos, ingredients and delivery system to poultry houses
- Bedding type, depth and application
- Litter management
- Stock inspections
- Ventilation
- House cleaning operations
- Bird numbers (stocking density)

### Conclusion

We are satisfied that the measures outlined in the application will minimise the potential for dust and bioaerosol emissions from the installation.

## **Biomass Boilers**

The Applicant is varying their permit to include 4 biomass boilers with a aggregated net rated thermal input of 0.924 MW (each 0.231MW individually)

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 (including building housing boiler(s) if relevant) and;

- there are no sensitive receptors within 50 metres of the emission points.

This is 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. Our risk assessment has shown that the biomass boilers should meet the requirements of the criteria above and are, therefore, considered not likely to pose a significant risk to the environment or human health and no further assessment is required.

## Ammonia

There are no Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites or Sites of Special Scientific Interest (SSSI) located within 5 kilometres of the installation. There are 2 Local Wildlife Sites (LWS) and 8 Ancient Woodlands (AW) within 2 km of the installation.

### Ammonia assessment – LWS and 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 4.6 (AST v4.6) has indicated that emissions from Grendon Manor Poultry Unit 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 948 metres of the emission source.

Beyond 948m the PC is less than  $1\mu\text{g}/\text{m}^3$  and therefore beyond this distance the PC is insignificant. In this case the LWS and AW listed in table 1 below are beyond this distance and therefore screen out of any further assessment.

**Table 1 – LWS/AW Assessment**

Name of LWS/AW	Distance from site (m)
Woodland near Batchley LWS	1,253m
Woodland near Grendon Bishop LWS	1,368m
Barnup Coppice AW	1,983m
Coppice AW	1,613m
Grit Coppice AW	2,060m
Hatfield Wood AW	1,772m

Screening using the ASTv4.6 has determined that the PCs on the LWS and AW listed in tables 2 and 3 below for ammonia emissions/nitrogen deposition/acid deposition from the application site are under the 100% significance threshold and can be screened out as having no likely significant effect.

**Table 2 - Ammonia emissions**

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of critical level
Unknown Woodland AW	3*	1.049	35
Ash Bed AW	3*	1.317	43.9
Ash Bed (separate area to other part) AW	3*	1.713	39.1

\* CLe 3 applied as no protected lichen or bryophytes species were found when checking Easimap layer



**Table 3 – Nitrogen deposition**

Site	Critical load kg N/ha/yr	Predicted PC kg N/ha/yr	PC % of critical load
Unknown Woodland AW	10*	5.446	54.5
Ash Bed AW	10*	6.841	68.4
Ash Bed (separate area to other part) AW	10*	6.094	60.9

\*Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 29/04/21 (rechecked 23/11/22)

**Table 4 – Acid deposition**

Site	Critical load keq/ha/yr	Predicted PC keq/ha/yr	PC % of critical load
Unknown Woodland AW	1.652*	0.389	23.5
Ash Bed AW	1.652*	0.489	29.6
Ash Bed (separate area to other part) AW	1.652*	0.435	26.3

\*Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) - 29/04/21 (rechecked 23/11/22)

Two ancient woodlands, Bredonbury Wood AW and Brierly Coppice AW, did not screen out using the ASTv4.6 therefore the Applicant was required to submit detailed ammonia modelling (referenced 'A Report on the Modelling of the Dispersion and Deposition of Ammonia from the Existing Turkey Rearing Houses and the Proposed Broiler Chicken Rearing Houses at Grendon Manor Farm, near Bredonbury in Herefordshire', completed by AS Modelling & Data Ltd, May 2021 and submitted with the application, duly made on 23/05/22). The modelling results are detailed below:

**Table 5 - Ammonia emissions**

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of critical level
Bredonbury Wood AW	1*	1.327	132.7**
Brierly Coppice AW	1*	1.04	104**

\* CLe  $1 \mu\text{g}/\text{m}^3$  applied as a precautionary measure in the modelling.

\*\* No protected lichen or bryophytes species were found when checking Easimap layer therefore we would ordinarily assign a CLe of  $3 \mu\text{g}/\text{m}^3$  which would result in ammonia emissions being below 100% threshold.

**Table 6 – Nitrogen deposition**

Site	Critical load kg N/ha/yr	Predicted PC kg N/ha/yr	PC % of critical load
Bredonbury Wood AW	10*	10.34	103.4
Brierly Coppice AW	10*	8.1	81

\*Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 23/11/22

**Table 7 – Acid deposition**

Site	Critical load keq/ha/yr	Predicted PC keq/ha/yr	PC % of critical load
Bredonbury Wood AW	1.636*	0.739**	45.1
Brierly Coppice AW	1.652*	0.579**	35

\*Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 23/11/22

\*\* No process contributions for acid deposition were included in the Applicant’s modelling. We have estimated these by dividing the process contributions for nitrogen deposition by 14.

The results above indicated that Brierly Coppice AW process contributions were below 100% (assuming a CLe of 3µg/m3), however Bredonbury Wood exceeded the 100% threshold for nitrogen deposition.

Focussing on Bredondury Wood AW, which the modelling indicates as having the largest impact, we had only limited information about why the site was designated. Therefore the Environment Agency consulted with Herefordshire Biological Records Centre, Herefordshire Council county ecologist, the Forestry Commission, Herefordshire Wildlife Trust, The Woodland Trust and our internal ecology team and local area team in order to determine:

- whether the site was considered vulnerable to airborne ammonia and/or nutrient enrichment;
- the key features for which the site was proposed as an ancient woodland which were vulnerable to ammonia emissions and/or nitrogen deposition;
- whether the important ancient woodland species were being actively conserved;
- whether the objectives for the management of the ancient woodland were being met;
- whether the woodland was improving as a result of management and
- whether there are any other management activities that may change the current status of the ancient woodland. LWS is likely to be de-designated.

Based upon the responses from the consultees who responded we have not determined that the site is being actively managed and we haven’t found specific conservation objectives in place. However, we were advised that the site is sensitive to the effects of ammonia emissions and nitrogen deposition, therefore the impact from ammonia emissions from the farm needed further assessment.

The Applicant has included, in their modelling, a comparison of the current predicted PCs with that of the proposal, for ammonia and nitrogen deposition.

**The impacts from the existing six houses are as follows:**

**Table 8 - Ammonia emissions**

Site	Critical level ammonia µg/m <sup>3</sup>	Predicted PC µg/m <sup>3</sup>	PC % of critical level
Bredonbury Wood AW	1*	2.39	239**

\* CLe 1 µg/m<sup>3</sup> applied as a precautionary measure in the modelling.

\*\* No protected lichen or bryophytes species were found when checking Easimap layer therefore we would ordinarily assign a CLe of 3 µg/m<sup>3</sup> which would result in ammonia emissions being below 100% threshold.

**Table 9 – Nitrogen deposition**

Site	Critical load kg N/ha/yr	Predicted PC kg N/ha/yr	PC % of critical load
Bredonbury Wood AW	10*	18.62	186.2

\*Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 23/11/22

### **Comparison conclusions:**

This indicates that the impacts from the proposed broiler chicken operation are approximately 44% lower than those of the existing turkey operation for both ammonia emissions and nitrogen deposition. The detailed modelling provided by the Applicant has been audited in detail by our air quality modelling team and we have confidence that we can agree with the report conclusions of a reduction of the impacts from the proposal, however checks have indicated that the reduction is less than that predicted by the Applicant's modelling; approximately 30% reduction for the same number of stag turkeys in the existing operation, assuming 100 % occupancy. Further sensitivity checks were carried out with the number of turkeys slightly reduced and downtime considered (based on turkey placement data provided by the Applicant for the last 5 years of operations) and this indicated that the impact from ammonia emissions and nitrogen deposition for the proposal with broiler chickens to be approximately 20% lower at Bredonbury Wood ancient woodland compared to the current operation with stag turkeys.

On this basis we agree that the permit can be granted based on a reduction of impacts on the conservation site Bredonbury Wood ancient woodland if the installation becomes operational.

No further assessment is necessary

# Decision checklist

Aspect considered	Decision
<b>Receipt of application</b>	
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.  The decision was taken in accordance with our guidance on confidentiality.
<b>Consultation</b>	
Consultation	The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.  The application was publicised on the GOV.UK website.  We consulted the following organisations:  Health and Safety Executive (HSE)  Herefordshire Council Environmental Health  UK Health Security Agency (UKHSA)  Director of Public Health, Herefordshire Council  The comments and our responses are summarised in the <a href="#">consultation section</a> .
<b>Operator</b>	
Control of the facility	We are satisfied that the Applicant (now the Operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.
<b>The facility</b>	
The regulated facility	We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility'.  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.
<b>The site</b>	
Extent of the site of the facility	The Operator has provided a plan which we consider is 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, landscape and nature conservation	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.  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.

Aspect considered	Decision
	<p>We consider that the application will not of itself have a negative effect on any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified. One ancient woodland is already above the critical level/load and a reduction of these impacts is predicted if the installation becomes operational – see Ammonia Section above for further details.</p>
<b>Environmental risk assessment</b>	
Environmental risk	<p>We have reviewed the Operator's assessment of the environmental risk from the facility. The Operator's risk assessment is satisfactory.</p>
<b>Operating techniques</b>	
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>The operating techniques that the Applicant must use are specified in table S1.2 in the environmental permit.</p> <p>The operating techniques are as follows:</p> <ul style="list-style-type: none"> <li>• Poultry houses 1 – 6 are ventilated by side fan outlets</li> <li>• Poultry houses 7 – 10 are ventilated by high velocity roof fans with an emission point higher than 5.5 metres above ground level and an efflux speed greater than 11 metres per second</li> <li>• Litter is exported off site and is spread on land owned by the operator, with any surplus sold to third parties for land spreading</li> <li>• Dirty wash water and contaminated yard water is collected and exported off site and spread on land owned by the operator, with surplus spread on land owned or operated by third parties</li> <li>• Roof water drains via gutters and underground drains to a ditch located to the south of the installation which ultimately drains to the River Lodon.</li> <li>• Uncontaminated yard water from concrete areas is diverted to the ditch to the south</li> <li>• Grassed areas adjacent to the sides and the northern gable ends of the poultry houses act as soakaways for drainage in these areas</li> <li>• Feed is stored on the installation in sealed food bins</li> <li>• Mortalities are collected daily and stored in a secure container on site for removal and disposal in accordance with the current Animal By-Product Regulations</li> <li>• the fuel for the biomass boilers is derived from virgin timber</li> <li>• the biomass boiler appliances and their installation meets the technical criteria to be eligible for the Renewable Heat Incentive</li> <li>• the stacks are 1m or more higher than the apex of the adjacent buildings.</li> </ul> <p>The proposed techniques for priorities for control are in line with the benchmark levels contained in the Sector Guidance Note EPR6.09 and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs.</p>

<b>Aspect considered</b>	<b>Decision</b>
Odour management	We have reviewed the odour management plan in accordance with our guidance on odour management. We consider that the odour management plan is satisfactory.
Noise management	We have reviewed the noise management plan in accordance with our guidance on noise assessment and control. We consider that the noise management plan is satisfactory.
<b>Permit conditions</b>	
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Raw materials	We have specified limits and controls on the use of raw materials and fuels. We have specified that only virgin timber (including wood chips and pellets), straw, miscanthus or a combination of these, are acceptable. These materials are never to be mixed with or replaced by, waste.
Emission limits	We have decided that emission limits are required in the permit. BAT AELs have been added in line with the Intensive Farming sector BAT conclusions document dated 21/02/17. These limits are included in permit table S3.3.
Monitoring	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. These monitoring requirements have been imposed in order to ensure compliance with the Intensive Farming BAT conclusions document dated 21/02/17.
Reporting	We have specified reporting in the permit. We made these decisions in order to ensure compliance with the Intensive Farming BAT conclusions document dated 21/02/17.
<b>Operator competence</b>	
Management system	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. The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.
Relevant convictions	The Case Management System has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found. The Operator satisfies the criteria in our guidance on operator competence.
Financial competence	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.
<b>Growth Duty</b>	
Section 108 Deregulation	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

Aspect considered	Decision
Act 2015 – Growth duty	<p>under section 110 of that Act in deciding whether to vary 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 been set to achieve the required legislative standards.</p>

## Consultation

The following summarises the responses to consultation with other organisations, 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

<b>Response received from</b>
Herefordshire Council Environmental Health (response received 18/07/22)
<b>Brief summary of issues raised</b>
<p>The following comments were made in relation to air quality:</p> <p>DEFRA has advised that poultry rearing operations should be included in the assessment for Local Air Quality Management (LAQM) and has published a screening assessment methodology for PM10's taking into considerations the number of birds, the distance of the receptor to the poultry units and the background PM10 concentrations. (TG16). The number of birds on the application site are below DEFRA's screening threshold of 400,000, however the poultry units are in relative close proximity to the residential dwelling. It is also noted that there are a 4 x199kW biomass boilers within the permitted area. The application also refers to LPG heating. Biomass boilers have the potential to emit NO2 and additional PM10. There appears to be no information in relation to the potential combined impacts of PM10 from the poultry houses and emissions of PM10 from the biomass boilers on human health.</p> <p>There is also no information on the NO2 emissions from the biomass plant and LPG heating (size unknown) and the potential impact on human health.</p> <p>Not aware of any noise or nuisance complaints in relation to the existing bird units.</p>
<b>Summary of actions taken or show how this has been covered</b>
<p>We have assessed the application in accordance with our agreed assessment criteria.</p> <p>The impacts from the biomass boilers had been assessed and detailed in the 'Biomass Boilers' section of the Key Issues above.</p> <p>Dust (which includes PM10s) emissions and control measures have been addressed in the 'Dust and Bioaerosols' section of the Key Issues section above. This is an agreed approach with UK Health Security Agency (UKHSA) (formerly Public Health England) with the requirement under specific criteria for a Dust and Bioaerosol Management Plan.</p> <p>LPG heaters in poultry farm installations are considered to be a low risk to human health due to their small size (much less than 1MWth thermal input) and therefore further detailed assessment is not required.</p> <p>We are satisfied that emissions from the installation will present a low risk to human health.</p> <p>No further action required.</p>

<b>Response received from</b>
UK Health Security Agency (UKHSA) (response received 05/08/22)
<b>Brief summary of issues raised</b>
<p>The main emissions of potential public health significance are emissions to air of bioaerosols, dust and ammonia, all of which contribute to the particulate matter (PM) burden.</p>



Although the proposed site is located in a rural area, UKHSA have identified sensitive human receptors to include:

Within 100 metres:

- Grendon Manor, immediately adjacent (south and east) (the application states that Grendon Manor is the residence of the operator, however we note that it is also used as a Bed and Breakfast)

Within 500 metres:

- Newbury farm bungalow, ~300 m south west
- Westlington court and a bungalow ~460 m west
- Bilfield cottages, ~400 m north
- Westlington workshop, ~490m north
- The Old Forge ~380m north
- Grendon green bank house and Hillcrest ~420 m north/north east
- Sticking field ~360 m north east

It is recommended that the Environment Agency ensures that the the receptors are consistent across all of the assessments the applicant has made.

It is recommended that the Environment Agency takes into consideration the following concerns when issuing their permit response:

#### Air Quality

- The applicant has provided little detail on off-site site impacts of emissions from biomass operations, boilers, the incinerator or LPG gas that are all briefly mentioned in the application. The impact of these on air quality has not been fully risk assessed and further consideration should be given to their frequency of use, cumulative impacts, emissions and location on-site in relation to identified receptors.

- A dust management plan, which outlines a range of control and mitigation measures for the emissions, has been provided by the applicant, however, it does not detail any monitoring or action that would be undertaken with actions if levels of dust above a trigger/action threshold are noted.

- Bioaerosols

The Environment Agency screen intensive livestock rearing units using a distance of 100m to the nearest sensitive receptor(s). This is based on a 2009 DEFRA report. Should it be identified by the applicant that there are sensitive receptors within 100m from the boundary of such units the applicant is required to carry out a bioaerosol risk assessment. The UKHSA have identified a sensitive human receptor within 100 m of the proposed installation (Grendon Manor), and therefore recommend that the Environment Agency ensure that a bioaerosol specific risk assessment is conducted.

#### Water

The applicant states that the drainage from the animal housing will be collected in underground storage tanks. However, it is not clear what then happens to this stored water, nor how much water can be stored at any one time.

#### Accidents and Hazards

Scarce details have been provided on LPG gas storage (e.g. bunding and location).

The regulator should ensure that the accident management plan is updated to consider any additional hazards posed.

It is assumed by UKHSA that the installation will comply in all respects with the requirements of the permit, including the application of Best Available Techniques (BAT). This should ensure that emissions present a low risk to human health.

### **Summary of actions taken or show how this has been covered**

Sensitive receptors: we have identified one sensitive receptor within 100m and 9 other sensitive receptors within 400m of the installation boundary (we consider the risk is low for receptors beyond 400m). As a result we requested revised odour and noise management plans be submitted by the Applicant to include the 9 sensitive receptors within 400m of the installation boundary, and the dust and bioaerosol management plan already included the one within 100m (the latter is excluded from the OMP and NMP and associated risk assessments as it is occupied by people associated with the farm and therefore not deemed likely to require assessment for

odour and noise which are amenity issues).

Air quality: the impacts from the biomass boilers had been assessed in accordance with our guidance and detailed in the 'Biomass Boilers' section of the Key Issues above. LPG heaters in poultry farm installations are considered to be a low risk to human health due to their small size (much less than 1MWth thermal input) and therefore further detailed assessment is not required. There is no incinerator on the installation. We have also considered the standby generator and its operation; this has a thermal input of 545kWth and is tested for approximately 1 hour per week, and is located more than 50m to the north of the receptor (therefore down wind, as the predominant wind direction is from the west, according to our air quality team during their audit of the ammonia modelling) therefore we consider this to be a low risk to human health and no further assessment is required. As detailed in the section entitled 'Dust and Bioaerosols' of this document, we require a dust and bioaerosol management plan (DBMP) for intensive farming installations with receptors within 100 metres of the installation boundary. This is an agreed approach as part of formal working together agreement with UKHSA (formerly Public Health England) and ourselves. This is a robust approach that requires listing of both point and fugitive emissions and listing of control measures to minimise impact on human health. We are satisfied that the measures outlined in the DBMP and application will prevent, and where that is not practicable, minimise dust and bioaerosol emissions from the installation and prevent significant pollution or harm to human health. We are also satisfied that we have sufficient controls within the permit conditions to enable further measures to be implemented should these be required.

Bioaerosols: as mentioned above, the Applicant is required to submit a dust and bioaerosol management plan if there are sensitive receptors within 100m, and this is an agreed approach as part of formal working together agreement with UKHSA (formerly Public Health England) and ourselves. The plan required includes measures to prevent or reduce dust, which will inherently prevent or reduce bioaerosols. We do not require the Applicant to submit a separate bioaerosol risk assessment.

Water: dirty water is regularly exported from the installation and spread on land owned by the operator and any surplus is spread on land owned or operated by third parties. The Applicant has confirmed they will operate in accordance with Sector Guidance Note EPR 6.09 'How to comply with your environmental permit for intensive farming' and this includes the requirement for adequate storage facilities for dirty water prior to it being exported off site.

Accidents and hazards – we requested further information and a revised accident risk assessment to address the concerns of the UKHSA with respect to the LPG and storage and it confirms that fuel tanks are bunded and have collision protection barriers in place.

No further action required.

#### **Response received from**

Director of Public Health (response received 11/08/22)

#### **Brief summary of issues raised**

The following comments were made:

I am aware of the already submitted response from our Council Environmental Health Officer, Philippa Hargraves, sent to you via email on 18<sup>th</sup> July. I agree with and want to re-state here the points she makes about air quality and the potential impact of the proposals on human health. In particular, as she has made clear, there is an information gap with regard to the potential combined impacts of PM10 emissions from the poultry houses and biomass boilers on human health. A second gap is information on the potential impact on human health of NO2 emissions from the biomass plant and LPG heating.

Further detail is needed too about the arrangements for the drainage water from the units which will be stored in underground storage tanks.

The proposed unit will have impact on air quality via bio aerosols, dust and ammonia, all of which contribute to the particulate matter burden which in turn is a risk factor for human health. There are human receptors in the area to consider, including Grendon Manor; Newbury farm bungalow; Westlington court and bungalow; Bilfield

cottages; Westlington workshop; the Old Forge; Grendon Green Bank House and Hillcrest; and Sticking field. I would expect the EA to require consideration of this in more detail and for a bio aerosol specific risk assessment to be carried out. Although a dust management plan is included, important detail such as monitoring arrangements and escalation action needs more development.

You will be aware that there is a relatively limited evidence base around the cumulative impact of intensive poultry farming methods on human health. The national agency for expert advice here is UKHSA (formerly part of Public Health England, and prior to that the Health Protection Agency.) An existing position statement from the Health Protection Agency is currently in the process of being updated at national level. However, Herefordshire Council has recently set up a Task and Finish Group, reporting into a Scrutiny Committee, on the health impact of intensive poultry farming. A report with recommendations is being presented to Scrutiny and to Cabinet in the near future. It should be noted that, as part of this work, members of the public were invited to contribute their experiences. Many of those who responded reported that the noise, dust, and smell of living near to intensive units was detrimental to health and in particular to mental well-being. Nonetheless, if the installation does comply in all respects with the requirements of the permit, including the application of Best Available Techniques (BAT) it is likely on the current evidence base that emissions will present a low risk to human health.

**Summary of actions taken or show how this has been covered**

All points raised have been addressed in the section above for the UKHSA response.

No further action.

The Health and Safety Executive were also consulted, with a deadline for responses of 11/08/22, but no responses were received.

In addition, the application was publicised on the [www.gov.uk](http://www.gov.uk) website, with a deadline for comments of 11/08/22, but no comments were received.