

Environment Agency permitting decisions

Bespoke Variation

We have decided to issue the variation for **Barnwell Poultry Farm** operated by **Tachbrook Farming Limited**.

The variation number is **EPR/UP3133DE/V002**.

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:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

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

Structure of this document

- Description of the changes introduced by the variation
- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

Description of the changes introduced with this variation

This is a substantial variation as the broiler number increase is greater than the Environmental Permitting Regulation threshold of 40,000 places for this activity as follows:

Section 6.9 Part A (1) (a) (i) Rearing of poultry intensively in an installation with more than 40,000 places.

The increase is exactly 220,000 bird places (from 330,000 to 550,000 broilers), as such, this is a substantial variation.

Overall, the changes are as follows:

- An increase in broilers from **330,000 to 550,000**. In order to achieve this four new poultry houses have been added to the installation. The ventilation is via high velocity roof fans for all ten poultry houses and the site drainage for the additional four poultry houses has been added, in line with the current installation drainage facilities.
- Two new biomass boilers have been added one for heating and electrical power for the new poultry houses and a smaller combined heat and power (CHP) unit for electricity generation. The total thermal input capacity for these two biomass boilers is **1.147 MW**.
- The installation boundary is extended to include the area associated with the new four poultry houses.

Key issues of the decision

Ammonia Emissions

There are no European /Ramsar sites within the relevant screening distance 10km of the installation boundary.

There are four Sites of Special Scientific Interest (SSSI) within 5 km screening criteria. In addition, there are three other conservation site within 2 km of this installation.

All the habitat sites screen out based on data in our Ammonia Screening Tool version 4.5 (ASTv4.5) ammonia screening assessment, dated **16/01/17** , except River Avon Local Wildlife Site (LWS). The more specific reasons for this LWS being screened out are given below.

Ammonia Assessment – SSSIs

The following trigger thresholds have been applied for assessment of SSSIs. If the Process Contribution (PC) is below 20% of the relevant critical level (CL_e) or critical load (CL_o) then the farm can be permitted with no further assessment. Where this threshold is exceeded, an in-combination assessment and/or detailed modelling may be required.

Our screening assessment dated 16/01/17 indicated that the PCs for the following SSSIs are predicted to be less than 20% CL_e/CL_o for ammonia, acid and N deposition therefore it is possible to conclude no damage. The results of the ammonia screening tool v4.5 are given in the tables below.

A precautionary CL_e of 1µg/m³ for ammonia has been used during the screen. Screening indicates that beyond **2053 m** distance, the PC at SSSIs is less than 20 % of the 1µg/m³ critical level for ammonia. In this case the SSSIs below in Table 1 are beyond this distance.

Table 1 – distance from source

Site	Distance (m)
Harbury Quarries	4,550
Harbury Railway Cutting	2,950
Long Itchington and Ufton Woods	4,590
Ufton Fields	4,110

Conclusion

The PCs for ammonia at these sites has been screened as insignificant. It is therefore possible to conclude that no significant pollution will occur at these sites and no further assessment is required.

Where a CLe of $1\mu\text{g}/\text{m}^3$ is used, and the PC is assessed to be less than the 20% insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification Critical Load values. In these cases, the $1\mu\text{g}/\text{m}^3$ level used has not been confirmed, but it is precautionary.

Ammonia assessment - LWS/AW/LNR.

There are three Local Wildlife Sites (LWS)/Ancient Woodlands(AW) within 2 km of this installation. The following trigger thresholds have been applied for the assessment of these sites.

- If PC is < 100% of relevant Critical Level or Load, then the farm can be permitted (H1 or ammonia screening tool)
- If further modelling shows PC <100%, then the farm can be permitted.

For the following site, this farm has been screened out, as set out above, using results of the AST 4.4 dated 16/01/17. The PCs on the LWSs for ammonia, acid and Nitrogen deposition from the application site are under the 100% significance threshold and can be screened out as having no likely significant effect.

A precautionary CLe of $1\mu\text{g}/\text{m}^3$ for ammonia has been used during the screen. Screening indicates that beyond **704 m** distance, the PC at conservation sites is less than 100% of the $1\mu\text{g}/\text{m}^3$ critical level for ammonia. In this case, two of the other conservation sites below in Table 2 are beyond this distance.

Table 2 – Distance from Source

Site	Distance (m)
Mollington Hill LWS	1,310
Mill pool Coppice AW	1,920

Conclusion

The PCs for ammonia at this LWS has been screened as insignificant. It is therefore possible to conclude that no significant pollution will occur at these sites and no further assessment is required.

Where a CLe of $1\mu\text{g}/\text{m}^3$ is used, and the process contribution is assessed to be less than the 100% insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification Critical Load values. In these cases, the $1\mu\text{g}/\text{m}^3$ level used has not been confirmed, but it is precautionary.

River Avon LWS

The River Avon was initially not screened out as this Local Wildlife Site is within 250 metres from the installation boundary. However subsequently we sought further information on this LWS from Warwickshire County Council ecologist (correspondence dated 21/09/16).

This organisation confirmed that this LWS is designated as an aquatic feature but that the citation does not refer to other plants/shrubs along the banks of the River Avon.

As such, we consider no further assessment is required.

Groundwater and soil monitoring

As a result of the requirements of the Industrial Emissions Directive, all permits are now required to contain condition 3.1.3 relating to groundwater monitoring. However, the

Environment Agency's H5 Guidance states **that it is only necessary for the Applicant to take samples** of soil or groundwater and measure levels of contamination where the 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 your risk assessment has identified a possible pathway to land or groundwater.

H5 Guidance further states that it is **not essential for the Applicant** 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 is within the application supplementary information dated 10th October 2016.

- It includes completion of H5 template plus an installation boundary with locations of farm buildings, drains, diesel tank and dirty water tank.
- The surrounding land is predominantly used for arable and grass farming. There are some small villages in the area.
- There are no existing buildings within the installation boundary and there is no record of historic land contamination.
- Historically the land has been used for grazing of cattle and sheep.

Our technical review of this specific land usage is as follows:

- There is no record of installation area land contamination.
- There is no record of any usage of the installation area except for agricultural usage.
- The site is not situated in a Groundwater Vulnerability Zone.
- The site is situated within a Surface Nitrate Vulnerable Zone.
- The site is not situated in, or within 250m of its boundary, to a Groundwater/Source protection zone.

Therefore, the conclusion is there is a low risk of historic groundwater and land contamination due to former activities within installation boundary.

Therefore, although condition 3.1.3 is included in the permit, no groundwater monitoring will be required at this installation as a result at this time.

Odour

There are sensitive receptors within 400 metres of the installation (excluding the farmers own residential property).

The closest relevant sensitive receptor is at NGR SP 33994 60755, approximately 190 metres to the North East of the installation boundary.

In terms of background, the installation has not been linked to any known odour complaints. More specifically no records of odour complaints exist over the last 4 years.

Therefore, an Odour management Plan (OMP) is formally required under our guidance.

The Applicant has completed an Odour Management Plan updated within the operator duly making response including an assessment of feed and litter management plus ventilation controls and poultry building design to minimise the risk of odour pollution beyond the installation boundary.

Further, the OMP covers building clean out and spent litter removal procedures plus a contingency plan to minimise the risk of odour pollution linked to abnormal installation activities and a complaints procedure.

The final OMP submitted with duly making response includes additional operating controls as follows to further minimise risk of odour pollution beyond the installation boundary

- a) More specific and detailed contingency plan with each abnormal operating scenario (with potential for elevated odour levels) listed complete with remedial actions.
- b) Poultry house depopulation and clean out operations limited to specific maximum time periods.

Conclusion

We, the Environment Agency, have reviewed and approved the Odour Management Plan and consider it complies with the requirements of our H4 Odour management guidance note. 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.

Overall, the risk of odour beyond the installation boundary is considered not significant.

Noise

There are sensitive receptors within 400 metres of the installation boundary as stated above in the odour review. The Applicant has hence provided a Noise Management Plan updated in their duly making response.

Operations with the most potential to cause noise nuisance have been assessed as those involving ventilation fans, biomass boiler flue, feed deliveries, feeding systems and broiler catching, building clean outs plus noise emissions from the standby generator. The Noise Management Plan covers control measures for each of these potential noise hazards.

Overall, we consider the risk of noise pollution beyond the installation boundary is not significant.

Biomass Boilers

The application includes for two new biomass boilers with an aggregated thermal input capacity of **1.149 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;

For poultry farm:

- A. the aggregate net rated thermal input is less than 0.5MW_{th}, or;
- B. the aggregate boiler net rated thermal input is less than or equal to 4 MW_{th}, and no individual boiler has a thermal input greater than 1 MW_{th}, and;
 - the stack height must be a minimum of 5 meters above the ground (where there are buildings within 25 meters the stack height must be greater than 1 meter above the roof level of buildings within 25 meters) and;
 - there are no sensitive receptors within 50 meters 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.

The Environment Agency's risk assessment has shown that the biomass boilers do not fully meet the requirements of criteria **B** above.

All criteria are met except the individual boiler criteria, as one boiler has a thermal input capacity of 1.05 MW.

However, in practice the environmental impact from these additional two boilers is considered not significant for the following reasons:

- Total thermal input capacity for the installation including new and existing biomass boilers is 2.197 MW. This is significantly lower than screening aggregate threshold of 4 MW.
- The closest sensitive receptor is more than 300 metres from the biomass boiler stack emission point.
- The largest biomass boiler is only marginally over the screening threshold ; 1.05 MW thermal input capacity compared to 1MW threshold.

On this basis we considered the environmental impact linked to the new biomass boilers is not significant and no further assessment is required.

Annex 1: decision checklist

This document should be read in conjunction with the application, supporting information and permit.

Aspect considered	Justification / Detail	Criteria met
		Yes
Receipt of submission		
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 commercial confidentiality.	✓
Consultation		
Scope of consultation	<p>The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.</p> <p>For this application we consulted the following bodies:</p> <ul style="list-style-type: none">• Health & Safety Executive (HSE).• Warwickshire County Council Environmental Health Department.• Public Health England (PHE)/Department of Public Health. <p>There is one sensitive receptor (including farm owned premises) within 100 metres of the installation boundary; hence, in line with our guidance Public Health England /Director of Public Health has been consulted for this application.</p>	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>The decision was taken in accordance with our guidance.</p>	✓
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓
The site		
Extent of the site of the facility	<p>The operator has provided a plan, which we consider, is satisfactory, showing the extent of the site of the facility.</p> <p>A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.</p>	✓
Site condition report	<p>The operator has provided a description of the condition of the site.</p> <p>We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED–guidance and templates (H5).</p>	✓
Biodiversity, Heritage, Landscape	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.	✓

Aspect considered	Justification / Detail	Criteria met Yes
and Nature Conservation	A full assessment of the application and its potential to affect the sites has been carried out as part of the permitting process. We consider that the application will not affect the features of the sites. There are no European/Ramsar sites within 10 km screening distance from the installation and hence there is no requirement for completion of an Appendix 11 assessment.	
Environmental Risk Assessment and operating techniques		
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p><i>The operator's risk assessment is satisfactory.</i></p> <p>The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment or similar methodology supplied by the operator and reviewed by ourselves, all emissions may be categorised as environmentally insignificant.</p> <p>Potential Risks considered are:</p> <ul style="list-style-type: none"> • Ammonia habitat assessment • Odour emissions • Noise • Atmospheric Emissions from Biomass Boilers • Site Condition Report <p>These are assessed in more detail in the key issues section of this document.</p>	✓
Operating techniques	<p>We have reviewed the techniques used by the Applicant and compared these with the relevant guidance notes. The proposed techniques for priorities for control are in line with the benchmark levels contained in the SGN EPR 6.09 and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs.</p> <p><u>The Applicant has proposed the following techniques:</u></p> <ul style="list-style-type: none"> • All poultry buildings will be well insulated for optimum animal health and the houses will use roof fan extraction fan complete with back up gable end fans to optimise odour dispersion. The poultry buildings will be thoroughly washed and disinfected between batches. • Two new biomass boilers have been added complete with operating techniques plus accident management measures to minimise risk of fire and the Renewable Heat Incentive certificate. • Fugitive Emission controls include building maintenance, routine building wash downs, usage of separate clean and water drainage. Feed is stored within enclosed feed bins. 	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	<ul style="list-style-type: none"> Roof water and lightly contaminated water is transferred to on-site soak aways. The roof water then overflows to a surface water discharge. The drainage system is of the same design as current drainage, simply extended for ten poultry houses, compared to current six poultry houses. Updated Odour and Noise Management Plans plus a new Dust Management Plan. Dirty water is contained in existing tankage, which has been confirmed as of sufficient volumes for ten poultry houses. <p>The proposed techniques for priorities for control are in line with the benchmark levels contained in the SGN EPR 6.09 and we consider them to represent appropriate techniques for the facility.</p> <p>The permit conditions ensure compliance with relevant BREFs and BAT Conclusions.</p>	
The permit conditions		
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, which was developed in consultation with industry having regard to the relevant legislation.	✓
Raw materials	We have specified limits and controls on the use of raw materials and fuels.	✓
Incorporating the application	<p>We have specified that the Applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.</p> <p>These descriptions are specified in the Operating Techniques table in the permit.</p>	✓
Emission limits	We have decided that emission limits should be not set in the permit.	✓
Monitoring	We have decided that monitoring does not need to be carried out.	✓
Operator Competence		
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance our guidance on what a competent Applicant is.	✓
Relevant convictions	The Case Management System has been checked to ensure that all relevant convictions have been declared.	✓

Annex 2: External Consultation and web publication responses

Summary of responses to consultation and web publication and the way in which we have considered these in the determination process.

We have received no specific comments from external consultees.

- Public Health England response dated 31/01/17 confirmed no specific concerns.
- Warwickshire District Council response dated 13/02/17 confirmed no specific concerns.

The application was also advertised on the www.gov.uk website, with no comments received.