

Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for **Hollins Lane Poultry Unit** operated by **Mr Harry Wilson, Mr Keith Wilson, Mr Ian Wilson and Mrs Lyn Wilson**.

The permit number is **EPR/FP3230AW**.

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

- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

Key issues of the decision

Introduction

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 Industrial Emissions Directive (IED).

This permit implements the requirements of the EU Directive on Industrial Emissions.

Environmental Impacts

Ammonia Emissions

There are no European statutory sites within the relevant screening distance 10km of the installation boundary. There are two Sites of Special Scientific Interest within 5 km screening criteria.

There are three Local Wildlife Sites (LWS) / Ancient Woodland / Local Nature Reserves within 2 km of this installation including two Local Wildlife Sites and one Ancient Woodland. One LWS Tyrley Spoil Banks is within 250 metres of the installation boundary.

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 (CLE) or critical load (CLO) 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 18/03/15 indicated that the PCs for the following SSSIs are predicted to be less than 20% CLE/CLO for ammonia, acid and N deposition therefore it is possible to conclude no damage. The results of the ammonia screening tool v4.4 are given in the tables below.

A precautionary CLE of $1\mu\text{g}/\text{m}^3$ for ammonia has been used during the screen.

Screening indicates that beyond **1,808m** distance, the PC at SSSIs is less than 20 % of the $1\mu\text{g}/\text{m}^3$ 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)
Burnt Wood SSSI	5,096

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.

Tyrley Canal Cutting SSSI

This site is designated due to geological features. No impact is expected from Ammonia, Nitrogen and Acid deposition therefore the Cle and Clo do not need to be assessed.

On this basis the SSSI **does not require further assessment.**

Ammonia assessment - LWS/AW/LNR.

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

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

For the following sites this farm has been screened out, as set out above, using results of the AST 4.4 dated 08/06/15. 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 **653 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)
Tyrley Spoil Banks LWS	195
The Sydnall LWS	1,288
Unnamed AW site	1,487

Conclusion

The PCs for ammonia at The Sydnall and the unnamed AW site 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 process contribution 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.

Tyrley Spoil Banks

In line with our guidance as this LWS is less than 250 metres from installation boundary detailed modelling is required.

Sites screening out using detailed modelling supplied by applicant

For the following site this farm has been screened out, based on the criteria as set out above, using results of the detailed modelling supplied by the applicant as part of the application.

The applicant has submitted detailed modelling with their application, because pre-application screening indicated this LWS is less than 250 metres from installation boundary detailed modelling is required

Modelling has been completed with ADMS Version 5. We have audited their modelling and accepted the report conclusions as accurate. The applicant has utilised five years of meteorological data. The critical levels and loads have been selected based on our pre-application report and precautionary values based on ecology of the wildlife sites (details provided below).

The modelling report is dated May 2015.

Table 3 - Ammonia Emissions

Site	Critical Level (CLe) Ammonia $\mu\text{g}/\text{m}^3$	PC $\mu\text{g}/\text{m}^3$	PC % Critical Level
Tyrley Spoil Banks	3*	2.184	72.8

* CLe - $3\mu\text{g}/\text{m}^3$ applied from our pre-application report. This is on the basis of lichens/byrophytes not present after review of data for location on APIS website (www.apis.ac.uk) – May 2015

* Process contribution is the maximum figure for all of the modelling runs at various receptor locations.

The process contribution is assessed as < 100 % threshold of critical level and therefore acceptable to be permitted.

Therefore no further assessment is required.

Table 4 – Nitrogen deposition

Site	Critical Load kg N/ha/yr	PC Kg N/ha/yr	PC % Critical Load
Tyrley Spoil Banks	10	13.62	136.2

Critical load values taken from APIS website (www.apis.ac.uk) – May 2015. Range is 10-20 µg/m³ for broadleaved woodlands.

*The maximum process contributions are greater than 100 % of relevant critical loads
The modelling results shows for 1.2 hectares of 6.1 hectares of this LWS that the N deposition is above 10 µg/m³; hence in reality for 80 % of this LWS the installation impacts are below the relevant critical load*

Mitigation

The applicant has presented the case that on the basis of the usage of biomass boiler indirect heating for the poultry buildings there is the potential for up to 60 % ammonia emission reduction relative to our standard ammonia emission factors.

We have investigated whether this LWS is being actively managed but have concluded it is not actively managed; this is after clarification from Canals and River Trust, Staffordshire Wildlife Trust and Staffordshire Council.

The Canals and River Trust is managing an area limited to the Shropshire Union Canal and immediate banks which runs north to south through the centre of the LWS. The 1.2 hectares area where modelling indicates potential exceedance of nitrogen deposition critical load is not within the area linked to the Shropshire Union Canal

There is no specific ammonia emission data for this facility as it is to be a newly build site.

The Environment Agency has been collecting ammonia emissions data for poultry farms utilising indirect heating via biomass boilers. Whilst no formal conclusion has been finalised, the initial data is showing ammonia levels typically 40 % below standard ammonia emission factors for poultry farms.

As such we conclude that overall process contributions in reality for nitrogen deposition will be < 100 % of critical load at all points within this LWS; hence no significant pollution will occur at this site and **no further assessment is required.**

Acid Deposition

The applicant has not completed acid deposition modelling, asserting that nitrogen deposition is the more stringent assessment

We have confirmed that the critical load is as follows from APIS website (www.apis.ac.uk) – May 2015

Acid Critical Load (keq/ha/yr)
2.70*

*Critical load values taken from APIS website (www.apis.ac.uk) – May 2015, based on LWS NGR 369306,331615 and Broadleafed/Coniferous unmanaged woodland.

We have utilised the standard estimate of acid deposition process contributions being 1/14th of nitrogen deposition levels. This means that even on basis of maximum nitrogen deposition levels stated in table 4 above, the acid deposition process contributions are < 100 % of acid deposition critical load at all points within this LWS; hence no significant pollution will occur at this site and **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 Appendix 1.

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.

The site itself is relatively flat or gently undulating, positioned the top of a small rise. Historically the land has been used for general agricultural activities.

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 within a 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 no sensitive receptors within 400 metres of the installation (excluding the farmers own residential property)

Therefore an Odour management plan is not formally required under our guidance.

Nonetheless the applicant has completed an Odour Management Plan within appendix 9 of the application supplementary application including a list of sensitive receptors within 1 km of the installation boundary, 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

In determining the Application we have considered the following documents: -

- The Environmental Impact Assessment submitted with the planning application (which also formed part of the Environmental Permit Application). There is an odour impact assessment within section 14 of the Environmental Impact Assessment (EIA)

From a review of this EIA document, the Environment Agency considers that no additional or different conditions are necessary, based on our own guidance that the risk of odour impacts are insignificant for poultry farms where sensitive receptors are beyond 400 metres from the installation boundary.

Overall the risk of odour beyond the installation boundary is considered insignificant.

Noise

There are no 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 in appendix 10 of their supplementary application information

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. pig loading, farm building ventilation fans, delivery of supplies and materials plus automated feed lines.

The noise management plan covers control measures for each of these potential noise hazards.

In determining the Application we have considered the following documents: -

- The Environmental Impact Assessment submitted with the planning application (which also formed part of the Environmental Permit Application). There is a noise impact assessment within Appendix 8 of the Environmental Impact Assessment (EIA).

From a review of this EIA document, the Environment Agency considers that no additional or different conditions are necessary, based on our own guidance that risk of noise impacts are insignificant for poultry farms where sensitive receptors are beyond 400 metres from the installation boundary.

Overall the risk of noise pollution beyond the installation boundary is considered insignificant.

Biomass Boilers

The application includes for a single biomass boiler with thermal input capacity **4.43 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:

- 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 **A or B above**, as the **single biomass boiler are > 1 MW and the aggregated total is > 4 MW**.

Further assessment

We have carried out carried out screen modelling to confirm that the impact of the biomass boiler emissions can be considered not significant

We utilised the oxides of nitrogen emission levels, biomass boiler stack heights and discharge flowrates data within the application supplementary documentation section 11.

The conclusion is that at the biomass boiler impacts at the closest sensitive receptors within 300 m of the installation boundary have Predicted Environmental Concentrations significantly below the NO₂ long and short term Environmental Quality Standards.

Annex 1: decision checklist

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

Aspect considered	Justification / Detail	Criteria met
		Yes
Consultation		
Scope of consultation	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. The application was sent for consultation with <ul style="list-style-type: none"> • Shropshire Council Environmental Health department • HSE 	✓
Responses to consultation and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision. No consultation comments were received. The decision was taken in accordance with our guidance.	✓
Applicant		
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 EPR RGN 1 Understanding the meaning of applicant.	✓
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application. This permit meets IED requirements. This	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	permit implements the requirements of the EU Directive on Industrial Emissions. See key issues section above for further information.	
The site		
Extent of the site of the facility	The applicant has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. This plan was finalised with the duly making response. A plan is included in the permit and the applicant is required to carry on the permitted activities within the site boundary.	✓
Site condition report	The applicant has provided a description of the condition of the site. We consider this description is satisfactory. Please refer to key issues, section 'Groundwater and soil monitoring'. As a result of further assessment, baseline data is not required. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED – guidance and templates (H5).	✓
Biodiversity, Heritage, Landscape and Nature Conservation	The application is within the relevant screening distance criteria of a number of conservation sites. The key issues section provides a list of these sites. In addition an ammonia emissions review is included in key issues section of this document. In conclusion installation environmental impacts on the surrounding habitat sites are considered not significant.	✓
Environmental Risk Assessment and operating techniques		
Environmental risk	We have reviewed the applicant's assessment of the environmental risk from the facility. The applicant's risk assessment is satisfactory. The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment all emissions may be categorised as environmentally insignificant.	✓
Operating techniques	We have reviewed the techniques used by the applicant and compared these with the relevant guidance notes. The applicant has confirmed that all farm facilities and operating techniques will be in compliance with our sector guidance EPR 6.09. <u>The Applicant has proposed the following techniques:</u> <ul style="list-style-type: none"> • Feed selection is carefully selected with reference to pigs' growth curve. Phosphorous and protein levels are reduced over the growing period. • All poultry buildings will be well insulated for optimum animal health and the houses will use high velocity extraction fans to optimise odour dispersion. • Fugitive Emission controls include building maintenance, routine building clean downs, separate clean and dirty water drainage systems. Feed is stored within enclosed feed bins. • Storage facilities: there is one 500 litre working volume diesel tank which is bunded. • Roof water is transferred to on-site soak aways which discharges to an off site pond and overflows into Shropshire Union Canal • Biomass boiler usage – with operating techniques as per Appendix 11 of their application supporting information with maximum virgin wood storage capacity at one time of 100 tonnes. • Emergency procedures for the installation (within section 3 of supplementary application documentation) including procedures to minimise risk of fires linked to usage of biomass boilers and actions in the event of such a fire. <p>The proposed techniques for priorities for control are in line with the</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	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 and BAT Conclusions, and ELVs deliver compliance with BAT-AELs.	
The permit conditions		
Incorporating the application	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. These descriptions are specified in the Operating Techniques table in the permit.	✓
Applicant Competence		
Environment management system (EMS)	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 applicant has chosen to utilise their own management system without external certification. The supporting information section 3 gives the detail of their EMS covering normal operation, maintenance schedules and records, incidents and abnormal operations, complaints system, training and provision of competent staff plus site security. The accident management plan is currently being prepared to allow completion prior to facility operation above EPR scheduled activity threshold. The decision was taken in accordance with RGN 5 on Operator Competence.	✓
Relevant convictions	The National Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found. The applicant satisfies the criteria in RGN 5 on Operator Competence.	✓
Financial provision	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 : Operator Competence	✓

Annex 2: Consultation and web publicising responses

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

Response 1 received from Canals and Rivers Trust dated 28/07/15
<ul style="list-style-type: none"> • Overall no reasons not to permit overall comment • Dirty water land spreading – concerns of water management raised • Office sewer sewage treatment plant discharge. - questions on pollution prevention.
<p>Summary of actions taken or show how this has been covered:</p> <ul style="list-style-type: none"> • Dirty water land spreading - Manure management plan condition covers this. • Office sewage treatment plant - not part of farm installation so not listed in the emissions table, General responsibility for fugitive emission control cover under permit condition 3.2.1/3.2.2.

This proposal was also publicised on the Environment Agency's website for 4 weeks but no representations were received during this period.