

Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for **Lower House Poultry Unit** operated by **Mr Jonathan Radford**.

The permit number is **EPR/FP3630AB**.

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

The installation is situated within the relevant screening distance of three European statutory sites including Tanat and Vyrnwy Bat; and Montgomery Canal both Special Areas of Conservation (SAC's); plus Midland Meres and Mosses Phase 2 which is a Ramsar site. There are seven Sites of Special Scientific Interest within the 5 km screening criteria. There are five other conservation sites within the 2 km of this installation.

The assessment below concludes that the installation impacts on all of the relevant habitat sites within screening distances screens out as having insignificant environmental impacts on the basis of our Ammonia Screening Tool AST v.4.4 assessment.

Ammonia Assessment – SAC / SPA / Ramsar sites

The following trigger thresholds have been designated for assessment of European sites including Ramsar sites.

- If the Process Contribution (PC) is below 4% of the relevant critical level (CLE) or critical load (CLo) then the farm can be permitted with no further assessment.
- Where this threshold is exceeded an assessment alone and in combination is required.
- An overlapping in combination assessment will be completed where existing farms are identified within 10km of the application.

Screening using the detailed modelling has determined that the Process Contribution (PC) on the SAC/SPA/Ramsar sites for ammonia, acid and N deposition from the application site are under the 4% significance threshold and can be screened out as having no likely significant effect.

The data is based on our Ammonia Screening Tool AST v.4.4 (report dated 08/07/15) with broiler numbers adjusted to actual application figure of 100,000.

See results below:

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

Screening indicates that beyond **2735 m** distance, the Process Contribution at conservation sites is less than 4 % of the $1\mu\text{g}/\text{m}^3$ critical level for ammonia. In this case the habitat sites below in Table 1 are beyond this distance.

Table 1– Distance from source

Site	Distance (m)
Tanat and Vyrnwy Bat SAC	9,169
Midland Meres & Mosses Phase 2 Ramsar	3,551

On the basis of distances above there is no further requirement for assessment as installation impacts on these habitat sites are concluded to have no likely significant effect.

Where a CLE of $1\mu\text{g}/\text{m}^3$ is used, and the process contribution is assessed to be less than the 4 % insignificance threshold in these circumstances it is not necessary to further consider Nitrogen Deposition or Acidification Critical Load values.

Montgomery Canal

The designated feature of the SAC is the floating water plantain (*Luronium natans*), an aquatic plant species, and ammonia critical levels do not apply for aquatic features. Therefore no further assessment is required.

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 08/07/15 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 **987 m** 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 2 are beyond this distance.

Table 2 – distance from source

Site	Distance (m)
Llanymynech and Llyncllys Hills	1,181
Morton Pool and Pasture	3,551
Crofts Mill Pasture	4,370
Blodwel Marsh	2,720
Sweeney Fen	3,916
Gweunydd Ty-Brith	4,533
Montgomery Canal	1,119

The PCs for ammonia at these sites has been screened as insignificant. It is therefore possible to conclude that insignificant pollution impact 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 these circumstances 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 five other conservation sites 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.

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 using AST 4.4 dated 08/07/15 indicates that beyond **356 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 the other conservation sites below in Table 3 are beyond this distance.

Table 3 – Distance from Source

Site	Distance (m)
Llanymynech Rocks (Shrops) LWS	6,306
Llyncllys Common LWS	1,958
Llanymynech Hill Wood AW	1,897
Plantation on Ancient Woodland Site AW	1,932
Llyncllys Hill Wood AW	2,031

Conclusion

It is therefore possible to conclude that insignificant 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 these circumstances it is not necessary to further consider Nitrogen Deposition or Acid Deposition.

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, dated May 2015.

It includes completion of H5 template plus an installation boundary with locations of farm buildings, drains, diesel tank and dirty water tank.

The installation site is located to the northeast of the existing farm buildings on the opposite side of Plas Cerrig Lane and has been used for arable cropping.

There are no existing buildings within installation boundary and there is no record of historic land contamination.

The site is on a slight slope predominantly from north to south and west to east with the ground falling away from the site to the east and south to the ditch course.

The site is partially underlain by a minor aquifer.

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.

Odour

There are multiple sensitive receptors within 400 metres of the installation (excluding the farmers own residential property). The closest is approximately 130 metres to the south of the installation boundary at NGR SJ 27748 20878.

Therefore an Odour Management Plan is required under our guidance.

An Odour Management Plan (OMP) is included within appendix 9 of the application supplementary application including a list of sensitive receptors within 400 metres 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

Environment Impact Assessment (EIA)

The EIA, as required under the planning submission for the site, has been submitted with this EP Regulations application.

The EIA includes an odour impact assessment (section 14 of application supporting information) complete with a summary of odour modelling for the installation.

The sensitive receptors utilised for the modelling are the twelve receptors within 400 metres of installation boundary listed in the OMP.

The applicant has utilised our H4 Odour Guidance to establish an odour concentration to minimise risk of odour pollution beyond installation boundary of 3 odour units for moderately offensive odours. This is based on the 98th percentile of hourly average concentrations of odour modelled over a year.

We accept in our H4 guidance that this benchmark is suitable for usage in intensive farming activity assessments.

The modelled results for this installation range between 0.5 and 1.7 oue/m³ giving confidence that odour levels at all sensitive receptors are likely to be less than 3 oue/m³ benchmark.

We have carried out sensitivity analysis on operator odour modelling. Based on our sensitivity checks and the applicant's modelling files, the impact at receptors is unlikely to exceed the benchmark of 3 oue/m³ and as such the modelling does not require further detailed auditing.

Hence overall the risk of odour impact is assessed as insignificant, conditional on applicant compliance with their Odour Management Plan.

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

Overall there is the potential for odour pollution from the installation beyond the installation boundary. However the risk of odour beyond the installation boundary is considered insignificant.

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 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, 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.

Overall there is the potential for noise from the installation beyond the installation boundary. However the risk of noise beyond the installation boundary is considered insignificant.

Environment Impact Assessment (EIA)

The EIA, as required under the planning submission for the site, has been submitted with this EP Regulations application.

The EIA includes an odour impact assessment complete with a full noise modelling for the installation. Noise levels generated by the installation have been predicted and assessed in line with the impact assessment criteria in British Standards (BS) 4142:2014.

The noise impact assessment has been completed at seven sensitive receptors (excluding two farm owned residential properties).

The potential increases in the future noise ambient climate as a result of the installation is likely to be no higher than +0.7 dBA, which is considered to have only minor impacts, in line with the BS 4142 guidance.

Overall there is the potential for noise from the installation beyond the installation boundary. However the risk of noise beyond the installation boundary is considered insignificant.

Biomass Boilers

The application includes for a single biomass boiler with thermal input capacity **1.11 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;
 - o 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:
 - o 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 is > 1 MW even though the aggregated total is < 4 MW.**

The closest relevant sensitive receptor is approximately 200 metres from the biomass boilers stack.

From our experience regarding biomass boilers, within poultry farm installations aggregated thermal input capacities of 4 to 5 MW are assessed after check modelling to have negligible environmental impact at sensitive receptors at equivalent distances, as here in this installation, from the stack emissions.

Hence we consider there to be negligible environmental impact from the single biomass boiler for this installation with a total thermal input capacity of 1.11 MW.

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 • Public Health England and Director of Public Health; this consultation is linked to sensitive receptors (farmer owned Bungalow to the south of the installation) within 100m of the installation boundary. 	✓
Responses to consultation and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision. One consultation response was received. The decision was taken in accordance with our guidance.	✓
Applicant		
Control of the facility	We are satisfied that the applicant (now the applicant) 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 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.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	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	<p>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.</p> <p>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 and Nature Conservation	<p>The application is within the relevant screening distance criteria of a number of conservation sites.</p> <p>The key issues section provides a list of these sites.</p> <p>In addition an ammonia emissions review is included in key issues section of this document.</p> <p>An Appendix 11 has been sent to Natural England for Midland Meres and Mosses Phase 2 Ramsar site and to CCW for Montgomery Canal and Tanat and Vymwy Bat SAS's. Both have been sent for information only.</p> <p>In conclusion installation environmental impacts on the surrounding habitat sites are considered insignificant.</p>	✓
Environmental Risk Assessment and operating techniques		
Environmental risk	<p>We have reviewed the applicant's assessment of the environmental risk from the facility. The applicant's risk assessment is satisfactory.</p> <p>The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment all emissions may be categorised as environmentally insignificant.</p>	✓
Operating techniques	<p>We have reviewed the techniques used by the applicant and compared these with the relevant guidance notes.</p> <p>The applicant has confirmed that all farm facilities and operating techniques will be in compliance with our sector guidance EPR 6.09.</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. • Fugitive Emission controls include building maintenance, routine building wash downs, usage of separate clean and water drainage. Feed is stored within enclosed feed bins. • Storage facilities: there is one diesel tank which is bunded. • Roof water is transferred to on-site soak aways which overflow to surface water discharge. • Dirty water is contained in a 5000 gallon underground tank. • Duly making applicant response appendix 12 dust assessment includes measures to minimise risk of dust and bio-aerosol fugitive emissions. • A summary of emergency operated procedures are provided in appendix 3 of the application supplementary information including measures to minimise risk of fire linked to biomass boilers and actions in the event of such a fire. Maximum virgin wood storage capacity is 100 tonnes. <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, and ELVs deliver compliance with BAT-AELs.</p>	✓
The permit conditions		
Incorporating	We have specified that the applicant must operate the permit in accordance with	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
the application	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)	<p>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.</p> <p>The supporting information appendix 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.</p> <p>The decision was taken in accordance with RGN 5 on Operator Competence.</p>	✓
Relevant convictions	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found.</p> <p>The applicant satisfies the criteria in RGN 5 on Operator Competence.</p>	✓
Financial provision	<p>There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.</p> <p>The decision was taken in accordance with RGN 5: Operator Competence</p>	✓

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 Local council Environmental Health dated 05/08/15
<ul style="list-style-type: none"> Overall comment is no reason not to permit General concern over flooding /dirty water
<p>Summary of actions taken or show how this has been covered:</p> <ul style="list-style-type: none"> Only extreme south of site is within a flood risk zone 2 areas; excluding farm houses. Dirty water will not be discharged directly from the site; kept in underground tanks. Dirty water management will be subject to operating and fugitive emission control permit conditions to ensure no pollution The operator has fugitive management plan actions in application supporting information appendix 3 to minimise impact of any flooding. Part of the site appears to fall within a Flood Zone 2 however from the topography of the site and surrounding area when compared to the flood maps it is considered unlikely that flood waters are of any significant depth. <p>In addition the site has included a detailed Flood Risk Assessment with controls to minimise impact of flooding in Appendix 10 of their planning submission Environmental Impact Assessment.</p>

In addition **Public Health England** provided a response dated **05/08/15** with no significant concerns

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