Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for **Knockin Hall Farm Poultry Unit** operated by **Robert Moseley, Monica Moseley and Abigail Moseley.**

The permit number is **EPR/BP3138RD**

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 main features of the installation/the changes introduced by the variation (delete as applicable)
- Key issues If applicable see OI/notes below
- Annex 1 the decision checklist
- Annex 2 the consultation, web publicising and newspaper advertising(delete as appropriate) responses

Description of the main features of the Installation

Knockin Hall Farm Poultry Unit is situated approximately 800 metres to the East of the village of Knockin near Oswestry. The installation is approximately centred on National Grid Reference SJ 34029 22353.

The installation is operated by Robert Moseley, Monica Moseley and Abigail Moseley and comprises two poultry houses which operate a broiler facility. The two poultry houses provide a combined capacity for 100,000 bird places. The chicks will be brought in from a hatchery at one day old with the average crop cycle being up to 42 days. Both poultry houses are ventilation by roof fans. Both houses also have gable end fans, although these are operated infrequently to maintain temperature, typically in the summer months.

No manure is stored within the installation boundary. All manure is exported from the installation for spreading on land owned by both the operator and third parties. Water from

the wash out of poultry houses is channelled to underground collection tanks close to the houses to await export off site. Roof water from all houses and lightly contaminated yard water drain to soakaways and discharge beyond the installation boundary into a ditch to the South of the installation with final discharge into the River Weir Brook.
The land around the site is predominantly agricultural and the surrounding area is a mixture of arable and grassland. Associated food is stored on the installation in sealed food bins. Mortalities are collected daily and stored in a secure container on site for removal under the National Fallen Stock Scheme. At the end of the cycle the houses are depopulated, washed and disinfected ready for the next cycle.

Key issues of the decision

Ammonia Emissions

There is one Special Area of Conservation (SAC) and one Ramsar site within the relevant screening distance 10km of the installation boundary.

There are four Sites of Special Scientific Interest within 5 km screening criteria. In addition there is one other conservation site within 2 km of this installation.

All the habitat sites screen out based on data in our Ammonia Screening Tool version 4.4 (ASTv4.4) ammonia screening assessment, dated 10/11/15.

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.

Initial screening using the Ammonia Screening Tool v4.4 dated 10/11/15 indicated that the PCs for the following European sites are predicted to be less than 4 % Critical Level for ammonia, acid and N deposition therefore it is possible to conclude no damage. The results of the ammonia screening tool v 4.4 are given in the tables below. A precautionary level of 1µg/m^3 for the critical level of ammonia has been used for the screening.
The screening indicates that beyond **2,735 m** distance, the Process Contribution at the European sites is less than 4 % of the 1µg/m^3 critical level for ammonia. In this case the European Site and Ramsar sites below in Table 1 are beyond this distance.

Table 1 – distance from source

Site	Distance (m)
Montgomery Canal SAC	7,539
Midland Meres and Mosses Phase 1 Ramsar	4,159

Conclusion

The PCs for ammonia at these sites have 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 1µg/m^3 is used, and the PC is assessed to be less than the 4 % insignificance threshold in these circumstances it is not necessary to consider nitrogen deposition or acidification critical load values. In these cases the 1µg/m^3 level used has not been confirmed, but it is precautionary.

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 10/11/15 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 1µg/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 1µg/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)
Crofts Mill Pasture	4,101
Morton Pool and Pasture	4,159
Lin Can Moss	3,580
Montgomery Canal	3,527

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 1µg/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 1µg/m^3 level used has not been confirmed, but it is precautionary.

Ammonia assessment - LWS/AW/LNR.

There is one Local Wildlife Sites (LWS) 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 10/11/15. 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 1µg/m^3 for ammonia has been used during the screen.
Screening indicates that beyond **356 m** distance, the PC at conservation sites is less than 100 % of the 1µg/m^3 critical level for ammonia. In this case two of the other conservation sites below in Table 3 are beyond this distance.

Table 3 – Distance from Source

Site	Distance (m)
Knockin Heath LWS	1,959

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 1µg/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 1µg/m^3 level used has not been confirmed, but it is precautionary.

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.
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 within a Source Protection Zone. A Source Protection Zone 3 runs to the west of the installation but does not protrude into the installation boundary.

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 Poplar View Barn at NGR SJ 34012 22059 approximately 250 metres south of the installation boundary.

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

The Applicant has completed an Odour Management Plan within appendix 9 of the application supplementary information including a list of sensitive receptors within approximately 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.
The Applicant has updated the OMP during the determination, in response to our duly making questions dated 07/04/16.
The final OMP dated 07/04/16 includes additional operating controls as follows to further minimize risk of odour pollution beyond the installation boundary

a) Daily site tours to monitor for elevated odour emissions from the installation.
b) More specific and detailed contingency plan (see OMP section 18) with each abnormal operating scenario (with potential for elevated odour levels) listed complete with remedial actions.
c) Poultry house depopulation and clean out operations limited to specific maximum time periods.

<u>Conclusion</u>
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.

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 13 of the Environmental Impact Assessment (EIA)

The odour impact assessment shows that for all but one sensitive receptor the odour impacts are below the 3 odour unit threshold referenced in our H4 guidance.
At R1 sensitive receptor The Lodge at National Grid Reference SJ 34223 22076 the odour impact averaged over 5 years meteorological data (2009 - 2013) is 2.67 odour units. The minimum and maximum odour levels are 1.94 - 3.57 odour units.

Therefore we have reviewed the impact assessment in further detail and have assessed that the impacts are worst case assumptions. In particular the assessment has been based upon a series of worst-case assumptions as part of the emission calculations, which are considered to overestimate the potential odour impact. These assumptions include an assumed summer' derived odour emission rate, which is considered to result in an overestimation of emission rates at all other times of the year , operation of the ventilation fans (in terms of all roof-ridge fans operating continuously during day 1 -42 of the bird cycle), assumptions that there is a zero mortality rate and emissions calculations based upon an assumed 100% 'standard' broiler population bird cycle.
In general, we have multiple poultry farms of this size and similar distance from sensitive receptors. In conclusion if well managed and operated in line with a robust OMP, as is in place here, such farms do not result in unacceptable odour pollution at the sensitive receptors.
Overall, the risk of odour beyond the installation boundary is considered not significant.
From a review of this EIA document, the Environment Agency considers that no additional or different conditions are necessary.

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. 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 9 of the Environmental Impact Assessment (EIA).

From a review of this EIA document, we note noise modelling highlights potential for elevated noise levels at night during periods of bird depopulation and HGV movements. This is planned to occur over a maximum of two nights per cycle and hence a maximum of 14 nights per annum.
The final noise modelling report dated 07/04/16 and additional information dated 12/04/16 confirms that for this worst case scenarios there is only one sensitive receptor where the difference between measured background sound level and the new installation rating sound level is greater than 5 dB (actual value +7dB) showing potential for adverse impact

dependant on the context. This is for the sensitive receptor Poplar View Barn to the south of the installation at National Grid Reference SJ 34012 22059.

We have reviewed their noise modelling report and confirm our conclusions below:

- We consider +6 dB acoustic penalty adjustment linked to new facility noise levels estimate to be overly conservative. We conclude an adjustment of +3 dB to be more appropriate as a robust conservative adjustment.
- The background level (24dB) is extremely low as might be expected for such a rural location. The LA90 measurement will not pick up traffic passing on the main road in the middle of the night because the flow rate will be sufficiently low.
- We consider given the context of the situation (see above bullet point) we assess likely actual impact will be much less severe ,as actual current background level likely to be higher than measured values.
- The Applicant has supplied an updated Noise Management Plan dated 07/04/16, which includes additional measures to minimise noise levels during night time hours. These controls include
    - HGV movements controls ,including prevention of excessive engine revving.
    - Bird depopulation to be targeted not to start until 3 am; this minimises numbers of hours depopulation takes place during night time hours.

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

Biomass Boilers

The application includes for three biomass boilers with an aggregated thermal input capacity of **0.615 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 0.5MWth, 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 fully meet the requirements of criteria **B** above.

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	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. For this application we consulted the following bodies: • HSE • Shropshire County Council There are no sensitive receptors (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 not been consulted for this application.	✓
Responses to consultation and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision. The decision was taken in accordance with our guidance.	✓
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	The operator has provided a plan, which we consider, is satisfactory, showing the extent of the site of the facility. A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.	✓
Site condition report	The operator has provided a description of the condition of the site. 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).	✓
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. A full assessment of the application and its potential to affect the sites has been carried out as part of the	✓

Aspect considered	Justification / Detail	Criteria met Yes
	permitting process. We consider that the application will not affect the features of the sites.	
Environmental Risk Assessment and operating techniques		
EIA	In determining the application, we have considered the Environmental Statement.	✓
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. *The operator's risk assessment is satisfactory.* 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 Potential Risks to consider are: • Odour emissions • Noise These are assessed in more detail in the key issues section of this document.	✓
Operating techniques	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. **The Applicant has proposed the following techniques:** • 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 500 gallon underground tank. • A summary of emergency operated procedures are provided in appendix 3 of the application supplementary information including measures	✓

Aspect considered	Justification / Detail	Criteria met Yes
	to minimise risk of fire linked to two biomass boilers and actions in the event of such a fire. Maximum virgin wood storage capacity is 37.5 tonnes. • The Environmental Management system complete with inventory of raw materials and accident management plan is included in appendix 3 of the application supplementary information. 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 and BAT Conclusions, and ELVs deliver compliance with BAT-AELs.	
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.	✓
Conditions where the consent of another person is needed.	Based on the information submitted in the application, we consider that it is necessary to impose conditions where the consent of another person is needed.	✓
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.	✓
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 with RGN 5 on Operator Competence.	✓
Relevant	The National Enforcement Database has been checked	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
convictions	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 taken these into account in the determination process.

We have received no specific comments from external consultees.

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