

Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for **Lower Bellamore Farm** operated by **Mr D. Hancorn and Mrs A. Hancorn**

The permit number is **EPR/HP3834VC**

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

The farm is located in a rural setting approximately 10 km to the west of Hereford and approximately 1 km to the south of the village of Preston-on-Wye. The installation is centred on National Grid Reference SO 38621 40470

The installation is operated by Mr D.Hancorn and Mrs A.Hancorn and comprises eight poultry houses with a combined capacity for **80,000** egg laying hens. Hence the facility is required to be permitted as a Section 6.9 A (1) (a) (i) as rearing of poultry intensively in an installation with more than 40,000 places.

Prior to this the total birds numbers were 39,000 egg laying hens and hence below the relevant threshold.

In summary the poultry house arrangements are as follows:

- Existing Houses 1 to 3 will be extended and converted to a multi-tier aviary system with belt clean manure cleanout. These houses in total will have a maximum capacity of 32,000 laying hens; ammonia emission factor of 0.08 kgNH₃/animal place/year.
- Houses 4 to 6 will be extended and modified to a multi-tier aviary system with belt clean manure cleanout. These houses will have a maximum capacity in total of 32,000 laying hens: ammonia emission factor of 0.08 kgNH₃/animal place/year.
- Houses 8 to 9 will be not be modified and remain as existing single tier system and current total 16,000 laying hens capacity ;ammonia emission factor of 0.29 kgNH₃/animal place/year.

Birds are brought onto the farm at 16 weeks old and depopulated between 70 and 80 weeks of age.

The poultry houses are built with insulated walls and concrete floors. All houses have side air inlets and high velocity exhaust roof fans. In addition the poultry houses have gutters and downpipes; clean water from poultry houses 1 to 6 goes to soakaways. Clean water from houses 8 to 9 goes to a pond.

For poultry houses 1 to 6 manure produced by birds will be collected on a manure belt, removed on a weekly basis and removed immediately from the site for spreading onto agricultural land some land owned by the operator. Records are kept of manure quantities and locations of destinations for land spreading. Manure management plans are in place.

Dirty water from the wash out of poultry houses is channelled to underground collection tanks; there are three 5 m³ tanks for the complete installation.

All feed is brought onto the farm and it will be stored in one of eight bulk bins (each with either 13 or 18 tonnes storage capacity). Diets are formulated according to the birds' requirements and the stage of the production cycle. The protein and phosphorus content of the feed is reduced as the flock gets older. Water is provided by nipple drinkers which are designed to minimise spillage, consumption levels are monitored daily. The design of the houses and equipment in use is expected to maintain good litter condition and to reduce ammonia and the likelihood of odours and fly problems. Low energy lighting systems are used throughout.

Birds which die during the production cycle are removed from the houses each day and the numbers are recorded. The carcasses are stored temporarily in a locked and sealed unit prior to disposal off site under the National Fallen Stock Scheme

The above measures are designed to minimise releases of ammonia and dust to air.

The installation is situated within the relevant screening distance of one European statutory site (River Wye) and five Sites of Special Scientific Interest

An assessment of the installation environmental impacts has been carried out and the installation is considered to have no significant impacts.

Industrial Emissions Directive (IED)

The Environmental Permitting (England and Wales) (Amendment) Regulations 2013 were made on the 20 February and came into force on 27 February. 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 is one Special Areas of Conservation (SAC), / Special Protection Areas (SPA), / Ramsar site located within 10km of the installation; this is the River Wye (SAC) which is also a Site of Special Scientific Interest. There are five Sites of Special Scientific Interest (SSSI) located within 5 kilometres of the installation. There are eleven Local Wildlife Sites (LWS) / Ancient Woodland / Local Nature Reserves within 2 km of this installation.

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.

Conclusion

After a detailed review with Natural England (NE) they gave the following reason why atmospheric emission impacts from intensive farms on the River Wye are **not** considered significant.

NE advised 'For poultry units which come in within 10km of the River Wye SAC / 5km of the SSSI, we usually advise that no further assessment is required. This is due to the likely dominance of other (diffuse, aquatic) sources of nitrogen to the River Wye, which means the application of the critical level for atmospheric ammonia is not considered defensible at this time. It would be difficult to justify application of the critical level without additional work to measure the contribution of atmospheric ammonia to the overall nutrient budget.' (Hayley Fleming 03/04/2014).

On the basis above no further assessment is necessary.

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.

Where sites screen out as <20%

Screening using our screening assessment dated 14/07/14 indicated that the PCs for the following SSSIs are predicted to be less than 20% Critical Level 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 level of 1µg/m³ for Critical Level for ammonia has been used during the screen.

Screening indicates that beyond 1523 m distance, the Process Contribution at conservation sites is less than 20 % of the 1µg/m³ critical level for ammonia. In this case all SSSI's below in Table 1 are beyond this distance.

TABLE 1– distance from source

Site	Distance (m)
Moccas Park	4,291
Monnington Scar	4,798
Bishop Meadow	5,029

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/m³ 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/m³ level used has not been confirmed, but it is precautionary.

River Wye SSSI

Based on the same reasoning as above for River Wye SAC designation, the impact of this poultry farm on this habitat site is assessed as not significant.

The Flits SSSI

The results of the ammonia screening tool v4.4 are given in the table below for ammonia emissions for the Flits SSSI.

Table 2 Ammonia Emissions

Name of SSSI	Ammonia Cle (µg/m ³)	PC (µg/m ³)	PC as % of Critical level
The Flits SSSI	3µg/m ³ *	1.037	34.6

* Confirmed critical level of 3 after advice from Natural England (advice provided 03/04/14)

Further assessment is required as PC > 20 %.

In combination assessment carried out as follows:

Table 3 In combination assessment

Site name	Ammonia Cle (µg/m ³)	PC (µg/m ³)	PC as % of Critical level	Comment
Kilkington Manor	3	0.035	1.2	All five farms have PC's < 20 % of Cle and as such are assessed as having insignificant impact on the SSSI. As such these PC's are not added to Lower Bellmore Farm for the in-combination assessment
Parkway		0.060	2.0	
Stoney Court Poultry Farm		0.054	1.8	
Swinmore Poultry Farm		0.024	0.8	
Cherrytrees Poultry Farm		0.043	1.4	
Lower Bellmore Farm		1.037	34.6	

Conclusion

Table 3 shows that the Σ process contribution at The Flits SSSI from all farms is 34.6%. In line with Environment Agency guidelines, where the Σ PC is <50% of the Critical Level, in-combination impacts can be considered as not being likely to damage the features of the SSSI for which it has been designated. Hence therefore we have concluded no likely significant effect from in-combination impacts at the The Flits SSSI.

Table 4 – Nitrogen deposition

The results of the nitrogen deposition screening tool v4.4 are given in the table below for the Flits SSSI.

Name of SSSI	Critical Load Deposition kg N/ha/year	PC Kg N/ha/yr	PC % Critical Load
The Flits SSSI	10 $\mu\text{g}/\text{m}^3$ *	5.388	53.9

*Critical load values taken from APIS website (www.apis.ac.uk) – 14/07/14 based on citation of wet woodland a CLo of 10 kg N/ha/year would be appropriate.

The process contribution at this SSSI is above 50 %. Hence an in combination assessment is required.

Table 5 In combination assessment

Site name	Critical Load Deposition Kg N/ha/year	PC Kg N/ha/yr	PC % Critical Load	Comment
Kilkington Manor	10	0.181	1.8	All five farms have PC's < 20 % of CLo and as such are assessed as having insignificant impact on the SSSI. As such these PC's are not added to Lower Bellamore Farm for the in-combination assessment
Parkway		0.312	3.1	
Stoney Court Poultry Farm		0.283	2.8	
Swinmore Poultry Farm		0.122	1.2	
Cherrytrees Poultry Farm		0.043	2.3	
Lower Bellamore Farm		5.388	53.9	

Conclusion

Table 5 shows that the Σ process contribution at The Flits SSSI from all farms is 53.9%. In line with Environment Agency guidelines, where the Σ PC is > 50% of the Critical load, detailed modelling is required. The above assessment confirms that the impacts of the surrounding farms are considered insignificant on this SSSI and that the detailed modelling needs to be performed for the impact of the Lower Bellamore Farm alone.

Detailed modelling

The applicant has carried out detailed modelling for the impact on The Flits SSSI [ADAS report dated 12/06/14]. We have carried out a detailed modelling pre-audit check on this report and have assessed it as accurate for usage in this determination.

The results are displayed below.

Table 6 Detailed modelling

Site	Critical Load kg N/ha/yr	PC Kg N/ha/yr	PC % Critical Load
The Flits SSSI	10*	3.456	34.6%

*Critical load values taken from APIS website (www.apis.ac.uk) – 14/07/14 based on citation of wet woodland a CLo of 10 **kg N/ha/yr** would be appropriate.

Conclusion

In this case using the detailed modelling data for the process contribution from the installation and repeating the in combination assessment the Σ PC is 34.6 %. This is because as all the surrounding five farms have PC's < 20 % of CLo and as such are assessed as having insignificant impact on the SSSI. Hence the Σ PC < 50% of CLo and therefore no further assessment is required and it is possible to conclude no adverse effect alone and in combination.

Table 7 – Acid deposition

The results of the nitrogen deposition screening tool v4.4 are given in the table below for the Flits SSSI.

Name of SSSI	Critical Load Acid Deposition Kg eq/ha/year	Predicted Acid Deposition Kg eq/ha/year	PC % Critical Load
The Flits SSSI	1.846 $\mu\text{g}/\text{m}^3$ *	0.385	20.9

*Critical load values taken from APIS website (www.apis.ac.uk) – 14/07/14 based on citation of broadleaved, mixed and yew woodland a CLo of 1.846 would be appropriate.

The process contribution at this SSSI is **above 20 %**. Hence an in combination assessment is required

Table 8 In combination assessment

Site name	Critical Load Acid Deposition Kg eq/ha/year	Predicted Acid Deposition Kg eq/ha/year	PC % Critical Load	Comment
Kilkington Manor	1.846	0.013	0.70	All five farms have PC's < 20 % of CLo and as such are assessed as having insignificant impact on the SSSI. As such these PC's are not added to Lower Bellamore Farm for the in-combination assessment
Parkway		0.022	1.91	
Stoney Court Poultry Farm		0.020	1.08	
Swinmore Poultry Farm		0.009	0.49	
Cherrytrees Poultry Farm		0.016	0.87	
Lower Bellamore Farm		0.385	20.9	

Conclusion

In this case the Σ PC < 50% of CLo and therefore no further assessment is required and it is possible to conclude no adverse effect alone and in combination.

Ammonia assessment - LWS/AW/LNR.

There are eleven Local Wildlife Sites (LWS) / Ancient Woodland / Local Nature Reserves 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.

Sites that screen out after initial review below

For the following sites this farm has been screened out at Stage 1, as set out above, using results of the Ammonia Screening Tool version 4.4.

Screening using Ammonia Screening Tool 4.4 has indicated that emissions from this farm will only have a potential impact on sites with a critical level of 1 µg/m³ if they are within 533 m of the emission source. Screening indicates that beyond this distance, the Process Contribution at conservation sites is less than 1µg/m³. 1µg/m³ is 100% of the 1ug/m³ critical level and therefore beyond this distance the PC is insignificant. In this case all other conversation sites below in Table 1 are beyond this distance.

TABLE 1 – distance from source

Site	Distance (m)
Moccas Park LWS	2,219
Land near Acton, Preston-on Wye LWS	1,492
Land at Rose Bank, Preston-on Wye LWS	1,622
River Wye LWS	2,151
Timberline Wood LWS	1,674
Woodbury Hill Wood AW	2,219
Barrettes Hill Wood AW	1,848
Woodsfield Barn Coppice AW	1,674

Conclusion

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

Sites that screen out from AST screen

For the following sites this farm has been screened out, as set out above, using results of the Ammonia Screening Tool version 4.4. The Process Contribution on the LWS/AW/LNR for ammonia, acid and N deposition from the application site are under the 100% significance threshold and can be screened out as having no likely significant effect.

Table 2 - Ammonia Emissions LWS's and AW

Site	Critical Level Ammonia µg/m ³	PC µg/m ³	PC % Critical Level
The Flits LWS/NNR	3*	1.037	34.6
Ponds near Woodsfield Farm LWS		1.095	36.5

* Confirmed critical level of 3 after advice from Natural England (advice provided 03/04/14).

Table 3 – Nitrogen deposition

Site	Critical Load nutrient enrichment kg N/ha/yr	PC Kg N/ha/yr	PC % Critical Load
The Flits	10*	5.388	53.9 %
Ponds near Woodsfield Farm	10*	5.687	56.9 %

*Critical load values taken from APIS website (www.apis.ac.uk) – 14/07/14 based on citation of wet woodland a CLo of 10 would be appropriate.

Table 4 - Acidification

Site	Critical Load acidification keq/ha/yr	PC keq/ha/yr	PC % Critical Load
The Flits	1.846	0.385	20.9
Ponds near Woodsfield Farm		0.406	21.9

*Critical load values taken from APIS website (www.apis.ac.uk) – 14/07/14 based on citation of broadleaved, mixed and yew woodland a CLo of 1.846 would be appropriate.

Conclusion

For ammonia emissions, nitrogen deposition and acidification **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 3.2.4 relating to groundwater monitoring. However, the Environment Agency's H5 Guidance states **that it is only necessary for the operator to take samples** of soil or groundwater and measure levels of contamination where 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 operator** to take samples of soil or groundwater and measure levels of contamination where:

- The environmental risk assessment identifies no hazards to land or groundwater; or
- Where the environmental risk assessment identifies only limited hazards to land and groundwater and there is no reason to believe that there could be historic contamination by those substances that present the hazard; or
- Where the environmental risk assessment identifies hazards to land and groundwater but there is evidence that there is no historic contamination by those substances that pose the hazard.

The site condition report dated June 2014 for Lower Bellamore Farm is within Appendix 1 of the supplementary application documentation. It includes completion of H5 template plus an installation boundary, barn layout plan and site drainage plan.

The nearest named water course is the River Wye which lies to the north of the installation

The land has been utilised as a farm for many years with the current poultry farm being in operation since 2006.

Our technical review of this specific former 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 ground water protection zone or flood risk area.

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 and therefore an odour management has been prepared. These consist of residential properties as follows:

- A residence which is approximately 400m to the north-east of poultry houses 8-9 and located at grid reference SO38919 40935.
- Residences on Bellamore Lane, the nearest of which is at grid reference SO 39188 40594 to the east of the farm. This is around 440m away from the nearest poultry houses (houses 4-6) but around 150m from the edge of the nearest range area, which forms the installation boundary.
- A farmstead to the south of the farm at grid reference SO 38348 39826. This is not within 400m of any of the poultry houses but the nearest range area is some 350m away.

There is no history of odour complaints linked to the existing poultry house facility. The poultry house ventilation high velocity roof fans will minimise risk of potential odour beyond installation boundary. An Odour Management Plan has been submitted with this application. The OMP consists of

- Appendix 9 initial OMP submission

- Duly making response with more detailed OMP including list of sensitive receptors, Poultry Code of Practice Checklist giving more details on appropriate measures for odour pollution minimisation beyond installation boundary plus procedures on odour monitoring and complaints management

Overall there is the potential for odour pollution from the installation. However the risk of odour pollution 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 and an associated risk assessment in appendix 11.

Operations with the most potential to cause noise nuisance have been assessed as those involving vehicle engine movement eg. feed delivery, transport of birds onto and off site, transport of eggs, manure, litter and dirty water off-site

To minimise associated noise from these activities the management plan includes usage of dedicated modern, well maintained vehicles and minimisation of deliveries at anti-social hours. The management plan includes a commitment to assess noise levels during such activities and optimise vehicles and procedures to minimise noise.

There is no history of noise complaints linked to the existing poultry house.

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.

Annex 1: decision checklist

Aspect considered	Justification / Detail	Criteria met
		Yes
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>The application was sent for consultation with</p> <ul style="list-style-type: none"> • Herefordshire Council Planning Department • Herefordshire Council Health Department • HSE 	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>No consultations responses were received. The decision was taken in accordance with our guidance.</p>	✓
Operator		
Control of the facility	<p>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 operator.</p>	✓
European Directives		
Applicable directives	<p>All applicable European directives have been considered in the determination of the application. This permit meets IED requirements. See key issues section above for further information.</p>	✓
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. This plan was finalised with a revised version sent as a final request for information response dated 24/07/14.</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. 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 the following nature conservation sites.</p> <ul style="list-style-type: none"> • European Sites : River Wye (SPA) • Sites of Special Scientific Interest : Five sites including River Wye , Monnington Scar, Moccas Park, The Flits and Bishop Meadow • Other nature conservation sites: Eleven including seven local wildlife sites three ancient woodlands and one National Nature Reserve. <p>An ammonia emissions review is included in key issues section of this document.</p> <p>Appendix 11 (dated 09/07/14) has been sent to Natural England for information only. All documents have been saved on EDRM.</p> <p>In conclusion installation environmental impact on the surrounding habitat sites is considered not significant.</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Environmental Risk Assessment and operating techniques		
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory.</p> <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 operator and compared these with the relevant guidance notes.</p> <p><u>The Operator has proposed the following techniques:</u></p> <ul style="list-style-type: none"> • All poultry houses are built on a concrete base and the walls and roofs are insulated. • All poultry houses have high velocity roof extraction fans to maximise extract air dispersion. • Delivery of feed into storage bins and from bins to the birds are contained utilising enclosed conveyor systems. • Dirty water storage from both poultry houses is contained within one of three below ground storage tanks ; each tank of 5 m3 volume Procedures are in place to minimise risk of tank overflowing and underground tanks are able to be visually inspected • Roof water and yard water from poultry houses is transferred via above ground drain gutters to a series of soakaways and a pond for water from houses 8 to 9. • Sealed and collision-protected feed storage bins • Diesel storage for standby generator is stored within a bund within dedicated building. There is no oil for heating purposes within the installation boundary. Chemicals are stored within a sealed and fire proof dedicated building. • Feed selection is carefully selected with reference to bird type and stage of production cycle. Phosphorous and protein levels are reduced over the production and growing cycle by providing different feeds. <p>The proposed techniques for priorities for control are in line with the benchmark levels contained in the SGN EPR6.09 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.</p>	✓
The permit conditions		
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. These descriptions are specified in the Operating Techniques table in the permit.</p>	✓
Operator 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>Appendix 3 of the supporting information gives the detail of their EMS covering normal operation, maintenance schedules and records, incidents and abnormal operations, complaints system, accident management, training and provision of competent staff plus site security.</p> <p>The accident management plan is currently being prepared to allow completion prior to facility operation beyond EPR scheduled activity threshold.</p> <p>The decision was taken in accordance with RGN 5 on Operator</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	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 operator 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.

No external consultation responses received.

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