Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Town Farm Poultry Unit operated by Mr William Davies.

The permit number is EPR/YP3337EK

This was applied for and determined as a new bespoke application.

Town Farm Poultry Unit is situated approximately 1 kilometre west of the village of Castle Frome. The installation is approximately centred on National Grid Reference SO 65840 46030.

The installation is operated by Mr William Davies and comprises four poultry houses, numbered 1 to 4 which are all ventilated by high velocity extraction fans. All four houses also have gable end fans, although these are operated infrequently to maintain temperature, typically in the summer months. The four poultry sheds provide a combined capacity for 197,200 broilers.

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 – Ammonia Emissions Assessment, Biomass Boiler, Industrial Emissions Directive (IED)
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

Key issues of the decision

Ammonia Emissions Assessment

There is one Site of Special Scientific Interest (SSSI) located within 5 kilometres of the installation. There are also nine Local Wildlife Sites (LWS) and eight Ancient Woodlands (AW) within 2km of the installation.

Ammonia Assessment - SSSI

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.

Detailed modelling (ADAS, June 2013) has indicated that the PC for Birchend SSSI is 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 detailed modelling are given in the tables below.

Table 1 Ammonia Emissions

Name of SSSI	Ammonia Cle ($\mu g/m^3$)	PC ($\mu g/m^3$)	PC as % of Critical level
Birchend	$1\mu g/m^3$*	0.0712	7.1

* A precautionary level of $1\mu g/m^3$ has been used during the screen. Where a critical level of $1\mu g/m^3$ 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 this case the $1\mu g/m^3$ level used has not been confirmed, but it is precautionary.

Ammonia assessment – LWS and AW

There are nine Local Wildlife Sites and eight Ancient Woodlands within 2 km of Town Farm. 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 Ammonia Screening Tool version 4.4. The Process Contribution on the LWS and AW 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

Habitat Type	Site	Critical Level Ammonia µg/m^3	PC µg/m^3	PC % Critical Level
LWS	Meephill coppice and Childer Wood	1*	0.087	8.7
LWS	Woodlands above Birchend	1*	0.134	13.4
LWS	Fisher's Coppice	1*	0.357	35.7
LWS	Foxhill and Fishpool Wood	1*	0.127	12.7
LWS	Blackway Coppice	1*	0.128	12.8
LWS	Cheyney Court Wood	1*	0.099	9.9
LWS	River Frome	3**	1.529	50.7
LWS	Ponds at Lower Moorend Farm	1*	0.133	13.3
AW	Blackway Coppice	1*	0.128	12.8
AW	Yew Tree Coppice	1*	0.120	12
AW	Unnamed Woodland	1*	0.351	35.1
AW	Camp Coppice	1*	0.239	23.9
AW	Fishpool Wood	1*	0.106	10.6
AW	Meephill Coppice	1*	0.087	8.7
AW	Leighton Court Wood	1*	0.297	29.7
AW	Cheyney court Wood	1*	0.098	9.8

* Precautionary CLe of 1µg/m^3 has been used. Where a critical level of 1µg/m^3 is used, and the process contribution is assessed to be < 100% the site automatically screens out as insignificant, and no further assessment of critical load is necessary. In these cases the 1µg/m^3 level used has not been confirmed, but it is precautionary.

** CLe3 applied as no protected lichen or bryophytes species were found when checking easimap layer.

The detailed modelling predicts that the process contribution, for receptors located at the River Frome LWS, is under the 100% significance threshold

and can be screened out as having no likely significant effect. However, the predicted process contribution to nitrogen deposition does exceed the Critical Load of 10kg-N/ha/year at one of the discrete receptors at 106%.

Table 3 – Ammonia emissions and nitrogen deposition River Frome LWS

Habitat Type	Site	Critical Level Ammonia µg/m^3	PC µg/m^3	PC % Critical Level	Clo (kg/ha)	PC as %age of Clo
LWS	River Frome	3	1.413	47.1	10	106.4

The area of exceedance is predicted to be only 10m^2 and therefore marginal given the context of the size of the River Frome. A survey was undertaken in December 2012 by an experienced ADAS ecologist to establish whether 'sensitive' species were present within small sections of vegetation adjacent to the river. The survey found that no sensitive/acidophyte species were present. Therefore, any increase in ammonia levels due to the establishment of the poultry site, will not have any detrimental impact on lichen and bryophyte species.

The Environment Agency's H1 guidance states that where modelling predicts a process contribution of above 100% at a LWS, a proposal *may* not be considered acceptable as there may be an impact to the designated conservation site.

In this case we have agreed to issue the permit. This decision was made based on the fact that the modelling shows that ammonia emissions are below the 100% threshold. The only exceedance was for nitrogen deposition, which only impacts approximately 10m^2 of the LWS. Also, the use of biomass boilers further reduces the ammonia emissions from poultry houses (biomass boilers as an indirect source of heating result in less moisture in the sheds to volatise ammonia, hence emissions are reduced), however there has not yet been a percentage reduction in emissions assigned to biomass boilers. Therefore no reduction was taken into account during the ammonia modelling; but we consider that the reduction will be sufficient to move the area of exceedance (of the threshold for N Deposition) outside of the boundary of the LWS.

Biomass Boiler

The applicant is installing a biomass boiler with a thermal input of 995 kilowatts to assist the heating of the poultry houses.

In line with the Environment Agency's May 2013 document "Biomass boilers on EPR Intensive Farms", an assessment has been undertaken to consider the proposed addition of the biomass boiler.

This guidance states that the Environment Agency has assessed the pollution risks and have 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 where:

(i) the fuel will be derived from virgin timber, miscanthus or straw, and;
(ii) the biomass boiler appliance and installation meets the technical criteria to be eligible for the Renewable Heat Incentive, and;
(iii) the aggregate boiler net rated thermal input is:

A. less than 0.5MWth, or;

B. less than 1MWth where the stack height is greater than 1 metre above the roof level of adjacent buildings (where there are no adjacent buildings, the stack height must be a minimum of 3 metres above ground), and there are:

- no Special Areas of Conservation, Special Protection Areas, Ramsar sites or Sites of Special Scientific Interest within 500 metres of the emission point(s);

- no National Nature Reserves, Local Nature Reserves, ancient woodlands or local wildlife sites within 100 metres of the emission point(s), or;

C. less than 2MWth where, in addition to the above criteria for less than 1MWth boilers, there are:

- no sensitive receptors within 150 metres of the emission point(s).

The biomass boiler meets the requirements of criteria B above, and are therefore considered not likely to pose a significant risk to the environment or human health and no further assessment is required.

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).

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

<u>Groundwater and soil monitoring</u>

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 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 for Town Farm Poultry Unit (dated 08/01/2014) demonstrated that the hazards to land or groundwater have been mitigated/minimised such that there is little likelihood of pollution and there is no evidence of historic contamination on site. Therefore, although this condition is included in the permit, no groundwater or soil monitoring will be required at this installation as a result.

Annex 1: decision checklist

This document should be read in conjunction with the Duly Making checklist, the application and supporting information and permit/ notice.

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.	✓
Responses to consultation and web publicising	The consultation responses (Annex 2) were taken into account in the decision. No responses were received to web publication. The decision was taken in accordance with our guidance.	✓
Operator		
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 operator.	✓
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application. This permit implements the requirements of the EU Directive on Industrial Emissions. **See key issues section ' Industrial Emissions Directive (IED)' above for further information.**	✓
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.	✓

Aspect considered	Justification / Detail	Criteria met Yes
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 permitting process. We consider that the application will not affect the features of the sites for the reasons outlined in the Key Issues section above. Natural England were consulted in the construction of the Environment Agency's May 2013 document "Biomass boilers on EPR Intensive Farms". This proposal screened out based on the criteria within that paper and as such is considered acceptable in terms of potential to impact sites of heritage, landscape or nature conservation, and/or protected species or habitat. **See key issues section 'Biomass Boiler and Ammonia Emissions Assessment' above for further information.** An Appendix 4 was completed and saved to EDRM on 17/02/2014 'For Audit Only'. We have not formally consulted on the application. The decision was taken in accordance with our guidance.	✓
Environmental Risk Assessment and operating techniques		
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory.	✓

Aspect considered	Justification / Detail	Criteria met Yes
	The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.	
Environmental risk	We have carried out a risk assessment on behalf of the operator. The operator considers this risk assessment is satisfactory. **See key issues section 'Ammonia Assessment – LWS and AW' above for further explanation.**	✓
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The operator has proposed the following key techniques: • Dirty water storage facilities are in place on site; • Nipple drinkers are used to reduce wastage of water and maintain dry litter; • Chemical storage is within a purpose-built store on site that is fully bunded; • All fuels are stored in bunded fuel stores; • Emergency generator on site in case of power failure; • Carcasses stored in sealed bins before being sent for incineration by an approved contractor; • the fuel for the biomass boiler is derived from virgin timber; • the biomass boiler appliance and it's installation meets the technical criteria to be eligible for the Renewable Heat Incentive; and • the stacks are 1m or more higher than the apex of the adjacent buildings. The proposed techniques for priorities for control are in line with the benchmark levels contained in the SGN EPR6.09 'How to comply with your environmental permit for intensive farming (version 2)' and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs	✓

Aspect considered	Justification / Detail	Criteria met Yes
	and BAT Conclusions.	
The permit conditions		
Raw materials	We have specified limits and controls on the use of raw materials and fuels. We have specified that only virgin timber (including wood chips and pellets), straw, miscanthus or a combination of these. These materials are never to be mixed with, or replaced by, waste.	✓
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.	✓
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 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 on 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 received from
Local Planning Authority – Herefordshire Council (19/02/2014)
Brief summary of issues raised
No further comments on proposal.
Summary of actions taken or show how this has been covered
No action required.

The following organisations were also consulted, however no responses were received:

- Environmental Health – Herefordshire Council
- Health and Safety Executive

This proposal was also publicised on the Environment Agency's website between 20/02/2014 and 20/03/2014, but no representations were received during this period.