

Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Eyeworth Lodge Farm operated by Lodge Farm Poultry Limited.

The permit number is EPR/HP3836NK/A001

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.

Description of the main features of the Installation

The four poultry houses will provide a combined capacity for 210,000 (bird) broiler places. Birds are housed at one day old and de-populated at around thirty-two to forty-two days of age with approximately seven days between for clean out, which will give 7 to 7.5 cycles per annum, this will be done on an all out all in basis. Two 1.088MWth biomass boilers will provide heating for the four poultry sheds. The biomass boilers will use biomass chips or pellets comprising virgin timber, straw, miscanthus; or a combination of these, which will not be mixed with or replaced by waste.

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

Ammonia emissions

There is one Site of Special Scientific Interest (SSSI) located within 5 km of the installation, Ashwell Springs. There is also one Local Wildlife Site (LWS), River Rhee within 2 km of the installation.

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.

Screening using the ammonia screening tool (version 4.4) has indicated that the PC for Ashwell Springs (SSSI) is predicted to be less than 20% critical level for ammonia, acid and nitrogen deposition therefore it is possible to conclude no damage. The results of the ammonia screening tool (version 4.4) are given in Table 1 below.

Table 1 - Ammonia emissions

Name of SSSI	Ammonia CLe ($\mu\text{g}/\text{m}^3$)	Predicted PC $\mu\text{g}/\text{m}^3$	PC as % of CLe
Ashwell Springs (SSSI)	1*	0.030	3

* A precautionary level of $1 \mu\text{g}/\text{m}^3$ has been used during the screen. Where the precautionary level of $1 \mu\text{g}/\text{m}^3$ is used, and the process contribution is assessed to be less than the 20% insignificance threshold in this circumstance it is not necessary to further consider nitrogen deposition or acid deposition critical load values. In these cases the $1 \mu\text{g}/\text{m}^3$ level used has not been confirmed, but it is precautionary.

No further assessment is required.

Ammonia assessment - LWS

There is one Local Wildlife Site (LWS) within 2 km of Eyeworth Lodge Farm. The following trigger thresholds have been applied for the assessment of this site.

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 (Table 2) has been screened out, using the ammonia screening tool (version 4.4). The predicted PC on the LWS 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.

Table 2 - Ammonia emissions

Name of LWS	Ammonia CLe ($\mu\text{g}/\text{m}^3$)	Predicted PC $\mu\text{g}/\text{m}^3$	PC as % of CLe
River Rhee (LSW)	1*	0.534	53.4

* A precautionary level of $1 \mu\text{g}/\text{m}^3$ has been used during the screen. Where the precautionary level 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 this circumstance it is not necessary to further consider nitrogen deposition or acid deposition critical load values. In these cases the $1 \mu\text{g}/\text{m}^3$ level used has not been confirmed, but it is precautionary.

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).

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

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, our H5 Guidance states that it is only necessary for the Operator to take samples of soil or groundwater and measure levels of contamination where there is 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 (SCR) for Eyeworth Lodge Farm (09/10/15) 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 monitoring will be required at this installation as a result.

Biomass boilers

The application is also to include two x 1.088MWth biomass boilers with a net rated thermal input of 2.176MWth.

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 0.5MWth, or:
- B. the aggregate boiler net rated thermal input is less than or equal to 4MWth, and no individual boiler has a thermal input greater than 1MWth, 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.

In accordance with the Environment Agency's Air Quality Technical Advisory Guidance 14: "for combustion plants under 5MWth, no habitats assessment is required due to the size of combustion plant". Therefore this proposal is considered acceptable and no further assessment is required.

The Environment Agency's risk assessment has shown that the biomass boilers do not meet all of the requirements of criteria above, as the individual

boilers are greater than 1MWth, therefore further assessment was required. All the other above requirements were met in full.

Biomass boiler assessment

As the biomass boilers on the installation do not meet the above criteria further assessment is necessary. Further screening has been undertaken using the boiler specifications provided by the operator.

Table 3

Flue diameter	350mm
Stack height (from ground level)	7m
Adjacent Building heights	6m
Flue nominal load temperature	170°C
Flue minimum temperature	120°C
Thermal input in kW per hour	2 x 1.088 kWth
Exit velocity in m/sec	16.6
NOx concentration in mg/Nm ³	<300
CO concentration in mg/Nm ³	<625
PM10 (dust) concentration in mg/Nm ³	<40
O2 concentration in mg/Nm ³	O2 = 10%
The exact grid reference of the stack 1	525631,243938
The exact grid reference of the stack 2	525618,243918
The exact grid reference of the centre of the farm	525704,243930
A plan giving layout of the farm including dimensions.	Supplied

The Air Quality Monitoring and Assessment Unit (AQMAU) screening tool (version 4) has been run for Carbon Monoxide (CO), Nitrogen Dioxide (NO₂) and Particulates (PM10), to assess the emissions impacts at the closest appropriate sensitive receptor at:

- Receptor 1 - dwelling at Eyeworth Lodge Farm, TL 25600 44139 (525600,244139);

Sulphur Dioxide (SO₂) has not been assessed due to the boiler fuel being clean woodchip which would contain very little or no sulphur.

Process Contributions (PC)

For NO₂, the short term Air Quality Standard (AQS) is 200 µg/m³ and for long term, 40 µg/m³. Process contribution significance thresholds are 10% of the AQS for short term and 1% for long term.

For PM10, the short term AQS is 50 µg/m³ and for long term, 40 µg/m³. Process contribution significance thresholds are 10% of the AQS for short term and 1% for long term.

For CO, the short term AQS is 10mg/m³, there is no long term AQS. Process contribution significance threshold is 10% of the AQS for the short term.

The results highlighted in red are process contributions (PCs) that are not insignificant as a percentage of the relevant AQS.

Table 4: Receptor 1 - Eyeworth Lodge Farm

Pollutant	Term	PC µg/m ³	AQS µg/m ³	PC %age of AQS
NO ₂	Short	13.6	200	6.8
NO ₂	Long	2.6	40	6.5
PM ₁₀	Short	0.82	50	1.6
PM ₁₀	Long	0.36	40	0.9
CO	Short	25.4	10,000	0.3

Predicted Environmental Contributions (PEC)

As the annual means (long term PC) for NO₂ is greater than 1% (6.5%) at the sensitive receptor is not insignificant, we must therefore take background concentrations into consideration to examine whether the PC is going to contribute significantly to a possible exceedance of the AQS. PC plus background is known as Predicted Environmental Concentration (PEC).

The background maps held on the DEFRA website were used to obtain relevant NO₂ background concentration.

Long term emissions are considered unlikely to give rise to an exceedance of an AQS where:

PC long term + background concentration < 70% of the AQS.

Table 5: Receptor 1 - Eyeworth Lodge Farm

Pollutant	Term	PC µg/m ³	AQS µg/m ³	Background µg/m ³	PEC %age of AQS
NO ₂	Long	2.6	40	9.5	30.3

The PEC value for the long term emissions of NO₂ shown in Table 5 are less than 70% of the AQS and therefore screen out from requiring further assessment. We are satisfied that the emissions from biomass boiler do not pose a significant risk to the sensitive receptors.

Annex 1: decision checklist

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

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.	✓
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.	✓
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.	✓
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 including discharge points. 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).	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Biodiversity, Heritage, Landscape and Nature Conservation	<p>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 sites. We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p> <p>In accordance with the Environment Agency's Air Quality Technical Advisory Guidance 14: "for combustion plants under 5MW, no habitats assessment is required due to the size of combustion plant". Therefore this proposal is considered acceptable and no further assessment is required. (See key issues above)</p>	✓
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.	✓
Operating techniques	<p>We have reviewed the techniques used by the Operator and compared these with the relevant guidance notes. The proposed techniques for priorities for control are in line with the benchmark levels contained in SGN EPR6.09 'How to comply with your environmental permit for intensive farming (version 2)' Technical Guidance Note and we consider them to represent appropriate techniques for the facility.</p> <p>The Operator has proposed the following key techniques:</p> <ul style="list-style-type: none"> • Housing design and management will be in accordance with the sector guidance note (SGN) EPR6.09; • Feed selection and use will be in accordance with the sector guidance note (SGN) EPR6.09. • Nipple drinkers are used to reduce wastage of water and maintain dry litter; • All dirty water is collected in storage tanks and taken off site; • the biomass boiler fuel is derived from virgin timber; • the biomass boiler appliance and its installation meets the technical criteria to be eligible for the Renewable Heat Incentive; and 	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	<ul style="list-style-type: none"> the stacks are 1m or more higher than the apex of the adjacent buildings. <p>The proposed techniques for priorities for control are in line with the benchmark levels contained in the Sector Guidance Note EPR6.09 and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs.</p>	
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.	✓
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.	✓
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.	✓
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
N/a
Brief summary of issues raised
N/a
Summary of actions taken or show how this has been covered
N/a

The Food Standard Agency (FSA), Central Bedfordshire Council (Planning Dept - Priors House), Central Bedfordshire Council (Environmental Services - Priors House), Health and Safety Executive (HSE), Public Health England (151 Buckingham Place Road, SW1 9SZ) and internal Ground Water & Contaminated Land team (GWCL) were consulted with. Comments for consultation ended on the 16/11/15.

The permit application was published on the Environment Agency's website (which finished 18/11/15); no comments / representations were received during the consultation period.