

Environment Agency permitting decisions

Variation

We have decided to issue the variation for Ilketshall Hall Farm Poultry Unit operated by St. Lawrence Hall Farms Limited.

The variation number is EPR/QP3331MD/V003.

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 the changes introduced by the variation
- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

Description of the changes introduced by the Variation

This is a Substantial Variation.

This variation authorises the following changes:

- an increase in bird places at the installation from 355,000 to 499,422 broilers;
- construction of two additional poultry houses (numbers 13 and 14) to the north east of poultry house 12;
- an increase in the site boundary to accommodate the new poultry houses;
- installation of two biomass boilers with a maximum (aggregated) thermal input not exceeding 1.248 MW;
- installation of a cold store, implement store and grain store; and
- installation of additional LPG tanks.

The new poultry houses will be constructed to comply with the latest BAT recommendations. The houses will be fan ventilated with a fully littered floor, well insulated and equipped with nipple drinking systems. Ventilation will be provided by high velocity roof extraction fans with side wall inlets for normal ventilation and gable end fans for hot weather cooling.

Roof water from poultry houses 13 and 14 and associated yard water (excluding poultry house wash out periods) will either discharge to a ditch via an attenuation reservoir or be recycled and reused at the installation.

The biomass boilers will burn virgin woodchip to heat poultry houses 9 to 14. There is capacity to store approximately 200 tonnes of fuel in the fuel storage building. Fuel will be transferred from the lorry to the biomass store via an enclosed/blown system. Boiler ash will be stored in a sealed container prior to being land spread under an exemption. The boilers and their installation meet the technical criteria to be eligible for the Renewable Heat Incentive. LPG will be used as a back-up fuel.

Broilers which die during the crop cycle will be removed from houses and held in a small lockable cold store prior to collection by a licensed contractor under the DEFRA fallen stock scheme.

Key issues of the decision

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 2013. These Regulations transpose the requirements of the IED.

Amendments have been made to the conditions of this variation so that it now implements the requirements of the European Union Directive on Industrial Emissions.

Ammonia emissions

There are three Special Areas of Conservation (SAC)/Special Protection Areas (SPA)/Ramsar sites located within 10 kilometres of the installation. There are also eight Local Wildlife Sites (LWS)/Ancient Woodlands (AW), within 2 km of the installation.

Ammonia assessment – SAC/SPA/Ramsar

The following trigger thresholds have been designated for the assessment of European sites:

- If the process contribution (PC) is below 4% of the relevant critical level (CL_e) or critical load (CL_o) then the farm can be permitted with no further assessment.
- Where this threshold is exceeded an assessment alone and in combination is required.
- An in combination assessment will be completed to establish the combined PC for all existing farms identified within 10 km of the SAC/SPA/Ramsar.

Broadland SPA/Ramsar

Screening using the Ammonia Screening Tool version 4.5 has determined that the PC on the following SPA/Ramsar for ammonia emissions/nitrogen deposition from the application site are under the 4% significance threshold and can be screened out as having no likely significant effect. See results below.

Table 1 – Ammonia emissions

Site	Critical level ammonia µg/m ³	Predicted PC µg/m ³	PC % of Critical level
Broadland SPA	3*	0.066	2.2
Broadland Ramsar	3**	0.066	2.2

* CLe 3 for most sensitive Fen, Marsh and Swamp, taken from APIS (www.apis.ac.uk) – 01/6/16.

**No APIS data for Ramsars, CLe Information used for Broadland SPA from APIS.

Table 2 – Nitrogen deposition

Site	Critical load kg N/ha/yr	Predicted PC kg N/ha/yr	PC % of critical load
Broadland SPA	10*	0.342	3.4
Broadland Ramsar	10**	0.342	3.4

*Critical load values taken from Air Pollution Information System (APIS) website (www.apis.ac.uk) – 01/06/16

**No APIS data for Ramsars, CLe Information used for Broadland SPA from APIS.

Screening using the Ammonia Screening Tool version 4.5 has determined that the process contributions of acid from the application site could exceed the 4% threshold, and are therefore potentially significant. An in combination assessment was carried out to consider other farms within close proximity of Broadland SPA and Ramsar. The total process contribution at Broadland SPA and Ramsar from all farms in combination is 12.9% for acid deposition. In line with Environment Agency guidelines, where the total PC is less than 20% of the critical level/load, in combination impacts can be considered as having no likely significant effect. Therefore we have concluded no likely significant effect from in combination impacts at the SPA/Ramsar.

No further assessment is necessary.

The Broad SAC

Screening using the Ammonia Screening Tool version 4.5 has determined that the process contributions of ammonia from the application site could exceed the 4% threshold, and are therefore potentially significant. An in combination assessment was carried out to consider other farms within close proximity of The Broads SAC. The total process contribution at The Broads SAC from all farms in combination is 24.4% for ammonia. In line with Environment Agency guidelines, in-combination impacts can only be considered as having no likely significant effect where the total PC is less than 20% of the critical level/load.

As a result, detailed modelling has been carried out. The applicant has supplied a detailed air dispersion modelling assessment of the emissions from the installation (Ammonia modelling report – Ilketshall Hall Farm Poultry Unit – dated 30/08/16).

The detailed modelling has determined that the process contributions of ammonia emissions from the application site are below the 4% significance threshold and can be screened out as insignificant. See below for the detail.

Table 3 – Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of critical load
The Broads SAC	1*	0.031	3.1

*NE confirmed that the citation for Geldeston Meadows SSSI, which underpins the Broads SAC and Broadland SPA and Ramsar at this location makes reference to bryophytes therefore a CLe of $1 \mu\text{g}/\text{m}^3$ should be used for this site (20/06/16).

Where a level of $1 \mu\text{g}/\text{m}^3$ is used, and the PC is assessed to be less than the 4% insignificance threshold, in this circumstance it is not necessary to further consider nitrogen deposition or acid deposition critical load values.

Although other farms have been identified that will act in combination with this application, given that the impact from Ilketshall Hall Poultry Unit is insignificant the in-combination assessment does not need to be further considered.

We have audited the operator's detailed modelling and we have confidence that we can agree with the report's conclusions.

Ammonia assessment - LWS/AW

The following trigger thresholds have been applied for the assessment of these sites:

- If the process contribution (PC) is below 100% of the relevant critical level (CLE) or critical load (CLO) then the farm can be permitted with no further assessment.

Screening using the Ammonia Screening Tool version 4.5 has indicated that emissions from Ilketshall Hall Farm Poultry Unit will only have a potential impact on the LWS/AW sites with a precautionary critical level of $1\mu\text{g}/\text{m}^3$ if they are within 1213 metres of the emission source.

Beyond 1213 metres the PC is less than $1\mu\text{g}/\text{m}^3$ and therefore beyond this distance the PC is insignificant. In this case the following LWS/AWs are beyond this distance (see table below) and therefore screen out of any further assessment.

Table 4 – LWS/AW Assessment

Name of LWS/AW	Distance from site (m)
Mill Common LWS	1606
Great and Briery Woods LWS	1561
St Lawrence Green Pond LWS	1469
Ilketshall John Wet Meadow LWS	1455
The Mardle LWS	1562
Great/Briery/Farm woods AW	1563
Spring Wood AW	1940

Godfrey's Common LWS is located within 1078 metres of the emission source. Screening using the Ammonia Screening Tool version 4.5 has determined that the PC on the LWS for ammonia emissions/nitrogen deposition/acid deposition from the application site are under the 100% significance threshold and can be screened out as having no likely significant effect. See results below.

Table 5 - Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of critical level
Godfrey's Common LWS	3*	1.226	40.9

* CLe 3 applied as no protected lichen or bryophytes species were found when checking easimap layer.

Table 6 – Nitrogen deposition

Site	Critical load kg N/ha/yr [1]	Predicted PC kg N/ha/yr	PC % of critical load
Godfrey's Common LWS	10	6.369	63.7

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 01/06/16 for Broadleaved, Mixed and Yew woodland (from Easimap info and aerial photo partly lowland meadows, partly wooded area so worst case scenario chosen).

Table 7 – Acid deposition

Site	Critical load keq/ha/yr [1]	Predicted PC keq/ha/yr	PC % of critical load
Godfrey's Common LWS	2.73	0.455	16.7

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) - 01/06/16 for Broadleaved, Mixed and Yew woodland (from Easimap info and aerial photo partly lowland meadows, partly wooded area so worst case scenario chosen).

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 a condition relating to protection of soil, groundwater and 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 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 the 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 Ilketshall Hall Farm Poultry Unit (dated 12/09/16) demonstrates that there are no hazards or likely pathway to land or groundwater and no historic contamination on site that may present a hazard from the same contaminants. **Therefore, on the basis of the risk assessment presented in the SCR, we accept that they have not provided base line reference data for the soil and groundwater at the site at this stage.**

Odour Management Plan

We, the Environment Agency, have reviewed and approved the Odour Management Plan (OMP) 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.

The OMP should be reviewed on a regular basis to ensure that it reflects the most up to date management practices and infrastructure.

Biomass boilers

The applicant is varying their permit to include 2 biomass boilers with a net rated thermal input of 1.248 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;
- the aggregate boiler net rated thermal input is less than or equal to 4 MWth, and no individual boiler has a net thermal input greater than 1 MWth, and;
- the stack height must be a minimum of 5 metres above the ground (where there are buildings within 25 metres the stack height must be greater than 1 metre above the roof level of buildings within 25 metres) and;
- there are no sensitive receptors within 50 metres 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. Our risk assessment has shown that the biomass boilers should meet the requirements of the criteria above, and are, therefore, considered not likely to pose a significant risk to the environment or human health and no further assessment is required.

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
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	<p>The consultation requirements were identified and implemented. The decision was taken in accordance with our Public Participation Statement and our Working Together Agreements.</p> <p>For this application we consulted the following bodies:</p> <ul style="list-style-type: none"> • The Health & Safety Executive • Environmental Health – Suffolk Coastal & Waveney District Councils • The Local Planning Authority – Waveney District Council • The Director of Public Health • Public Health England 	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>The decision was taken in accordance with our guidance.</p>	✓
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.	✓

Aspect considered	Justification / Detail	Criteria met Yes
	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	<p>The operator has provided a description of the condition of the site.</p> <p>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).</p>	✓
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.</p> <p>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.</p> <p>See Key Issues ‘Ammonia Emissions Assessment’ section above for further information.</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.</p> <p>See Key Issues ‘Biomass Boilers’ above for further information.</p>	✓
Environmental Risk Assessment and operating techniques		
Environmental risk	<p>We have carried out a risk assessment on behalf of the operator.</p> <p>See Key Issues section for further explanation.</p>	✓
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>The operating techniques are as follows:</p> <ul style="list-style-type: none"> • the fuel is derived from virgin timber; • the aggregate boiler net rated thermal input is less than or equal to 4 MWth, and no individual boiler has a net thermal input greater than 1 MWth; • the biomass boiler appliance and its installation meet the technical criteria to be eligible for the Renewable Heat Incentive; • the stacks are 1m or more higher than the apex of the adjacent buildings; and • the construction of two additional poultry houses complies with the latest BAT recommendations. The houses will be fan ventilated with a fully littered floor, well insulated and equipped with nipple drinking systems. Ventilation will be provided by high velocity roof extraction fans with side wall inlets for normal ventilation and gable end fans for hot weather cooling. <p>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' and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs and BAT Conclusions.</p>	
The permit conditions		
Updating permit conditions during consolidation.	<p>We have updated previous permit conditions to those in the new generic permit template as part of permit consolidation. The new conditions have the same meaning as those in the previous permit(s).</p> <p>The operator has agreed that the new conditions are acceptable.</p>	✓
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.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Raw materials	<p>We have specified limits and controls on the use of raw materials and fuels.</p> <p>We have specified that only virgin timber (including wood chips and pellets), straw, miscanthus or a combination of these can be used as fuel in the biomass boilers. These materials are never to be mixed with, or replaced by, waste.</p>	✓
Incorporating the application	<p>We have specified that the applicant must operate the permit in accordance with the descriptions in the application, including all additional information received as part of the determination process.</p> <p>These descriptions are specified in the Operating Techniques table in the permit.</p>	✓
Emission limits	No emission limits have been added as a result of this variation.	✓
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 our guidance on what a competent operator is.	✓

Annex 2: External 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 on 21/12/16 from
Public Health England
Brief summary of issues raised
Acknowledgement of receipt of consultation request. Confirmed a response would be provided by 16/01/17
Summary of actions taken or show how this has been covered
None required

Response received on 22/12/16 from
Suffolk Coastal and Waveney District Council (Email 1)
Brief summary of issues raised
The response indicated that the local authority Environmental Health Officer has no observations or comments in respect to this variation.
Summary of actions taken or show how this has been covered
None required

Response received on 09/01/17 from
Suffolk Coastal and Waveney District Council (Email 2)
Brief summary of issues raised
The revised response confirmed that the Environmental Protection Team has an objection to the variation on the grounds of detriment to local air quality and proximity of sensitive receptors. They stated that the applicant should submit a detailed air quality assessment, considering both PM10 emissions from the poultry sheds and biomass boilers, and nitrogen dioxide emissions from the biomass boilers, to ensure that National Air Quality Objectives are not exceeded.
They confirmed that they hold no record of complaints made in respect of environmental impacts arising from the operation of the poultry unit.
Summary of actions taken or show how this has been covered
In terms of PM10 emissions, the operator has submitted a dust (including bio-aerosols) risk assessment. This has been reviewed and approved by the Environment Agency in line with our guidance, 'How to comply with your environmental permit for intensive farming : Assessing dust control measures on intensive poultry installations'.
In terms of nitrogen dioxide, emissions from small biomass boilers burning fuel derived from virgin timber, clean non virgin timber, straw and Miscanthus are not likely to pose a significant risk to the environment or human health providing certain criteria in our position statement on biomass boilers on EPR intensive farms are met. Our risk assessment has shown that the biomass

boilers meet the requirements of the criteria (detailed above in the Key Issues section) and are therefore considered not likely to pose a significant risk to the environment or human health and no further assessment is required.

Standard conditions which require the operator to action any emissions management plan should a substantiated negative impact be notified have been included in the permit. Conditions 3.1.1 and 3.2.1 concerning fugitive emissions, are included.

As the risk has been appropriately addressed, it is not deemed necessary to request a detailed air quality assessment, considering emissions of PM10 and nitrogen dioxide, from the operator.

Response received on 09/01/17 from

Public Health England

Brief summary of issues raised

PHE noted that the main emissions of public health significance are emissions to air of bio aerosols, dust including particulate matter and ammonia. They noted that the closest receptor, excluding those under the ownership/control of the site operator, includes a residential property situated approximately 240 metres to the North-North-West of existing poultry houses.

They concluded that assuming that the installation complies in all respects with the requirements of the permit, all relevant domestic and European legislation, and will use Best Available Techniques (BAT), emissions present a low risk to human health.

Summary of actions taken or show how this has been covered

The operator has submitted a dust (including bio-aerosols) risk assessment, which has been reviewed and approved by the Environment Agency.

Likely impacts have been assessed during the determination as unlikely to have a significant impact and therefore we have included standard conditions which require the operator to action any emissions management plan should a substantiated negative impact be notified. Conditions 3.1.1 and 3.2.1 concerning fugitive emissions, are included in the permit.

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

- The Health and Safety Executive
- The Local Planning Authority – Waveney District Council
- The Director of Public Health

This proposal was also publicised on the Environment Agency's website between 14/12/16 and 16/01/17, but no representations were received during this period.