

Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Berrington Farm operated by Mr Jonathan Lovegrove-Fielden.

The permit number is EPR/RP3338NC.

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, web publicising responses.

Key issues of the decision

1) Ammonia Impacts

There are two Ramsar Sites within 9.2km, four Sites of Special Scientific Interest (SSSI) within 4.5km, eight Local Wildlife Sites (LWS) within 1.7km and one Ancient Woodland (AW) within 1.1m of the installation.

Assessment of 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. Initial screening using Ammonia Screening Tool (AST) v4.3 has indicated that Midland Meres and Mosses: Phase 2 Ramsar Site screens out based on distance. Distance criteria generated using AST v4.3 and the proposed 200,000 broiler places concludes that any Ramsar designation more than 3,440m away from the proposed installation automatically screens out.

Initial screening using AST v4.3 has indicated that the PC for Midland Meres and Mosses: Phase 1 Ramsar Site is predicted to be greater than 4% of the CLe for ammonia. It is not possible to conclude that there is not a potential risk of damage at the site from this installation and therefore, detailed ammonia modelling will be required. The results of the ammonia screening are given in Table 1a below.

Table 1a: Assessment of ammonia emissions (Ramsar Site)

Name	Ammonia CLe	PC	Ammonia deposition (N)	Acidification (N)	PC of CLe
Midland Meres and Mosses Phase 1	1µg/m ³ *	0.452µg/m ³	2.350kg/ha/yr	0.168keq/ha/yr	45.2%

* Where 1µg/m³ is used and the PC is assessed to be <4% insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification CLo values. In these cases the 1µg/m³ level used has not been confirmed but it is precautionary.

Also, because the Midland Meres and Mosses: Phase 1 Ramsar Site is fragmented, the PC for another area is predicted to be between 4% and 20% of the relevant CLe or CLo. This means that the proposal requires in-combination screening as there are other intensive farming installations with a PC above 4% of the ammonia CLe within 10km acting in-combination with this application. If the in-combination ammonia screening does not screen the site out then detailed ammonia modelling will be required. The results of the ammonia screening are given in Table 1b below.

Table 1b: Assessment of ammonia emissions (Ramsar Site)

Name	Ammonia CLe	PC	Ammonia deposition (N)	Acidification (N)	PC of CLe
Midland Meres and Mosses Phase 1	1µg/m ³ *	0.067µg/m ³	0.346kg/ha/yr	0.025keq/ha/yr	6.7%

* Where 1µg/m³ is used and the PC is assessed to be <4% insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification CLo values. In these cases the 1µg/m³ level used has not been confirmed but it is precautionary.

The total PC for all the installations acting in-combination with the proposal is 15.3%. Therefore, detailed ammonia modelling will be required to assess the impact of airborne ammonia emissions at the Midland Meres and Mosses: Phase 1 Ramsar Site.

Assessment of SSSI

If the PC is below 20% of the relevant CLe or CLo then the farm can be permitted with no further assessment. Initial screening using AST v4.3 has indicated that:

- Bomere, Shomere and Betton Pools SSSI,
- Attingham Park SSSI,
- Coundmoor Brook SSSI,

All screen out based on distance. Distance criteria generated using AST v4.3 and proposed 200,000 broiler places concludes that any SSSI designation more than 1,203m away from the proposed installation automatically screens out.

Initial screening using AST v4.3 has indicated that the PC for a fourth SSSI (Berrington Pool SSSI) is predicted to be between 20% and 50% CLe for ammonia. Normally, this would require an in-combination assessment. However, because this is an aquatic habitat it is not sensitive to airborne ammonia emissions and there are no land based features associated with the site. Therefore, it is possible to conclude no damage to Berrington Pool SSSI from the proposed installation and consultation with Natural England is not required. Therefore, no further assessment is necessary. However, it should be noted that Berrington Pool also forms part of the Midland Meres and Mosses: Phase 1 Ramsar Site (refer to discussion in the Assessment of Ramsar Sites section).

Table 2: Assessment of ammonia emissions (SSSI)

Name	Ammonia CLe	PC	Ammonia deposition (N)	Acidification (N)	PC of CLe
Berrington Pool	1µg/m ³ *	0.461µg/m ³	2.396kg/ha/yr	0.171keq/ha/yr	46.1%

* Where precautionary level of 1µg/m³ is used and the PC is assessed to be <20% insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification CLo values. In these cases the 1µg/m³ level used has not been confirmed, but it is precautionary.

Assessment of LWS and AW

The following trigger thresholds have been applied for the assessment of non-statutory LWS and AW:

- If PC is <100% of relevant CLe or CLo then the farm can be permitted (H1 or ammonia screening tool)
- If PEC < CLe or CLo then the farm can be permitted
- If further modelling shows PC <100%, then the farm can be permitted.

Initial screening using AST v4.3 has indicated that Cronkhill, Fox Farm Meadow, The Big Bog, Atcham Foot Bridge, The Long Bog and Top Pool LWSs as well as an un-named AW screen out based on distance. Distance criteria generated using AST v4.3 and proposed 200,000 broiler places concludes that any LWS or AW designation more than 421m away from the proposed installation automatically screens out.

The Rivern Severn (Emstrey to Cressage Bridge) and Cound Brook LWSs are aquatic habitats and not sensitive to airborne ammonia emissions. There are no land based features associated with these sites. Therefore, it is possible to conclude no damage to these sites from the proposed installation. Therefore, no further assessment is necessary.

Detailed Modelling

The pre-application ammonia screening report dated 28 May 2013 has indicated that emissions from Berrington Farm may have a potential impact on the following ecological sites:

- Midland Meres and Mosses: Phase 1 – more than 4% of the CLe for ammonia and an in-combination impact at a second part of the same site between 10% and 20%.

In this case further detailed air emission modelling was required as part of the application. A detailed air modelling report was provided within the application as a supporting document (ADAS) dated 11 February 2014. An audit of the detailed modelling report was conducted by the Air Quality Modelling and Assessment Unit (AQMAU) on 02/09/2014.

The Environment Agency Guidance on modelling the concentration and deposition of ammonia emitted from intensive farming - Air Quality Modelling and Assessment Unit, 22 November 2010, v3 was used to cross check the model version, input parameters, meteorological dataset, emission rate calculation, emission rate used in the modelling, data sets and data source types. On this basis we accept that the results and conclusions presented in the modelling report are correct.

The model indicates that there is potentially significant PCs from ammonia emissions from the installation at the Midland Meres and Mosses: Phase 1 Ramsar Site. The detailed ammonia modelling report concluded that a Critical Level (CLe) of 3 was appropriate for the site rather than a CLe of 1. The predicted maximum annual mean ammonia concentration for the proposed installation exceeds the permitted 4% for the Ramsar Site (Midland Meres and Mosses Phase 1) at three locations:

- Berrington Pool at NGR 352555E,307299N – 7.5% of CLe
- Ramsar Site at NGR 350614E,307555N – 4.2% of CLe
- Ramsar Site at NGR 350725E,307889N – 4.6% of CLe.

In conclusion, at Berrington Pool the Process Contribution (PC) to ammonia falls between 4% and 20% of the CLe of 3ug/m³ and the PC to nitrogen deposition falls between 4% and 20% of the Critical Load (CLo) of 10kg N/Ha/yr. The 4% exceedance to ammonia covers approximately 4.3Ha (88%) and the 4% exceedance to nitrogen deposition covers approximately 2.2Ha (50%) of the Berrington Pool part of the Ramsar Site only.

ADAS have also conducted a lower plants survey at Berrington Pool dated December 2013 to assess the implications of aerial emissions from the installation on this part of the Midland Meres and Mosses Phase 1 Ramsar Site. The survey targeted lower plant interest at Berrington Pool. The survey and report concluded that species of sphagna were absent at the site and that the surrounding vegetation were unsuitable for supporting sphagna species. This is because Berrington Pool is a mere environment (not moss), is nutrient-rich and therefore unsuitable for supporting sphagna species. Based on the result of the assessment by ADAS, the construction of the proposed installation would not have any detrimental affect on the vegetation of Berrington Pool.

Consultation with Natural England has been undertaken as per the Environment Agency Working Agreement and a summary of their response is provided in Annex 2.

2) 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 IED. Amendments have been made to the conditions of this permit so that it now implements the requirements of the EU Directive on Industrial Emissions.

Soil and Groundwater Monitoring

As a result of the IED requirements all permits must now have 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 and/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 and/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.

3) Biomass Boilers

The applicant is including four biomass boilers with an aggregated net rated thermal input of 0.796MWth at their installation (199kWth each). These will be used to provide heat to the poultry houses and are therefore a directly associated activity and need to be included in Table S1.1 of the environmental permit EPR/RP3338NC.

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 boilers. 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:

- 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:
 - A. less than 0.5MWth or

- B. less than 1MWth where the stack height is greater than 1m above the roof level of adjacent buildings (where there are no adjacent buildings within 25m, the stack height must be a minimum of 3m above ground), and there are:
 - no Special Areas of Conservation, Special Protection Areas, Ramsar sites or Sites of Special Scientific Interest within 500m of the emission point
 - no National Nature Reserves, Local Nature Reserves, ancient woodlands or local wildlife sites within 100m of the emission point or
- C. less than 2MWth where, in addition to the above criteria for less than 1MWth boilers, there are:
 - no sensitive receptors within 150m of the emission point.

The biomass boilers meet the requirements of criteria B above. 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.

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, web publicising	The web publicising, 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. This permit has implemented the requirements of the Industrial Emissions Directive (IED). Please refer to the key issues section for more details.	✓
The site		
Extent of the site of the facility	The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.	✓
Site condition report	<p>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).</p> <p>The geology beneath the installation comprises sandy loamy glacio-fluvial materials overlying a mudstone, sandstone and conglomerate bedrock which is a ‘Secondary A’ Aquifer of low vulnerability. The site is not within a groundwater source protection zone, drinking water protection or safeguard area, not at risk from flooding, is within a NVZ for groundwater and is within a groundwater drinking water ‘at risk’ area.</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	<p>The application Site Condition Report (SCR) for Berrington Farm (dated 20 March 2014) makes reference to no previous pollution incidents being identified as well as no evidence of existing land contamination.</p> <p>The SCR demonstrates that there are no significant hazards or likely pathways to land or groundwater and no historic contamination sources on site that may present a significant risk. Therefore, on the basis of the assessment presented in the SCR the Environment Agency accepts that no baseline reference data needs to be provided for the site soil and groundwater conditions as part of application EPR/RP3338NC/A001.</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. A full assessment of the application and its potential to affect the site has been carried out as part of the permit application EPR/RP3338NC/A001. Detailed air emission modelling for ammonia was undertaken as part of the application.</p> <p>In accordance with our guidance, as there are Ramsar sites within 10km of the installation, we are required to complete an Appendix 11 Habitats Directive Assessment for formal consultation. This was completed and sent to Natural England on 25 September 2014. The consultation response (Annex 2) was taken into account in the permitting decision. Please refer to the key issues section for more details.</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	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 the SGN EPR6.09 and we consider them to represent appropriate techniques for the facility.	✓
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. Please refer to 3) in the key issues section for more details.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
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, web publicising responses

Summary of responses to consultation, web publication and the way in which we have taken these into account in the determination process.

As per the Environment Agency Working Agreement with Natural England a consultation request was sent out to Natural England on the 25 September 2014. No response or comment has been received from Natural England with regards to the consultation request.

The Health and Safety Executive, Local Authority Planning Department and Local Authority Environmental Health were also consulted. However, consultation responses from these parties were not received.

The application was advertised externally on the GOV.UK website between 05 September and 03 October to invite any responses and comments from the general public. No responses were received.