Environment Agency permitting decisions

Variation

We have decided to issue the variation for Middle Pig Farm, Court Farm and Bentham Farm operated by Alexander and Angell (Farms) Limited.

The variation number is EPR/VP3834UB/V004.

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 changes introduced by the Variation

This is a Substantial Variation.

This variation authorises the following changes:

- Increase in the number of sow places from 400 to 528. The existing sheds are to be better utilised in order to accommodate this increase. Table S1.1 in the permit has been updated to reflect this change.
- Increase in the number of broiler breeder layer places on Court Farm from 29,700 to 36,790. Table S1.1 in the permit has been updated to reflect this change.
- Poultry houses BT1, BT2, BT3 and BT4 are to be knocked down and replaced with poultry houses CF5 and CF10 to accommodate the increase in bird numbers on Court Farm. The two new sheds are to be ventilated using side ventilation. A revised site layout and drainage plan has been submitted as part of this application which have been incorporated into the operating techniques.
- Extend the installation boundary in order to accommodate poultry houses CF5 and CF10. A revised installation boundary plan has been submitted which has been included in Schedule 7 of this permit.
- The previous variation (EPR/VP3834UB/V003) included the rearing of 1810 pigs from birth up to 30kg as a Directly Associated Activity (DAA). The specified limits for this DAA have changed since the last variation was issued to the rearing of pigs from weaning up to 30kg. Based on this change the operator has specified that the revised number will be 1173 pigs, which is the value used in the ammonia modelling. Table S1.1 has been updated to reflect this.
- The permit has been consolidated and updated to reflect the requirements of the Industrial Emissions Directive (IED).

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 1 Special Area of Conservation (SAC) site located within 10 kilometres of the installation. There are 7 Sites of Special Scientific Interest (SSSI) located within 5 km of the installation. There is also 1 Local Wildlife Site (LWS) and 1 Ancient Woodland (AW) within 2 km of the installation.

Ammonia assessment – SAC site

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 (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 in combination assessment will be completed to establish the combined PC for all existing farms identified within 10 km of the application.

Screening using detailed modelling [*A report on the modelling of the dispersion and deposition of ammonia from the piggery at Middle Farm and the egg laying chicken units at Court Farm and Bentham Farm near Brockworth in Gloucestershire, dated 11/08/15, AS Modelling & Data Ltd.*] has determined that the PC on the SAC for ammonia and acid 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.

Detailed modelling provided by the applicant has been audited in detail by our Air Quality Modelling and Assessment Unit (AQMAU) and we have confidence that we can agree with the report conclusions.

Table 1 – Ammonia emissions

Site	Critical level ammonia µg/m^3	Predicted PC µg/m^3	% of critical level
Cotswold Beechwoods SAC*[1]	3*	0.082	2.7

* Natural England advised that a CLe of 3 for ammonia should be applied across the Cotswold Beechwoods SAC (March 2012)

*[1] Results obtained from the applicants detailed modelling report

Table 2 – Acid deposition

Site	Critical load keq/ha/yr [1]	Predicted PC keq/ha/yr	PC % of critical load
Cotswold Beechwoods SAC	2.768	0.045*	1.6

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 23/11/15
*Calculated based upon nitrogen deposition Predicted Contribution (PC)

No further assessment is necessary.

Screening using detailed modelling [*A report on the modelling of the dispersion and deposition of ammonia from the piggery at Middle Farm and the egg laying chicken units at Court Farm and Bentham Farm near Brockworth in Gloucestershire, dated 11/08/15, AS Modelling & Data Ltd.*] has determined that the process contributions of nitrogen deposition from the application site is over the 4% significance threshold. As such, it is not possible to conclude no adverse effect alone. Where the process contribution falls between 4% and 20%, Environment Agency guidance indicates that an in combination assessment should be undertaken.

There are no other farms acting in combination with this application. The PC is predicted to be <20% critical load significance threshold. It is possible to conclude no adverse effect to the site from the installation and therefore no further assessment is required. See results below.

Detailed modelling provided by the applicant has been audited in detail by AQMAU and we have confidence that we can agree with the report conclusions.

Table 3 – Nitrogen deposition

Site	Critical load kg N/ha/yr [1]	Predicted PC kg N/ha/yr	PC % of critical load
Cotswold Beechwoods SAC*[1]	10	0.640	6.4

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 23/11/15
*[1] Results obtained from the applicants detailed modelling report

No further assessment is required.

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 and detailed modelling [*A report on the modelling of the dispersion and deposition of ammonia from the piggery at Middle Farm and the egg laying chicken units at Court Farm and Bentham Farm near Brockworth in Gloucestershire, dated 11/08/15, AS Modelling & Data Ltd.*] has indicated that the PC for the SSSI is predicted to be less than 20% critical level for ammonia, acid and nitrogen deposition therefore it is possible to conclude no damage. See results below.

The ammonia modelling assessment has been audited in detail by our Air Quality Modelling and Assessment Unit and we have confidence that we can agree with the report conclusions.

Table 4 – Ammonia emissions

Name of SSSI	**Ammonia CLe (µg/m^3)**	**PC (µg/m^3)**	**PC as % of Critical level**
Cotswold Commons and Beechwoods SSSI*[1]	3**	0.082	2.7
Crickley Hill and Barrow Wake SSSI*[1]	3**	0.199	6.6
Hucclecote Meadows SSSI*[2]	3**	0.288	9.6
Badgeworth SSSI*[2]	1*	0.198	19.8
Leckhampton Hill and Charlton Kings SSSI*[2]	3**	0.247	8.2

* A precautionary critical level of 1 µg/m^3 has been assigned to this site. Where the precautionary level of 1 µg/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.
**Natural England advised that a CLe of 3 for ammonia should be applied across Cotswold Commons and Beechwoods (March 2012) all other SSSIs (March 2011)
*[1] Results obtained from the applicants detailed modelling report
*[2] Results obtained from the ammonia screening tool version 4.4

Table 5 – Nitrogen deposition

Site	**Critical load kg N/ha/yr [1]**	**PC kg N/ha/yr**	**PC % critical load**
Cotswold Commons and Beechwoods SSSI*[1]	10	0.640	6.4
Crickley Hill and Barrow Wake SSSI*[1]	10	1.550	15.5
Hucclecote Meadows SSSI*[2]	20	1.498	7.5
Leckhampton Hill and Charlton Kings SSSI*[2]	15	1.284	8.6

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 23/11/15
*[1] Results obtained from the applicants detailed modelling report
*[2] Results obtained from the ammonia screening tool version 4.4

Table 6 – Acid deposition

Site	Critical load keq/ha/yr [1]	PC keq/ha/yr	PC % critical load
Cotswold Commons and Beechwoods SSSI*[1]	2.768	0.045	1.6
Crickley Hill and Barrow Wake SSSI*[1]	2.755	0.110	3.9
Hucclecote Meadows SSSI*[2]	4.928	0.107	2.1
Leckhampton Hill and Charlton Kings SSSI *[2]	4.856	0.091	1.8

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 23/11/15
*[1] Results obtained from the applicants detailed modelling report
*[2] Results obtained from the ammonia screening tool version 4.4
*Calculated based upon nitrogen deposition Predicted Contribution (PC)

No further assessment is required.

Knap House Quarry, Birdlip SSSI

The SSSI is designated for geological features only. The site is not sensitive to ammonia emissions. No further assessment is necessary.

Bushley Muzzard SSSI

Screening using the ammonia screening tool version 4.4. has indicated that the PC for the SSSI is predicted to be greater than 20% critical level for ammonia. See results below.

Table 7 – Ammonia emissions

Name of SSSI	Ammonia CLe (µg/m^3)	PC (µg/m^3)	PC as % of Critical level
Bushley Muzzard SSSI*[1]	1*	0.208	20.8

* A precautionary level of 1 µg/m^3 has been used during the screen. Where the precautionary level of 1 µg/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 µg/m^3 level used has not been confirmed, but it is precautionary.
*[1] Results obtained from the ammonia screening tool version 4.4

Bushley Muzzard SSSI was not included in the detailed modelling provided by the applicant. Bushley Muzard is located 4.4km away to the south east of the Middle Pig Farm. Crickley Hill and Barrow Wake SSSI is located 1.5km south east of Middle Pig Farm. Crickley Hill Barrow Wake SSSI was included in the detailed modelling and screened out with a PC less than 20% for ammonia, nitrogen and acid deposition (see tables 4,5 and 6). Bushely Muzzard SSSI is located further away and in a similar direction to Crickley Hill Barrow Wake SSSI. This is also the case for Court Farm and Bentham Farm. Therefore, it can also be predicted that the PC for Bushley Muzzard SSSI will also screen

out at less than 20% for ammonia and it is possible to conclude no damage to the SSSI from these proposals.

Ammonia assessment – LWS and AW sites

There is 1 Local Wildlife Sites (LWS) and 1 Ancient Woodland (AW) within 2 km of 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.

Screening using the ammonia screening tool version 4.4 has indicated that the PC for the AW is predicted to be less than 100% critical level for ammonia it is possible to conclude no damage. See results below.

Table 8 - Ammonia emissions

Site	Critical level ammonia µg/m^3	Predicted PC µg/m^3	PC % of critical level
Witcombe/ Buckle Woods AW*[1]	1*	0.975	97.5

* A precautionary critical level of 1 µg/m^3 has been assigned to this site. Where the precautionary level of 1 µg/m^3 is used, and the PC 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.
*[1] Results obtained from the ammonia screening tool version 4.4

No further assessment is required.

Witcombe Reservoirs LWS

This is an aquatic habitat with no associated land based features. The site is not sensitive to ammonia emissions. No further assessment is necessary.

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.

This permit implements the requirements of the European Union 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 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 Middle Pig Farm, Court Farm and Bentham Farm (dated 14/01/14) 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.**

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. For this application we consulted the following bodies: • Local Planning Authority – Tewkesbury Borough Council • Environmental Health - Tewkesbury Borough Council • Health and Safety Executive • Director of Public Health • Public Health England	✓
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.	✓
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application. The permit has been consolidated and updated to reflect the requirements of the Industrial Emissions Directive (IED).	✓

Aspect considered	Justification / Detail	Criteria met Yes
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.	✓
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. Formal consultation has been carried out with Natural England. The consultation responses (Annex 2) were taken into account in the permitting decision. A combined Appendix 11 and 12 form was sent to Natural England in relation to the Cotswold Beechwoods SAC. An assessment of all habitats sites within the screening distances is included in the Key issues section above.	✓
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 relevant guidance note for this installation is Sector Guidance Note EPR6.09.	✓

Aspect considered	Justification / Detail	Criteria met Yes
	The operating techniques include: • On Middle Pig Farm all diets are formulated in match the age of the pigs. • Nipple drinkers are used and water meters installed on Middle Pig Farm to minimise leakage. • The rearing pens on Middle Pig Farm are cleaned out daily. • The new poultry houses on Court Farm are naturally ventilated house with a fully littered floor and equipped with non-leaking drinking systems, which is in accordance with Best Available Techniques (BAT). The existing sheds on Court and Bentham farm are of the same design. The proposed techniques for priorities for control are in line with the benchmark levels contained in the TGN and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs and BAT Conclusions. We have reviewed the operators Odour Management Plan (OMP). The revised OMP submitted as part of this variation is considered sufficient to managed the risk of odour from the site. The OMP should be reviewed on a regular basis to ensure that it reflects the most up to date management practices and infrastructure.	
The permit conditions		
Updating permit conditions during consolidation.	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). The operator has agreed that the new conditions are acceptable.	✓
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
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.	✓

Annex 2: Consultation and web publicising responses

Summary of responses to consultation and web publication and newspaper advertising and the way in which we have taken these into account in the determination process. (Newspaper advertising is only carried out for certain application types, in line with our guidance.)

Response received from
Environmental Health – Tewkesbury Borough Council – 11/11/15
Brief summary of issues raised
An odour compliant was received in 2010. There have been no complaints since this date.
Summary of actions taken or show how this has been covered
Condition 3.3.1 is included in the permit which requires that emissions from the activates shall be free from odour at levels likely to cause pollution outside the site. The Odour Management Plan (OMP) has been reviewed and a revised OMP has been submitted. This is considered to be sufficient to manage the risk of odour from the site.

Response received from
Public Health England – 10/11/15
Brief summary of issues raised
Ensure that the risk assessment has been completed satisfactorily to address the pollution risks from the site. The pollution risks identified in the correspondence are ammonia, bioaerosols, particulates, pollution of groundwater and surface water, odour and noise. The correspondence also highlights the need to ensure that complaints are captured and dealt with.
Summary of actions taken or show how this has been covered
Conditions 3.1.1, 3.2.1, 3.3.1, and 3.4.1, concerning noise, odour and fugitive emissions included in permit. An Environmental Impact Assessment, Noise Management Plan, Odour Management Plan (OMP) and bioaersol risk assessment have been submitted with this application. We have reviewed these documents and consider them to be sufficient to managed the risks outlined above. Roof and Yard water are discharged to soakaways and wash water is collected in dirty water storage tanks before being taken off site. These measures minimise the risk of surface or ground water pollution. Any odour complaints would be recorded and investigated by the Environment Agency and follow up actions taken as necessary.

Response received from
Natural England – 08/12/15 (response to consultation on combined Appendix 11 and 12 form)
Brief summary of issues raised
Based on the material provided Natural England's view was that the proposed development is not likely to significantly affect the interest features associated with Costwolds Beechwoods SAC for which they are notified.
Summary of actions taken or show how this has been covered
None required

The Local Planning Authority-Tewkesbury Bury Council, Health and Safety Executive and the Director of Public Health were also consulted, however, no responses were received.

The application was advertised on our website from 23/10/15 to 20/11/15. No comments were received.