

# Environment Agency permitting decisions

## Substantial Variation

We have decided to issue the variation for **The Bow Poultry Unity** operated by **Robert Norman, Ellen Norman, Hilton Norman and Wayne Norman**

The variation number is **EPR/EP3539KS/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.

## 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.

## Key Issues

The operator has applied for a substantial variation. This is because the application is for a change in poultry broilers numbers from **220,000 to 330,000**, an increase of 110,000. This is above the scheduled activity section 6.9 A (1) (a) (i) threshold of 40,000. Therefore in line with our regulatory guidance this is a substantial variation (Substantial Changes RGN No.8 Guidance).

The operator name has been changed to correct an administration error to return the operator name to that of the original permit EPR/EP3539KS and the legal permit holder, with additional partner names which were applied for but not included in that original permit. The registered company Bow Farms Limited, included in variation EPR/EP3539KS/V002, was not subject to a transfer application so is not considered the legal permit holder and as such has been removed from this permit. The company also has no direct involvement in the operation of this installation.

## Overview

The operator is applying for increasing broiler numbers as detailed above. This is based on an increase in land area and the addition of two new poultry houses.

The operator is responding to a requirement for smaller birds and there will be no increase in weight of bird per square metre.

The operator has submitted an overall environmental assessment for the installation covering poultry production, use of vehicles within installation and carcass disposal covering odour, noise and ammonia emissions.

The only environmental impact to be assessed with this variation is the ammonia emissions impact on habitat sites with the change in broiler numbers.

The key permit changes for this variation are as follows:

- S1.1 activities table updated for new broiler numbers
- S1.2 operating techniques table updated for techniques linked to new broiler numbers.
- S3.1 and S3.2 emission location tables updated.

## Ammonia Emissions

There are five Special Areas of Conservation (SAC), / Special Protection Areas (SPA), / Ramsar sites located within 10km of the installation. There are also five Sites of Special Scientific Interest (SSSI) located within 5 kilometres of the installation. There are no other conservation sites within 2km of the installation.

We have carried out a pre-screening assessment on operator application environmental impacts. This is based on usage of our Ammonia Screening Tool AST v.4.3 9 (report dated 8<sup>th</sup> May 2014)

All the habitat sites have screened out utilising the Ammonia Screening Tool report except Orton Moss SSSI. The operator has utilised detailed modelling as discussed below for this site for assessment of installation annual ammonia concentrations and nitrogen deposition rate environmental impacts.

The operator has submitted detailed modelling with their application. Modelling has been completed with ADMS Version 5. We have screened their modelling and accepted the report conclusions as accurate. The critical levels and loads have been selected based on our pre-application report and precautionary values based on ecology of the wildlife sites (details provided below).

## Ammonia Assessment – SAC / SPA / Ramsar sites

The following trigger thresholds have been designated for assessment of European sites including 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.
- Where this threshold is exceeded an assessment alone and in combination is required.
- An overlapping in combination assessment will be completed where existing farms are identified within 10km of the application.

Screening using the detailed modelling has determined that the Process Contribution (PC) on the SAC/SPA/Ramsar sites for ammonia, acid and N deposition from the application site are under the 4% significance threshold and can be screened out as having no likely significant effect. The data is based on our Ammonia Screening Tool AST v.4.3 9 (report dated 8<sup>th</sup> May 2014).

See results below:

#### South Solway Mosses SAC

A precautionary level of 1µg/m<sup>3</sup> for Critical Level for ammonia has been used during the screen for this SAC site.

Screening indicates that beyond **4763 m** distance, the Process Contribution at conservation sites is less than 20 % of the 1µg/m<sup>3</sup> critical level for ammonia. In this case the SSSI's below in Table 1 are beyond this distance.

**Table 1– Distance from source**

Site	Distance (m)
South Solway SAC	7,345

**The PCs for ammonia at these sites has been screened as insignificant.** It is therefore possible to conclude that no significant pollution will occur at these sites and no further assessment is required. Where a CLe of 1µg/m<sup>3</sup> is used, and the process contribution is assessed to be less than the 4 % insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification Critical Load values.

#### Other European Sites

**Table 2 – Ammonia Emissions**

Site	Critical Level Ammonia µg/m <sup>3</sup>	Predicted Process Contribution µg/m <sup>3</sup>	% of Critical Level
Solway Firth SAC	3	0.042	1.4
River Eden SAC	3	0.59	2.0
Upper Solway Flats and Marshes SPA and RAMSAR	3	0.042	1.4

The Critical Level of 3µg/m<sup>3</sup> has been used, after advice from Natural England and confirmation no bryophyte or lichen interest listed for these above listed designated areas.

The process contributions are less than 4 % of relevant critical loads and as such assessed as insignificant

**Table 3 – Nitrogen deposition**

Site	Critical Load kg N/ha/yr	PC Kg N/ha/yr	PC % Critical Load
Solway Firth SAC	8	0.220	2.7
River Eden SAC	10	0.304	3.0
Upper Solway Flats and Marshes SPA and RAMSAR	20	0.220	1.1

Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – May 2014

The process contributions are less than 4 % of relevant critical loads and as such assessed as insignificant.

***Therefore no further assessment is necessary for these sites.***

**Table 4 – Acid Deposition**

Site	Critical Load keq /ha/yr	PC Keq/ha/yr	PC % Critical Load
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Solway Firth SAC	0.606	0.016	2.6
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Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – May 2014

The process contributions are less than 4 % of relevant critical loads and as such assessed as insignificant.

#### River Eden

There are no figures for nitrogen deposition critical loads for this site on APIS website. This is a water feature and therefore unlikely to be impacted by emissions.

#### Upper Solway Flats and Marshes

The specific citation noted is for European Golden Plover (wintering). Natural England advice consulted and advised not sensitive to acid deposition.

***Therefore no further assessment is necessary for these sites.***

### **Ammonia Assessment – SSSI's**

The following trigger thresholds have been applied for assessment of SSSI's. 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. The operator has utilised detailed modelling to confirm installation process contributions.

Screening using the detailed modelling has determined that the Process Contribution (PC) on the SSSI sites for ammonia, acid and N deposition from the application site are under the 20% significance threshold and can be screened out as having no likely significant effect.

The data is based on our Ammonia Screening Tool AST v.4.3 9 (report dated 8<sup>th</sup> May 2014).

See results below:

A precautionary level of 1µg/m<sup>3</sup> for Critical Level for ammonia has been used during the screen for the three SSSI sites listed in Table 5.

Screening indicates that beyond **1668 m** distance, the Process Contribution at conservation sites is less than 20 % of the 1µg/m<sup>3</sup> critical level for ammonia. In this case the SSSI's below in Table 5 are beyond this distance.

**Table 5 – Distance from source**

Site	Distance (m)
Finglandrigg Woods	5,084
Upper Solway Flats and Marshes	4,600
River Eden and Tributaries	3,721

**The PCs for ammonia at these sites has been screened as insignificant.** It is therefore possible to conclude that no significant pollution will occur at these sites and no further assessment is required.

Where a CLE of 1µg/m<sup>3</sup> is used, and the process contribution is assessed to be less than the 4 % insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification Critical Load values.

## Other SSSI's

**Table 6 Ammonia Emissions**

Name of SSSI	Ammonia Cle ( $\mu\text{g}/\text{m}^3$ )	PC ( $\mu\text{g}/\text{m}^3$ )	PC as % of Critical level
Orton Moss	1	1.736	173.6
Thurstonfield Lough	3	0.27	9.0

Natural England citation for Orton Moss has confirmed that a Cle of 1 for ammonia should be applied. For Thurstonfield Lough Natural England confirmed that a Cle of 3 for ammonia should be applied.

For Thurstonfield Lough SSSI the process contributions are assessed to be less than the 20 % insignificance threshold.

For Orton Moss as the process contribution is > 50 % of the Critical Level therefore detailed modelling is required.

**Table 7 – Nitrogen deposition**

Site	Critical Load kg N/ha/yr	PC Kg N/ha/yr	PC % Critical Load
Orton Moss	5	9.015	180.3

Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – May 2014

For Orton Moss as the predicted nitrogen deposition is > 50 % of the Critical Load therefore detailed modelling is required.

### Thurstonfield Lough SSSI

There are no figures for nitrogen deposition critical loads for this site on APIS website. This is a water feature and therefore unlikely to be impacted by emissions.

**Table 8 – Acid deposition**

Site	Critical Load keq /ha/yr	PC Keq /ha/yr	PC % Critical Load
Orton Moss	1.529	0.644	42.1

Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – May 2014

The predicted acid deposition is > 20 % but less than 50 % threshold. Therefore an in-combination impact assessment is required.

### In combination assessment for Orton Moss

There are no other intensive farming installations within 5 km of the nearest boundary of Orton Moss SSSI relative to the Bow Poultry Unit installation.

Hence as the total in-combination process combination is less than the 50 % of critical load threshold, the installation screens out.

*No further assessment is necessary for the acid deposition for Orton Moss SSSI*

### **Overall**

*The installation screens out for all habitat sites except Orton Moss for ammonia emissions and nitrogen deposition impacts.*

### **Sites screen out using detailed modelling supplied by operator**

For the following site this farm has been screened out, as set out above, using results of the detailed modelling supplied by the applicant as part of the application

The operator has submitted detailed modelling with their application. Modelling has been completed with ADMS Version 5. We have screened their modelling and accepted the report conclusions as accurate. The operator has utilised five years of meteorological data. The critical levels and loads have been selected based on our pre-application report and precautionary values based on ecology of the wildlife sites (details provided below).

**Table 9 - Ammonia Emissions**

Site	Critical Level (Cle ) Ammonia $\mu\text{g}/\text{m}^3$	PC $\mu\text{g}/\text{m}^3$	PC % Critical Level
Orton Moss	1*	0.311 *	31.1

\* Cle -  $1\mu\text{g}/\text{m}^3$  applied from our pre-application report.

\* Process contribution is the maximum figure, at any of eleven receptor locations within this habitat site, from the detailed modelling detailed run.

The process contribution is assessed as < 50 % threshold of critical level and therefore acceptable to be permitted. This is on the basis that the in combination assessment, as discussed above, has confirmed there are no additional farming installations within the 5 km radius of this habitat site.

**Table 10 – Nitrogen deposition**

Site	Critical Load nutrient enrichment kg N/ha/yr	PC Kg N/ha/yr	PC % Critical Load
Orton Moss	10*	2.930 *	29.3

\* Critical load values taken from pre-application report.

\* Predicted nitrogen deposition is the maximum figure from detailed modelling detailed run.

The predicted nitrogen deposition is assessed as < 50 % threshold of critical level and therefore acceptable to be permitted. This is on the basis that the in combination assessment, as discussed above, has confirmed there are no additional farming installations within the 5 km radius of this habitat site.

**Therefore overall the installation impacts on all the relevant habitat sites screen out and therefore there is no significant impact from installation on these habitat sites.**

### **Groundwater and soil monitoring**

The Industrial Emissions Directive soil and ground water condition has already been added to this permit within previous variation EPR/EP3539KS/V003.

The addition of two new poultry houses has led to an increase in the installation boundary and therefore the requirement for an updated site condition report.

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 initially dated August 2009 is updated within the variation EPR/EP3539KS/V004 application supplementary information and section Q5 C, plus final site condition report updated dated 26/03/15 after request for information response. The final installation site drainage plan provided with the application is dated 11/03/15 for houses 1 to 3 and 6 to 8 plus 18/03/15 for houses 4 and 5. It includes completion of H5 template plus an installation boundary with locations of farm buildings and a separate site drainage plan with location of three underground tanks for receipt of wash down water plus standby generator and fuel oil tank

The surrounding land is predominantly used for arable farming. There are some small villages in the area.

The site itself is relatively flat or gently undulating. There are no sensitive environmental features nearby. Historically the land has been used for arable farming production.

The site is not within a Groundwater Nitrate Vulnerable Zone (NVZ); further the site is neither within a Groundwater Source Protection Zone nor a flood plain.

Our technical review of this specific former land usage is as follows.

- There is no record of installation area land contamination.
- There is no record of any usage of the installation area except for agricultural usage.
- The site is not within a Source Protection Zone.

Therefore the conclusion is there is a low risk of historic groundwater and land contamination due to former activities within installation boundary.

**Therefore, although condition 3.1.3 is included in the permit, no groundwater monitoring will be required at this installation as a result.**

## Odour

There is one sensitive receptor within 400 metres of the installation and therefore an odour management plan has been prepared. The residential property is as follows:

1. Stonerigg residential property located to the south west of the installation (National Grid Reference NY 33109 55374)

*There is no history of odour complaints from local residents linked to the installation activities over last three years.*

An Odour Management Plan has been submitted with this application. The OMP consists of:

- Duly making response with more detailed OMP including list of sensitive receptors, application of Poultry Code of Practice Checklist giving more details on appropriate measures for odour pollution minimisation beyond installation boundary plus procedures on odour monitoring and complaints management.

The OMP covers feed selection, feed storage and containment, ventilation design, techniques to manage wash down and litter management.

Overall there is the potential for odour pollution from the installation. However the risk of odour pollution beyond the installation boundary is considered insignificant.

## Noise

There are sensitive receptors within 400 metres of the installation boundary as stated above in the odour review. The applicant has hence provided a noise risk assessment under table A2 of their supplementary application information and a noise management plan under section Q8B of their supplementary application information.

Operations with the most potential to cause noise nuisance have been assessed as those involving feed delivery, removal of finished- weight birds and used litter from the site where main source of noise is vehicle engines plus noise from ventilation fans.

The noise management plan covers control measures for each of these potential noise hazards.

The management plan includes a commitment to assess noise levels during such activities and optimise vehicles and procedures to minimise noise.

There is no history of noise complaints linked to the existing poultry farm, except on in 2012 This was not substantiated as coming from installation; however a potential source of noise was identified linked to feed deliveries. This action is included in above referenced noise management plan.

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Feed deliveries have subsequently been planned to be after 7.30 am and there has been no further noise complaints since.

Overall there is the potential for noise from the installation beyond the installation boundary. However the risk of noise beyond the installation boundary is considered insignificant.

#### Annex 1: decision checklist

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>Operator</b>		
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.	✓
<b>European Directives</b>		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓
<b>The site</b>		
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. There is a change to the installation boundary and hence the installation plan has been amended.	✓
Site condition report	The operator has provided a description of the condition of the site in the original permit application. The updated site condition report is accepted as per discussion in key issues section above. 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 sites 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. Please refer to section 'Ammonia Assessment' in Key Issues above. We have sent an appendix 11 to Natural England for information only. The decision was taken in accordance with our guidance.	✓
<b>Environmental Risk Assessment and operating techniques</b>		
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory. The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally not significant.	✓
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. Table S1.2 has been updated with the variation changes. 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, and ELVs deliver compliance with BAT-AELs.	✓
<b>The permit conditions</b>		
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 S1.2 in the permit.	✓



Aspect considered	Justification / Detail	Criteria met
		Yes
<b>Operator Competence</b>		
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. One relevant conviction has been found in 2010. This was linked to operating without a permit. The operator responded promptly and has had a permit since the end of 2009. Our compliance team has confirmed the operator has complied with their permit since issue and has operated the installation in an effective manner without environmental incidents. The operator satisfies the criteria in RGN 5 on Operator Competence	✓

## Annex 2: Consultation and Web Advertising.

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

1. Response received from Cumbria Council Environmental Health Department 25/03/15
<p><b>Brief summary of issues raised:</b> No particular concerns over last 3 years</p> <p>About 3 years ago there was a concern over odour from land spreading from this farm outside installation boundary but on local operated owned land</p> <p>This has not been repeated. No other concerns raised</p>
<p><b>Summary of actions taken or show how this has been covered – linked to issues raised above</b></p> <p>Operator has a manure management plan in place to control land spreading on their own land.</p>