

Environment Agency permitting decisions

Variation

We have decided to issue the variation for Cottrells Farm Poultry Unit operated by Mr J. Howat, Mr I. Howat and Mrs C. Howat (Trading as I & J Howat).

The permit number is EPR/NP3931MU

The variation number is EPR/NP3931MU/V003

This was applied for and determined as a substantial variation.

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 responses

Key Issues

Industrial Emissions Directive (IED)

The Environmental Permitting (England and Wales) (Amendment) Regulations 2013 were made on the 20 February and came into force on 27 February. These Regulations transpose the requirements of the 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.

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 Cottrells Farm Poultry Unit (dated 30/07/07) 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 baseline reference data for the soil and groundwater at the site at this stage.

Ammonia Emissions

There are:

- three Special Area(s) of Conservation (SAC) sites located within 10 kilometres of the installation;
- ten Sites of Special Scientific Interest (SSSI) located within 5 km of the installation; and
- nine Local Wildlife Sites (LWS) and five Ancient Woodland(s) (AW) located within 2 km of the installation.

Ammonia assessment – SAC/SPA/Ramsar sites

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.

The Wye Valley and Forest of Dean Bat Sites SAC is designated for bats only and no critical level is applicable. No further assessment is needed.

Screening using the ammonia screening tool (version 4.4) has determined that the PCs for the Wye Valley Woodlands SAC and River Wye SAC for ammonia from the application site are under the 4% significance threshold and can be screened out as having no likely significant effect. Furthermore the River Wye is not affected by ammonia. See results in table 1.

Table 1 – Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of Critical level
Wye Valley Woodlands	1*	0.012	1.2
River Wye	1*	0.022	2.2

*A critical level of $1\mu\text{g}/\text{m}^3$ has been assigned because bryophytes/lichens are integral to the interest features of the site. Note that N deposition and acidification are only assessed where a critical level of $3\mu\text{g}/\text{m}^3$ has been used.

It is possible to conclude no significant pollution will occur at these sites and 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.

The following sites are designated for geological properties and no Cle is required: Westbury Brook Ironstone Mine, Edgehills Quarry, Land Grove Quarry – Mitcheldean, Puddlebrook Quarry, Scully Grove Quarry and Stenders Quarry.

Wigpool Ironstone Mine is designated for bats only and is not sensitive to ammonia.

Screening using the ammonia screening tool (version 4.4) has indicated that the PCs for Longhope Hill, May Hill and Hobb's Quarry – Longhope are predicted to be less than 20% critical level for ammonia therefore it is possible to conclude no damage. The results of the ammonia screening tool (version 4.4) are given in the tables below.

Table 2 – 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
Longhope Hill	1*	0.034	3.4
Hobb's Quarry – Longhope	1*	0.034	3.4
May Hill	1*	0.035	3.5

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

It is possible to conclude no significant pollution will occur at these sites and no further assessment is required.

Ammonia assessment – LWS and AW

There are nine Local Wildlife Sites (LWS) and five Ancient Woodlands (AW) located within 2 km of the installation.

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.

For the following sites this farm has been screened out at stage 1, as set out above, using results of the ammonia screening tool (version 4.4).

Table 3

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$ *	PC $\mu\text{g}/\text{m}^3$	PC % Critical Level
Mitcheldean Meend Marsh GWT Nature Reserve	1	0.153	15.3
Marshall's Grove	1	0.138	13.8
Scully Grove	1	0.254	25.4
Howley Grove	1	0.302	30.2
Pit House Pond & Bog GWT Nature Reserve	1	0.867	86.7
Fields near Norton Farm	1	0.352	35.2
Woodlands Near Hope Mansell	1	0.219	21.9
Harechurch Wood	1	0.180	18.0
Scully Grove	1	0.257	25.7
Haywood/Edgehill	1	0.132	13.2
Howley Grove	1	0.294	29.4

* Precautionary CLe of $1 \mu\text{g}/\text{m}^3$ has been used. Where the precautionary level of $1 \mu\text{g}/\text{m}^3$ is used, and the process contribution is assessed to be <100% the site automatically screens out as insignificant, and no further assessment of critical load is necessary. In these cases the $1 \mu\text{g}/\text{m}^3$ level used has not been confirmed, but it is precautionary.

The PC at these sites has been screened as insignificant. It is possible to conclude no significant pollution will occur at these sites and no further assessment is required.

For the following sites 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. 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 4 Ammonia Emissions at LWS

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$ *	PC $\mu\text{g}/\text{m}^3$	PC % Critical Level
Wigpool Nature GWT Reserve LWS	3	0.80	53.7
Lea Bailey Enclosure LWS	3	0.34	19.5

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

It is possible to conclude no significant pollution will occur at these sites and no further assessment is required.

The Applicant was also required to undertake a detailed assessment of the impact of airborne ammonia at Cornage Wood Ancient Woodland because the installation is within 250m of the site.

The applicant assessed existing and proposed emission rates. The results of the predicted annual mean ground level ammonia concentrations are shown in table 5 (existing) and table 6 (proposed). In these tables, predicted ammonia concentrations that are in excess of that which may not be considered acceptable (100% of critical level or load for a non-statutory wildlife site) are coloured red. Concentrations in the range between what is considered insignificant and what may not be considered acceptable are coloured blue. The predicted annual mean ammonia concentrations are currently in excess of 100% of the critical level at closer parts of the Ancient Woodlands that surround the farm.

Table 5 Annual ammonia concentration at discrete receptors within Cornage Wood AW – existing

Receptor number	X(m)	Y(m)	Maximum annual mean ammonia concentration ($\mu\text{g}/\text{m}^3$)					
			2009	2010	2011	2012	Maximum	%age of Cle_1
1	364974	219984	6.77	7.12	6.69	6.29	7.12	712.5
2	365026	220062	11.49	11.34	12.76	12.59	12.76	1276.3
3	365098	220067	15.95	13.58	17.10	17.91	17.91	1791.3
4	365133	220010	26.80	24.87	23.10	27.04	27.04	2704.4
5	365102	219943	8.15	11.34	7.81	9.75	11.34	1134.0
6	365046	219871	2.19	3.84	2.53	2.92	3.84	383.6
7	364966	219815	0.95	1.55	1.12	1.16	1.55	154.6
8	364852	219903	0.87	0.83	0.73	0.66	0.87	86.7
9	364888	220134	0.64	0.74	0.70	0.73	0.74	73.8
10	365121	220259	0.96	0.77	1.09	1.04	1.09	108.9
11	365266	220186	1.02	0.84	1.08	1.19	1.19	118.7
12	365343	219962	0.99	0.88	0.79	0.88	0.99	99.2
13	365188	219759	0.52	0.80	0.47	0.67	0.80	79.5
14	365019	219640	0.26	0.49	0.33	0.37	0.49	48.7
15	364811	219737	0.35	0.44	0.33	0.32	0.44	44.0
16	364716	219989	0.26	0.31	0.34	0.31	0.34	34.2
17	365177	219645	0.27	0.44	0.26	0.35	0.44	44.1
18	364641	220056	0.15	0.21	0.22	0.20	0.22	21.8
19	364923	220389	0.28	0.20	0.29	0.26	0.29	29.4
20	365335	220439	0.27	0.20	0.32	0.31	0.32	31.6
21	365556	220052	0.306	0.293	0.269	0.307	0.31	30.7

Table 6 Annual ammonia concentration at discrete receptors within Cornage Wood AW – proposed

Receptor number	X(m)	Y(m)	Maximum annual mean ammonia concentration ($\mu\text{g}/\text{m}^3$)					
			2009	2010	2011	2012	Max	%age of Cle_1
1	364974	219984	1.86	2.00	1.69	1.98	2.00	199.5
2	365026	220062	3.56	2.92	3.83	3.18	3.83	382.5
3	365098	220067	6.97	5.48	7.88	6.91	7.88	788.5
4	365133	220010	6.00	4.48	6.15	5.74	6.15	615.4
5	365102	219943	2.89	4.44	2.71	3.43	4.44	444.5
6	365046	219871	1.16	2.33	1.18	1.36	2.33	232.5
7	364966	219815	0.64	1.08	0.63	0.65	1.08	108.5
8	364852	219903	0.45	0.46	0.34	0.39	0.46	46.1
9	364888	220134	0.37	0.36	0.41	0.40	0.41	41.4
10	365121	220259	0.78	0.66	0.96	0.79	0.96	96.3
11	365266	220186	0.85	0.68	0.95	0.93	0.95	94.7
12	365343	219962	0.64	0.55	0.61	0.60	0.64	64.1
13	365188	219759	0.27	0.54	0.22	0.39	0.54	53.7
14	365019	219640	0.19	0.38	0.21	0.23	0.38	38.4
15	364811	219737	0.25	0.33	0.23	0.23	0.33	33.3
16	364716	219989	0.15	0.17	0.18	0.19	0.19	19.5
17	365177	219645	0.16	0.33	0.15	0.24	0.33	33.3
18	364641	220056	0.09	0.12	0.13	0.14	0.14	14.3
19	364923	220389	0.22	0.16	0.26	0.19	0.26	25.7
20	365335	220439	0.28	0.21	0.33	0.30	0.33	32.9
21	365556	220052	0.28	0.24	0.26	0.27	0.28	28.0

The level of exceedance is reduced in the proposed scenario (table 6). As a result of the proposed engineering improvements, and despite the increased pullet numbers, the impact is likely to be a substantial reduction compared to the existing impacts. We have carried out an audit check of the detailed modelling assessment and agree with the conclusions. We are satisfied that the variation is making an environmental improvement and can therefore be granted.

Annex 1: decision checklist

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 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 Environmental Permitting (England and Wales) (Amendment) Regulations 2013 were made on the 20 February and came into force on 27 February. These Regulations transpose the requirements of the 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.	✓
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.	✓
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 site. We have not formally consulted on the application. The decision was taken in accordance with our guidance. An Appendix 11 form summarising the effect on the nearby	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	SACs was sent to Natural England for information only. An Appendix 4 summarising the impact on SSSIs was filed for audit purposes.	
Environmental Risk Assessment and operating techniques		
Environmental risk	We carried out an assessment of risk. See key issues section for more information.	✓
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 TGN and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs and BAT Conclusions.	✓
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.	✓
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.	✓
Financial provision	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓

Annex 2: Consultation and web publicising advertising responses

1) Consultation responses

Response received on 10/02/15 from
Public Health England
Brief summary of issues raised
<ol style="list-style-type: none">1. The main potential issues of relevance from a health perspective were reported to be fugitive emissions to air (including ammonia, bioaerosols and particulate matter), and emissions which may cause nuisance (including noise and odour). Noted that the installation is within 400m of residential properties and recommended quantitative odour and dust monitoring in the event of substantiated complaints.2. Noted that no risk assessment provided and no mention of whether there is a history of complaints associated with the existing operations.
Summary of actions taken or show how this has been covered
<ol style="list-style-type: none">1. Likely impacts have been assessed during the determination as unlikely to have a significant impact. As a result of the proposed engineering improvements, and despite the increased pullet numbers, the impact of ammonia is likely to be a substantial reduction compared to the existing impacts. We have carried out an audit check of the Applicant's detailed modelling assessment and agree with the conclusions. Conditions relating to emissions, odour and noise and fugitive emissions included in the original permit are retained in the consolidated permit produced by this variation (conditions 3.1, 3.2 and 3.3). Management and controls are in place for emissions to air. For example, the delivery of feed and litter in sealed systems, and the use of appropriate ventilation to prevent the build up of high concentrations of odorous emissions. Bio-aerosol emissions, and how these will be mitigated, are not considered in the application. However, we are satisfied that it is unlikely that bio-aerosols will pose a significant risk to nearby residents.2. We have not received any complaints about the installation. The Applicant has provided a Noise Management Plan and Odour Management Plan which address the additional risks posed by the proposed changes. We are satisfied that proper implementation of the appropriate management plans will ensure that levels of odour and noise are kept to a minimum. The risk of ammonia has been summarised in the key issues section of this document.

Responses not received

The Health and Safety Executive (HSE), Food Standards Agency (FSA) and local authority planning department were also consulted; however, consultation responses from these parties were not received.