Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Clearwell Farm operated by Mr Jonathan Hay.

The permit number is EPR/WP3034VF

This was applied for and determined as a new bespoke application.

The application was duly made on 08/08/2014.

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: Ammonia Emissions; Industrial Emissions Directive (IED); Groundwater/Soil Monitoring; Odour management
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

Key issues of the decision

Ammonia Emissions

There are four European designated sites located within ten kilometres, sixteen Sites of Special Scientific Interest (SSSI) located within five kilometres, seven Local Wildlife Sites (LWS) and ten Ancient Woodlands (AW) located within two kilometres of the installation.

Ammonia Assessment – SAC / SPA / Ramsar sites

The following trigger thresholds have been applied 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 10 km of the habitat site.

Wye Valley Woodlands (SAC)

Initial modelling using the ammonia screening tool (AST v4.4) determined that the process contribution (PC) of airborne ammonia from the application site were above the 4% threshold; detailed modelling was therefore requested from the applicant to model in more detail the predicted impact of ammonia from the installation at Wye Valley Woodlands SAC.

The detailed modelling results submitted with the application in the report dated 11/06/2014, indicate that the PC of airborne ammonia from the installation is under the 4% threshold and can therefore be screened out as insignificant. See results below.

Table 1 Ammonia Emissions

Site name	Critical Level ($\mu g/m^3$)	PC ($\mu g/m^3$)	PC % Critical Level
Wye Valley Woodlands	1*	0.024	2.4

* A critical level of 1 $\mu g/m^3$ has been assigned to this site as confirmed by Natural England Feb 2010.

Severn Estuary (SAC, SPA & Ramsar)

For Severn Estuary SAC/SPA/Ramsar initial modelling using the ammonia screening tool (AST v4.4) has determined that the PC of ammonia from the application site is under the 4% threshold and can be screened out as insignificant. See below for more detail.

Table 2 Ammonia Emissions

Site name	Critical Level ($\mu g/m^3$)	PC ($\mu g/m^3$)	PC % Critical Level
Severn Estuary	1*	0.022	2.2

*A critical level of 1 µg/m^3 has been assigned to this site. This has not been confirmed by Natural England, but it is precautionary. Since the PC is <4% at this site, there is no need to consider critical load.

Wye Valley & Forest of Dean Bat Sites (SAC)

This site has been selected on the grounds of the exceptional breeding populations of lesser and greater horseshoe bats that are found in the area and not for habitat features. For this reason a critical level has not been applied and it has not been considered during the ammonia impact assessment for Clearwell Farm.

River Wye (SAC)

The River Wye SAC has not been included in the ammonia risk assessment due to Natural England confirming (Feb 2010) that 'Given the absence of information on direct damage to this type of vegetation, the low risk of acidification and the likely dominance of other (diffuse, aquatic) sources of nitrogen - the application of the critical level for atmospheric ammonia is not considered defendable at this time.'

Ammonia Assessment – 16 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 (AST v4.4) has indicated that the PCs for the 13 SSSIs listed in Table 3 are predicted to be less than 20% CLe for ammonia, nitrogen and acid deposition therefore it is possible to conclude no damage to the designated features of the sites. The results of the ammonia screening are given in the table below.

Table 3 Ammonia Emissions

SSSI name	Critical Level (µg/m^3)	PC (µg/m^3)	PC % Critical Level
Nagshead	3*	0.241	8.0
Astridge Wood	3*	0.229	7.6
Bigsweir Woods	1**	0.156	15.6
Slade Brook	1**	0.174	17.4
Swanpool Wood & Furnace Grove	1**	0.152	15.2
Devil's Chapel Scowles	1**	0.102	10.2
River Wye	1**	0.117	11.7
Highbury Wood	1**	0.183	18.3
Lower Hael Wood	1**	0.095	9.5
Pentwyn Farm Grassland Penallt	1**	0.088	8.8
Graig Wood	1**	0.110	11.0
Harpers Grove- Lords Grove	1**	0.098	9.8
The Hudnalls	1**	0.081	8.1

Table 4 Nitrogen deposition

SSSI name	Critical Load (kg N/ha/yr)	PC (kg N/ha/yr)	PC % Critical Load
Nagshead	10***	1.250	12.5
Astridge Wood	10***	1.187	11.9

Table 5 Acid deposition

SSSI name	Critical Load (keq/ha/yr)	PC (keq/ha/yr)	PC % Critical Load
Nagshead	2.91***	0.089	3.1
Astridge Wood	6.21***	0.085	1.4

* A CLe of 3µg/m^3 has been assigned to these sites as confirmed by Natural England (May 2014).

**A CLe of 1µg/m^3 has been used during the screen, this has not been confirmed, but is precautionary. Where the precautionary level of 1µg/m^3 is used and the PC is assessed to be less than the 20% significance threshold, the site automatically screens out as insignificant and no further assessment of critical load is necessary.

*** Critical load values taken from APIS website (www.apis.ac.uk) – 19/05/2014

Dingle Wood SSSI

For Dingle Wood SSSI initial screening using the ammonia screening tool (AST v4.4) determined that the PC of ammonia from the application site was over the 20% threshold. As such, it is not possible to conclude no likely damage to features of the SSSI alone. Where the PC falls between 20% and 50%, Environment Agency guidance indicates that an in combination assessment should be undertaken.

There are no other intensive farming operations within 5 km of the maximum point of impact at Dingle Wood. Under Environment Agency guidelines it is therefore possible to conclude no damage to the site from the installation. No further assessment of this site is required.

Table 6 Ammonia Emissions

SSSI name	Critical Level (µg/m^3)	PC (µg/m^3)	PC % Critical Level
Dingle Wood	1*	0.226	22.6

* Natural England advised that a CLe of 1µg/m^3 for ammonia should be applied across Dingle Wood SSSI (May 2014).

Tudor Farm Bank SSSI

For Tudor Farm Bank SSSI initial screening using the ammonia screening tool (AST v4.4) determined that the PCs of ammonia and nitrogen deposition from the application site were over the 20% threshold, and therefore may cause damage to features of the SSSI. Detailed modelling was provided with the application. The PC of acid deposition was > 20% but there are no other intensive farming operations within 5 km of the maximum point of impact acting in combination with Clearwell Farm. It is therefore possible to conclude no damage to the site via acid deposition from the installation.

Detailed modelling (report dated 11/06/2014) has determined that the PC on the Tudor Farm Bank SSSI for ammonia and nitrogen deposition from the application site

are under the 20% significance threshold and therefore it is possible to conclude no damage to the designated features of the site. See results below.

Table 7 Ammonia Emissions

SSSI name	Critical Level ($\mu g/m^3$)	PC ($\mu g/m^3$)	PC % Critical Level
Tudor Farm Bank	3*	0.384	12.8

Table 8 Nitrogen deposition

SSSI name	Critical Load (kg N/ha/yr)	PC (kg N/ha/yr)	PC % Critical Load
Tudor Farm Bank	15**	1.994	13.3

Table 9 Acid deposition

SSSI name	Critical Load (keq/ha/yr)	PC (keq/ha/yr)	PC % Critical Load
Tudor Farm Bank	4.85**	1.890	39.0

* Natural England advised that a CLe of 3 for ammonia should be applied across Tudor Farm Bank SSSI (May 2014)

** Critical load values taken from APIS website (www.apis.ac.uk) – 19/05/2014

Old Bow & Old Ham Mines SSSI

This site has been selected on the grounds of the exceptional breeding populations of lesser and greater horseshoe bats that are found in the area and not for habitat features. For this reason a critical level has not been applied and it has not been considered during the ammonia impact assessment for Clearwell Farm.

Ammonia Assessment – LWS & AW

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.

The following ten sites have been screened out, as set out above, using results of the ammonia screening tool (AST v4.4). The process contributions (PC) on the sites listed in the tables below for ammonia, acid and nitrogen deposition from the application site are under the 100% significance threshold and can be screened out as having no likely significant effect. No further assessment is required for these sites.

Table 10 Ammonia Emissions

Site	Critical Level ($\mu g/m^3$)	PC ($\mu g/m^3$)	PC % Critical Level
Fetter Hill Quarries (LWS)	1*	0.545	54.5
Whitecliffe Recreation Ground (LWS)	1*	0.409	40.9

Ellwood Green & Dark Hill (LWS)	1*	0.960	96.0
Long Balls Grove (AW)	1*	0.439	43.9
Bircham Wood (AW)	1*	0.622	62.2
Crabtree Ption (east) (AW)	1*	0.829	82.9
Trow Wood (AW)	1*	0.562	56.2
Darkhill (AW)	1*	0.606	60.6
Miners Arm, Sling (AW)	3**	1.513	50.4
Galders Wood (AW)	3**	1.342	44.7
Wort Wood (AW)	3**	1.422	47.4

Table 11 Nitrogen deposition

Site	Critical Load (kg N/ha/yr)	PC (kg N/ha/yr)	PC % Critical Load
Miners Arm, Sling (AW)	20***	7.856	39.3
Galders Wood (AW)	10***	6.972	69.7
Wort Wood (AW)	10***	7.387	73.9

Table 12 Acid deposition

Site	Critical Load (keq/ha/yr)	PC (keq/ha/yr)	PC % Critical Load
Miners Arm, Sling (AW)	4.8***	0.561	11.7
Galders Wood (AW)	1.48***	0.498	33.6
Wort Wood (AW)	2.02***	0.528	26.1

* A CLe of 1µg/m^3 has been used during the screen, this has not been confirmed, but is precautionary. Where the precautionary level of 1µg/m^3 is used and the PC is assessed to be less than the 100% significance threshold, the site automatically screens out as insignificant and no further assessment of critical load is necessary.

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

***Critical load values taken from APIS website (www.apis.ac.uk) – 19/05/2014

Clearwell Meend (LWS), Clearwell Valley (LWS) & Breckness Wood (AW)

For the following three 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 (Report dated 11/06/2014).

Table 13 Ammonia Emissions

Site	Critical Level (µg/m^3)	PC (µg/m^3)	PC % Critical Level
Clearwell Meend (LWS)	1*	0.430	43.0
Clearwell Valley (LWS)	1*	0.374	37.4
Breckness Wood (AW)	1*	0.610	61.0

* A CLe of 1µg/m^3 has been used during the modelling, this has not been confirmed, but is precautionary. Where the precautionary level of 1µg/m^3 is used and the PC is assessed to be less than the 100% significance threshold, the site automatically screens out as insignificant and no further assessment of critical load is necessary.

Great Lanbsquay Wood & Little Eddies Wood (LWS), Stockwood (AW)

& Great Lanbsquay Wood (AW)

For the following three sites this farm has not screened out, as set out above, using results of the detailed modelling supplied by the applicant as part of the application (Report dated 11/06/2014).

Table 14 Ammonia Emissions

Site	Critical Level (µg/m^3)	PC (µg/m^3)	PC % Critical Level
Great Lanbsquay Wood & Little Eddies Wood (LWS)	3*	3.72	**124.1**
Stockwood (AW)	3*	1.75	58.3
Great Lanbsquay Wood (AW)	3*	3.72	**124.1**

Table 15 Nitrogen deposition

Site	Critical Load (kg N/ha/yr)	PC (kg N/ha/yr)	PC % Critical Load
Great Lanbsquay Wood & Little Eddies Wood (LWS)	10**	29.00	**290.0**
Stockwood (AW)	10**	13.62	**136.2**
Great Lanbsquay Wood (AW)	10**	29.00	**290.0**

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

** Critical load values taken from APIS website (www.apis.ac.uk)– 19/05/2014

The farm can be permitted for reasons set out in our internal guidance on existing farms found in 'Operational Instruction (OI:69_10)'. It states that existing farms are likely to have been in operation for a number of years, already contributing to the background ammonia levels. This existing nitrogen burden may have led to the habitat already being slightly more stress tolerant to increases. This particular site has been operating as a free range layer site under the permitting threshold for a number of years.

Where an applicant applies to increase animal place numbers at an existing farm, and the detailed assessment has shown that a negative effect would be expected at a LWS or ancient woodland, further controls consistent with Best Available Techniques (BAT) should be applied, with the aim of achieving a process contribution of 100% or less.

The proposal shows that all buildings will be brand new and inline with BAT. They will be fully insulated with concrete floors throughout. They will all have high velocity roof mounted fans for better dispersal of ammonia emissions. Water will be provided by nipple drinkers to minimise spillage and keep the litter dry and friable.

From the scientific literature, it can be suggested that significant pollution may result where the process concentration is above 6µg/m^3 (2 × a critical level of 3µg/m^3) for a site with sensitive higher plants. The predicted process contributions for ammonia at the above sites are all less than 6µg/m^3 and therefore for this reason we will accept the operator's proposal.

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 Industrial Emissions Directive (IED).

This permit implements the requirements of the European Union Directive on Industrial Emissions.

Groundwater/Soil Monitoring

As a result of the requirements of the Industrial Emissions Directive, all permits are now required to contain 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 or groundwater and measure levels of contamination where the 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 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 for Clearwell Farm (*Site Condition Report, August 2014*) demonstrates that there are no hazards to land or groundwater and no historic contamination on site that may present a hazard. **Therefore, although this condition is included in the permit, no groundwater or soil monitoring will be required at this installation as a result.**

Odour

The operator has provided an Odour Management Plan (OMP) (reference Appendix 9 *Odour Management Plan*) with the application, as there are sensitive receptors within 400 metres of the installation.

The OMP has been assessed using Environment Agency Guidance *H4 Odour Management – How to Comply with your Environmental Permit* and the *Poultry Industry Good Practice Checklist*. We are happy that the control and contingency measures on site are sufficient to control odorous emissions from the site. We have therefore approved the OMP for Clearwell Farm. The OMP will be reviewed every year; or sooner if an odour complaint is received.

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 Regulatory Guidance Note (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.	✓
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. **See key issues section above for further information.** This permit implements the requirements of the European 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.	✓
Site condition report	The operator has provided a description of the condition of the site.	✓

Aspect considered	Justification / Detail	Criteria met Yes
	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. **See key issues 'Ammonia Emissions' section above for further information.** The following assessments were performed: • An Appendix 11 proforma has been completed for European sites and sent to Natural England for information only (dated 15/09/2014). • An Appendix 4 proforma has been completed for nearby SSSIs and saved to EDRM for information only (dated 28/08/2014).	✓
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. The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.	✓
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The operator has proposed the following key techniques: • Fully insulated housing designed and managed in accordance with Sector Guidance Note (SGN) EPR 6.09. • Concrete floors throughout the sheds • Water provided by nipple drinkers to reduce	✓

Aspect considered	Justification / Detail	Criteria met Yes
	spillage • Dirty water is contained in underground storage tanks before being exported from site. • High velocity roof ventilation. The proposed techniques for priorities for control are in line with the benchmark levels contained in Sector Guidance Note (SGN) EPR 6.09 'How to comply with your environmental permit for intensive farming (version 2)' and we consider them to represent appropriate techniques for the facility. We consider that the operating techniques specified in the permit reflect the Best Available Techniques (BAT) for the installation.	
The permit conditions		
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.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
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. The financial provision arrangements satisfy the financial provisions criteria.	✓

Annex 2: 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 from
Environmental Health department, Forest of Dean District Council– 26/08/2014
Brief summary of issues raised
Section 2 statutory nuisance completed and no issues raised.
Summary of actions taken or show how this has been covered
No action necessary.

Response received from
Local Planning Authority, Forest of Dean District Council– 28/08/2014
Brief summary of issues raised
Section 3 planning conditions & acceptance completed and no issues raised. Also confirmed that there have been no enforcement issues.
Summary of actions taken or show how this has been covered
No action necessary.

The following organisation was consulted, however no response was received:

- Health and Safety Executive (HSE)

This proposal was also publicised on the Environment Agency's website between 15/08/2014 and 19/09/2014, but no representations were received during this period.