

# Environment Agency permitting decisions

## Bespoke permit

We have decided to grant the permit for Corfton Farm operated by Corfton Farms Ltd.

The permit number is EPR/SP3833EM

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

## Key issues of the decision

### 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 EU 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 for Corfton Farm (SA13695/ Corfton FarmsEP/Appendix 1) 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, although condition 3.1.3 is included in the permit, no groundwater or soil monitoring is required at this installation as a result of this condition at this time.**

## **Ammonia Emissions**

There is one Special Area of Conservation (SAC) located within 10km of the installation. There are three Sites of Special Scientific Interest (SSSI) located within 5 km of the installation. There are also five Local Wildlife Sites (LWS), / Ancient Woodlands (AW), within 2km of the installation.

### **Ammonia Assessment – SAC**

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 Ammonia Screening Tool ( version 4.4) has determined that the Process Contributions (PC) on the SAC- Downton Gorge 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.

### **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 (v4.4) has indicated that the PCs for Princes Rough, Wolverton Wood and Eaton Track SSSIs are predicted to be less than 20% Critical Level for ammonia, acid and N deposition therefore it is possible to conclude no damage.

### **Ammonia assessment - LWS/AW**

There are five Local Wildlife Sites (LWS) / Ancient Woodlands (AW) within 2 km of Corfton 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.

For the following sites this farm has been screened out at Stage 1, as set out above, using results of the Ammonia Screening Tool v4.4.

Screening using Ammonia Screening Tool v4.4 has indicated that ammonia emissions from Corfton Farm will only have a potential impact on sites with a critical level of 1 µg/m<sup>3</sup> if they are within 421m of the emission source. Screening indicates that beyond this distance, the Process Contribution at conservation sites is less than 1ug/m<sup>3</sup>. 1ug/m<sup>3</sup> is 100% of the 1ug/m<sup>3</sup> critical level and therefore beyond this

distance the PC is insignificant. In this case all local wildlife sites listed below are beyond this distance. Where a site screens out for ammonia at a CLe of 1 µg/m<sup>3</sup> it is not necessary to consider PCs of nitrogen and acid deposition.

**TABLE 3– distance from source**

Site	Distance (m)
Seifton Batch LWS	1197
Titterel Plantation LWS	1829
East of Black Tree Coppice LWS	2207
Hazeldine Coppice LWS	2952
HAZELDINE COPPICES AW	2394

The PC 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.

## Noise

There are 4 main receptors -

- Elsie Barn situated approximately 430 metres to the west of the site
- Corfton Hall ( including Corfton View and Coach House ) the nearest receptor situated approximately 350 metres to the south east of the site
- Two further properties approximately 500 metres to the south east of the site (The Beeches and The Lodge)

The applicant has provided a noise impact assessment SLR report 402.04826.00001 (NIA) and Noise Management Plan (NMP) to support the application.

The NIA provided by the applicant has been audited in detail by our Air Quality Modelling and Assessment Unit (AQMAU).

Our audit identified a number of shortfalls with the assessment as detailed below :-

- Corfton Hall was not considered as a receptor because the measured background levels are low (below 30 dB(A)) and the calculated predicted noise impacts are less than 35 dB(A), but our checks showed that Corfton Hall should be considered as a receptor and assessed in accordance with BS4142.
- The assessment did not include gable end fans as a noise source.
- The broiler noise source has been calculated using the lowest of the range of 57-60 dBA quoted in the example noise levels for poultry unit from IPPC SRG 6.02.
- No absorption co-efficient was used for any of the buildings.
- Receptor heights in the assessment were set at 4m which is conservative and may not accurately represent the impacts that would occur in the daytime at the receptors.
- The assessment did not include on-site traffic in the BS4142 assessment.

A request for further information was made by a schedule 5 notice (dated 10/06/2014) to review and amend the noise impact assessment addressing the comments above and to provide confirmation of the use of silencers.

The applicant provided a response to the schedule 5 notice (incorrectly dated 10/06/2014 received by email on the 23/06/2014).

The applicant provided a revised noise impact assessment and addressed the issues as follows:-

- Included gable end fans as worst scenario case within the revised assessment.
- Used a noise source for broilers of 89.9 dBA . This will provide worst case scenario.
- Confirmed that a co-efficient value of 0.1 has been used. This is acceptable.
- Confirmed that the revised noise assessment includes a height of both 1.5 m and 4.0 m to reflect both daytime and night-time assessment.
- Included on-site HGV movements into the revised assessment.

The results of the revised noise impact assessment conclude that at two of the receptors Elsie Barn and Corfton Hall there may be occasions towards the end of the production cycle when the likelihood of complaints is marginal to likely. However this only applies to the later stages of the broiler production cycle which will account for a limited period of time during the 46 day turnaround phase when depopulating, cleaning and populating the poultry houses or when the temperature is sufficiently high ( 30 °C).

We accept the conclusion of the applicant that the impact is moderate upon Elsie Barn and Corfton Hall. However, we also accept that several factors make this a worst case estimate:-

- The use of worst scenario data in the impact assessment e.g gable end fans are for emergency use only and will not run unless outside ambient temperature rises above 30 °C. Meteorological data indicates that this has not occurred at this location since records began in the 1957 (shawbury data). It is also noted that there would not be a situation where all roof fans and all gable end fans would simultaneously operate at their maximum capacity.
- In the impact assessment it is assumed that the broiler noise would be constant during both the day and night-time, this scenario is unlikely as there will be times that the broilers will be much quieter.
- The low background noise levels presented in the noise assessment were measured on a Saturday and Sunday , day time background noise levels were measured between 16:00 – 23:00 hours and night time background levels between 01:00 and 04:00 hours – typically quieter periods. So the data presented would represent worst scenario case, as at other times of the week and periods of day and night it may be anticipated that the background noise could be higher.
- the applicant has provided a revised robust NMP which also identifies the three highest source contributors to the specific noise levels and provides techniques to minimise noise.

Considering predictive modelling uncertainties we accept the applicant's conclusion is acceptable for determination but, in addition to the standard permit noise conditions, we have included of an improvement condition requiring the operator to

complete a noise survey within 6 months of the site commencing operations to confirm the noise levels.

## Odours

The applicant has provided an Odour impact assessment (OIA) and Odour Management Plan (OMP) to support the application.

The OIA provided by the applicant has been audited in detail by our Air Quality Modelling and Assessment Unit (AQMAU).

The applicant concluded 'the predicted impact from the facility is less than 3  $\text{OU}_E/\text{m}^3$  at the majority of modelled receptor locations.' The indicative exposure level criterion for odours, which equates to 'no pollution', i.e. no reasonable cause for annoyance, is 3  $\text{OU}_E/\text{m}^3$  for moderately offensive odours as a 98th percentile of hourly means at sensitive receptors. Occasionally odour will be perceived at a number of sensitive receptors, however it will not be at a level which would be problematic, the model predicts that occasional odour will be perceived at Corfton Hall, primarily during the last days of a crop and during cleaning of the houses. Additional measures are proposed in the OMP to reduce these odours which include:

- Providing additional bedding which will be added to maintain dry litter during the last days of the crop,
- Clean-out in adverse weather conditions (when the wind is blowing towards sensitive receptor) will be avoided wherever possible. Otherwise or where there are concerns regarding odours a temporary windbreak hay bale wall (3 metres high) will be built.
- Clean-out will be contained to avoid odours, with building being sealed during and after clean-out and ventilation will be reduced to a minimum during clean-out.

We have carried out check modelling using air dispersion software Breeze AERMOD 9 (version 7.7) and ADMS (version 5.1) based on emission concentrations and parameters provided in the applicant's report. Based on the worst case scenario for 185,000 birds our checks indicate impacts at receptors could be potentially lower than those predicted by the applicant. However taking modelling uncertainties into account, although we do not completely agree with the applicant's absolute numerical predictions, we agree with the applicant's conclusions that predicted impacts at the majority of the receptors are likely to be less than 3  $\text{OU}_E/\text{m}^3$

The OMP was assessed using the Poultry Good Practice checklist and IPPC SRG 6.02 Odour Management at Intensive Livestock Installations.

There were however a number of omissions from the OMP-

- Contingencies – the OMP does not include a list of 'routine' abnormalities and fixes, such as fire; electricity, gas and water failure; sick and staff availability, elevated odour scenarios.
- The full details of odour management during the last days of the crop and clean-out
- Accident management needs to cover actions in event of abnormal scenarios.

The applicant addressed these omissions and an amended OMP was submitted 23/06/2014 .

## **Biomass boiler**

The applicant has included within the application 4 biomass boiler(s) with a net rated thermal input each of 231 KW, therefore an aggregate of 924 KW.

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 boiler(s).

This guidance states that the Environment Agency has assessed the pollution risks and has 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 1 metre above the roof level of adjacent buildings (where there are no adjacent buildings, the stack height must be a minimum of 3 metres above ground), and there are:
    - no Special Areas of Conservation, Special Protection Areas, Ramsar sites or Sites of Special Scientific Interest within 500 metres of the emission point(s);
    - no National Nature Reserves, Local Nature Reserves, ancient woodlands or local wildlife sites within 100 metres of the emission point(s), or;
  - C. less than 2MWth where, in addition to the above criteria for less than 1MWth boilers, there are:
    - no sensitive receptors within 150 metres of the emission point(s).

In accordance with Environment Agency's Air Quality Technical Advisory Guidance 14: "for combustion plants under 5 MW, no habitats assessment is required due to the size of combustion plant." Therefore this proposal is considered acceptable and no further assessment required.

However the biomass boilers did not meet the requirements of any of the criteria above and could not be screened out for human health using the position statement. This is because there are sensitive human receptors within 150 metres of the boilers.

Our Air Quality Modelling and Assessment Unit have completed a risk screening for the biomass boilers using emissions data provided by the applicant and running sensitivity to the following:

- 4 biomass boilers emitting from a single stack and 4 individual stacks
- Worst Met data as determined from the odour audit
- Terrain
- On site sensitive receptors

Based on the emission parameters as provided in Table 8 of the document "HDG Compact 199 chip RHI Emission Cert", process contributions (PC) from the boilers for Carbon Monoxide and PM10 are likely to be insignificant at all receptors previously identified in the odour assessment (including onsite receptors).

For long term NO<sub>2</sub>, PC is not likely to be insignificant at receptors, however data from taken from DEFRA background maps indicates the background levels are low for this area and therefore predicted environmental concentrations (PEC) are not likely to exceed the Environmental Quality Standard (EQS) of 200ug/m<sup>2</sup>. Similarly for short term NO<sub>2</sub>, PC is not likely to be insignificant at on-site receptors but not likely to exceed the relevant EQS.

Therefore no further assessment is necessary.

## Annex 1: decision checklist

This document should be read in conjunction with the application and supporting information and permit.

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>Consultation</b>		
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 were carried out, however no responses were received. Shropshire Council Environmental Protection Department, Shropshire Council Planning Authority and HSE (Stoke-on Trent) were consulted. The decision was taken in accordance with our guidance.	✓
<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. 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.  We consider this description is satisfactory.	✓
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 special Area of Conservation (Downton Gorge) is situated within 10 km of the installation. Three Sites of Special Scientific Interest are situated within 5km of the installation. Four Local Wildlife Sites are located within 2 km of the installation.  A full assessment of the application and its potential to affect the sites, species and habitat has been carried out as part of	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>the permitting process. We consider that the application will not affect the features of the site, species or habitat.</p> <p>We have completed an appendix 11 (dated 10/06/14) and sent it to Natural England for information only. An appendix 4 has been completed (dated 02/07/2014) as a record of our assessment. An assessment of other nature conservation sites has been carried out in the key issues for the decision section above. All documents have been saved on the Environment Agency's Electronic Data Records Management system (EDRM).</p>	
<b>Environmental Risk Assessment and operating techniques</b>		
EIA	<p>In determining the application we have considered the Environmental Statement.</p> <p>We have audited the noise and odour impact assessment contained within the EIA during the permit determination.</p>	✓
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p>	✓
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.</p> <p>The Operator is proposing to carry out activities in compliance with SGN EPR 6.09.</p> <p>We have reviewed a summary of Operating techniques provided by the operator, they are in-line with SGN EPR 6.09.</p> <p>Technical Standards are detailed in appendix 4 of the documents supporting the application.</p> <p>They are summarised below</p> <ul style="list-style-type: none"> <li>• Feed – will be appropriated for each stage of the production cycle. It will be stored in purpose built silos and delivered via sealed pipework.</li> <li>• Housing – will be well insulated with a damp proof course. Ventilation will be of the conventional design with roof mounted variable speed fan and air drawn down the sides of the building. Temperature will be appropriate to meet the health and welfare for the age and number of birds. A computer automatically controls ventilation to ensure efficiency. A non-leaking drinking system will be installed and maintained. The houses will be managed to maintain the poultry litter as dry and friable as possible. The Housing and drainage will be reviewed each year.</li> <li>• Slurry and Manure is managed in accordance with a</li> </ul>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>plan, it will be transported off site for storage and spreading. Litter is exported at the end of each production cycle.</p> <ul style="list-style-type: none"> <li>• Fugitive emissions will be prevented and minimised. The building will be maintained, no manure or slurry will be stored onsite, spills will be dealt with immediately. Drainage from houses and water from clean-down will be collected in underground storage tanks and transported off site. Clean drainage systems from the roof or clean yard areas will be diverted through French drains before being discharged to surface water ponds.</li> <li>• Dead /fallen stock will be stored in vermin proof containers to await collection by Animal Health Approved contractors.</li> <li>• Bunding and containment – the fuel oil storage tank will be bunded, gas tanks are protected from collision damage by guard rails. Pesticides and medicines are kept in a secure store.</li> <li>• Biomass boilers will operate on fuel derived from virgin timber, the boilers will meet the technical criteria to be eligible for the Renewable Heat Incentive and the stacks are 1 m or more higher than the apex of the adjacent buildings.</li> </ul> <p>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 ensure compliance with relevant BREFs and BAT Conclusions, and ELVs deliver compliance with BAT-AELs.</p>	
<b>The permit conditions</b>		
Raw materials	<p>We have specified limits and controls on the use of raw materials and fuels.</p> <p>We have limited the fuel for the biomass boilers to virgin wood, straw, miscanthus or a combination of these.</p>	✓
Improvement conditions	<p>We have included an improvement condition, requiring the applicant to carry out a noise survey within 6 months of being operational to validate the conclusion of the noise impact assessment. The improvement condition was included because of the following :-</p> <ul style="list-style-type: none"> <li>• the operator made a number of omissions from the assessment –see Noise section in the key issues section above for more details.</li> <li>• We ran our own check modelling using the applicant's data and including omissions and sensitivity analysis and obtained different results to the applicant's, a worst case scenario approaching 15 dB(A) at the nearest sensitive receptor ( Corfton Hall) which is the</li> </ul>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	level that is likely to result in complaints.	
Incorporating the application	<p>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.</p> <p>These descriptions are specified in the Operating Techniques table in the permit.</p>	✓
<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	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found.</p> <p>The operator satisfies the criteria in RGN 5 on Operator Competence.</p>	✓
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.	✓