

# Environment Agency permitting decisions

## Bespoke permit

We have decided to grant the permit for Green Farm operated by Mr K. Hern, Mrs P. Hern & Mr A. Hern (Trading as F C Jones & Co).

The permit number is EPR/ZP3230AZ/A001

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 of the decision

### 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's) located within 5 km of the installation. There are also six Local Wildlife Sites and nine Ancient Woodlands (AW) located within 2 km of the installation.

### Ammonia Assessment - SAC

The following trigger thresholds have been designated for the assessment of European sites:

- If the process contribution (PC) is below 4% of the relevant critical level (CLe) or critical load (CLo) then the farm can be permitted with no further assessment.
- Where this threshold is exceeded an assessment alone and in combination is required.
- An in combination assessment will be completed to establish the combined PC for all existing farms identified within 10 km of the application.

Screening using the ammonia screening tool (version 4.4) has determined that the PC on the SAC for ammonia, acid and nitrogen deposition from the application site are under the 4% significance threshold and can be screened out as having no likely significant effect. See results below.

**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
River Wye (SAC)	1**	0.021	2.1

\*\*A precautionary critical level of  $1 \mu\text{g}/\text{m}^3$  has been assigned to this site. Where the precautionary level of  $1 \mu\text{g}/\text{m}^3$  is used, and the PC is assessed to be less than the 4% insignificance threshold in this circumstance it is not necessary to further consider nitrogen deposition or acid deposition critical load values.

No further assessment required.

### Ammonia assessment - SSSI's

There are three SSSI's within the 5km distance criteria - Queestmoor Meadow, Birches and Quebb Meadow.

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 ammonia screening tool (version 4.4) has indicated that emissions from Green Farm will only have a potential impact on SSSI's with a critical level of  $1 \mu\text{g}/\text{m}^3$  if they are within 1,372 metres of the emission source. Screening indicates that beyond this distance, the PC at conservation sites is less than  $0.2 \mu\text{g}/\text{m}^3$ .  $0.2 \mu\text{g}/\text{m}^3$  is 20% of the  $1 \mu\text{g}/\text{m}^3$  CLe and therefore beyond this distance the PC is insignificant. See Table 2 below for SSSI's that are beyond this distance.

**Table 2 - distance from source**

Site	Distance (m)
Queestmoor Meadow	4,105
Birches	4,344
Quebb Meadow	4,376

No further assessment is necessary.

## Ammonia assessment - LWS/AW

There are five Local Wildlife Sites (LWS) and four Ancient Woodlands (AW) within 2 km of Green 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 (version 4.4).

Screening using ammonia screening tool (version 4.4) has indicated that emissions from Green Farm will only have a potential impact on sites with a critical level of  $1 \mu\text{g}/\text{m}^3$  if they are within 470 metres of the emission source. Screening indicates that beyond this distance, the PC at conservation sites is less than  $1 \mu\text{g}/\text{m}^3$ .  $1 \mu\text{g}/\text{m}^3$  is 100% of the  $1 \mu\text{g}/\text{m}^3$  CLe and therefore beyond this distance the PC is insignificant. See Table 3 below for LWS and AW that are beyond this distance.

**Table 3 - distance from source**

Site	Distance (m)
Hopleys Green Common (LSW)	1,174
Tippet's Brook (LWS)	856m
The Batch (LWS)	1,624
Land at Rose Cottage (LWS)	1,776
Land at Moorcourt Farm (LWS)	1,859
Pennsylvania Wood (AW)	603
Crump Oak Wood (AW)	340
Longclose Coppice (AW)	1,519
Buttington Wood (AW)	1,533

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

With the exception of Crump Oak Wood no further assessment is required.

Crump Oak Wood (LWS) is within 470 metres, however the site screened out using the ammonia screening tool (version 4.4). The predicted PC on the LWS 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. See tables 4, 5 and 6 below for assessment of impact at Crump Oak Wood.

**Table 4 - Ammonia emissions**

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of critical level
Crump Oak Wood (LWS)	3**	1.869	62.3

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

**Table 5 – Nitrogen deposition**

Site	Critical load kg N/ha/yr <sup>[1]</sup>	Predicted PC kg N/ha/yr	PC % of critical load
Crump Oak Wood (LWS)	10*	9.708	97.1

Note <sup>[1]</sup> Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) 03/03/15

**Table 6 – Acid deposition**

Site	Critical load keq/ha/yr <sup>[1]</sup>	Predicted PC keq/ha/yr	PC % of critical load
Crump Oak Wood (LWS)	2.12	0.693	32.7

Note <sup>[1]</sup> Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) 03/03/15

No further assessment is required.

## 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 condition 3.1.3 relating to groundwater monitoring. However, our 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 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 (SCR) for Green Farm (20/03/15) demonstrated that the hazards to land or groundwater have been mitigated/minimised such that there is little likelihood of pollution and there is no evidence of historic contamination on site. Therefore, although this condition is included in the permit, no groundwater monitoring will be required at this installation as a result.

## **Biomass boiler**

The applicant is also applying to include twelve biomass boilers with an individual rated thermal input of 199.25kWth and an aggregated thermal input of 2,391kWth

In line with the Environment Agency's 2014 document "Biomass boilers on EPR Intensive Farms", an assessment has been undertaken to consider the environmental impact of the proposed addition of the biomass boilers. This guidance states that the Environment Agency has assessed the pollution risks and have 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.

- the fuel will be derived from virgin timber, clean non virgin timber, straw or Miscanthus, and;
- the biomass boiler appliance and its installation meets the technical criteria to be eligible for the Renewable Heat Incentive, and;
- the aggregate boiler net rated thermal input is less than 0.5MWth, or;
- the aggregated boiler net rated thermal input is less than or equal to 4MWth, and no individual boiler has a net thermal input greater than 1MWth:
- the stack height must be a minimum of 5 meters above the ground (where there are buildings within 25 metres the stack height must be greater than 1 metre above the roof level of buildings within 25 metres) and:
- there are no sensitive receptors within 50 metres of the emission points

The Operator reports that the biomass boilers:

- exhaust stack heights are 7 metres,
- adjacent building within 25 meters are 5.5 metres high (1.5 metre below stack), the boilers are Renewable Heat Incentive compliant,
- farm Centre Grid Reference is 334427,253678,
- exhaust stack Grid References are 1. 334436,253748 (bank of 6) and 2. 334447,253675 (bank of 6),

- boiler ash will be appropriately stored within a seal containers and sent off site for appropriate disposal,
- approved biomass fuel only - virgin wood chip/pellets, miscanthus, straw,
- On site storage 150 tonnes with estimated annual tonnage 1800,
- there are no sensitive receptors within 50 metres of the emissions points (biomass boiler stacks).

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

Our risk assessment has shown that the biomass boilers at this site meet the above criteria and therefore considered not likely to pose a significant risk to the environment or human health

Therefore, no further assessment is required.

## 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
<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 responses (Annex 2) were taken into account in the decision.  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.  Refer to key issues section above for further information regarding the Industrial Emissions Directive (IED).	✓
<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. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED -	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	guidance and templates (H5).	
Biodiversity, Heritage, Landscape and Nature Conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>A full assessment of the application and its potential to affect the sites was part of the new permit application process. We considered that the application would not affect the features of the sites. We consider that the variation will not change the impacts on the sites.</p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p> <p>An Appendix 4(s) (CROW) form detailing the impacts of the proposals on the relevant SSSI's was completed on 12/05/15 for audit purposes only. All documents are saved on EDRM. No formal consultation with NE, saved to EDRM only.</p> <p>An Appendix 11 form detailing the impacts of the proposals on the relevant SAC was completed on 12/05/15 for audit purposes only. All documents are saved on EDRM. No formal consultation with NE, sent for information purposes only.</p>	✓
<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.	✓
Operating techniques	<p>We have reviewed the techniques used by the Operator and compared these with the relevant guidance notes.</p> <p>The proposed techniques for priorities for control are in line with the benchmark levels contained in SGN EPR6.09 'How to comply with your environmental permit for intensive farming (version 2)' Technical Guidance Note and we consider them to represent appropriate techniques for the facility.</p> <p>The Operator has proposed the following key techniques:</p> <ul style="list-style-type: none"> <li>Housing design and management will be in accordance with the sector guidance note (SGN)</li> </ul>	✓



Aspect considered	Justification / Detail	Criteria met
<b>Yes</b>		
	<p>EPR6.09.</p> <ul style="list-style-type: none"> <li>• Feed selection and use will be in accordance with the sector guidance note (SGN) EPR6.09.</li> <li>• Nipple drinkers are used to reduce wastage of water and maintain dry litter;</li> <li>• All dirty water is collected in storage tanks and taken off site.</li> <li>• the fuel is derived from virgin timber, and</li> <li>• the stack is 1m or more higher than the apex of the adjacent buildings within 25m (and greater than 5m overall)</li> </ul> <p>We consider that the operating techniques specified in the permit reflect the BAT for the installation.</p> <p>We have reviewed the techniques used by the Operator and compared these with the relevant guidance notes.</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 specified that only virgin timber (including wood chips and pellets), miscanthus or straw shall be used as a fuel for the biomass boiler. These materials are never to be mixed with, or replaced by waste.</p>	✓
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	<p>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.</p>	✓
Relevant convictions	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found.</p>	✓

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.	✓

## 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
Ground Water & Contaminated Land team (GWCL)
Brief summary of issues raised
<p>Q1 - Should dirty water and clean water systems be controlled via a diverter valve, measures must be put in place to ensure that it is set in the correct position post cleaning. Underground tanks will hold dirty wash down water, monitoring of levels in the tanks and care during cleaning will need to be considered.</p> <p>A - No diverter valves in use all wash waters (dirty and lightly contaminated directed to containment tanks in separate dirty water system)</p> <p>Q2 - Dust contaminated wash water arising from the fans must drain to a sealed tank.</p> <p>A - All fan washings routed with dirty water to containment tanks</p> <p>Q3 - Feed - the mitigation measures should include checking of the bulk storage containers.</p> <p>A - Feed silos visually checked for integrity as per routine inspection and maintenance schedule</p> <p>Q4 - Fuel (oil/Kerosene) - Deliveries/usage should be closely monitored and that the tank, bund and the pipelines need to be regularly checked/tested. Weekly checks are proposed, (See routine maintenance schedule).</p> <p>A - Fuel oil deliveries will be monitored and pipe-work and containment check regularly as per routine maintenance and inspection schedule</p> <p>Q5 - Litter - it is noted that the humidity and watering systems are to be checked daily to maintain the quality of the litter. This should be included in the plan and records should be kept.</p> <p>A - Humidity and water systems checked daily and records kept for inspection</p> <p>Q6 - Wash waters/dirty water - In relation to the use of the tanks, I assume that monitoring of the levels within the tanks will be undertaken throughout the operations in order to demonstrate no overflow. Could high level alarms be installed to ensure no overspill/ leakage detection? I would also expect to see a maintenance schedule including regular integrity testing.</p> <p>There is the need to ensure that adequate measures are in place in order to minimise the potential for adverse impact on groundwater quality.</p> <p>A - Washing operations monitored with staff present at all times, free board monitored on dirty water tanks to prevent overflow, defined responsibilities defined for staff members. Integrity testing carried out at least once a year as per BAT guidance.</p> <p>Q7 - Evidence should be recorded to demonstrate that this on-going maintenance has occurred. The same approach should be applied to the dirty</p>

wash water tanks.

A - Full record keeping of maintenance and inspection schedule available for inspection

Q8 - There is also the need to ensure that all vehicles are well maintained and serviced in appropriate locations with impermeable hard-standing and sealed drainage system. Drip trays should also be used when vehicles are parked for extended periods of time.

A - All vehicles fully maintained and serviced with drip trays used for any vehicles on site for an extended period of time.

**Summary of actions taken or show how this has been covered**

All issues / questions raised by GWCL team were addressed by the Operator via a Request for Further Information (RFI), and all relevant responses included within Table S1.2 Operating techniques of the permit pertaining to these questions.

The Food Standard Agency (FSA), Herefordshire Council (Planning - Blueschool House) , Herefordshire Council (Environmental Health - County Offices), Health and Safety Executive (HSE), Public Health England, Director of Public Health (Herefordshire Council) and internal Ground Water & Contaminated Land team (GWCL). Comments for consultation ended on the 10/06/15.

The permit application was also published on the Environment Agency's website (which finished 11/06/15); no comments / representations were received during the web consultation period.