

Environment Agency permitting decisions

Consolidated Substantial Variation

We have decided to issue the substantial variation for Thinghill Grange by operated by Mr. R. F Chilman, Mr. R. J Chilman. and Mrs. Z Chilman (Trading as TP. One).

The permit number is EPR/TP3032TS

The variation number is EPR/TP3032TS/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 of the decision

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).

Amendments have been made to the conditions of this variation so that it now 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, 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 (SCR) for Thinghill Grange 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 Operator is varying their permit to include two additional biomass boilers each with a net rated thermal input of 195kWth, increasing the number of biomass boilers at the facility from 5 to 7. Giving a combined total aggregated thermal input of 1365kWth (7 x 195kWth).

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 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. 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).

The biomass boilers meet the requirements of criteria C above, and are therefore considered not likely to pose a significant risk to the environment or human health and no further assessment is required. 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.

Ammonia Screening Results

Screening Input

Grid Reference used for the assessment: 355215, 245407 (with a 135 m buffer)

Animal numbers and types

Animal numbers and types, and housing systems assessed are listed below. The animal numbers and emission factors are based on an interpretation of the information provided by the applicant during the pre-application process and have been used in this initial risk assessment to identify if modelling is necessary.

Category of livestock	Housing system	Number of animal places	Ammonia Emission Factor (kg NH3/animal place/year)
Broilers	Roof ventilation only (vents greater than 5.5 metres high, fan efflux velocity greater than 7 m/s)*	225,000	0.034
	Side ventilation, natural or combination ventilation Note this includes tunnel ventilation and cross ventilation	180,000	0.034
405,000 Total bird places			

* this can include gable end fans that are used for heat extraction only during the summer months

Note: Should the Operator decide to alter their proposal by increasing the number of animal places or by changing the animal housing type or by increasing the manure or slurry storage they will need to request a revised screening assessment.

Screening Overview

This screening assessment considered any Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites within 10km; any Sites of Special Scientific Interest (SSSI) within 5km and also any National Nature Reserves (NNR), Local Nature Reserves (LNR), Ancient Woodlands and Local Wildlife Sites (LWS) within 2km of the farm.

We used the Environment Agency's Ammonia Screening Tool (AST v4.4) to assess the impact of your proposal at those sites identified within the above distance criteria.

We applied a two stage screening criteria to the ammonia screening tool results:

For SAC, SPA, Ramsar and SSSIs the screening assessment has taken into account other intensive farms that could act in combination with the proposal.

Where the ammonia screening tool predicted that emissions of ammonia or ammonia deposition (nutrient nitrogen or acid) will be <Y% (see Table 1 below) of the relevant Critical Level or Critical Load, the proposal screens out of the requirement for an ammonia assessment.

Further modelling is required where:

- emissions of ammonia or ammonia deposition (nutrient nitrogen or acid) are in excess of Z% of the relevant Critical Level (ammonia) or Critical Load (nutrient nitrogen or acid) at any particular designated site;

- there is the potential for an in-combination effect with existing farms at a SAC, SPA, Ramsar and/or SSSI if emissions are > Y% of the critical level or critical load;
- the original permit for the installation required an Improvement Condition to reduce ammonia emissions;
- the proposal is within 250m of a nature conservation site.

Table 1 Screening thresholds

Designation	Y%	Z%
SAC, SPA, Ramsar	4	20
SSSI	20	50
NNR, LNR, LWS, ancient woodland	50	100

Table 2 Ammonia Assessment – SAC / SPA / Ramsar sites

Habitat Type	Habitat Name	NGR of closest point	NGR of closest point	Distance from Emission Source (m)
e.g. SAC/SSSI/LWS		Easting	Northing	
SAC	River Wye/Afon Gwy	353285	244595	2,094

River Wye/Afon Gwy (SAC) - Although this designated site screens in on distance criteria the audited critical levels spreadsheet states that it is not appropriate to apply a critical level for ammonia to this site at present. Therefore no further assessment is required.

Table 3 Ammonia Assessment – SSSI

Habitat Type	Habitat Name	NGR of closest point	NGR of closest point	Distance from Emission Source (m)
e.g. SAC/SSSI/LWS		Easting	Northing	
SSSI	Lugg and Hampton Meadows	352954	241834	4,228
SSSI	River Lugg	353285	244595	2,094

Lugg and Hampton Meadows (SSSI) - Screening using Ammonia Screening Tool 4.4 has indicated that emissions from Thinghill Grange will only have a potential impact on sites with a critical level of $1 \mu\text{g}/\text{m}^3$ if they are within 2486m of the emission source. Screening indicates that beyond this distance

the Process Contribution at conservation sites is insignificant. Lugg and Hampton Meadows SSSI is beyond the relevant distance criteria for SSSI's and therefore it is not appropriate to apply a critical level for ammonia.

River Lugg (SSSI) - Although this designated site screens in on distance criteria the audited critical levels spreadsheet states that it is not appropriate to apply a critical level for ammonia to this site at present. Therefore no further assessment is required.

Table 4 Ammonia Assessment – LWS, AW, LNR, NNR

Habitat Type	Habitat Name	NGR of closest point	NGR of closest point	Distance from Emission Source (m)
e.g. SAC/SSSI/LWS		Easting	Northing	
LWS	River Lugg	353285	244595	2,094
LWS	Field South of Sutton Rhea	353737	243890	2,118
LWS	Sutton Hill Gravel Pitt	354257	246325	1,327

River Lugg, Field South of Sutton Rhea and Sutton Hill Gravel Pitt (LWS) - Screening using Ammonia Screening Tool 4.4 has indicated that emissions from Thinghill Grange will only have a potential impact on sites with a critical level of 1 µg/m³ if they are within 994m of the emission source. Screening indicates that beyond this distance, the Process Contribution at conservation sites is insignificant. All the LWS in the table above are beyond the relevant distance criteria for non-statutory sites and therefore it is not appropriate to apply a critical level for ammonia. Therefore no further assessment is required.

Table 5 – Distance from source

Screening criteria - Associated distance			
Critical Level (ug/m3)		% of CLe	Distance (m)
1	SAC SPA RAMSAR	4	6296
1	SSSI	20	2486
1	LWS, AW, LNR, NNR	100	994

Screening Results

The ammonia impacts from the proposal screened out and therefore detailed modelling was not required. The PC at these sites has been screened as insignificant. Therefore it is possible to conclude no significant pollution will occur at these sites, 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
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 web publicising	The web publicising 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.	✓
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. 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 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. We have not formally consulted on the application. The decision was taken in accordance with our guidance.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	<p>An Appendix 11 was sent to Natural England for information purposes only on 02/05/14.</p> <p>An Appendix 4 (CRoW) form was completed 23/05/14 for audit trail only. All documents are saved on EDRM.</p>	
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.	✓
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 techniques contained in the SGN EPR6.09 "How to comply with your Environmental Permit for Intensive Farming, version 2" and we consider them to represent appropriate techniques for the facility.	✓
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.	✓
Raw materials	We have specified limits and controls on the use of raw materials and fuels. We have specified that only virgin timber (including wood chips and pellets), straw, miscanthus or a combination of these. These materials are never to be mixed with or replaced by waste.	✓
Pre-operational conditions	<p>Based on the information in the application, we consider that we need to impose pre-operational conditions.</p> <p>Pre-operational condition 1 - The Operator shall inform the Environment Agency at least 14 days before the use of any proposed biomass boiler units.</p>	✓
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.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Relevant convictions	The National Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found.	✓

Annex 2: Consultation and web publicising

Response received from
Brief summary of issues raised
Summary of actions taken or show how this has been covered

The Health and Safety Executive (HSE), Food Standards Agency (FSA), Herefordshire Council Planning Services and Herefordshire Council Environmental Health Department were also consulted; however, consultation responses from these parties were not received.

The permit application was also published on the Environment Agency's website (which finished 14/05/14); no comments / representations were received during the web consultation period.