Habitats Regulations Assessment and Appropriate Assessment

Site: P212666/F Thinghill Grange Poultry Enterprise Cross Keys Hereford Herefordshire HR1 3NY
Date: 14th July 2022
Prepared by: Fran Lancaster, Ecology & Green Infrastructure Specialist

1. Overview

1.1 Aims and Objectives of the report

In accordance with Government policy, Herefordshire Council has to undertake a HRA assessment, as required by the Conservation of Habitats and Species Regulations 2017, in accordance with the EC Habitats Directive (Council Directive 92/43/EEC) before the council, as the 'competent authority' under the Regulations, can grant planning permission for a project.

Subject to certain exceptions, Herefordshire Council shall restrict or revoke permission where the integrity of a European (EU) Designated site would be adversely affected.

biT has been appointed by Herefordshire Council to prepare a Habitat Regulations Assessment for Demolition of incinerator shed, erection of new building to house wood chip store, two biomass boilers and buffer tanks to include ancillary stainless steel flue pipesat at Thinghill Grange Poultry Enterprise Cross Keys Hereford Herefordshire HR1 3NY under application reference P212666/F.

The assessment will collate the information required to assess the implications of the project in relation to European Sites, and their conservation objectives.

1.2 Survey and Consultation

The Habitat Regulations Assessment has been prepared by Fran Lancaster BSc, MSc, MCIEEM, who has over ten years of experience as a professional ecologist within the planning system undertaking complex Habitats Regulations Assessments for Local Planning Authorities.

1.3 Legislative and planning policy context

Planning reference P202713/F, will be considered in line with:

- *Conservation of Habitats and Species Regulations 2017;*
- *National Planning Policy Framework (NPPF) 2019;*
- *Natural England DRAFT Air Quality Assessment Guideline Thresholds for Interim Use – 2017/18;*
- *Environmental Permitting (England and Wales) Regulations 2016;*
- *Countryside and Rights of Way Act 2000;*
- *Natural Environment and Rural Communities Act 2006;*
- *Environmental Protection Act 1990;*
- *Wildlife and Countryside Act 1981; and*
- *Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999.*

Supporting Citations and Documents

This HRA should be read alongside supporting information available on Herefordshire Council Planning Portal, application reference: P212666/F: - An Assessment using Dispersion Modelling of the Impact of Airborne Emissions from the Existing and Proposed Biomass Boilers at Thinghill Grange, near Cross Keys in Herefordshire by AS Modelling & Data Ltd (24th September 2021). - A report comparing the current biomass boilers at TPOne (Hereford) Ltd against the proposed scenario of two additional biomass boilers, with particular focus on phosphates and the River Lugg (Wye) SAC by TPOne (Hereford) Ltd. - Email to Chloe Smart from Mike Harris dated 3rd February 2022

Habitat Regulations Assessment

Date of completion for the HRA screening:

14th July 2022

HRA completed by:

Fran Lancaster MSc, BSc (hons), MCIEEM, Ecology & Green Infrastructure Specialist Telford & Wrekin Council working for biT with over ten years of experience undertaking Habitats Regulations Assessments for Local Planning Authorities.

Screening Assessment:

Summary Table 1: Details of project

Name of project:	Reference: 212666 Address: Thinghill Grange Poultry Enterprise, Cross Keys, Hereford, Herefordshire, HR1 3NY Proposal: Demolition of incinerator shed, erection of new building to house wood chip store, two biomass boilers and buffer tanks to include ancillary stainless steel flue pipes Easting-Northing: 355135 245416
Name and Designated Features of Natura 2000 site within 10km of project:	**The River Lugg SSSI and River Wye SAC (UK0012642) are 2.3km west of the proposal.** The River Wye SAC full citation can be found at European Site Conservation Objectives for River Wye SAC - UK0012642 (naturalengland.org.uk) The site qualifies for designation by virtue of the following qualifying habitats and species.

	Qualifying habitats: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I: • Transition mires and quaking bogs. (Very wet mires often identified by an unstable 'quaking' surface) • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho Batrachion vegetation. (Rivers with floating vegetation often dominated by water crowfoot) Qualifying species: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II: • Allis shad Alosa alosa • Atlantic salmon Salmo salar • Brook lamprey Lampetra planeri • Bullhead Cottus gobio • Otter Lutra lutra • River lamprey Lampetra fluviatilis • Sea lamprey Petromyzon marinus • Twaite shad Alosa fallax • White-clawed (or Atlantic stream) crayfish Austropotamobius pallipes **Conservation objectives of EU designated sites** Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely.
Description of the project and potential effect pathways:	Demolition of incinerator shed, erection of new building to house wood chip store, two biomass boilers and buffer tanks to include ancillary stainless steel flue pipes. The following potential effect pathways have been assessed: Aerial emissions of NOx and particulate matter Phosphates via the application of ash to land
Is the project directly connected with or necessary to the management of the site (provide details):	No

Likely significant effect test - Screening assessment:

River Wye SAC Baseline Situation

Summary from APIS (http://www.apis.ac.uk/) accessed January 2022):

Designated SAC Feature:	Habitat Sensitive to Nitrogen (APIS)	Lowest Empirical Critical Load kg/N/ha/yr	Back-ground Level	Natural England Condition summary:
H7140 Transition mires and quaking bogs	Yes	10-15	26.8	SAC Monitored Features not allocated to unit
H3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	Yes	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site specific level. Furthermore, consideration should also be given to other sources of N, i.e. discharges to water, diffuse agricultural pollution etc.	21.5	Unfavourable recovering
S1092 White-clawed (or Atlantic stream) crayfish	Yes			
S1095 Sea Lamprey	Yes			
S1096 Brook Lamprey	Yes			
S1099 River Lamprey	Yes			
S1102 Allis Shad	Yes			
S1103 Twaite Shad	Yes			
S1106 Atlantic Salmon	Yes			
S1163 Bullhead	Yes			
S1355 Otter	Yes			

Designated SAC Feature:	Habitat Sensitive to Nitrogen (APIS)	Critical Level (µg NH3/m3 annual mean)	Back-ground Level	Natural England Condition summary:
H7140 Transition mires and quaking bogs	Yes	1 (bryophytes present)	3.93	SAC Monitored Features not allocated to unit

Target levels of NOx and particulates are also set for human health:

- 30µg/m^3 annual mean NOx
- 75 µg/m^3 daily mean NOx
- 40 µg/m^3 annual mean particulates (PM_{10})
- 50 µg/m^3 daily mean (not be exceeded more than 35 times per year) particulates (PM_{10})

Screening for likelihood of significant effects on European Sites:

The technical information supporting the application, including the email from Mike Harris, sets out the proposal as follows:

- There are 10 poultry houses on the site
- There are currently 6 woodchip boilers on the site
- 2 of the boilers currently serve 4 houses between them
- The proposal is for 2 new additional boilers so that 2 existing and 2 new boilers serve the same 4 poultry houses
- The intention is to spread the load between more woodchip boilers with no increase in heat requirements across the site which are stable annually and fluctuate throughout the stocking cycle. Spreading the load will reduce the maintenance costs and prolong the life span of the existing boilers

The AS Modelling and Data report sets out the NOx and PM_{10} outputs from the proposed change (existing combined with the proposed new boilers under the proposed running scenario). There are no exceedances of any of the target levels (annual mean or daily mean set for human health) for either NOx or PM_{10} under the proposed changes on the site.

Impacts at all ecological receptors for Nitrogen deposition and acid deposition are below 1% of the critical level/load and at all SSSI and SAC receptor points are below the decision making thresholds set out by JNCC[1].

The report on phosphates by TPone sets out the existing permission in terms of heat produced, woodchip used and ash produced. The ash produced by biomas boilers of this kind is around 2.6% phosphate by weight and is spread to land after being mixed with poultry manure.

[1] Guidance on Decision-making Thresholds for Air Pollution. Chapman, C and Kite, B. JNCC. (December 2021).

The existing situation is summarised as:

Boiler 2 – 574,444 kwhs heat annually, 229.8 tonnes of woodchip used annually and 223.6kg of ash produced.

Boiler 3 – 580,444 kwhs heat annually, 232.2 tonnes of woodchip used annually and 225.9kg of ash produced.

Totals for heating the 4 poultry houses with 2 boilers – 1154,888 kwhs heat produced, 462 tonnes woodchip used and 449.5kg ash produced.

The proposed situation is summarised as:

	Heat annually (kwhs)	Woodchip used annually (tonnes)	Ash produced annually (kg)
Existing boiler 2	287,222	114.9	111.8
Proposed boiler A	287,222	114.7	111.6
Existing boiler 3	290,222	116.1	113.0
Proposed boiler B	290,222	115.9	112.8
Totals	1154,888	461.6	449.2

The proposed development, therefore, results in a decrease of 400kg of woodchip used per annum and a decrease of 0.3kg of ash produced per annum due to the energy efficiency improvements associated with the two new boilers.

There is no proposal to increase heat production on the site which is set by the stage in the stock cycle, the housing type and design and the stocking number which are all controlled through welfare standards alongside the Environmental Permit.

Ash produced on the site is then mixed with poultry manure and spread to land in line with agricultural regulations.

The proposal results in a slight betterment in ash production and therefore phosphate generated by the boilers on the site. The proposal does not result in an increase in phosphate spread to land in the River Wye Catchment and is considered to be nutrient neutral.

The proposal can be screened out as not having a likely significant effect on the River Wye SAC and an Appropriate Assessment is not required.

Are there any other projects or plans that together with the project or plan being assessed could affect the site (provide details):	N/A The proposal provides a slight betterment over the existing situation in terms of phosphate in the River Wye catchment and an in-combinations effect test is therefore not required. The proposal results in ammonia emissions and Nitrogen deposition which is below the JNCC decision making thresholds at all SSSIs and SACs and therefore can be screened out without the need for an in-combinations effect test as set out in that JNCC guidance. Acid deposition can likewise be screened out.

The Significance test

For the proposed works under application No 212666 no potential effect pathways have been identified and therefore it has concluded that the project will not have a likely significant effect on the River Lugg SSSI and the River Wye SAC.
An appropriate assessment is not required and the proposal can be screened out from further consideration.

The Integrity test

The proposal has screened out and there will be no adverse impact on the integrity of the SAC.

Conclusions

No legal barrier has been identified under the Habitat Regulation Assessment process and planning permission can be granted in this case.