Environment Agency permitting decisions

Bespoke permit

We have decided to grant the variation for Borsdane Farm **operated by Mrs Maureen Entwistle, Mr Jason Entwistle & Mr Darren Entwistle**

The variation number is **EPR/NP3436FJ/V002**

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

Introduction

The changes introduced with this variation are as follows:

- Increase in broiler numbers from **120,000 to 200,000**. This is via the addition of a fifth poultry house of equivalent design of existing four poultry houses. The additional building will be identical in size with the usage of high velocity ridge extraction fans. The houses are complete with fully littered floors and non-leaking drinking systems plus sealed feed bins.
- Drainage plan updated: the changes involve the updating of site drainage to include for poultry building 5 have been included with clean water from the additional house discharging to a single existing attenuation pond and dirty water drainage to an existing 80 m3 underground sealed tank.
- Increase in installation boundary to include the additional poultry house and correct plan to include existing attenuation pond
- Biomass boiler ; one new biomass boiler (<0.2 KW) is added to provide heating for the new poultry house

This is a substantial variation by definition of increase in bird numbers itself being above the relevant scheduled activity threshold.
Section 6.9 A (1) (a) (i) Rearing of poultry intensively in an installation with more than 40,000 places

An assessment of the installation environmental impacts of this variation has been carried out and the installation is considered to have no significant impacts.

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. The majority of requirements have been included in the original permit. The key changes include the addition of amended notifications to schedule 5 for compliance with new IED requirements.

Environmental Impacts

Ammonia Emissions

There is one Special Areas of Conservation (SAC), / Special Protection Areas (SPA), / Ramsar site located within 10km of the installation; this is Manchester Mosses (SAC). There are three Sites of Special Scientific Interest (SSSI) located within 5 kilometres of the installation. There are 12 other nature conservation sites within 2 km of this installation**.**

Ammonia Assessment – SAC / SPA / Ramsar sites

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.

Conclusion

Screening using the ammonia screening tool version 4.4 dated 05/09/14 has determined that the PC's at 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 µg/m^3	Predicted PC µg/m^3	PC % of Critical level
Manchester Mosses	1*	0.006	0.6

*A precautionary critical level of 1 µg/m^3 has been assigned to this site. Where the precautionary level of 1 µg/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.

On the above basis no further assessment is necessary.

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.

Where sites screen out as <20%

Screening using our screening assessment dated 05/09/14 indicated that the PCs for the following SSSIs are predicted to be less than 20% Critical Level for ammonia, acid and N deposition therefore it is possible to conclude no damage. The results of the ammonia screening tool v4.4 are given in the tables below.

A precautionary level of 1µg/m^3 for Critical Level for ammonia has been used during the screen.
Screening indicates that beyond **1009 m** distance, the Process Contribution at conservation sites is less than 20 % of the 1µg/m3 critical level for ammonia. In this case all SSSI's below in Table 2 are beyond this distance.

Table 2 – Distance from source

Site	Distance (m)
Abraham Flashes	4,972
Byrn Marshes and Ince Moss	4,272
Red Moss	3,770

The PCs 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.
Where a CLe of 1µg/m^3 is used, and the process contribution is assessed to be less than the 20% insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification Critical Load values. In these cases the 1µg/m^3 level used has not been confirmed, but it is precautionary.

On the above basis no further assessment is necessary.

Ammonia assessment – Other nature conservation sites

There are twelve such sites within 2 km of this installation. 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.

Sites that screen out after initial review below:

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 4.4 has indicated that emissions from this farm will only have a potential impact on sites with a critical level of 1 µg/m^3 if they are within **349 m** of the emission source. Screening indicates that beyond this distance, the Process Contribution at conservation sites is less than 1µg/m^3. 1µg/m^3 is 100% of the 1ug/m^3 critical level and therefore beyond this distance the PC's are insignificant. In this case all other conversation sites below in Table 3 are beyond this distance.

Table 3 – distance from source

Site	Distance (m)
Hindley Deep Pits LWS	1,161
Hart Common LWS	799
Cunningham Brook LWS	1,681
Little Cannel Pit LWS	1,988
Leeds Liverpool Canal Adlington to Wigan (South)	2,043*
Hilton Branch Line	715
Woodshaw Colliery	1,662
Kirless Lane	1,580

*****This site is just within 2km from installation boundary

Conclusion

The PC's at these sites has been screened as not significant. **It is possible to conclude no significant pollution will occur at these sites and no further assessment is required.**

Sites screen out using detailed modelling supplied by applicant

For the following 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 (Document reference: Revised modelling report submitted with duly making responses 11/09/14).

There are four such sites which did not screen out via our pre-application screening but have screened out after detailed modelling. All four such sites required detailed modelling as they were within 250 metres from installation boundary.The sites are:

- Borsdane Wood (West) ; LWS
- Borsdane Wood (East) – LWS
- Borsdane Wood – Ancient Woodland (AW). Note this is within Borsdane Wood (West)
- Unnamed Ancient Wood.

Table 4 - Ammonia emissions
The figures below are the worst case data for each habitat site from the applicant's detailed modelling:

Site	Critical level ammonia µg/m^3	Predicted PC µg/m^3	PC % of critical level
Borsdane Wood (West) which incorporates Borsdane Wood	3*	0.51	17.1
Borsdane Wood (East)	3*	1.17	53.1
Unnamed AW	3*	0.68	22.7

e.g. * 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 [1]	Predicted PC kg N/ha/yr	PC % of critical load
Borsdane Wood (West) Which incorporates Borsdane Wood	10	4.01	40.0
Borsdane Wood (East)	10	9.14	91.4
Unnamed AW	10	5.31	53.1

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 19/09/14

Acid deposition

The operator has not carried out detailed modelling for acid deposition. Their reasoning they provided in their application was that normally nitrogen deposition is the more stringent standard to screen out. We have carried out checks on the impact of acid deposition using the operators' modelled predictions and can conclude that the impact is low risk. The acid deposition process contributions are significantly below the relevant critical loads. The critical loads applied of 3.11 Kg eq/h/yr for each site were taken from APIS website (www.apis.ac.uk) – 19/09/14.

Overall conclusions linked to detailed modelling

Overall we have undertaken a technical assessment of the accuracy and sufficiency of the operator's detailed modelling to utilise in the above environmental assessment. A summary of our conclusions is as follows:

- We have checked, and are satisfied with the applicant's emission parameters.
- We are satisfied with the applicants approach to considering the effects of building down wash and of terrain on model predictions.
- We are satisfied with the consultant's selection of worst-case receptors.
- We are satisfied that the correct assessment criteria for ammonia concentrations and nitrogen deposition have been used in the assessment.

Conclusion

We have carried out a review of the applicant detailed modelling and confirm we have confidence in the output modelling process contribution estimates. As such all process contributions are < 100 % of the relevant critical level or load.

No further assessment for these sites is required.

Biomass boiler assessment.

The operator is varying their permit to include one biomass boiler with a net rated maximum thermal input of 199 kWh .This boiler will heat poultry houses 4 and 5. The LPG heaters for poultry houses 1 to 3 will continue to be utilised for building heating.

The current permit LPG fired heaters for poultry houses 4 and 5 will be retained as standby back up facilities; these will not to be utilised in normal operation.

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 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).

The biomass boilers meet the requirements of criteria **A** 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.

In terms of virgin wood chip/pellet storage the biomass facility maximum timber storage capacity is *15 tonnes.* Boiler Ash is to be securely stored before being spread under exemption with poultry litter.

In addition the variation application duly making response confirmed control measures within an updated section of their accident management plan to minimise the risk of fire linked to wood storage and procedures in place to respond to any potential fire.

Groundwater and soil monitoring

As a result of the requirements of the Industrial Emissions Directive, all permits are now required to contain condition 3.2.4 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 updated site condition report for Borsdane Farm is within Appendix 5 of the supplementary application documentation.
It includes completion of H5 template plus a revised installation boundary plan and revised site drainage plan
The installation boundary has increased to allow for the 5th building to increase broiler numbers from 120,000 to 200,000 plus the inclusion of a pond to receive surface water which should have been included in installation boundary in original permit.

There are no surface water features on the site; a drainage dyke exists to the south of the installation. There is no evidence of historical contamination at this site

The land has been utilised for arable agriculture for many years with the current permit being in operation since 2013.

Our technical review of this specific former land usage is as follows.

- There is no record of installation area land contamination.
- There is no record of any usage of the installation area except for agricultural usage.
- The site is not within a ground water protection zone or flood risk area.

Therefore the conclusion is there is a low risk of historic groundwater and land contamination due to former activities within installation boundary.

Therefore, although condition 3.2.4 is included in the permit, no groundwater monitoring will be required at this installation as a result.

Odour
There is one sensitive receptor within 400 metres of the installation boundary and therefore an odour management has been prepared. The of residential property is as follows:

- Keepers Cottage – National grid reference SD 62906 06341 (just over 250 metres North of installation boundary).

There is no history of odour complaints linked to this farm. The poultry house ventilation high velocity roof fans will minimise risk of potential odour beyond installation boundary.
An Odour Management Plan has been submitted with this application. The OMP consists of the following documents:

- Appendix 9 initial OMP submission
- Duly making response with more detailed OMP including list of sensitive receptors, Poultry Code of Practice Checklist giving more details on appropriate measures for odour pollution minimisation beyond installation boundary plus procedures on odour monitoring and complaints management

Overall there is the potential for odour pollution from the installation. However the risk of odour pollution beyond the installation boundary is considered insignificant.

Noise
There are sensitive receptors within 400 metres of the installation boundary as stated above in the odour review. The applicant has hence provided a noise management plan in appendix 10 of their supplementary application information and an associated risk assessment in appendix 8 .
Operations with the most potential to cause noise nuisance have been assessed as those involving vehicle engine movement eg. feed delivery, transport of birds onto and off site plus operation of ventilation fans.

To minimise associated noise from these activities the management plan includes usage of dedicated modern, well maintained vehicles and minimisation of deliveries at anti-social hours. The management plan includes a commitment to assess noise levels during such activities and optimise vehicles and procedures to minimise noise.

There is no history of noise complaints linked to the existing poultry house.

Overall there is the potential for noise from the installation beyond the installation boundary. However the risk of noise beyond the installation boundary is considered insignificant.

Annex 1: decision checklist

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. The application was sent for consultation with • Bolton Metropolitan Borough Council Planning Department • Bolton Metropolitan Borough Council Health Department • HSE	✓

Aspect considered	Justification / Detail	Criteria met Yes
Responses to consultation and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision. No consultations comments were received. 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. This permit meets IED requirements. See key issues section above for further information.	✓
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. This plan was finalised with a revised version sent with duly making response. The installation boundary has increased with addition of 5th broiler building and inclusion of attenuation pond for receipt of surface water 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. Please refer to key issues, section 'Groundwater and soil monitoring'. As a result of further assessment, baseline data is not required. 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 screening distance criteria of the following nature conservation sites. • Manchester Mosses (SAC) • Sites of Special Scientific Interest: Three sites including Abram Flashes, Bryn Marshes and Ince Moss, Red Moss. • Other nature conservation sites ; Twelve such sites An ammonia emissions review is included in key issues section of this document. Appendix 11 (dated 22/09/14) has been sent to Natural England for information only. All documents have been saved on EDRM. In conclusion installation environmental impact on the surrounding habitat sites is considered not significant.	✓
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 operating techniques in compliance with our EPR 6.09 guidance for the 5th broiler building. The operating techniques are with those utilised in the other four barns** All poultry houses are built on a concrete base and the walls and roofs are insulated. The sheds are fan ventilated with high velocity ridge fans for main	✓

Aspect considered	Justification / Detail	Criteria met Yes
	emissions to maximise air dispersion and usage of gable end fans for limited period for temperature control within the sheds as per other four existing sheds. The feed bins are sealed. There is an 80 m3 underground tank to receive the dirty wash water. This has been confirmed by the operator as having sufficient capacity for the additional poultry house. In addition procedures are in place to prevent underground tank overfilling and inspection to ensure timely removal of dirty water. Further procedures are in place to ensure clean yard water is diverted to the pond and then dirty water to the underground tank 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.	
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 (EMS)	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 applicant has chosen to utilise their own management system without external certification. Appendix 3 of the supporting information gives the detail of their EMS covering normal operation, maintenance schedules and records, incidents and abnormal operations, complaints system, accident management, training and provision of competent staff plus site security. The accident management plan is currently being prepared to allow completion prior to facility operation beyond EPR scheduled activity threshold. 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.	✓
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 : 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.

No external consultation responses received.

This proposal was also publicised on the Environment Agency's website for 4 weeks but no representations were received during this period.