

Permitting decisions

Variation

We have decided to grant the variation for North Moor Pig Farm operated by Elsham Linc Limited.

The variation number is EPR/NP3636FS/V003

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 provides a record of the decision making process. It summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account.

This decision document provides a record of the decision making process. It:

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision checklist](#) to show how all relevant factors have been taken into account

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice. The introductory note summarises what the variation covers.

Key issues of the decision

New Intensive Rearing of Poultry or Pigs BAT Conclusions document

The new Best Available Techniques (BAT) Reference Document (BREF) for the Intensive Rearing of poultry or pigs (IRPP) was published on the 21st February 2017. There is now a separate BAT Conclusions document which will set out the standards that permitted farms will have to meet.

The BAT Conclusions document is as per the following link

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D0302&from=EN>

Now the BAT Conclusions are published **all new housing within variation applications** issued after the 21st February 2017 must be compliant in full from the first day of operation.

There are some new requirements for permit holders. The conclusions include BAT Associated Emission Levels for ammonia emissions which will apply to the majority of permits, as well as BAT associated levels for nitrogen and phosphorous excretion.

For some types of rearing practices stricter standards will apply to farms and housing permitted after the new BAT Conclusions are published.

This variation determination includes a review only of BAT compliance for new housing introduced with this variation. A BAT review of existing housing compliance with BAT conclusions document is to be the subject of a sector permit review and is beyond the scope of this variation application permit determination.

Please note: tables S3.3, S4.1 and S4.2 have been included to future proof the permit ahead of the permit review. Table S3.3 includes:

1. a limit for fattening pigs in houses 3 and 8 (production pigs > 30kg) of 2.6kg NH₃/animal place/year because the operator has confirmed that the housing system is fully slatted floor with acidification of slurry and frequent slurry removal⁽¹⁾,
2. a limit for fattening pigs in house 3 (Gilt House) (production pigs > 30kg) of 5.65 kg NH₃/animal place/year in because the housing system is a solid manure system.
3. a limit for farrowing sows in houses 4 and 5 (Farrowing House and Old Farrowing House) of 5.6 kg NH₃/animal place/year because the operator has confirmed that the housing system with acidification of slurry is a frequent slurry removal system⁽¹⁾
4. a limit for mating and gestating sows in houses 1, 2 and 9 (Sow house 1, Sow house 2 and Orphanage) of 5.2 kg NH₃/animal place/year because the housing system is a solid manure system.
5. a limit for weaners in houses 6-8 (FlatDeck 1, FlatDeck 2 and Grower) of 0.53 kg NH₃/animal place/year because the operator has confirmed that the housing system with acidification of slurry is a frequent slurry removal system⁽¹⁾.

Notes

(1) The operator has confirmed that the housing system with acidification of slurry is a frequent slurry removal system which meets the following criteria:

- All slurry pits are to be operated with a maximum slurry liquor depth of 800 mm as defined as optimal depth in section 4.7.1.2 of the latest Intensive Farming BREF http://eippcb.jrc.ec.europa.eu/reference/BREF/IRPP/JRC107189_IRPP_Bref_2017_published.pdf, and
- Slurry removal frequency of a maximum of 12 weeks.

Slurry Acidification System

Slurry acidification is one of the agreed BAT measures for ammonia emissions control under BAT 30 d within the latest Intensive Farming BAT conclusions document issued 21/02/17

For reasons of flooring, site drainage and building schedules it is not appropriate to acidify the slurry from all of the buildings at North Moor Pig Farm. In this variation the operator has applied for usage of this BAT measure for the following pig types and pig house numbers:

All livestock in houses 4-8.

There is an agreed certification system, by which suppliers of such systems can obtain a pre-agreed ammonia emissions reduction %. The VERA certification for the applicant's technology provider Jørgen Hyldgaard Staldservice A/S (JH Agro) is given in document 21 JH Agro VERA performance statement and follows the guidance as given in the link below:

http://www.vera-verification.eu/fileadmin/download/Press/201710_VERA_general.pdf

The applicant has provided a certification document for ammonia emissions reduction factor for their acidification of slurry system for pigs up to 30kg and production pigs > 30kg of 64 %. This is based on usage of slurry acidification at a pH of 5.5 which has been confirmed in this application under supporting document 1 (Non-Technical Summary) received 18/01/18.

Critical environmental controls for this technology include:

- 96 % Sulphuric acid tank banded in compliance with latest CIRIA 736 guidance
- Sulphuric acid tank volume of 25 m³ is designed to suit maximum fill volume of 22.3 m³
- Mixing tank has level control and high level alarms to prevent overflow plus pH control to ensure compliance with a pH of 5.5 or lower to ensure ammonia emissions reduction % as detailed above.
- Mixing tank is also located on a concrete base to minimise groundwater and land contamination
- Acidified slurry pipework is sealed and maintenance procedures in place to ensure minimization of risk of slurry fugitives emissions to land and ground water.

We consider the above measures allow compliance with BAT 18 measures to prevent emissions to soil and water from slurry collection within Intensive Farming BAT conclusion document dated February 2017.

In addition the following measures have been assessed as satisfactory:

- Odour control measures. These included static mixing tank with high level control to prevent overflowing and usage of a mechanical separator to remove particulate matter over 2mm in diameter. All the slurry transfer pipework is also sealed. The operator has updated their Odour Management Plan to include contingency measures to assess in event of odour complaints whether the acidification of slurry system is the odour source to allow corrective actions. The mixing tank has been designed to have a concrete lid which is sealed. While the slurry within this tank does smell, the tank is sealed so there are no odour emissions sources from this tank. Any vent from the mixing tank will be designed such that a carbon filter could be added in the event of odour complaints beyond the installation boundary. There is a pH monitor, a mixing pump and an acid dosing pump to dose the sulphuric acid into the slurry all contained within the mixing tank
- Environmental Management System (EMS) has been updated to include procedures, controls and training of operatives linked to addition of Acidification of Slurry within the installation

The operating techniques for this technology has been added to the permit variation S1.2 Operating techniques table.

Industrial Emissions Directive (IED)

The Environmental Permitting (England and Wales) (Amendment) Regulations 2013 were made on the 20 February 2013 and came into force on 27 February 2013. These Regulations transpose the requirements of the IED.

This permit implements the requirements of the European Union 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 (SCR) for North Moor Pig Farm (dated 18/01/18) 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, on the basis of the risk assessment presented in the SCR, we accept that they have not provided base line reference data for the soil and groundwater at the site at this stage and although condition 3.1.3 is included in the permit no groundwater monitoring will be required.**

Odour

Intensive farming is by its nature a potentially odorous activity. This is recognised in our 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 guidance (http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297084/geho0110brsb-e-e.pdf).

Condition 3.3 of the environmental permit reads as follows:

"Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour."

Under section 3.3 of the guidance an Odour Management Plan (OMP) is required to be approved as part of the permitting process, if as is the case here, sensitive receptors (sensitive receptors in this instance excludes properties associated with the farm) are within 400m of the Installation boundary. It is appropriate to require an OMP when such sensitive receptors have been identified within 400m of the installation to prevent, or where that is not practicable, to minimise the risk of pollution from odour emissions. In this instance we have assessed the OMP only for the changes brought about by this variation.

The risk assessment for odour provided with the Application has been updated to include the slurry acidification system and lists the key potential risks of odour pollution beyond the Installation boundary as the mixing tank and associated acidified slurry pipework.

Odour Management Plan Review

The Installation is located within 400m of one sensitive receptor, as listed below (please note, the distances stated are only an approximation from the Installation boundary to the assumed boundary of the properties):

1. High Harbour Farmhouse, approximately 99m to the west of the Installation boundary
2. High Harbour Farm Yard 1, approximately 165m to the north of the Installation boundary

In this instance property 1 is not considered as it is owned by the Operator. The Operator has provided a revised OMP (received 15/03/18) in response to a request for further information sent 08/03/18. This revised OMP has been assessed against the requirements of 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 (version 2), Appendix 4 guidance 'Odour Management at Intensive Livestock Installations' and our Top Tips Guidance and Poultry Industry Good Practice Checklist (August 2013) as well as the site specific circumstances at the Installation. We consider that the OMP is acceptable because it complies with the above guidance, with details of odour control measures, contingency measures and complaint procedures described below.

The Operator is required to manage activities at the Installation in accordance with condition 3.3.1 of the Permit and its OMP. The revised OMP includes odour control measures linked to the variation changes, in particular, procedural controls for the acidification of slurry system.

The OMP also provides a suitable procedure in the event that complaints are made to the Operator. The OMP is required to be reviewed at least every 4 years and/or after a complaint is received, whichever is the sooner.

The Environment Agency has reviewed the OMP and considers it complies with the requirements of our H4 Odour management guidance note. We agree with the scope and suitability of key measures but this should not be taken as confirmation that the details of equipment specification design, operation and maintenance are suitable and sufficient. That remains the responsibility of the Operator.

Conclusion

Although there is the potential for odour pollution from the Installation, the Operator's compliance with the Permit and its OMP will minimise the risk of odour pollution beyond the Installation boundary. The risk of odour pollution at sensitive receptors beyond the Installation boundary is therefore not considered significant.

Noise

Intensive farming by its nature involves activities that have the potential to cause noise pollution. This is recognised in our 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 guidance. Under section 3.4 of this guidance a Noise Management Plan (NMP) must be approved as part of the permitting determination, if there are sensitive receptors within 400m of the Installation boundary.

Condition 3.4 of the Permit reads as follows:

Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan, to prevent or where that is not practicable to minimise the noise and vibration.

There are sensitive receptors within 400 metres from the Installation boundary as stated in the odour section above, and the Operator has provided a revised noise management plan (NMP) (received 15/03/18) as part of the Application supporting documentation, and further details are provided below.

The risk assessment for the Installation provided with the Application lists key potential risks of noise pollution linked to the variation changes beyond the Installation boundary. These activities are the slurry transfer pump, acid dosing pump, mixing pump and the recirculation pump.

Noise Management Plan Review

The Operator is required to manage activities at the Installation in accordance with condition 3.4.1 of the Permit and its NMP. The NMP includes noise control measures linked to the variation changes, in particular, for the slurry transfer pump, acid dosing pump, mixing pump and the recirculation pump.

Conclusion

We have assessed the NMP and the H1 risk assessment for noise and conclude that the Applicant has followed the guidance set out in EPR 6.09 Appendix 5 'Noise management at intensive livestock installations'. We are satisfied that all sources and receptors have been identified, and that the proposed mitigation measures will minimise the risk of noise pollution / nuisance.

Dust and Bio aerosols

The use of Best Available Techniques and good practice will ensure minimisation of emissions. There are measures included within the Permit (the 'Fugitive Emissions' conditions) to provide a level of protection. Condition 3.2.1 'Emissions of substances not controlled by an emission limit' is included in the Permit. This is used in conjunction with condition 3.2.2 which states that in the event of fugitive emissions causing pollution following commissioning of the Installation, the Operator is required to undertake a review of site activities, provide an emissions management plan and to undertake any mitigation recommended as part of that report, once agreed in writing with the Environment Agency.

Guidance on our website concludes that applicants need to produce and submit a dust and bio aerosol risk assessment with their applications only if there are relevant receptors within 100 metres of their farm, e.g. the farmhouse or farm worker's houses. Details can be found via the link below:

www.gov.uk/guidance/intensive-farming-risk-assessment-for-your-environmental-permit#air-emissions-dust-and-bioaerosols.

As there are receptors within 100m of the Installation, the Applicant was required to submit a dust and bio aerosol risk assessment in this format.

In the guidance mentioned above it states that particulate concentrations fall off rapidly with distance from the emitting source. This fact, together with the proposed good management of the Installation such as keeping areas clean from build-up of dust, and other measures in place to reduce dust and risk of spillages (e.g. feed management/delivery procedures) all reduce the potential for emissions impacting the nearest receptors. The Applicant has confirmed the measures in their operating techniques to reduce dust for the following: General – day-to-day activity; Pig feed – Dust from filling and emptying feed bins, dust from feed storage, feed spill control, the use of wet and dry feed and feeding method; Type of slurry system; Ventilation systems; House cleaning – general management; Building layout and design.

Conclusion

We are satisfied that the measures outlined in the Application will minimise the potential for dust and bioaerosol emissions from the Installation.

Ammonia

A full ammonia impact assessment has not been carried out, as this variation has no increase in livestock numbers and the inclusion of the slurry acidification system will result in an overall reduction of 64% in ammonia emissions from all the houses.

Decision checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
The facility	
The regulated facility	We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility'. The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.
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 The plan is included in the permit.
Site condition report	The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports
Biodiversity, heritage,	The application is within the relevant distance criteria of a site of heritage,

Aspect considered	Decision
landscape and nature conservation	<p>landscape or nature conservation, and/or protected species or habitat.</p> <p>We have not completed a full assessment of the application and its potential to affect all known sites of nature conservation as part of the permitting process. This is because the variation will result in a reduction of overall ammonia emissions.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p>
Environmental risk assessment	
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	
General operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.</p> <p>The operating techniques are as follows:</p> <ul style="list-style-type: none"> • 96 % Sulphuric acid tank bunded in compliance with latest CIRIA 736 guidance • Sulphuric acid tank volume of 25 m³ is designed to suit maximum fill volume of 22.3 m³ • Mixing tank has level control and high level alarms to prevent overfill plus pH control to ensure compliance with a pH of 5.5 or lower to ensure ammonia emissions reduction % as detailed above. • Mixing tank is also located on a concrete base to minimise groundwater and land contamination • Odour control measures– includes static mixing tank with high level control to prevent overfilling and usage of a mechanical separator to remove particulate matter over 2mm in diameter. All the slurry transfer pipework is sealed. OMP updated to include contingency measures to assess in event of odour complaints whether the acidification of slurry system is the odour source to allow corrective actions. The mixing tank has been designed to have a concrete lid which is sealed. While the slurry within this tank does smell, the tank is sealed so there are no odour emissions sources from this tank. Any vent from the mixing tank will be designed such that a carbon filter could be added in the event of odour complaints beyond the installation boundary. There is a pH monitor, a mixing pump and an acid dosing pump to dose the sulphuric acid into the slurry all contained within the mixing tank. • Environmental Management System (EMS) has been updated to included procedures, controls and training of operatives linked to addition of Acidification of Slurry within the installation.
Odour management	We have reviewed the odour management plan in accordance with our guidance on odour management.

Aspect considered	Decision
	We consider that the odour management plan is satisfactory.
Noise management	<p>We have reviewed the noise management plan in accordance with our guidance on noise assessment and control.</p> <p>We consider that the noise management plan is satisfactory.</p>
Permit conditions	
Updating permit conditions during consolidation	We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit.
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Pre-operational conditions	<p>Based on the information in the application, we consider that we need to impose a pre-operational condition.</p> <p>We have included pre-operational condition PO1 as described in table S1.4 requiring the operator to submit a written plan for approval providing details of the drainage, location and operating techniques for the emergency shower to minimise the risk of sulphuric acid run-off to ground or surface water from the emergency shower.</p> <p>We have included pre-operational condition PO2 as described in table S1.4 requiring the operator to submit a written plan for approval providing details of the operating techniques to contain fugitive emissions from the slurry acidification system to minimise the risk of entry of slurry and/or sulphuric acid into groundwater and of land contamination specifically, in light of all relevant groundwater boreholes within the installation boundary.</p>
Improvement programme	<p>Based on the information on the application, we consider that we need to impose an improvement programme.</p> <p>We have previously imposed an improvement programme to ensure that proposals are provided for replacing or covering existing uncovered slurry stores and lagoons to comply with the requirements of S3.2 of SGN How to Comply – Intensive Farming, Version 2.</p> <p>We have decided to remove this improvement programme as the slurry acidification system is compliant with the 2017 “BAT conclusions for the intensive rearing of poultry or pigs”, BAT 16c.</p> <p>If the operator does not install the slurry acidification system, the operator will need to present an alternative measure to ensure that any slurry store will be complaint with BAT 16 by 2021. This will be addressed during permit review process.</p>
Emission limits	We have decided that emission limits are required in the permit. BAT AELs have been added in line with the Intensive Farming sector BAT conclusions document dated 21/02/17. These limits are included in permit table S3.3.
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>These monitoring requirements have been imposed in order to ensure compliance</p>

Aspect considered	Decision
	with Intensive Farming BAT conclusions document dated 21/02/17.
Reporting	<p>We have specified reporting in the permit.</p> <p>We made these decisions in order to ensure compliance with Intensive Farming BAT conclusions document dated 21/02/17.</p>
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	<p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.</p>