

Permitting decisions

Variation

We have decided to grant the variation for Monkcastle Pig Farm operated by Birchwood Farms Limited.

The variation number is EPR/UP3533UV/V005.

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 in to 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
- shows how we have considered the [consultation responses](#)

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; although we have set a requirements for appropriate AELs to apply to existing housing after 21/2/2021.

New BAT conclusions review

There are 34 BAT conclusion measures in total within the BAT conclusion document dated 21st February 2017.

The Applicant has confirmed their compliance with all BAT conditions for the new housing, houses Y3 and Y4, in their document reference Technical Standards and dated 26/07/19 which has been referenced in Table S1.2 Operating Techniques of the permit.

The following is a more specific review of the measures the Applicant has applied to ensure compliance with the above key BAT measures.

BAT measure	Applicant compliance measure
BAT 3 - Nutritional management Nitrogen excretion	<p>The Applicant has confirmed it will demonstrate that the new houses, houses Y3 and Y4, within the installation achieves levels of Nitrogen excretion below the required BAT-AEL of 13 kg N/animal place/year by an estimation using manure analysis for total Nitrogen content.</p> <p>The remaining houses on the installation have until 21/02/21 to demonstrate BAT measures;</p> <ul style="list-style-type: none">- Weaners (rearing of pigs up to 30kg) – 4 kg N/animal place/year- Fattening Pigs (production pigs over 30kg) – 13 kg N/animal place/year- Farrowing Sows – 30 kg N/animal place/year- Mating and gestating sows – 30 kg N/animal place/year <p>The above levels will be achieved by using mass balance based on feed intake, dietary content and animal performance.</p> <p>Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.</p> <p>Pigs are mixed within houses and therefore, in Table S3.3 of the Permit the worst case BAT-AEL has been assigned for that house.</p>
BAT 4 Nutritional management Phosphorous	<p>The Applicant has confirmed it will demonstrate that the new houses, houses Y3 and Y4, within the installation achieves levels of Phosphorous excretion below the required BAT-AEL of 5.4 kg</p>

BAT measure	Applicant compliance measure
excretion	<p>P₂O₅ animal place/year by an estimation using manure analysis for total Phosphorous content.</p> <p>The remaining houses on the installation have until 21/02/21 to demonstrate BAT measures;</p> <ul style="list-style-type: none"> - Weaners (rearing of pigs up to 30kg) – 2.2 kg P₂O₅/animal place/year - Fattening Pigs (production pigs over 30kg) – 5.4 kg P₂O₅/animal place/year - Farrowing Sows – 15 kg P₂O₅/animal place/year - Mating and gestating sows – 15 kg P₂O₅/animal place/year <p>The above levels will be achieved by using mass balance based on feed intake, dietary content and animal performance.</p> <p>Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.</p> <p>Pigs are mixed within houses and therefore, in Table S3.3 of the Permit the worst case BAT-AEL has been assigned for that house.</p>
BAT 24 Monitoring of emissions and process parameters <ul style="list-style-type: none"> - Total nitrogen and phosphorous excretion 	Table S3.3 Process monitoring requires the operator to undertake relevant monitoring that complies with these BAT conclusions
BAT 25 Monitoring of emissions and process parameters <ul style="list-style-type: none"> - Ammonia emissions 	Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 26 Monitoring of emissions and process parameters <ul style="list-style-type: none"> - Odour emissions 	The approved OMP includes the following details for on Farm Monitoring and Continual Improvement: <ul style="list-style-type: none"> - The staff will perform a daily boundary walk to check the surrounding area for high levels of odour, as well as this checks will be performed on the surrounding area by persons who do not regularly work on the farm. - Visual (and nasal) inspections of potentially odorous activities will be carried out.
BAT 27 Monitoring of emissions and process parameters -Dust emissions	Table S3.3 Process monitoring requires the operator to undertake relevant monitoring that complies with these BAT conclusions. The Applicant has confirmed they will report the dust emissions to the Environment Agency annually by multiplying the dust emissions factor for pigs by the number of pigs on site.
BAT 30 Ammonia emissions from pig houses	The Applicant has confirmed it will demonstrate it achieves levels of ammonia below the required BAT-AEL for the following pig types: <p>Pigs 7 – 30kg: 0.53 kg NH₃/animal place/year.</p> <p>Pigs > 30kg (on PSF vacuum): 2.6 kg NH₃/animal place/year.</p> <p>Pigs > 30kg (on SF): 5.65 kg NH₃/animal place/year.</p> <p>Sows (on PSF): 2.7 kg NH₃/animal place/year.</p> <p>Sows (on SF): 5.2 kg NH₃/animal place/year.</p> <p>Farrowers: 5.6 kg NH₃/animal place/year.</p> <p>The Installation does not include an air abatement treatment facility, hence the standard emission factor complies with the BAT AEL.</p>

More detailed assessment of specific BAT measures

Ammonia emission controls

A BAT Associated Emission Level (AEL) provides us with a performance benchmark to determine whether an activity is BAT.

Ammonia emission controls – BAT conclusion 30(pigs)

The new BAT conclusions include a set of BAT-AELs for ammonia emissions to air from animal housing for pigs.

There is a footnote in some of the Ammonia BAT-AELs allowing a higher AEL for existing plant. 'New plant' is defined as plant first permitted at the site of the farm following the publication of the BAT conclusions. 'Existing plant' is defined in the BREF as any plant that is not a 'new plant'. The key phrase is 'first permitted'.

For variations all new housing on existing farms will need to meet the BAT-AEL, while the existing housing will be allowed the less stringent existing plant AEL. The 'existing plant' BAT-AEL will apply indefinitely to any existing housing on any site permitted before 21st February 2017 or at least until the next revision of the BREF.

Pigs are mixed within houses and therefore, in Table S3.3 in the Permit the worst case BAT-AEL (lowest) has been assigned for that house.

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 Monkcastle Pig Farm 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.

The risk assessment for the Installation provided with the Application lists key potential risks of odour pollution beyond the Installation boundary. These activities are as follows:

- Feed selection
- Manure and slurry storage
- Yard areas
- Housing
- Drinking water systems
- Ventilation
- Cleanout
- Carcase storage and disposal
- Feed storage and mixing
- Manure and slurry spreading
- Dust build up

These and further risks are also assessed in the OMP detailed below, which includes control measures for these.

Odour Management Plan Review

An odour management plan was submitted as part of the permit application because there are sensitive receptors within 400m of the installation boundary.

The installation is located with 400m of 10 receptors as detailed in the OMP, including five within 100m of the site to the south, three within 100m to the east of the site and two within 400m of the east of the site. The closest property is the residence of the farm manager and therefore not considered in this assessment as it is unlikely that odour complaints would be received from this property. There has been no history of odour complaints for the current operation.

The odour management plan details how activities on site will be managed to control odour, in particular to the delivery of feed and stock, litter (including carcasses) management, dirty water control, and heating and ventilation. The OMP outlines a complaints procedure, should there be any, contingency plans for abnormal operations and the OMP will be reviewed every year, or earlier if there are substantial complaints.

We are therefore satisfied that operations on site will reduce the risk of odour pollution and consider the site to be low risk.

The Environment Agency has reviewed the OMP and considers it compliant with the requirements of our H4 Odour Management guidance note. We agree with the scope and suitability of the 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 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 of the Installation boundary as stated in section 4.4.2 above. The Operator has provided a noise management plan (NMP) as part of the Application supporting documentation, and further details are provided in section 4.5.2 below.

The risk assessment for the Installation provided with the Application lists key potential risks of noise pollution beyond the Installation boundary. These activities are as follows:

- Feeding
- Feed delivery and Mill and Mix
- Feed preparation
- Pig moving
- Pig loading, in and out
- Bedding pens
- Mucking out
- Slurry transfer pump
- Slurry tanker filling and emptying
- Manure loading/transport and spreading
- Delivery of supplies and materials
- Ventilation fans
- Vehicles operating within installation boundary
- Alarms

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.

Noise Management Plan Review

The plan was received as part of the permit application. Operations likely to cause noise pollution are assessed and include: use of machinery and vehicles, feed transfer, ventilation, pig removal and restocking, personnel and alarm systems. The noise management plan outlines control measures that will be taken to reduce any noise impact.

The installation is located within 400m of 10 receptors as detailed in the NMP, including five within 100m of the site to the south, three within 100m to the east of the site and two within 400m of the east of the site. The closest property is the residence of the farm manager and therefore not considered in this assessment as it is

unlikely that noise complaints would be received from this property. There has been no history of noise complaints for the current operation.

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.

The installation is located within 400m of 10 receptors as detailed in the NMP, including five within 100m of the site to the south, three within 100m to the east of the site and two within 400m of the east of the site.

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, including 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. litter and feed management/delivery procedures) all reduce the potential for emissions impacting the nearest receptors. The Applicant has confirmed the following measures in their operating techniques to reduce dust:

- Pig feed
- Bedding
- House and yard cleaning
- Ventilation

Conclusion

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

Ammonia

The applicant has demonstrated that the housing will meet the relevant NH3 BAT-AEL.

There is one Special Areas of Conservation (SAC) site located within 5 kilometres of the installation. There are no Sites of Special Scientific Interest (SSSI) located within 5 km of the installation. There are also two Ancient Woodlands (AW) within 2 km of the installation.

Ammonia assessment – SAC/SPA/Ramsar

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 (CL_e) or critical load (CL_o) 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 5 km of the SAC.

Screening using the ammonia screening tool version 4.5 has determined that the process contributions of ammonia emissions from the application site is over the 4% significance threshold. As such, it is not possible to conclude no adverse effect alone. Where the process contribution falls between 4% and 20%, Environment Agency guidance indicates that an in combination assessment should be undertaken.

There are no other farms acting in combination with this application. The PC is predicted to be less than 20% of the critical level / load significance threshold. It is possible to conclude no adverse effect to the site from the installation and therefore no further assessment is required. See results below.

Table 1 – Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted process contribution $\mu\text{g}/\text{m}^3$	% of critical level
River Eden SAC	3*	0.129	4.3

*e.g. Natural England advised that a CLe of 3 for ammonia should be applied across the River Eden SAC (January 2019)

No further assessment is required.

Ammonia assessment - AW

The following trigger thresholds have been applied for the assessment of these sites:

- If the process contribution (PC) is below 100% of the relevant critical level (CLe) or critical load (CLO) then the farm can be permitted with no further assessment.

Initial screening using ammonia screening tool version 4.5 has indicated that emissions from Monkcastle Farm will only have a potential impact on the AW sites with a precautionary critical level of $1\mu\text{g}/\text{m}^3$ if they are within 1,292 metres of the emission source.

Beyond 1,292m the PC is less than $1\mu\text{g}/\text{m}^3$ and therefore beyond this distance the PC is insignificant. In this case all AWs are beyond this distance (see table below) and therefore screen out of any further assessment.

Table 2 – AW Assessment

Name of SAC/SPA/Ramsar	Distance from site (m)
Raughtonguill Wood	1,361
Gill Beck Wood	1,719

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.
Consultation	
Consultation	<p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>The application was publicised on the GOV.UK website.</p> <p>We consulted the following organisations:</p> <ul style="list-style-type: none"> - Local Authority – Cumbria - Health & Safety Executive - Director of Public Health – Cumbria - Public Health England - Eden District Council <p>The comments and our responses are summarised in the consultation section.</p>
The facility	
The regulated facility	<p>We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility',.</p> <p>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.</p>
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 including the discharge points. The plan is included in the permit.
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>We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We consider that the application will not affect any sites of nature conservation,</p>

Aspect considered	Decision
	landscape and heritage, and/or protected species or habitats identified.
Environmental risk assessment	
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p>
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 for the new housing are as follows:</p> <ul style="list-style-type: none"> - Two new finisher pig houses with high velocity fans and fully slatted flooring with frequent vacuum removal.
Odour management	<p>We have reviewed the odour management plan in accordance with our guidance on odour management.</p> <p>We consider that the odour management plan is satisfactory.</p>
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(s).
Emission limits	. 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 with the 2017 Intensive Farming BAT conclusion document.</p>
Reporting	<p>We have specified reporting in the permit.</p> <p>We have made these decisions in accordance with the 2017 Intensive Farming BAT conclusion 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.

Aspect considered	Decision
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>

Consultation

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from
Public Health England
Brief summary of issues raised
Raised concerns with emissions to air of bioaerosols, dust including particulate matter and ammonia and the potential impact on public health.
Summary of actions taken or show how this has been covered
The Environment Agency is satisfied following a review of the information provided by the Applicant, and the conditions present within the permit, that emissions of bioaerosols, dust and ammonia from the Installation will not pose an increased risk of pollution to the environment or harm to human health. To prevent significant emissions from the site the Operator has proposed appropriate measures to manage dust and bioaerosols - a risk assessment has been provided by the Operator, together with a dust and bioaerosols management plan. This includes the use of appropriate housing design and management and appropriate containment of feedstuff. We are satisfied that these measures will appropriately mitigate emissions to prevent a significant impact from the site.

Response received from
Eden District Council
Brief summary of issues raised
Review of all documentation and no comments to make with regards to the proposed changes. No complaints have been received in the last 10 years.
Summary of actions taken or show how this has been covered
N/A

The Health and Safety Executive, Cumbria Local Authority and the Director of Public Health were consulted, with a deadline for responses of 21/11/19, but no responses were received.

In addition, the application was publicised on the www.gov.uk website, but no comments were received.