

Permitting decisions

Variation

We have decided to grant the variation for Bickmarsh Hall Pig Unit operated by Mr Malcolm Green and Mr Barry Green (trading as B & M Green Pigs).

The variation number is EPR/GP3031MM/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 provides a record of the decision making process. It:

- highlights [key issues](#) in the determination; and
- 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 21 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 21 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.

New BAT conclusions review

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

The Applicant has confirmed their compliance with all BAT conditions for the new housing, in their document reference 'Document 011 – Technical Standards Control of Emissions' and dated 05/02/19.

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	For the new pig shed, the Applicant has confirmed it will demonstrate it achieves levels of Nitrogen excretion below the required BAT-AELs of 13.0 kg N/animal place/year by an estimation using manure analysis for total Nitrogen content. Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 4 Nutritional management Phosphorous excretion	For the new pig shed, the Applicant has confirmed it will demonstrate it achieves levels of Phosphorous excretion below the required BAT-AEL of 5.4 kg P ₂ O ₅ animal place/year by an estimation using manure analysis for total Phosphorous content. Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 24 Monitoring of emissions and process parameters - 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 - 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 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.
BAT 30 Ammonia emissions from pig houses	The Applicant has confirmed it will demonstrate it achieves levels of ammonia below the required BAT-AEL: Pigs > 30kg: 2.6 kg NH ₃ /animal place/year. The Installation does not include an air abatement treatment facility, hence the standard emission factor complies with the BAT AEL.

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

The new BAT conclusions include a set of BAT-AEL's 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 21 February 2017 or at least until the next revision of the BREF.

More detailed assessment of AEL's

Pig housing

The new housing has a fully slatted floor with vacuum system, and is for pigs weighing over 30kg. This housing has a BAT AEL of 2.6 kg NH₃/animal place/yr. These pigs have are fed a 2% reduced crude protein and therefore the emission factor is estimated to be 2.49 kg NH₃/animal place/yr, lower than the BAT AEL.

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 Bickmarsh Hall Pig Unit (dated 12/06/19) 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 Delivery and Storage
- Carcase storage and disposal
- Slurry Handling
- Pig Housing and ventilation

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. Odour has been risk assessed in line with H1.

There are two relevant sensitive receptors within the 400 metre criteria; with the closest is approximately 300 metres from the installation boundary. Both receptors are a minimum of 400m from the new pig shed and new slurry lagoon.

A revised OMP was provided by the operator. The final odour management plan, dated 05/02/19, details how activities on site will be managed to control odour in particular the delivery of feed and stock, litter management and slurry management. The OMP outlines a complaints procedure should there be any complaints.

The revised OMP includes a more thorough contingency plan for abnormal operating scenarios and measures to minimize odour pollution.

New pig shed

The new pig shed is located a minimum of 400m from the nearest sensitive receptor. The shed will be managed in line with all other sheds, in accordance with the OMP. Due to the distance from the nearest receptors, the increase in odour risk from the new shed is low. The Operator has shown appropriate controls to minimise the risk of odour from the pig sheds on site. These measures include:

- Use of nipple drinkers and feeders to minimise leakage.
- Slurry removed at least every 12 weeks to ensure a continuous void between the slurry and the slats.
- All pens and stock checked for cleanliness as part of daily welfare routines.
- All pens and buildings cleaned out in accordance with written cleaning plan.
- Potentially odorous spillages are cleaned up immediately.
- Stocking density maintained at or below levels set out in Welfare Regulations.
- Temperature is computer controlled with daily monitoring carried out by farm staff.

Slurry storage

The site will be adding a new slurry storage tank with a capacity of 6,773m³, and is constructed of coated steel. The Operator has shown appropriate controls to minimise the risk of odour from the slurry storage on site.

These measures include:

- The slurry store will be positioned on the eastern boundary of the site, a minimum of 400m from the nearest sensitive receptor.
- The new slurry tank is to be fitted with a floating cover, and the existing slurry tank will be retrofitted with a cover to help prevent potential odour emissions.
- The slurry tank is SSAFO compliant.
- The site will use a slurry separators to reduce solids entering the slurry store. This is a recognised method to reduce the feed supply to microbes within slurry stores.
- The slurry separator will be checked daily with any problems identified and followed up as required to maintain efficient use.
- Slurry removal will be via umbilical pumping to the fields or with tractor vacuum tankers. All removal will be carried out by trained staff. Slurry removed at least every 12 weeks.
- Any slurry spillage would be captured immediately with straw and cleared up with slurry tanker by farm staff.

- The solid fraction of the slurry will be stored on a pad under cover. The cover will prevent ingress of rain water and contribute to a reduction in odour through sheltering the manure from the effects of wind.

We are satisfied that the measures being used by the Operator shall limit the impact of odour on the nearest receptors, and we consider that the odour management plan is satisfactory.

Ammonia

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

There are no Special Areas of Conservation (SAC), /Special Protection Area(s) (SPA), /Ramsar sites located within 10 kilometres of the installation.

There are 3 Sites of Special Scientific Interest (SSSI) located within 5 km of the installation.

There are also 2 Local Wildlife Sites (LWS) within 2 km of the installation.

Ammonia assessment – SSSI

The following trigger thresholds have been applied for assessment of SSSIs:

- If the process contribution (PC) is below 20% 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 SSSI.

Initial screening using the ammonia screening tool version 4.5 has indicated that emissions from Bickmarsh Hall Pig Unit will only have a potential impact on SSSI sites with a precautionary critical level of 1µg/m³ if they are within 3,160 metres of the emission source.

Beyond 3,160m the PC is less than 0.2µg/m³ (i.e. less than 20% of the precautionary 1µg/m³ critical level) and therefore beyond this distance the PC is insignificant. In this case all SSSIs are beyond this distance (see table below) and therefore screen out of any further assessment.

Where the precautionary level of 1µg/m³ is used, and the process contribution is assessed to be less than 20% the site automatically screens out as insignificant and no further assessment of critical load is necessary. In this case the 1µg/m³ level used has not been confirmed by Natural England, but it is precautionary. It is therefore possible to conclude no likely damage to these sites.

Table 1 – SSSI Assessment

Name of SSSI	Distance from site (m)
Broom Railway Cutting	3,918m
Welford Field	4,273m
Windmill Hill	4,329m

Ammonia assessment - LWS

Screening using detailed modelling [Reference: *A Report on the Modelling of the Dispersion and Deposition of Ammonia from the Existing and Proposed Piggery at Bickmarsh Hall Farm, Bidford-on-Avon in Warwickshire*, dated: 27/02/19] has determined that the PC on the LWSs for ammonia emissions/nitrogen deposition/acid deposition from the application site are under the 100% significance threshold and can be screened out as having no likely significant effect. See results below.

Detailed modelling provided by the applicant has been audited in detail by our Air Quality Modelling and Assessment Unit (AQMAU) and we have confidence that we can agree with the report conclusions.

Table 2 - Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of critical level
Fox Covert	3**	1.019	34.0
River Avon and Tributaries	3**	1.320	44.0

* Precautionary CLe of $1 \mu\text{g}/\text{m}^3$ has been used. Where the precautionary level of $1 \mu\text{g}/\text{m}^3$ is used, and the process contribution is assessed to be less than 100% the site automatically screens out as insignificant, and no further assessment of critical load is necessary. In these cases the $1 \mu\text{g}/\text{m}^3$ level used has not been confirmed, but it is precautionary.

** CLe 3 applied as no protected lichen or bryophytes species were found when checking Easimap2 layer.

Table 3 – Nitrogen deposition

Site	Critical load kg N/ha/yr. *	Predicted PC kg N/ha/yr.	PC % of critical load
Fox Covert	10	7.94	79.4

* Critical load values taken from APIS website (www.apis.ac.uk) – 14/06/19

Table 4 – Acid deposition

Site	Critical load keq/ha/yr*	Predicted PC keq/ha/yr.**	PC % of critical load
Fox Covert	10.893	1.202	11.0
River Avon and Tributaries	4.928	1.585	32.2

* Critical load values taken from APIS website (www.apis.ac.uk) – 20/02/19

**Acid deposition PC has been calculated using the ammonia screening tool version 4.5 (dated 20/02/19).

The detailed modelling showed that the nitrogen deposition impact from the proposed installation on the River Avon and Tributaries LWS, resulted in a maximum annual nitrogen deposition PC of 10.28 kg/ha. This equates to 102.8% of the site's Critical Load (10 kg N/ha/yr), which would signify potential significant effects.

However the detailed modelling estimated the emissions from the installation as the emission factor for the 2,880 pigs over 30kg, in sheds with fully slatted floors, used an emission factor of 2.488 (kg-NH₃/animal-place/y). A reduced emission factor of 2.00 (kg-NH₃/animal-place/y) could have been used due to the sheds being shallow pit and having frequent slurry removal. If the reduced emission factor had been used, the impact on River Avon and Tributaries LWS would be screened out as not significant.

Furthermore it is estimated in the modelling that only <0.1% of the LWS would have the potential for the nitrogen deposition CLo to be exceeded. The LWS is also predominantly an aquatic feature which would not be considered as part of an ammonia impact assessment.

We are satisfied that the Operator is utilising the measures stated in BAT 3, 14, 16, 23, 25 and 30 to reduce and monitor ammonia emissions from the installation.

No further assessment is necessary.

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 decision was taken in accordance with our guidance on confidentiality.
Consultation/Engagement	
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"> • Food Standards Agency • Health & Safety Executive • Worcestershire Regulatory Services, Environmental Health & Licensing • Public Health England <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 are 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. 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, 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, landscape and heritage, and/or protected species or habitats identified.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p>

Aspect considered	Decision
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> <p><u>Dust and bioaerosols</u></p> <p>The new pig shed and slurry management features introduced as part of the variation are a minimum of 200m from the nearest sensitive receptor. Due to the low potential effect on this receptor, the Operator's existing dust risk assessment has not been reviewed as part of this determination.</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>
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. Please see key issues for further information.</p>
Noise management	<p>We have reviewed the noise management plan in accordance with our guidance on noise assessment and control.</p> <p>The variation is introducing a new pig shed and slurry management features, which are a minimum of 400m from the nearest sensitive receptor. We are satisfied that the Noise Management Plan is sufficient to cover this increase in noise risk.</p>
Permit conditions	
Updating permit conditions during consolidation	<p>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).</p>
Emission limits	<p>ELVs based on BAT have been set for the following substances:</p> <ul style="list-style-type: none"> • N excreted/animal place/year • P₂O₅ excreted/animal place/year • NH₃ /animal place/year <p>The different limits for the pig types and housing types is shown in Table S3.3 of the permit.</p> <p>Existing housing does not need to comply with these emission limits until 21/02/21. Details with regards to how the Operator will comply with these BAT requirements for existing housing will be the subject of a future sector permit review.</p>
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 implement the IRPP BAT Conclusions.</p>

Aspect considered	Decision
	Existing housing does not need to comply with these emission limits until 21/02/21. Details with regards to how the Operator will comply with these BAT requirements for existing housing will be the subject of a future sector permit review.
Reporting	<p>We have specified reporting in the permit for emissions of ammonia, dust, nitrogen and phosphorus.</p> <p>We made these decisions in accordance with the IRPP BAT Conclusions, dated 21/02/17.</p> <p>Existing housing does not need to comply with these emission limits until 21/02/21. Details with regards to how the Operator will comply with these BAT requirements for existing housing will be the subject of a future sector permit review.</p>
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
Worcestershire Regulatory Services, Environmental Health & Licensing – dated 02/10/19
Brief summary of issues raised
There was an odour complaint in 2013 relating to the spreading of manure on land. No further complaints have been received.
Summary of actions taken or show how this has been covered
The spreading of manure on land is not a consideration for this Environmental Permit.

Response received from
Public Health England – dated 21/10/19
Brief summary of issues raised
No site specific issues raised. It was identified the main emissions of potential public health significance are emissions to air of bioaerosols, dust including particulate matter, and ammonia.
Summary of actions taken or show how this has been covered
<u>Dust and bioaerosols</u> The new pig shed and slurry management features introduced as part of the variation are a minimum of 200m from the nearest sensitive receptor. Due to the low potential effect on this receptor, the Operator's existing dust risk assessment has not been reviewed as part of this determination.
<u>Ammonia</u> The detailed ammonia modelling for the activity demonstrates that the nearest human health receptor would have a maximum annual impact of ammonia between 8 µg/m ³ and 20 µg/m ³ , from the farm activities. The majority of this will come from the existing activity, as opposed to the new pig sheds which are located 200m+ from the nearest receptor. We have considered the predictions of ammonia between 8 µg/m ³ and 20 µg/m ³ at receptors compared against the environmental standards of 180µg/m ³ and 2500µg/m ³ for both the long term and short term respectively. Our modelling shows that under all scenarios considered it is unlikely that there would be an exceedance of the environmental standards (ES) at receptors.

Representations from individual members of the public.

None received.