

Permitting decisions

Variation

We consider we have taken into account all relevant considerations and legal requirements and that permits in the pig sector 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 for the BAT review for the pig sector. Every site has been individually reviewed against the BAT conclusions and an assessment made as to whether this generic decision document can be relied on. It explains our decision for all sites in the sector where a site specific document has not been considered necessary. It:

- highlights key issues in the determination of the permit to take account of the Best Available Techniques (BAT) Conclusions for the Intensive Rearing of Poultry or Pigs and the legal requirement to review the permit
- summarises the decision making process for each BAT conclusion and identifies how the requirements are covered by the permit conditions and which requirements are new

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

BAT conclusions review

This is an Environment Agency initiated variation. The purpose of the review is to reconsider and if necessary update the permit taking into account new or updated requirements set out in the BAT Conclusions for the Intensive Rearing of Poultry or Pigs published on 21 February 2017¹.

The BAT conclusions document is available to download online:

<https://eippcb.jrc.ec.europa.eu/reference/intensive-rearing-poultry-or-pigs-0>

We have reviewed permits against the BAT conclusions and have concluded operators will be compliant with the Environmental Permitting Regulations/Industrial Emissions Directive if they are compliant with their existing permit as varied including updated permit conditions and schedules. The BAT conclusions list specific techniques recommended to ensure environmental protection. BAT is neither prescriptive nor exhaustive and techniques other than those identified in the BAT conclusion document may be used where they ensure at least an equivalent level of protection. We are satisfied that either an appropriate combination of techniques identified in the BAT conclusions are being used or alternative techniques that deliver an equivalent level of environmental protection are being used. Where these techniques are not specified in the permit we are satisfied the conditions of the permit are such that these are the techniques that will be required to meet them. The permit as varied will ensure appropriate monitoring is undertaken and that BAT Associated Emission Levels (AELs) are met.

¹ C/2017/0688 Commission Implementing Decision (EU) 2017/302 of 15 February 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs

The basis for our conclusion is outlined below.

Table 1: Summary of BAT conclusions and decision on compliance

	Description	How does the site demonstrate compliance?
BAT 1	<p>EMS</p> <p><i>In order to improve the overall environmental performance of farms, BAT is to implement and adhere to an environmental management system (EMS).</i></p>	<p>The operator already holds a written management system comprising a suite of documents to help identify and minimise the risk of pollution. These include an accident management plan, maintenance plan, staff training and where necessary, odour and noise management plans. This is a requirement of the existing general management condition in the permit.</p> <p>By 21 February 2021, the operator will be required to update their management system to include an environmental policy statement and demonstrate the commitment of their management to the EMS. This will be checked during routine compliance inspections.</p>
BAT 2	<p>Good housekeeping</p> <p><i>In order to prevent or reduce the environmental impact and improve overall performance, BAT is to use all the techniques given [in the BAT conclusions document]</i></p>	<p>The operator is already required to manage their operation as set out in the existing general management and operating techniques conditions in the permit. In complying with these conditions we would expect the operator to use all the techniques identified in BAT 2.</p>
Nutritional management		
BAT 3	<p><i>In order to reduce total nitrogen excreted and consequently ammonia emissions while meeting the nutritional needs of the animals, BAT is to use a diet formulation and nutritional strategy which includes one or a combination of the techniques given [in the BAT conclusions document].</i></p> <p><i>BAT-associated total nitrogen excreted levels are provided.</i></p>	<p>The operator is already required to have a nutritional strategy to reduce nitrogen and phosphorus. This requirement is incorporated into the existing operating techniques condition in the permit.</p> <p>In addition to this, the variation includes a new condition requiring the operator to report annually the levels of nitrogen and phosphorus excretion per animal place to demonstrate compliance with the BAT-associated total nitrogen and phosphorus excreted.</p> <p>The operator will now need to submit monitoring to demonstrate they are compliant. If they are not compliant with the BAT-associated total nitrogen and total phosphorus excreted they will be in breach of the permit and will need to revisit their nutritional management techniques.</p> <p>Based on our review, and engagement with industry, we expect all operators to meet the BAT-associated excretion levels.</p> <p>Where the BAT-associated total nitrogen and total phosphorus excreted level is not met the operator will be required to consider and adopt alternative diets or feed additives which enable them to meet the level.</p>
BAT 4	<p><i>In order to reduce the total phosphorus excreted, while meeting the nutritional needs of the animals, BAT is to use a diet formulation and a</i></p>	<p>As BAT 3.</p>

	<p><i>nutritional strategy which includes one or a combination of the techniques given [in the BAT conclusions document].</i></p> <p><i>BAT-associated total phosphorus excreted levels are provided.</i></p>	
BAT 5	<p>Efficient use of water</p> <p><i>In order to use water efficiently, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i></p>	The operator is already required to minimise the use of water as set out in the existing efficient use of raw materials condition in the permit.
Emissions from waste water		
BAT 6	<p><i>In order to reduce the generation of waste water, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i></p>	These requirements are fulfilled through existing permit conditions on general management, the efficient use of raw materials and emissions of substances not controlled by emission limits.
BAT 7	<p><i>In order to reduce emissions to water from waste water, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>The operator is already required to minimise emissions of waste water through existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.</p> <p>Where appropriate the operator is already expected to have dedicated slurry and/or wash water storage which is compliant with BAT standards (equivalent to the standards set out in the Silage Slurry and Agricultural Fuel Oil Regulations (SSAFO)). These requirements also apply to reception pits, channels, underground tanks and pipework and requires that slurry is collected and contained.</p>
BAT 8	<p>Efficient use of energy</p> <p><i>In order to use energy efficiently on a farm, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i></p>	The operator is already required to minimise the use of energy through existing permit conditions on general management and energy efficiency.
Noise emissions		
BAT 9	<p><i>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to set up and implement a noise management plan, as part of the environmental management system (see BAT 1).</i></p> <p><i>BAT 9 is only applicable to cases where a noise nuisance at sensitive receptors is expected and/or has been</i></p>	<p>A Noise Management Plan (NMP) is in place when there are relevant receptors within 400m of the installation boundary or there have been substantiated complaints. This reflects our current approach and no change is required.</p> <p>This conclusion is only applicable where we expect noise pollution or it has been substantiated. We anticipate the potential for noise pollution within 400m of sites, and require operators with receptors located within this distance, or at sites where noise complaints have been substantiated at receptors outside this distance, to have a NMP.</p> <p>This is detailed in the existing permit condition on noise and</p>

	<i>substantiated.</i>	<p>vibration in the permit.</p> <p>The condition allows for us to require a NMP if not previously in place, in the event of noise complaints or other evidence of risk of noise pollution beyond the installation boundary.</p> <p>The NMP needs to be regularly updated and reviewed to prevent noise pollution and ensure compliance.</p>
BAT 10	<i>In order to prevent, or where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i>	<p>Noise minimisation has been considered in equipment location and operation at the permit determination stage.</p> <p>The operator is already required to prevent and minimise noise through the existing permit conditions on general management, operating techniques and noise and vibration.</p> <p>The existing operating techniques permit condition already allows us to require the operator to update the NMP to introduce additional BAT measures to minimise the risk of noise pollution beyond the installation in the event of substantiated noise complaints at local receptors.</p>
BAT 11	<p>Dust emissions</p> <p><i>In order to reduce dust emissions from each animal house, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>Techniques are already in place to reduce dust generation inside sheds such as ad libitum feeding and the use of long straw applied by hand.</p> <p>The operator is already required to minimise dust emissions through existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.</p>
Odour emissions		
BAT 12	<p><i>In order to prevent, or where that is not practicable, to reduce odour emissions from a farm, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1).</i></p> <p><i>BAT 12 is only applicable to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.</i></p>	<p>An Odour Management Plan (OMP) is in place when there are relevant receptors within 400m of the installation boundary or there have been substantiated complaints. This reflects our current approach and no change is required.</p> <p>This conclusion is only applicable where we expect odour pollution or it has been substantiated. We anticipate the potential for odour pollution within 400m of sites, and require operators with receptors located within this distance, or at sites where odour complaints have been substantiated at receptors outside this distance, to have an OMP.</p> <p>This is already detailed in the existing condition on odour in the permit.</p> <p>The condition allows for us to require an OMP if not previously in place, in the event of odour complaints or other evidence of risk of odour pollution beyond the installation boundary.</p> <p>The OMP needs to be regularly updated and reviewed to prevent odour pollution and ensure compliance.</p>
BAT 13	<i>In order to prevent or, where that is not practicable, to reduce odour emissions and/or odour impact from a farm, BAT is to use a combination of the techniques given [in the BAT</i>	<p>Odour minimisation has been considered in equipment location and operation at the permit determination stage.</p> <p>The operator is already required to prevent and minimise odour through the existing permit conditions on general management, operating techniques and odour.</p>

	<i>conclusions document].</i>	The existing operating techniques permit condition already allows us to require the operator to update the OMP to introduce additional BAT measures to minimise the risk of odour pollution beyond the installation in the event of substantiated odour complaints at local receptors.
Emissions from solid manure storage		
BAT 14	<i>In order to reduce ammonia emissions to air from the storage of solid manure, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i>	The operator is already required to prevent and minimise emissions of ammonia from solid manure through the existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.
BAT 15	<i>In order to prevent, or where that is not practicable, to reduce emissions to soil and water from the storage of solid manure, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i>	The operator is already required to prevent and minimise emissions to soil and water from solid manure through the existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.
Emissions from slurry storage		
BAT 16	<i>In order to reduce ammonia emissions to air from a slurry store, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i>	<p>Slurry based housing is already required to have an appropriately designed slurry store and cover in compliance with BAT 16.</p> <p>Installations permitted without such a cover already have an improvement condition in place in the permit to cover the slurry store by 2020.</p> <p>Installations that had been using the previous <1% dry matter position as justification for not covering a slurry store have an extended deadline to 21 August 2022 under the Regulatory Position Statement Slurry stores on permitted pig and poultry farms with less than 1% dry matter. We have added an Improvement Condition to the permit for such installations to meet the BAT conclusion by 21 August 2022.</p> <p>A small number of pig farm installations are compliant through the use of a slurry acidification abatement system.</p> <p>The operator is already required to prevent and minimise emissions of ammonia from slurry through the existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.</p>
BAT 17	<i>In order to reduce ammonia emissions to air from an earth-banked slurry store (lagoon), BAT is to use a combination of the techniques given [in the BAT conclusions document].</i>	<p>Where there is slurry stored on site the operator is already required to cover their slurry lagoons as well as minimising stirring.</p> <p>Installations permitted without such a cover already have an improvement condition in place in the permit to cover the slurry store by 2020.</p> <p>Installations that had been using the previous <1% dry matter position as justification for not covering a slurry store have an</p>

		<p>extended deadline to 21 August 2022 under the Regulatory Position Statement Slurry stores on permitted pig and poultry farms with less than 1% dry matter. We have added an Improvement Condition to the permit for such installations to meet the BAT conclusion by 21 August 2022.</p> <p>The operator is already required to prevent and minimise emissions of ammonia from slurry through the existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.</p>
BAT 18	<p><i>In order to prevent emissions to soil and water from slurry collection, piping, and from a store and/or an earth-banked storage (lagoon), BAT is to use a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>Existing permit conditions for operating techniques, general management and emissions of substances not controlled by emission limits will ensure this requirement is met.</p>
BAT 19	<p>On farm processing of manure</p> <p><i>If on-farm processing of manure is used, in order to reduce emissions of nitrogen, phosphorus, odour and microbial pathogens to air and water and facilitate manure storage and/or landspreading, BAT is to process the manure by applying one or a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>Where an operator processes manure on site, the existing permit conditions for operating techniques and general management will ensure the BAT conclusion requirements are met.</p>
Manure landspreading		
BAT 20	<p><i>In order to prevent or, where that is not practicable, to reduce emissions of nitrogen, phosphorus and microbial pathogens to soil and water from manure landspreading, BAT is to use all the techniques given [in the BAT conclusions document].</i></p>	<p>Spreading of manure and slurry on land outside of the installation boundary is not considered to be part of the permitted installation. In the rare circumstances where spreading occurs within the installation boundary the requirements are covered by the existing operating techniques permit condition.</p>
BAT 21	<p><i>In order to reduce ammonia emissions to air from slurry landspreading, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>Spreading of manure and slurry on land outside of the installation boundary is not considered to be part of the permitted installation. In the rare circumstances where spreading occurs within the installation boundary the requirements are covered by the existing operating techniques permit condition.</p>
BAT 22	<p><i>In order to reduce ammonia emissions to air from manure landspreading, BAT is to incorporate the manure into the</i></p>	<p>Spreading of manure and slurry on land outside of the installation boundary is not considered to be part of the permitted installation. In the rare circumstances where spreading occurs within the installation boundary the</p>

	<i>soil as soon as possible.</i>	requirements are covered by the existing operating techniques permit condition. The time delay between landspreading and incorporation into the soil is now a maximum of 12 hours.
BAT 23	<p>Emissions from the whole production process</p> <p><i>In order to reduce ammonia emissions from the whole production process for the rearing of pigs (including sows) or poultry, BAT is to estimate or calculate the reduction of ammonia emissions from the whole production process using the BAT implemented on the farm.</i></p>	An operator complying with the relevant existing conditions in the permit will meet this BAT conclusion in so far as they will have reduced ammonia emissions compared to those they would have produced had they not have implemented BAT. The operator is now required to report they are meeting the BAT-AELs annually.
Monitoring of emissions and process parameters		
BAT 24	<i>BAT is to monitor the total nitrogen and total phosphorus excreted in manure using one of the following techniques with at least the frequency given [in the BAT conclusions document].</i>	<p>The operator will now be required to comply with a new permit condition which sets out a requirement to monitor nitrogen and phosphorus levels in livestock manure.</p> <p>This can be carried out using a mass balance of nitrogen based on the feed intake, dietary content of crude protein and animal performance or estimation by using manure analysis for total nitrogen content and the equivalent for phosphorus.</p>
BAT 25	<i>BAT is to monitor ammonia emissions to air using one of the following techniques with at least the frequency given [in the BAT conclusions document].</i>	<p>The operator will now be required to comply with a new permit condition setting out a requirement for annual reporting of ammonia emissions. This should not represent a new requirement as they already submit this in their Pollution Inventory return.</p> <p>We expect all operators will demonstrate compliance using emission factors (one of the identified techniques) however they may choose to monitor ammonia emissions using a suitable and agreed monitoring protocol.</p>
BAT 26	<p><i>BAT is to periodically monitor odour emissions to air.</i></p> <p><i>BAT 26 is only applicable to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.</i></p>	Routine monitoring (e.g. subjective 'sniff' testing) is not expected in most cases, as we would expect the odour management plan to minimise and prevent any odour pollution. It will only be expected as part of ongoing odour management at sites where there have been substantiated odour complaints.
BAT 27	<i>BAT is to monitor dust emissions from each animal house using one of the following techniques with at least the frequency given [in the BAT conclusions document].</i>	<p>The operator will now be required to comply with a new permit condition setting out a requirement for annual reporting of dust emissions. This is a new requirement for pigs.</p> <p>We expect all operators will demonstrate compliance using the emission factors technique.</p>
BAT 28	<i>BAT is to monitor ammonia, dust and/or odour emissions</i>	If an air scrubber or cleaning system is in place, the operator will be required to comply with this BAT conclusion. Air

	<p><i>from each animal house equipped with an air cleaning system by using all of the following techniques with at least the frequency given [in the BAT conclusions document].</i></p>	<p>abatement systems are not common as they are costly and only work with closed housing systems so are not appropriate for a retrofit to older housing.</p> <p>Where such abatement is in place (for ammonia or odour abatement) the criteria has been met via process monitoring.</p>
BAT 29	<p><i>BAT is to monitor the following process parameters at least once every year:</i></p> <ul style="list-style-type: none"> • <i>Water consumption;</i> • <i>Electric energy consumption;</i> • <i>Fuel consumption;</i> • <i>Incoming and outgoing animal numbers;</i> • <i>Feed consumption;</i> • <i>Manure generation.</i> 	<p>The operator is already required to keep records for these parameters in their current permit through existing permit conditions on energy efficiency, efficient use of raw materials and operating techniques. These will be checked during routine compliance inspections.</p>
BAT 30	<p>Ammonia emissions from pig houses</p> <p><i>In order to reduce ammonia emissions to air from each pig house, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>We are confident that pig farm installations will be able to comply with the objective of BAT 30 via the usage of existing housing and operating techniques.</p> <p>This is based on the operator using techniques listed in this conclusion and achieving the BAT-AELs or by demonstrating the method used produces an equivalent level of protection. 'Equivalence' will need to be confirmed through emissions monitoring to show compliance with the BAT-AEL's. Our review of housing types in England indicates that all operators should already be compliant with the techniques set out in BAT 30. This will be checked during routine compliance inspections.</p> <p>Deep pit systems are defined as houses where slurry is stored and slurry removed infrequently. The depth of the pit is greater than 800 mm (excluding freeboard of up to 300 mm).</p> <p>The operator is required to comply with the new permit condition to carry out annual monitoring and reporting. The results will need to meet the associated BAT-AELs. We expect the operator will demonstrate compliance using emission factors.</p> <p>Compliance with AELs is covered under a new condition and associated process monitoring table.</p>