Permitting decisions

Variation

We have decided to grant the variation for Lake Farm Poultry Unit operated by Mr Phillip Greenhill, Mr Robert Greenhill & Mrs Bridget Greenhill

The variation number is. EPR/BP3539UT/V004

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 <u>decision checklist</u> 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 sets 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 (BAT-AELs) for ammonia emissions, which will apply to the majority of permits, as well as BAT-AELs 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 were 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 21st February 2017.

The Applicant has confirmed their compliance with all BAT conditions for the new housing, in their document reference Supporting Documentation dated 23/03/2018.

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	The Applicant has confirmed it will demonstrate that the installation achieves levels of Nitrogen excretion below the required BAT-AEL of 0.6 kg N/animal place/year by an estimation using manure analysis for total Nitrogen content.
	This confirmation was in supporting documentation in the application received 23/03/2018, which has been referenced in Table S1.2 Operating Techniques of the Permit.
	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	The Applicant has confirmed it will demonstrate the installation achieves levels of Phosphorous excretion below the required BAT-AEL of 0.25 kg P ₂ O ₅ animal place/year by an estimation using manure analysis
	This confirmation was in supporting documentation in the application received 23/03/2018, which has been referenced in Table S1.2 Operating Techniques of the Permit.
	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	Table S3.3 concerning Process monitoring requires the Operator to undertake relevant

BAT measure	Applicant compliance measure
emissions and process parameters - Total nitrogen and phosphorous excretion	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 26 Monitoring of emissions and process parameters - Odour emissions	The approved Odour Management Plan (OMP) includes the following details for on Farm Monitoring and Continual Improvement: Daily inspections of potentially odorous activities will be carried out.
BAT 27 Monitoring of emissions and process parameters - Dust emissions	 Table S3.3 concerning 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 broilers by the number of birds on site. This confirmation was in supporting documentation in the application received 23/03/2018, which has been referenced in Table S1.2 Operating Techniques of the Permit.
BAT 32 Ammonia emissions from poultry houses - Broilers	The BAT-AEL to be complied with is 0.01 – 0.08 kg NH3/animal place/year. The Applicant will meet this as the emission factor for broilers is 0.034 kg NH3/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 32

The new BAT conclusions include a set of BAT-AEL's for ammonia emissions to air from animal housing for broilers.

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'.

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 (<u>http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297084/geho0110brsb-e-e.pdf</u>).

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:

- Odour from the selection, delivery and storage of feed
- Odour arising from problems with housing ventilation system, inadequate air movement within house leading to high humidity and wet litter. Inadequate system design, causing poor dispersal of odours
- Litter management, odours arising from wet litter, the use of insufficient or poor quality litter.
- Spillage of water from drinking systems.
- Disease outbreaks, leading to wet litter
- Carcase disposal, inadequate storage of carcasses on site.
- House clean out (de littering)
- House clean out (Disinfection and fumigation)

Odour Management Plan Review

We have assessed the OMP and the H1 risk assessment for noise and conclude that the Applicant has followed the guidance set out in EPR 6.09 Appendix 4 'odour 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 odour pollution / nuisance.

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:

- Large vehicles travelling to and from farm, also Mobile sources
- Large vehicles delivering/collecting from site, litter removal, removal of dirty water
- Small vehicle movements Mobile Sources
- Feed transfer from lorry to bins and fixed source
- Ventilation Fans fixed sources
- Alarm System
- Standby Generator Fixed Source

Noise Management Plan Review

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. EPR/BP3539UT/V004

Date issued: 07/09/2018

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.

There are neighbouring dwellings which are sensitive receptors within 100m of the Installation boundary, the nearest sensitive receptor (the nearest point of their assumed property boundary) is approximately 80 metres to the north of the installation boundary.

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-dustand-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:

- Feed delivered in sealed systems.
- Use of pelleted feed with oil coating to prevent pellet degradation.
- Pan feeding system within poultry houses on timed feed pattern to appetite preventing wastage.
- Dust socks fitted to silo exhaust pipes.
- Closed system delivery of feed from silo to poultry house.
- Silos and delivery pipes checked daily for integrity.
- Feed spills dealt with promptly.
- Bedding layer will be either green sawdust which has high moisture content minimising dust or dust extracted shavings, not blown into poultry house.
- Shavings spread inside house with only minimum ventilation in operation to minimise dust release.
- Top up bales spread during spread during cycle with light intensity reduced to prevent birds panicking minimising dust.
- Bird catching under very low light levels to prevent bird stress and minimising dust.
- Computer controlled environment keeping humidity between 55 and 60% minimising dust
- Use of roof extraction fans on all new houses
- Litter removed carefully during cleanout minimising dust. Full trailers sheeted before leaving installation.
- Houses and exhaust vents pre-soaked with low pressure hose to minimise dust release. Exhaust vents then high pressure hosed minimising any lightly contaminated water release onto roofs.
- Stock inspections carried out by trained staff with reduced light intensity to prevent birds panicking and minimising disturbance and dust levels.

Conclusion

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

Biomass boilers

The applicant is varying their permit to add another biomass boiler with a net rated thermal input of 0.842 MW. There will now be x 2 biomass boilers (0.832 MWth & 0.842 MWth) on site with an aggregated thermal input of 1.674 MW.

The Environment Agency has assessed the pollution risks and has concluded that air emissions from small biomass boilers are not likely to pose a significant risk to the environment or human health providing certain conditions are met. Therefore a quantitative assessment of air emissions will not be required for poultry sites where:

- the fuel will be derived from virgin timber, miscanthus or straw, and;
- the biomass boiler appliance and installation meets the technical criteria to be eligible for the Renewable Heat Incentive, and;
- the aggregate boiler net rated thermal input is less than or equal to 4 MWth, and no individual boiler has a net thermal input greater than 1 MWth, and;
- the stack height must be a minimum of 5 metres above the ground (where there are buildings within 25 metres the stack height must be greater than 1 metre above the roof level of buildings within 25 metres (including building housing boiler(s) if relevant) and:
- there are no sensitive receptors within 50 metres of the emission point(s).

This is in line with the Environment Agency's document "Air Quality and Modelling Unit C1127a Biomass firing boilers for intensive poultry rearing", an assessment has been undertaken to consider the proposed addition of the biomass boiler.

Our risk assessment has shown that the biomass boilers should meet the requirements of the criteria above, and are, therefore, considered not likely to pose a significant risk to the environment or human health and no further assessment is required.

In accordance with the Environment Agency's Air Quality Technical Advisory Guidance 14: "for combustion plants under 5MW, no habitats assessment is required due to the size of combustion plant". Therefore this proposal is considered acceptable and no further assessment is required.

Ammonia

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

There are No Special Area(s) of Conservation (SAC), /Special Protection Area(s) (SPA), /Ramsar sites located within 5 kilometres of the installation. There are 5 Sites of Special Scientific Interest (SSSI) located within 5 km of the installation. There are also 10 Local Wildlife Site(s) (LWS), /Ancient Woodland(s) (AW), 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 (CLe) or critical load (CLo) then the farm can be permitted with no further assessment.
- Where this threshold is exceeded an assessment alone and in combination is required. An in combination assessment will be completed to establish the combined PC for all existing farms identified

Using the detailed modelling "A Report on the Modelling of the Dispersion and Deposition of Ammonia from the Existing and Proposed Broiler Chicken Rearing Houses at Lake Farm, near, Draycott Cerne in Wiltshire dated 07/04/2018" has indicated that the PC's in Table 2 below are predicted to be less than 20% of the critical level for ammonia emissions/nitrogen deposition/acid deposition therefore it is possible to conclude no damage.

The ammonia modelling assessment has been audited and we have confidence that we can agree with the report conclusions.

Table 1 – Ammonia emissions

Site	Ammonia Cle (µg/m³)	PC (µg/m³)	PC % critical level
Sutton Lane Meadow	3**	0.591	19.7
Kellaways - West Tytherton, River Avon	N/A***	-	-
Harries Ground, Rodbourne	1*	0.022	2.2
Bencroft Hill Meadows	1*	0.002	0.2
Stanton St Quintin Quarry and Motorway Cutting	N/A***	-	-

* Cle 1 A precautionary figure used where details of the site are unavailable, or citations indicate that sensitive lichens and bryophytes may be present

** CLe 3 applied as no protected lichen or bryophytes species

*** site designated for geological features only

Where a Cle 3 has been assigned we also are required to look at Nutrient Nitrogen and Acid deposition for the site.

Table 3 – Nitrogen deposition

Site	Critical load kg	Predicted PC kg	PC % of critical
	N/ha/yr*	N/ha/yr.	load
Sutton Lane Meadow	20	2.59	12.9%

Critical load values taken from APIS website (<u>www.apis.ac.uk</u>) – 09/08/2018

Table 4 – Acid deposition

Site	Critical load	Predicted PC	PC % of critical
	keq/ha/yr*	keq/ha/yr.	load
Sutton Lane Meadow	4.353	0.383	8.8%

* Critical load values taken from APIS website (www.apis.ac.uk) - 09/08/2018

Under Environment Agency guidelines it is therefore possible to conclude no likely damage to the site from the installation, no further assessment is required.

Ammonia assessment - LWS/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.

Screening using the ammonia screening tool version 4.5 has determined that the PC on the LWS/AW 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.

Site	Critical level ammonia µg/m ³	Predicted PC µg/m ³	PC % of critical level
LWS/AW Sydney's Wood	1*	0.327	32.7
LWS Kington Langley Meadow	1*	0.282	28.2
LWS/AW - Poor Lain's Coppice	1*	0.154	15.4
LWS - Long Pond Plantation	1*	0.211	21.1
LWS/AW - Old Coppice	1*	0.204	20.4

Table 6 - Ammonia emissions

LWS - The Cuttings	1*	0.114	11.4
LWS/AW - The Shrubbery	1*	0.413	41.3
LWS - North Draycot Park	1*	0.112	11.2
LWS - Bristol Avon River	1*	0.008	0.8
AW - Weir Wood	1*	0.472	47.2

* Cle 1 A precautionary figure used where details of the site are unavailable, or citations indicate that sensitive lichens and bryophytes may be present.

No further assessment is required.

Decision checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
	The decision was taken in accordance with our guidance on confidentiality.
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	The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.
	The application was publicised on the GOV.UK website.
	We consulted the following organisations:
	Wiltshire Council, Planning and Environmental Health
	Health and Safety Executive
	The comments and our responses are summarised in the consultation section.
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, landscape and nature	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.
conservation	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.
	We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.

Aspect considered	Decision		
	We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.		
Environmental risk asse	essment		
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility.		
	The operator's risk assessment is satisfactory.		
	The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment, all emissions may be categorised as environmentally insignificant		
Operating techniques			
General operating techniques	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.		
	The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.		
	The operating techniques are as follows:		
	 Feed Selection and use of feed is in accordance with SGN EPR6.09 'How to comply with your environmental permit for intensive farming'. Protein is reduced over the growing cycle by providing different feeds. Phosphorus levels in rations are reduced over the production cycle. Feed storage bins are specifically designed to accommodate the required feeding regime. Housing Housing design and management is in accordance with SGN EPR6.09 'How to comply with your environmental permit for intensive farming'. The sheds are fan ventilated with a fully littered floor equipped with nonleaking drinking systems. Litter is kept loose and friable. The quality is regularly inspected to ensure it does not become excessively wet or dry. Temperature in the sheds meets the health and welfare needs for the age and number of the birds. Blown hot water radiators are spaced regularly within the sheds to prevent cold spots and extremes of temperature. The fans are fitted with back draft shutters to prevent drafts and unnecessary heat loss. The shed is accessed via the control room/vestibule area, which prevent drafts. A computer automatically controls ventilation and heating so that heat is not wasted by being drawn out of the building. The ventilation management system controls the ventilation rates depending on the health and welfare needs of the birds and the outside weather conditions. 		
	 General Management In accordance with the management system at the farm, the buildings are regularly inspected and maintained. The floors and walls of the sheds are kept clean. The site is regularly inspected and well maintained. Livestock Numbers and Movements 		
	A system is in place to record the number animal places and animal movements.		

Aspect considered	Decision
	These records will be available for inspection.
	 Slurry spreading and manure management planning - off site-activity Litter is not stored at the installation. Litter is exported off site and sold or used on operator land. Any litter that is exported from the installation has records kept of the quantities, destination and the date of transfer to third party. Contingency arrangements are in place with surrounding farms to accept the manure in case of an emergency. In these circumstances where the litter is exported for spreading to land, records are kept of the manure confirms by signing a docket that litter is spread to land in accordance with the Code of Good Agricultural Practice, or in accordance with the manure management plan for the receiving land.
Odour management	We have reviewed the odour management plan in accordance with our guidance on odour management.
	We consider that the odour management plan is satisfactory.
	See key issues
Noise management	We have reviewed the noise management plan in accordance with our guidance on noise assessment and control.
	We consider that the noise management plan is satisfactory.
	See key issues
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).
Raw materials	We have specified limits and controls on the use of raw materials and fuels.
Emission limits	ELVs [and/or] equivalent parameters or technical measures [based on BAT] have been set for the following substances.
	Nitrogen, phosphorus and ammonia
Monitoring	ELVs [and/or] equivalent parameters or technical measures [based on BAT] have been set for the following substances.
	Nitrogen, phosphorus and ammonia
Reporting	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.
	These monitoring requirements have been imposed in order to ensure compliance with BAT. We made these decisions in accordance with BAT conclusion document dated 21 st February 2017
Operator competence	
Operator competence	

Aspect considered	Decision
	management system to enable it to comply with the permit conditions.
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	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.
	Paragraph 1.3 of the guidance says:
	"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."
	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.
	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.

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
response	receiveu	

Public Health England

Brief summary of issues raised

The effects of Bio-aerosol's on human health.

Summary of actions taken or show how this has been covered

Comments taken into consideration and standard conditions have been applied.

This application was publicised on Citizen Space-Environment Agency from 27/04/2018 until 29/05/2018.