Permitting decisions

Bespoke permit

We have decided to grant the permit for Marsh House Farm operated by Mr Paul Matthews and Mrs Sarah Jane Prosser (trading as TS Matthews & Son).

The permit number is EPR/JP3044QA.

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;
- summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account; and
- 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. The introductory note summarises what the permit 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 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 installation farming permits issued after 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.

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 installations in their document reference 'Marsh House Farm' received with the application, 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	The Applicant has confirmed it will demonstrate that the installation achieves levels of Nitrogen excretion below the required BAT-AEL by an estimation using manure analysis for total Nitrogen content. The BAT-AELs to be complied with are: Broilers - 0.6 kg N/animal place/year Stag turkeys - 2.3 kg N/animal place/year
BAT 4 - Nutritional management - Phosphorous excretion	The Applicant has confirmed it will demonstrate that the installation achieves levels of Phosphorous excretion below the required BAT-AEL by an estimation using manure analysis for total Phosphorous content. The BAT-AELs to be complied with are: Broilers - 0.25 kg P_2O_5 /animal place/year Stag turkeys - 1.0 kg P_2O_5 /animal place/year
BAT 24 - Monitoring of emissions and process parameters - Total nitrogen and phosphorous excretion	Table S3.3 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.

BAT measure	Applicant compliance measure
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. The Applicant has confirmed they will report the ammonia emissions to the Environment Agency annually by multiplying the ammonia emissions factor for broilers by the number of birds on site.
BAT 26 - Monitoring of emissions and process parameters - Odour emissions	The approved odour management plan (OMP) includes the following details for on odour monitoring: • Twice daily olfactory checks coinciding with stock inspections (normally 07.00-10.00 hrs and 16.00-18.00hrs) any abnormalities recorded and investigated • Odour checks carried out weekly, by means of "sniff testing" at the check points at the installation boundary by persons not involved directly with the operations at the installation.
BAT 27 - Monitoring of emissions and process parameters - Dust emissions	Table S3.3 of the Permit 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 or stag turkeys by the number of birds on site.
BAT 32 - Ammonia emissions from poultry houses - broilers	The BAT-AEL to be complied with is 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. The BAT Conclusions document does not have a BAT-AEL for turkeys and therefore an ammonia emission limit value has not been included within the permit.

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.

'New plant' is defined as plant first permitted at the site of the farm following the publication of the BAT Conclusions.

All new bespoke applications issued after 21st February 2017, including those where there is a mixture of old and new housing, will now need to meet the BAT-AEL.

Industrial Emissions Directive (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 Marsh House Farm (dated 03/11/22) 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:

- Manufacture and selection of feed.
- Feed delivery or storage.
- Problems with housing ventilation system.
- Litter management.
- Carcass disposal.
- House clean out.

There are three sensitive receptors within 400 metres of the installation boundary, the nearest receptor is located approximately 240 metres to the south-east of the installation boundary. The operator has provided an OMP that

has been assessed against the requirements of EPR 6.09 (version 2) Appendix 4 guidance 'Odour Management at Intensive Livestock Installations' and the 'Poultry Industry Good Practice Checklist' version 2, August 2013. We consider that the OMP is acceptable because it complies with the above guidance. The operator is required to manage activities in accordance with condition 3.3.1 of the permit and this OMP.

The OMP, dated 02/05/23, sets out the preventative measures that will be taken at the installation as part of the daily management of odour risk at the site. The following key measures are included in the operator's OMP:

- Twice daily olfactory checks coinciding with stock inspections, plus odour checks carried out weekly, by means of "sniff testing".
- No on-site milling and mixing of feed.
- Feed delivery systems are sealed to minimise atmospheric dust.
- Any spillage of feed around the bins is immediately swept up.
- Feed silos protected by collision barriers.
- Feed deliveries are monitored to avoid dust and spills.
- The ventilation and heating system is regularly adjusted to match the age and requirements of the flock.
- Use of nipple drinkers with drip cups to minimise spillage.
- Daily checks of drinker height and pressures to avoid capping.
- Carcasses placed into plastic sealed bags, stored in sealed, shaded and vermin proof containers away from sensitive receptors.
- Carcass collection will be timed to prevent the release of odour, at least twice weekly during crop cycle, frequency increased during summer months and crop age (three times per week).
- Clean out carried out as soon as possible following destocking.
- Houses awaiting delittering are kept sealed. Minimum ventilation is operated during delittering. Houses are resealed awaiting washing operations.
- No storage of used litter on site at any time; all trailers are covered before leaving fill position.
- Washing operations carried out within one day of delittering.
- The dirty water system is washed at crop end before being removed off site immediately following washing operations and spread to land under control of the operator.
- Working areas around houses are concreted and kept clean during the production cycle.

The OMP includes contingency measures to minimise odour pollution during abnormal operations. A list of remedial measures is included in the contingency plan, including triggers for commencing and ceasing use of these measures.

The OMP also provides a suitable procedure in the event that complaints are made to the Operator and includes a complaint form template.

The Operator is required to review the OMP at least every year (as committed to in the OMP), prior to any major changes to operations (to ensure effectiveness) and/or after the Environment Agency has notified the Operator that it has substantiated a complaint and make any appropriate changes to the OMP identified by the review.

Odour Management Plan Review

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

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”.

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:

- Vehicles travelling to and operating on the site
- Feed transfer
- Livestock
- Ventilation system
- Generator
- Personnel
- Maintenance and Repairs

There are three sensitive receptors within 400 metres of the installation boundary. The Operator has provided a noise management plan (NMP), dated 02/05/23, as part of the Application supporting documentation. The following key measures are contained in the NMP to minimise noise pollution:

- Noisy operations are sited as far as practical to be screened by other buildings and woodland.
- Noise from ventilation system assessed during twice daily inspections (07.00 - 10.00hrs and 16.00 - 18.00hrs). Any noisy fans are isolated and the electrician notified.
- Delivery lorries are fitted with silencers.
- No idling engines or reversing warnings allowe on site.
- Large capacity lorries are used to reduce the number of deliveries.
- Speed restriction on site (10mph).
- Vehicles are regularly maintained.
- Daily inspections of feed bin stocks to prevent augers running empty (07.00 - 10.00hrs and 16.00 - 18.00hrs).
- Feed bins are located to reduce vehicle movements.
- No audible alarms are used on site.
- Bird catch teams are fully trained and advised of the need to keep noise to a minimum, i.e no shouting or playing of loud music.
- Litter removal is carried out during normal working hours (07.00 - 18.00hrs).
- Washing operations are carried out during normal working hours (08.00 - 18.00hrs).
- Maintenance and repairs are carried out during normal working hours (07.00 - 1800hrs), excepting emergencies/breakdown.
- Bird set up/placements is carried out during normal working hours (08.00 - 18.00hrs).
- The standby generator is housed within an acoustic jacket.

The NMP provides a suitable procedure in the event of complaints in relation to noise.

The NMP will be reviewed annually or following a substantiated complaint, and any appropriate changes made to the NMP, as identified by the review.

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 Bioaerosols

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 is one sensitive receptors within 100m of the installation boundary. The nearest point of their assumed property boundary is approximately 90 metres to the north-east of the installation boundary.

The Applicant has provided a dust and bioaerosol risk assessment.

In addition, guidance on our website concludes that Applicants need to produce and submit a dust and bioaerosol management plan (DMP) beyond the requirement of the initial risk assessment, with their applications only if there are relevant receptors within 100 metres of their farm, e.g. the farmhouse or farm worker's houses. Details can be found via the link below:

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

As there are receptors within 100m of the installation, the Applicant was required to submit a dust and bioaerosol management plan 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 the 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, which will inherently reduce bioaerosols:

- Vents from feed silos are covered to prevent a release of dust to atmosphere.
- No feed milling is undertaken at the installation.
- Use of pelleted feed and some use of oil coating on pellets. Some use of maize within diets.
- Sealed pipe delivery of feed into poultry houses; free fall of feed into hoppers minimised.
- Pan feeding system used on timed feeding, preventing over feeding.
- Any feed spills cleared up immediately.
- Use of dust extracted shavings; base layer spread inside houses with minimum ventilation running, top up bedding in sealed plastic bales.
- Stock inspections by trained personnel.
- Used litter is tipped carefully into trailers; trailers are sheeted prior to leaving site.
- Exhaust vents are washed under low pressure minimising dust release to atmosphere and lightly contaminated water to drainage system.

The DMP will be reviewed annually or following a substantiated complaint or any changes to operations.

Conclusion

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

Standby generator

The standby generator has a net thermal rated input of 0.364MWth, for use in the event of mains power failure. The generator will not be tested more than 50 hours per annum, and will not be used more than 500 hours per annum, averaged over a 3 year period. The generator falls outside of the requirements of the Medium Combustion Plant Directive.

Ammonia

Ammonia assessment – SAC

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 (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 within 5 km of the SAC.

Screening using the ammonia screening tool version 4.6 has determined that the PC on the SAC for ammonia emissions and acid deposition from the application site are under the 4% significance threshold and can be screened out as having no likely significant effect. See results below.

Table 1 – Ammonia emissions

Site	Critical level ammonia µg/m^3*	Predicted PC µg/m^3**	PC % of Critical level
River Wye SAC	3	0.114	3.8

*Natural England advised in an email dated 28/04/23 that a CLe of 3 for ammonia should be applied for the River Wye SAC.
**From AST based on worst case scenario of 14,000 stag turkeys.

Table 2 – Acid deposition

Site	Critical load keq/ha/yr. *	Predicted PC keq/ha/yr.**	PC % of critical load
River Wye SAC	1.073	0.042	3.9

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23
** From AST based on worst case scenario of 14,000 stag turkeys.

Natural England advised in an email dated 28/04/23 that nitrogen deposition did not need to be considered as the River Wye is not sensitive to nitrogen.

No further assessment is necessary.

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 within 5 km of the SSSI.

Initial screening using the ammonia screening tool version 4.6, has indicated that emissions from Marsh House Farm will only have a potential impact on SSSI with a precautionary CLe of 1µg/m^3 if they are within 2,125 metres* of the emission source.

Beyond 2,125m, the PC is less than 0.2µg/m^3 (i.e. less than 20% of the precautionary 1µg/m^3 CLe) and therefore beyond this distance the PC is insignificant. In this case the SSSI is beyond this distance (see table below) and therefore screens out of any further assessment.

Where the precautionary level of 1µg/m^3 is used and the PC is assessed to be less than 20%, the site automatically screens out as insignificant and no further assessment of CLo is necessary. In this case, the 1µg/m^3 level used has not been confirmed by Natural England, but it is precautionary. It is therefore possible to conclude no likely damage to this site.

Table 3 – SSSI Assessment

Site	Distance from site (m)*
River Wye SSSI	2,889

* From AST based on worst case scenario of 14,000 stag turkeys.

Screening using the ammonia screening tool version 4.6, has determined that the process contributions of ammonia emissions/nitrogen deposition/acid deposition from the application site are over the 20% threshold, and therefore may cause damage to features of Littlemarsh Common SSSI. An in-combination assessment has therefore been carried out. There are other farms acting in combination with this application. A detailed assessment has been carried out as shown below.

A search of all existing active intensive agriculture installations permitted by the Environment Agency has identified the following farms within 5km of the maximum concentration point for Littlemarsh Common SSSI.

Table 4 – In combination Assessment for Ammonia emissions

Name of Farm	PC µg/m^3*	Critical Level µg/m^3**	PC as % of Critical level***
Marsh House Farm	**0.982**	**3**	**32.7**
Arkstone Court	0.231	3	7.7
Cherry Trees Poultry Farm	0.039	3	1.3
Gooses Foot Farm Poultry Unit	0.074	3	2.5
Stoney Court Poultry Farm	0.185	3	6.2
Swinmoor Poultry Farm	0.041	3	1.4
Parkway Poultry Farm	0.097	3	3.2
Bowling Green Farm Poultry Unit	0.061	3	2.0
Total PC**			**32.7**

* From AST based on worst case scenario of 14,000 stag turkeys.
**Critical level values taken from APIS website (www.apis.ac.uk) – 02/05/23
*** Only process contributions from farms which are over the 20% threshold are included in the total.

NOTE – The predicted process contributions for each of the farms listed above are calculated using the Environment Agency's ammonia screening tool version 4.6. The values are conservative in their estimate of process contribution and thus greater than would be the case if detailed modelling was undertaken for each farm.

Table 5 – In combination Assessment for nitrogen deposition

Name of Farm	PC µg/m^3**	Critical load kg N/ha/yr. *	PC as % of Critical load***
Marsh House Farm	**5.102**	**15**	**34.0**
Arkstone Court	1.198	15	8.0
Cherry Trees Poultry Farm	0.2	15	1.3
Gooses Foot Farm Poultry Unit	0.385	15	2.6

Stoney Court Poultry Farm	0.959	15	6.4
Swinmoor Poultry Farm	0.213	15	1.4
Parkway Poultry Farm	0.504	15	3.4
Bowling Green Farm Poultry Unit	0.315	15	2.1
Total PC**			**34**

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23
** From AST based on worst case scenario of 14,000 stag turkeys.
*** Only process contributions from farms which are over the 20% threshold are included in the total.

NOTE – The predicted process contributions for each of the farms listed above are calculated using the Environment Agency's ammonia screening tool version 4.6. The values are conservative in their estimate of PC and thus greater than would be the case if detailed modelling was undertaken for each farm.

Table 6 – In combination Assessment for acid deposition

Name of Farm	**PC µg/m³****	**Critical load keq/ha/yr. ***	**PC as % of Critical level*****
Marsh House Farm	0.364	1.093	**33.3**
Arkstone Court	0.086	1.093	7.9
Cherry Trees Poultry Farm	0.014	1.093	1.3
Gooses Foot Farm Poultry Unit	0.027	1.093	2.5
Stoney Court Poultry Farm	0.068	1.093	6.2
Swinmoor Poultry Farm	0.015	1.093	1.4
Parkway Poultry Farm	0.036	1.093	3.3
Bowling Green Farm Poultry Unit	0.022	1.093	2.0
Total PC**			**33.3**

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23
** From AST based on worst case scenario of 14,000 stag turkeys with side fans.
*** Only process contributions from farms which are over the 20% threshold are included in the total.

NOTE – The predicted process contributions for each of the farms listed above are calculated using the Environment Agency's ammonia screening tool version 4.6. The values are conservative in their estimate of PC and thus greater than would be the case if detailed modelling was undertaken for each farm.

Tables 4, 5 and 6 show that the total PC at Littlemarsh Common SSSI from all farms is 32.7% for ammonia emissions, 34% for nitrogen deposition and 33.3% for acid deposition. In-line with Environment Agency guidelines, where the total PC is less than 50% of the critical level/load, in-combination impacts can be considered as not being likely to damage the features of the SSSI for which it has been designated. Therefore we have concluded no likely damage from in combination impacts at the SSSI.

No further assessment is required.

Detailed modelling (A Report on the Modelling of the Dispersion and Deposition of Ammonia from the Existing Turkey Rearing Houses and Proposed Broiler Chicken Rearing Houses at Marsh House Farm, near Eaton Bishop in Herefordshire, dated 22/10/22) has indicated that the PC for Cage Brook Valley SSSI is predicted to be less than 20% of the Cle/CLo for ammonia emissions/nitrogen deposition/acid deposition, therefore it is possible to conclude no damage. The results are given in the tables below.

The ammonia modelling assessment has been audited in detail by our Air Quality Modelling and Assessment Unit and we have confidence that we can agree with the report conclusions.

Table 7 – Ammonia emissions

Site	Ammonia Cle (µg/m^3)*	PC (µg/m^3)**	PC % critical level
Cage Brook Valley SSSI	1	0.051	5.1

*CLe 1 µg/m^3 has been used as APIS stated lichens and bryophytes are present.
**From modelling based on 180,000 broilers.

Table 8 – Nitrogen deposition

Site	Critical load kg N/ha/yr. *	PC kg N/ha/yr.**	PC % critical load
Cage Brook Valley SSSI	10	0.4	4.0

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23
**From modelling based on 180,000 broilers.

Table 9 – Acid deposition

Site	Critical load keq/ha/yr. *	PC keq/ha/yr.***	PC % critical load
Cage Brook Valley SSSI	1.659	0.029**	1.75

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23
**Based on 1/14th of maximum PC for nitrogen deposition from modelling.
***From modelling based on 180,000 broilers.

The modelling assessment was based on the proposal to stock 180,000 broilers, but did not consider the proposal to stock 14,000 stag turkeys. Check modelling has been undertaken as part of the audit, which included checks on the impacts on the SSSI from the proposed turkey operation, and as a result we are satisfied that impacts on the SSSI as a result of stocking 14,000 stag turkeys are likely to be less than 20% of the Cle/CLo for ammonia emissions/nitrogen deposition/acid deposition, therefore it is possible to conclude no damage.

No further assessment is required.

Ammonia assessment - LWS

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 4.6, has indicated that emissions from Marsh House Farm will only have a potential impact on the LWS with a precautionary CLe of 1µg/m^3 if they are within 887 metres of the emission source*.

Beyond 887m, the PC is less than 1µg/m^3 and therefore beyond this distance the PC is insignificant. In this case, the LWS are beyond this distance (see table below) and therefore screen out of any further assessment.

Table 10 – LWS Assessment

Site	Distance from site (m)*
Kingstone Common LWS	1,934
Cage Brook Valley and Woodlands LWS	1,319
Littlemarsh Common LWS	895
Eaton Bishop Church LWS	1,894
Two Ponds at Castle Farm LWS	1,936

* From AST based on worst case scenario of 14,000 stag turkeys.

Screening using the ammonia screening tool version 4.6, has determined that the PC on the LWS 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.

Table 11 - Ammonia emissions

Site	Critical level ammonia µg/m³*	Predicted PC µg/m³**	PC % of critical level
Honeymoor Common LWS	3	1.504	50.1

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

**From AST based on worst case scenario of 14,000 stag turkeys.

Table 12 – Nitrogen deposition

Site	Critical load kg N/ha/yr. *	Predicted PC kg N/ha/yr.**	PC % of critical load
Honeymoor Common LWS	10	7.813	78.1

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23

**From AST based on worst case scenario of 14,000 stag turkeys.

Table 13 – Acid deposition

Site	Critical load keq/ha/yr. *	Predicted PC keq/ha/yr.**	PC % of critical load
Honeymoor Common LWS	1.818	0.558	30.7

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23

** From AST based on worst case scenario of 14,000 stag turkeys.

No further assessment is required.

Detailed modelling (A Report on the Modelling of the Dispersion and Deposition of Ammonia from the Existing Turkey Rearing Houses and Proposed Broiler Chicken Rearing Houses at Marsh House Farm, near Eaton Bishop in Herefordshire, dated 22/10/22) has determined that the PC on Cage Brook LWS for ammonia emissions/nitrogen deposition/acid deposition from the proposed new installation are over the 100% significance threshold. However, comparison between the impacts on the LWS from the existing under threshold farm, which comprises four turkey rearing houses, ventilated by side mounted fans, accommodating up to 17,000 turkeys, and the proposed broiler operation, indicates that the impacts from the proposed broiler operation are approximately 31% lower than those of the existing turkey operation for ammonia emissions, nitrogen deposition and acid deposition (see below).

Table 14 – Ammonia emissions – existing turkey rearing

Site	Critical level ammonia µg/m³*	Predicted PC µg/m³**	PC % of critical level
Cage Brook LWS	3	7.527	251

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

**Modelling based on 17,000 turkeys.

Table 15 – Ammonia emissions – proposed broiler rearing

Site	Critical level ammonia µg/m³*	Predicted PC µg/m³**	PC % of critical level
Cage Brook LWS	3	5.193	173

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

**Modelling based on 180,000 broilers.

Table 16 – Nitrogen deposition - existing turkey rearing

Site	Critical load kg N/ha/yr. *	Predicted PC kg N/ha/yr.**	PC % of critical load
Cage Brook LWS	10	39.10	391

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23

**Modelling based on 17,000 turkeys.

Table 17 - Nitrogen deposition - proposed broiler rearing

Site	Critical load kg N/ha/yr. *	Predicted PC kg N/ha/yr.**	PC % of critical load
Cage Brook LWS	10	26.97	269.7

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23

**Modelling based on 180,000 broilers.

Table 18 – Acid deposition - existing turkey rearing

Site	Critical load keq/ha/yr.*	Predicted PC keq/ha/yr.**	PC % of critical load
Cage Brook LWS	1.827	2.79***	153

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23

**Modelling based on 17,000 turkeys.

***Based on 1/14th of maximum PC for nitrogen deposition from modelling.

Table 19 - Acid deposition - proposed broiler rearing

Site	Critical load keq/ha/yr.*	Predicted PC keq/ha/yr.**	PC % of critical load
Cage Brook LWS	1.827	1.93***	105

*Critical load values taken from APIS website (www.apis.ac.uk) – 02/05/23

**Modelling based on 180,000 broilers.

***Based on 1/14th of maximum PC for nitrogen deposition from modelling.

The 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 that the impacts on the LWS from the proposed broiler operation are lower than those of the existing turkey operation.

The modelling assessment is based on the proposal to stock 180,000 broilers, but does not consider the proposal to stock 14,000 stag turkeys. Check modelling has been undertaken as part of the audit, which included checks on the impacts at the LWS from the proposed turkey operation. Our modelling checks indicate that the impacts on the LWS from the proposed turkey operation are lower than those of the existing turkey operation.

On this basis we agree that the permit can be granted based on a reduction of impacts on Cage Brook LWS.

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.
Consultation	
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: • Local Authority Environmental Health – Herefordshire Council • UK Health Security Agency (UKHSA) • Director of Public Health • Health and Safety Executive The comments and our responses are summarised in the consultation section.
Operator	
Control of the facility	We are satisfied that the Applicant (now the Operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.
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 and baseline reporting under the Industrial Emissions Directive.
Biodiversity, heritage, landscape and nature conservation	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat. 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,

Aspect considered	Decision
	landscape and heritage, and/or protected species or habitats identified. One LWS is already above the critical level/load and a reduction of these impacts is predicted as a result of the proposed installation. A Habitats Regulations Assessment has been sent to Natural England 'For information only'. The decision was taken in accordance with our guidance. See key issues section.
Environmental risk assessment	
Environmental risk	We have reviewed the Operator's assessment of the environmental risk from the facility. The Operator's risk assessment is satisfactory.
Operating techniques	
General operating techniques	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 include the following: • Poultry houses 1 to 4 are ventilated by side fans, and poultry houses 5 and 6 are ventilated by high velocity roof fans. Poultry houses 3 and 4 also have gable end fans. • Water from the wash out of poultry houses is channelled to underground collection tanks close to the houses to await export off site for spreading on operator-controlled land. • Roof water from all the houses and water draining from the yard (excluding periods of washout when water from the yard drains to the underground tanks) discharges to the Cage Brook, via sediment traps. • There is one standby generator, with a net thermal rated input of 0.364MWth. • Mortalities are collected daily and stored in a secure container on site for removal by a licensed collection agent. The proposed techniques for priorities for control are in line with the benchmark levels contained in the Sector Guidance Note EPR6.09 and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs.
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 section.
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.

Aspect considered	Decision
	See key issues section
Permit conditions	
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Emission limits	ELVs based on BAT have been set for the following substances. • Ammonia • Nitrogen • Phosphorus BAT-AELs have been added in-line with Intensive Farming BAT conclusions document dated 21/02/2017. These limits are included in table S3.3 of the permit.
Monitoring	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 Intensive Farming BAT conclusions document dated 21/02/17.
Reporting	We have specified reporting in the permit. We made these decisions in order to ensure compliance with Intensive Farming BAT conclusions document dated 21/02/17.
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. The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.
Relevant convictions	The Case Management System has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found. The Operator satisfies the criteria in our guidance on operator competence.
Financial competence	There is no known reason to consider that the operator will not be financially able 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 vary 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

Aspect considered	Decision
	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 on 21/06/23 from
UKHSA
Brief summary of issues raised
Notes that the main emissions of potential public health significance are emissions to air of dust, bioaerosols and ammonia. Notes that the proposed two new sheds would appear to extend beyond the existing hedge-line, which provides screening around southern boundary of the existing site. Screening by high hedges is included in the mitigations outlined by the applicant for the control of fugitive emissions of bioaerosols and dust. Therefore, the Regulator should satisfy itself that this mitigation will be re-established around the new southern boundary of the extended site. UKHSA assume that the installation will comply in all respects with the requirements of the permit, including the application of Best Available Techniques (BAT). This should ensure that emissions present a low risk to human health.
Summary of actions taken or show how this has been covered
The Applicant has confirmed that the Installation will be operated and managed in accordance with BAT. As there are relevant sensitive receptors within 100 metres of the Installation boundary, the Applicant was required to submit a dust and bioaerosols risk assessment and management plan. Appropriate measures have been proposed to manage fugitive emissions, including ammonia, bioaerosols and particulates, in accordance with our technical guidance note for intensive farming, and we are satisfied that the proposed measures will minimise the potential for emissions from the Installation. Standard conditions 3.2.1 and 3.3.1 concerning fugitive emissions have been included in the permit. The operator will be required to operate this Installation in full compliance with these conditions and its dust and bioareosols management plan. The Applicant has confirmed that full screening with hedges and trees will be established along the proposed boundary, once the proposed houses have been constructed.

No other responses were received.