

Natural Resources Wales permitting decisions

Bespoke permit

We have decided to grant the permit for Greenway Poultry Unit operated by Greenway Poultry Limited.

The permit number is EPR/AB3099ZU

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:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Structure of this document

- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

Key issues of the decision

Background

Application for an environmental permit for a farm stocking either 230,000 broiler chickens, 50,000 female turkeys or 28,000 male turkeys (only 1 type of bird will be grown at a time). Birds will be raised for the production of meat in six poultry houses with a capacity of 40,000 bird places each.

The site is operated solely for the production of poultry meat. Day old chicks are introduced into the poultry sheds bedded with wood shavings or straw and grown until a maximum of 43 days old. Day old turkey poults are grown until 38 – 42 days and moved to a grow-out farm.

The birds are then removed for processing and the sheds emptied of litter, washed and disinfected ready for the next crop.

Litter is removed immediately from the site by trailers to the main farm for land spreading. The farm has a manure management plan in place. Wash water is collected in underground storage tanks and spread on to the land in accordance with Welsh Government code of good practice (WATER). Feed is stored on-site in sealed steel bins in order to retain dust, odour and spillage.

Clean water from the surface of the yards and roofs of poultry houses 1, 2 & 3 will be routed to an off-site stream located approximately 30m from the Northern side of the installation boundary. Clean water from the surface of the yards and roofs of poultry houses 4, 5 & 6 will be routed to an attenuation pond to the north and then on to the stream.

Temperature and humidity inside the houses will be controlled using high velocity extraction fans which will be located on the ridges of the poultry houses. Fan speed will be automatically adjusted to maintain optimum ambient conditions within the houses. Additional ventilation is provided in the form of gable-end fans which will be used during high temperature periods.

Biodiversity, heritage, landscape and nature conservation

As part of their assessment the applicant considered the impact of emissions of ammonia from the installation on habitats within relevant screening distances of poultry unit. The following European habitats sites (i.e. Special Areas of Conservation - SAC) are located within 10km of the installation:

- Brecon Beacons – SAC UK0030096
- Drostre Bank – SAC UK0012878
- Llangorse Lake – SAC UK0012985
- River Usk – SAC UK 0013007
- River Wye – SAC UK0012642
- Usk Bat Sites – SAC UK0014784

The following Sites of Special Scientific Interest (SSSI) are located within 5km of the installation:

- River Usk Tributaries – SSSI code: 33WXY
- Alexanderstone Meadows – SSSI code: 32WWS
- Caeau Ty-Mawr – SSSI code: 33WHX
- Coed Nant Menascin – SSSI code: 33WJC
- Drostre Bank – SSSI code: 32WQF
- Llangorse Lake – SSSI code: 33WKJ
- River Usk (Upper Usk) – SSSI code 32WLM

There are also 21 ancient woodland within 2km of the site.

Emissions of Ammonia

Submitted modelling for 230,000 broilers used a fixed emission rate based on the emission factor for broilers reported in the Environment Agency's Intensive Farming Guidance Note (January 2013, version 5). NRW air quality specialists AQMRAT reviewed the assessment provided by the operator and used time varying NH₃ emission rates based on reported emissions..

Submitted modelling for turkeys (28,000 male or 50,000 female birds) used a fixed emission rate based on the average emission factor for poultry reported in the Inventory of Ammonia Emissions from UK Agriculture 2009. AQMRAT used time varying NH₃ emission rates based on the average emission factor for turkeys reported in the Inventory of Ammonia Emissions from UK Agriculture 2011.

With regard to type, design and set-up of the installation, the assessment incorporated the following elements:

- Birds stocked would be broilers or male turkeys or female turkeys;
- Poultry houses would have fully littered floors;
- Non-leaking drinkers will be used;
- New poultry houses would be roof fan ventilated with vents greater than 5.5m high and with a fan efflux velocity greater than 7m/s;
- Existing poultry houses would have gable-end fan ventilation fitted.
- There would be no storage of manure on site.

European Sites: SACs, SPAs, RAMSAR's

For intensive farms, the critical level for ammonia is 1 µg/m³ for sites with sensitive lichens and bryophytes, and 3 µg/m³ for higher plants and general vegetation.

28,000 Male Turkeys

Submitted modelling results (no depletion) indicate that there is an exceedance of the NH₃ screening threshold of the 1g.m-3 critical level at two SAC sites (Llangorse Lake and River Usk). Subsequent modelling at these locations with deposition depletion of the plume indicated that predicted ground level NH₃ concentrations did not exceed the upper acceptable threshold at these locations.

Exceedance of the screening thresholds for NH₃ may occur at receptors located within the River Usk and Llangorse lake SACs. However, following a review of species present in the SAC designated species lists, no lichen or bryophyte species were found to be present. Therefore, comparison with the critical level for higher plants of 3g.m-3 can be considered protective.

Comparison against the critical level for higher plants indicates exceedance of the NH₃ screening threshold values at Llangorse Lake SAC of 5%. However the upper acceptable threshold at the SAC was not exceeded.

The River Usk is primarily an aquatic SAC and therefore not affected by aerial Ammonia deposition.

As the total bird number here is below 40,000 places it does not come under EPR and the remit of this permit

50,000 Female Turkeys

Submitted modelling results (no depletion) indicate that there is an exceedance of the NH₃ screening threshold of the 1g.m-3 critical level at Llangorse Lake SAC. Subsequent modelling at this location with deposition depletion of the plume indicated that predicted ground level NH₃ concentrations did not exceed the upper acceptable threshold.

Exceedance of the NH₃ screening thresholds may occur at receptors located within the River Usk and Llangorse lake SACs. As no lichen or bryophyte species are present, comparison with the critical level for higher plants of 3g.m-3 can still be considered protective.

Comparison against the critical level for higher plants indicates exceedance of the NH₃ screening threshold values Llangorse Lake SAC of 6%. However the upper acceptable threshold at the SAC was not exceeded.

The River Usk is primarily an aquatic SAC and therefore not affected by aerial Ammonia deposition.

230,000 Broilers

Submitted modelling results (no depletion) indicate that there is an exceedance of the screening threshold of the 1g.m-3 critical level at the River Usk and Llangorse lake SACs. Subsequent modelling at these locations with deposition depletion of the plume indicated that predicted ground level NH₃ concentrations did not exceed the upper acceptable threshold at these locations.

AQMRAT's review of the ammonia modelling carried out by AS Modelling & Data Ltd for Greenway Farm indicated that exceedance of the screening thresholds of the 1g.m-3 critical level may occur at the River Usk and Llangorse lake SACs. As no lichen or bryophyte species are present, comparison with the critical level for higher plants of 3g.m-3 indicates exceedance of the screening threshold values is unlikely.

The River Usk is primarily an aquatic SAC and therefore not affected by aerial Ammonia deposition.

Check modelling for NH₃ indicates predicted process contributions (PC's) from submitted modelling are generally lower at the majority of receptors. No predicted PCs exceed the relevant critical levels or loads at any receptors.

National Sites: SSSI

28,000 Male Turkeys

Exceedance of the screening thresholds for NH_3 may occur at a receptor located within the Caeau Ty-Mawr SSSI. However, following a review of species present in the SSSI citations, no lichen or bryophyte species were found to be present. Therefore, comparison with the critical level for higher plants of 3g.m^{-3} can be considered protective.

Comparison against the critical level for higher plants indicates exceedance of the NH_3 screening threshold values at Caeau Ty-Mawr SSSI of 7%. However the upper acceptable threshold at the SSSI site was not exceeded.

As the total bird number here is below 40,000 places it does not come under EPR and the remit of this permit

50,000 Female Turkeys

Exceedance of the NH_3 screening thresholds may occur at a receptor located within the Caeau Ty-Mawr SSSI. As no lichen or bryophyte species are present, comparison with the critical level for higher plants of 3g.m^{-3} can still be considered protective.

Comparison against the critical level for higher plants indicates exceedance of the NH_3 screening threshold values at Caeau Ty-Mawr SSSI of 8%. However the upper acceptable threshold at the SSSI site was not exceeded. AQMRAT check modelling for NH_3 indicates predicted PCs are generally lower than submitted values at the majority of receptors. No predicted PCs exceed the relevant critical levels or loads at any receptors.

230,000 Broilers

There is no significant impact on any SSSI site from the broiler chickens.

Non-Statutory and Conservation Sites

Our review of the NH_3 modelling carried out by AS Modelling & Data Ltd for Greenway Farm indicated that the predicted long term PC of NH_3 is not likely to exceed the critical level for the protection of vegetation and ecosystems of 1g.m^{-3} at any receptor for 230,000 broilers. However, the 1g.m^{-3} critical level was exceeded for both 50,000 female and 28,000 male turkeys at a single AW site. Subsequent check modelling for N deposition with depletion indicated that PCs were unlikely to exceed the minimum critical load for broadleaved deciduous woodland of $10\text{ kg N.ha}^{-1}\text{.yr}^{-1}$ at all modelled receptors.

Environmental risk

Odour

Following a review of the Odour Risk Assessment supplied by the applicant and consideration of the proximity of sensitive receptors to the site, the odour modelling report was submitted to AQMRAT for assessment

Three of the closest affected receptors are attached to Greenway Farm while the remaining three receptors affected by both turkey scenarios and two receptors affected by the broiler scenario have predicted values between 3 & 3.3OU_E.m⁻³.

Given the substantial reduction in odour that would be expected and the fact that the predicted maximum odour concentrations are below 3.5 odour units, the proposals represent a substantial improvement and are considered acceptable.

Noise

The operator provided a noise assessment that has been assessed as part of the determination process. The background noise was measured in the area surrounding the farm and measured at 4 dwellings. The main background noise in the area is from the A40 road that is nearby. Powys County Council's standard plant noise criterion for extraction fans on poultry until is that the rating level must not be 5dB greater than pre-development background at the nearest dwellings. Provided that attenuators are fitted to the fans (as stated in the application) then this criterion will be met. The noise assessment shows that the aggregate extraction fan rating level at the nearest dwellings can be controlled so that at its greatest is 4dB above the lowest measured background noise. The highest predicted noise level from the farm unit is predicted to be 32dB. BS4142 considers a noise level of 35dB to be very low.

We are therefore satisfied that noise levels are unlikely to cause an issue for the surrounding dwellings.

Annex 1: decision checklist

This document should be read in conjunction with the application and supporting information and permit.

Aspect considered	Justification / Detail
Consultation	
Scope of consultation	The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.
Responses to consultation and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision. The decision was taken in accordance with our guidance.
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 EPR RGN 1 Understanding the meaning of operator.
European Directives	
Applicable directives	All applicable European directives have been considered in the determination of the application.
The site	
Extent of the site of the facility	A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.
Site condition report	The operator has provided a description of the condition of the site. We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports – guidance and templates (H5).
Biodiversity, Heritage, Landscape and Nature Conservation	The application is within the relevant distance criteria of sites or nature conservation and protected species and habitats. See Key Issues section.

Aspect considered	Justification / Detail
Environmental Risk Assessment and operating techniques	
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. See Key Issues section.
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The operator has proposed operating techniques for broiler production, feed storage, fuel and chemical storage and dirty water storage in accordance with EPA Sector Guidance Note 6.09 How to comply with your environmental permit for intensive farming.
The permit conditions	
Raw materials	We have specified limits and controls on the use of raw materials and fuels. LPG fuel, and Diesel stored on-site for farm use. Disinfectant, herbicides and wood shavings (for bedding) stored on-site
Incorporating the application	We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process. These descriptions are specified in the Operating Techniques table in the permit.
Emission limits	We have decided that no emission limits should be set for the parameters listed in the permit.

Aspect considered	Justification / Detail
Operator Competence	
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.
Relevant convictions	The National Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found.

Annex 2: Consultation, web publicising and newspaper advertising responses

Summary of responses to consultation and web publication and the way in which we have taken these into account in the determination process.

Response received from
Brecon Beacons National Park Authority
Brief summary of issues raised
1. The bird numbers that were supplied to Brecon Beacons National Park Authority as part of the planning application are different to the bird numbers that were submitted to NRW for determination
Summary of actions taken or show how this has been covered
1. We have assessed the application based on the bird numbers submitted to us with the operators application. We have supplied Brecon Beacons National Park Authority with the application that we have and passed on all relevant information in regards to bird numbers.