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Natural Resources Wales permitting decisions

Lower Trederwen Farm Broiler Unit

Decision Document

Bespoke permit

The application number is: PAN-00657

The Applicant / Operator is: Mrs Jaqueline Heather Mountford

The Installation is located at: Lower Trederwen Farm Broiler Unit, Lower Trederwen Farm, Ardleen, Llanymynech, Powys, SY22 6RZ

We have decided to grant the permit for Lower Trederwen Farm Broiler Unit operated by Mrs Jaqueline Heather Mountford.

The permit number is **EPR/BB3395ZM/A001**

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

- Table of contents
- Key issues
- Annex 1 the consultation and web publicising responses

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Key issues of the decision

1 Our decision

Based on the information currently available to us we are currently minded to grant a permit to the Applicant. This would, if issued, allow it to operate the Installation, subject to the conditions in the Permit.

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the permit will ensure that a high level of protection is provided for the environment and human health.

This Application is to operate an installation which is subject principally to the Industrial Emissions Directive (IED).

The permit contains many conditions taken from our standard Environmental Permit template including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the permit, we have considered the Application and accepted the details are sufficient and satisfactory to make the standard conditions appropriate.

2 How we reached our decision

2.1 Receipt of Application

The Application was received on 24 March 2018 and was duly made on 23 May 2018. This means we considered it was in the correct form and contained sufficient information for us to begin our determination, but not that it necessarily contained all the information we would need to complete that determination.

2.2 Consultation on the Application

We carried out consultation on the Application in accordance with the EPR and our statutory Public Participation Statement (PPS).

We advertised the Application by a notice placed on our website, which contained all the information required by the IED, including telling people where and when they could see a copy of the Application.

A copy of the Application and all other documents relevant to our determination (see below) are available for the public to view. Anyone wishing to see these documents could arrange for copies to be made.

We sent copies of the Application to the following bodies, which includes those with whom we have “Working Together Agreements”:

- **Powys County Council Planning Authority**
- **Powys County Council Environmental Protection Department**
- **Food Standards Agency**
- **Health Protection Agency**
- **Public Health Wales**

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly.

Further details along with a summary of consultation comments and our response to the representations we received can be found in Annex 1. In this instance no comments were received.

2.2.1 Draft Permit Consultation

We are now carrying out a consultation on our draft decision. This consultation will begin on **15 July 2019** and end on **12 August 2019**.

2.3 Requests for Further Information

Further information was requested by the means of a Schedule 5 Notice requiring the applicant to submit a revised site layout plan, biomass boiler specifications and

technical standards for the ammonia air cleaning systems. The Schedule 5 Notice was sent out on the 10 June 2019 with a response date of the 14 June 2019. The Applicants response to the Schedule 5 Notice was provided on the 14 June 2019. The additional information supplied was satisfactory of the Schedule 5 Notice.

A copy of the information notice and e-mails requesting further information were placed on our public register as were the responses when received.

3 The Legal Framework

The Permit will be granted, under Regulation 13 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an installation as described by the IED
- subject to aspects of the Well-Being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016 which also have to be addressed.

We address the legal requirements directly where relevant in the body of this document. NRW is satisfied that this decision is consistent with its general purpose of pursuing the sustainable management of natural resources in relation to Wales, and applying the principles of sustainable management of natural resources. In particular, NRW acknowledges that it is a principle of sustainable management to take action to prevent significant damage to ecosystems. We consider that, in granting the Permit a high level of protection will be delivered for the environment and human health through the operation of the Installation in accordance with the permit conditions.

4 The Installation

4.1 Description of the Installation and related issues

4.1.1 The permitted activities

The Installation is subject to the EPR because it carries out an activity listed in Part 1 of Schedule 1 of the EPR:

- Section 6.9 Part A(1)(a)(i) Rearing poultry in an installation with more than 40,000 places.

An installation may also comprise “directly associated activities”, which at this Installation include:

- Dirty Water Tanks
- Generator and Fuel Storage
- Biomass Boilers
- Exhaust Air Scrubbing Units

Together, these listed and directly associated activities comprise the Installation.

4.1.2 The Site

The site lies to the East of Arddleen, Powys, approximately 2.6km South of Four Crosses at grid reference 326749,315837. The surrounding area is hilly with some woodland. The predominant land use is grassland and grazing.

The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. In addition, the operator has provided a site layout/drainage plan which includes discharge points.

A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.

4.1.3 What the Installation does

The facility will comprise of two poultry houses, with a maximum capacity of 116,000 broiler birds. Birds will be house at day old chicks and will be grown on a 42-day crop cycle. There will be approximately 7.6 crop cycles per annum. The chickens will enter and leave on an all-in, all-out basis. The two poultry sheds will be fitted with ammonia air cleaning systems.

4.2 The site and its protection

4.2.1 Proposed site design: potentially polluting substances and prevention measures

There will be two fan ventilated poultry houses, with a combined capacity for 116,000 broiler birds. The working area where vehicles operate is laid to concrete and hard standing. Ventilation is controlled by temperature, all houses will have high velocity roof mounted extraction fans. Water is via a nipple drinking system fitted with cups to reduce leakage and spills, leading to drier litter. Feed is delivered in covered lorries and stored on site in vermin proof steel galvanised bins. Manure will be removed from the houses at the end of the cycles and removed off site. Manure will be spread on operator controlled land in line with their manure management plan. Any surplus will be sold to third parties if required. In these circumstances where the litter is exported for spreading to land, records are kept of the names, addresses of the receiving farms. Dirty wash water will be directed to an underground storage tank.

The houses are then washed and disinfected prior to the cycle beginning again. Underground storage tanks will be installed to catch all wash waters. Fallen stock are removed from the houses and stored in sealed containers awaiting collection from a licensed agent.

Due to ammonia exceedances at Breidden Hill SSSI, the applicant has agreed to install ammonia scrubbers to reduce the ammonia impact on the ecological site. The reductions the scrubbers will achieve is 70% and will be fitted to both poultry houses. Table S1.3 Pre-operational measures has been inserted into the operator's permit. PO1 requires the operator to install ammonia scrubbing units as stated in email dated 14/06/19, ensuring there will be at least a 70% ammonia reduction rate. PO2 requires that at least 10 days before the operation of poultry house 1 and 2 the operator shall submit written confirmation to Natural Resources Wales that the necessary procedures are in place for the operation of the ammonia air scrubbing units and that staff have received the necessary training.

4.2.2 Closure and decommissioning

Permit condition 1.1.1 requires the Operator to have a written management system in place which identifies and minimises risks of pollution including those arising from closure.

At the definitive cessation of activities, the Operator has to satisfy us that the necessary measures have been taken so that the site ceases to pose a risk to soil or groundwater, taking into account both the baseline conditions and the site's current or approved future use. To do this, the Operator has to apply to us for surrender, which we will not grant unless and until we are satisfied that these requirements have been met.

The operator has included a site closure plan with their application detailing the steps that will be taken on the event of the facility closing.

A site condition report has been completed providing a baseline for the site at the time of the permit application. No pollution incidents have previously occurred at the site. We consider that the description provided is satisfactory. The decision was taken in accordance with our guidance on site condition reports – guidance and templates (H5).

4.3 Operation of the Installation – general issues

4.3.1 Administrative issues

The Applicant is the sole Operator of the Installation. We are satisfied that the Applicant is the person who will have control over the operation of the Installation; and that the Applicant will be able to operate the Installation so as to comply with the conditions included in the Permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.

4.3.2 Relevant convictions

NRW's COLINS Database has been checked to ensure that all relevant convictions have been declared.

No relevant convictions were found.

4.3.3 Management

The Applicant has stated in the Application that they will implement an Environmental Management System (EMS) that will meet the requirements for an EMS in our “How to comply with your environmental permit guidance”. The Applicant submitted a summary of the EMS with their application which includes sections on normal operations, maintenance schedule recording, incidents and abnormal operations, complaints, accident/emergency plan, training, installation plans and site security.

All written management systems will be subject to regular review by the Operator.

We are satisfied that appropriate management systems and management structures will be in place for this Installation, and that sufficient resources are available to the Operator to ensure compliance with all the Permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.

4.3.4 Accident management

In order to ensure that the management system proposed by the Applicant sufficiently manages the residual risk of accidents, permit condition 1.1.1a requires the implementation of a written management system which addresses the pollution risks associated with, amongst other things, accidents.

The operator has an emergency plan which will be subject to regular review. It includes contingencies for events such as fire, power failure, flood, disease and containment failure. We are satisfied with the Applicant’s Emergency Plan.

4.3.5 Site security

The site itself does not have a secure boundary fence. Poultry houses, all fuel stores and all store rooms are kept locked and secure, preventing any unauthorised access.

Having considered the information submitted in the Application, we are satisfied that procedures will be in place to ensure that the site remains secure.

4.3.6 Off-site conditions

Based on the information submitted in the application, we do not consider that it is necessary to impose offsite conditions.

4.3.7 Operating techniques

Before bird arrival the house floors will be covered to a sufficient depth of bulk shavings. Temperature and humidity will be closely monitored on a daily basis to achieve bird comfort and a relative humidity of 55-60%, this should achieve litter with a dry matter content of between 60-70%, which is important to minimising emissions.

A computer controls the ventilation so that temperature is maintained for the age of the birds. Fans are fitted with back drafts shutters to prevent drafts and unnecessary heat loss. Water is via a nipple drinking system fitted with cups to reduce leakage and spills leading to drier litter.

Feed is delivered from a UKASTA accredited feed mill and blown into bulk feed bins situated adjacent to the houses, from the feed bins the feed is augered into the houses and distributed to the birds via a pan feeding system.

Fallen stock is disposed of in accordance with the current Animal By-Products Regulations. Carcasses will be stored in sealed vermin proof containers awaiting regular collection by a licenced renderer. Records of dates, quantities and destination will be held on site.

Records of tonnages of litter and wash water removal are recorded, wash water will be spread on operator controlled land or sold to be used as fuel at a local anaerobic digester.

Pre-operational requirement PO2 requires the operator to submit written confirmation to NRW that the necessary operating techniques are in place for the operation of the air scrubbing units and that staff have received the necessary training before the operation of the second poultry house.

4.3.8 Energy efficiency

We are satisfied that the Applicant will ensure that energy is used in the most efficient way possible.

4.3.9 Avoidance, recovery or disposal of wastes produced by the activities

At depletion any remaining litter will be removed from the site and used on operator controlled land with any extra sold to third parties. The site will then be pressure washed and disinfected, all wash waters will be contained in sealed underground tanks.

5 Minimising the Installation's environmental impact

Regulated activities can present different types of risk to the environment, these include odour, noise and vibration; accidents, fugitive emissions to air and water; as well as point source releases to air, discharges to ground or groundwater, global warming potential and generation of waste. All these factors are discussed in this and other sections of this document.

For an installation of this kind, the principal emissions are :

- Ammonia
- Dust
- Odour
- Noise
- Effluent discharges

The next sections of this document explain how we have approached the critical issue of assessing the likely impact of emissions from the Installation on human health and the environment and what measures we are requiring to ensure a high level of protection.

5.1 Assessment of Impact on Air Quality

The applicant has carried out a risk assessment identifying potential risks to human health including dust and ammonia. Operating procedures have been put in place to

minimise the risks, in line with BAT procedures. It is considered that if the site is operated in line with these procedures, there is no significant risk to human health as a result of activities at the site.

5.2 Assessment of odour impact

The applicant has submitted detailed dispersion modelling of the impact of odour from the proposed facility.

H4 Odour Management guidance explains that the odour benchmarks are based on the 98th percentile of hourly average concentrations of odour modelled over a year at the site/installation boundary. The benchmarks are:

- 1.5 odour units for most offensive odours
- 3 odour units for moderately offensive odours
- 6 odour units for less offensive odours

Odours from poultry rearing are usually placed in the moderately offensive category. Therefore for their modelling the applicant has used the benchmark of 3.0 ouE/m³ to assess the potential impact of odour on nearby sensitive receptors. Modelling has been carried out based on emissions from the two poultry houses.

The applicant has described the following measures which will be in place to minimise odour emissions during house depopulation/de-littering:

- Litter will be placed carefully into trailers positioned close to house doors;
- Trailers containing spent litter will be sheeted before transporting off site;
- De littering will be avoided at weekends during the summer months;
- Clean out will be carried out as soon as possible following destocking;

We have compared the measures proposed for the site to the BAT standards in EPR 6.09 and are satisfied that the techniques represent appropriate measures for the installation.

The modelling indicates that the emissions from the poultry houses, are unlikely to result in an exceedance of the odour benchmark level. Management of the onsite manure store will comply with the BAT standards in 6.09 to reduce odour emissions. Effluent channels and collection tanks will be maintained to avoid blockages and contaminated run-off.

Permit condition 3.3.1 requires that emissions from the activities are free from odour at levels likely to cause pollution outside the site. We are satisfied that this condition will be sufficiently protective in conjunction with the measures described by the applicant for minimising odour production at the installation.

It is recognised that this modelling does only represent the expected odour concentrations for 98% of the time and that odours may be higher for the remaining 2% of the time. NRW is not able to ensure that odour impacts on nearby receptors are reduced to zero, but is determined to ensure that they are minimised.

5.3 Assessment of impact to surface and ground water

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent pollution of ground and surface water.

Clean, uncontaminated rainwater from roofs and yard areas will drain along the lengths of the poultry houses to a diverter valve and then to a soakaway. Any lightly contaminated yard wash will be directed to a sealed underground tank.

The permit includes a condition that requires periodic monitoring to be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

5.4 Emissions to sewer

When birds are removed from the poultry houses, the site will be pressure washed, disinfected and dried out prior to the next cycle. All wash waters will be contained in

sealed underground tank prior to being spread on operator controlled land. There are no emissions to sewer.

5.5 Fugitive emissions

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise fugitive emissions, including dust, and to prevent pollution from fugitive emissions.

5.6 Assessment of noise impact

A risk assessment of the potential impact of noise from the site on nearby sensitive receptors has been carried out by the applicant. Potential sources of noise include vehicles travelling to and from site for deliveries, collections, litter removal and dirty water removal, ventilation fans, alarm system and the standby generator.

There are sensitive receptors within 400 metres of the installation. The applicant has submitted a noise management plan (NMP) for the installation as required by EPR 6.09 “How to Comply with your Permit for Intensive Farming”. The NMP describes the measures and controls in place to minimise noise and includes twice daily inspections of the site.

Roof mounted ventilation fans will be subject to regular, end of cycle maintenance by qualified electricians and noisy fans will be isolated and an electrician notified. Vehicles will only arrive on site at daylight hours to minimise disturbance and will be driven slowly on site to minimise noise. The movement of vehicles outside of the installation boundary is not within the regulatory scope of the Environmental Permitting (England and Wales) Regulations 2016 and is a matter for the local planning authority. Stand by generators will be subject to weekly test (Monday mid-mornings) and will have frequent electrical inspections.

We have compared the measures proposed for the site to the BAT standards in EPR 6.09 and are satisfied that the techniques represent appropriate measures for the installation. The NMP has been incorporated into the operating techniques section of the permit.

Permit condition 3.4.1 requires that emissions from the activities are free from noise at levels likely to cause pollution outside the site, as perceived by an officer of NRW. We are satisfied that this condition will be sufficiently protective in conjunction with the measures described by the applicant for minimising odour production at the installation.

5.7 Impact on Habitats sites, SSSIs, non-statutory conservation sites etc.

The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.

A full assessment of the application and its potential to affect the sites has been carried out as part of the permitting process. Providing the operator installs the air scrubbing systems (with an ammonia reduction rate of at least 70%), we consider that the application will not affect the features of the sites.

The following sites have been considered:

SAC, SPA and Ramsar Sites (within 5km)

- Montgomery Canal SAC/SSSI

SSSI (within 5km)

- Montgomery Canal SAC/SSSI
- Breidden Hill SSSI
- Moel Y Golfa SSSI
- Gweunydd Ty-Brith SSSI

We also considered the potential impacts on nearby ancient woodlands, local wildlife sites, local nature reserves and national nature reserves (within 2km).

The applicant has carried out detailed modelling of the potential impact of dispersion and deposition of Ammonia from the site. The submitted report concludes that the

maximum predicted NH₃ process contributions (PCs) from the proposed poultry unit would exceed from the preliminary modelling results. The report concludes should the permit be granted at Lower Trederwen Farm Broiler Unit, the ammonia emissions would increase, the modelling predicts that the maximum annual ammonia concentrations at the nearest receptors considered would be above the threshold for Breidden Hill SSSI (critical level of 1 µg/m³).

Given these predicted exceedances, especially at Breidden Hill SSSI, NRW has requested the operator to install an ammonia air cleaning system. The applicant submitted proposals (14/06/2019) to install ammonia air scrubbing units on both poultry houses. The air scrubbing units will reduce ammonia emissions from the installation by approximately 70%. The 70% reduction will reduce the contribution from the installation to below 1%.

NRW have placed a maximum annual limit on ammonia emissions (1183kg as NH₃ per year). This limit was calculated using the standard ammonia emission factor for broiler chickens (0.034 kg-NH₃/bird place/year).

HRA Consultation

OGN Form 1 and CRoW Appendix 4 have been completed and forwarded onto our internal Natural Resource Management team for consultation. Full details of the assessment carried out of the potential effect of ammonia emissions from the proposed site on the SAC and SSSIs detailed above are detailed in the forms. Our conclusions were that providing the Applicant uses the ammonia air scrubbing units, it is not likely to have a significant effect on any of these sites. The forms were sent to our internal Natural Resource Management team for consultation. The forms are available from our public register.

6 Setting ELVs and other Permit conditions

6.1 Translating BAT into Permit conditions

Article 14(3) of the Industrial Emissions Directive (IED) states that BAT conclusions shall be the reference for setting the permit conditions to installations covered by the

Directive. As a result of the Commission Implementing Decision (EU) 2017/302 of 15 February 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs, the format of our Permit for the intensive farming sector has been updated. Appendix 1 of the Permit sets out generic conditions which apply to all sites. Appendix 2 sets out site specific conditions based on the activities being carried out.

6.2 Monitoring

Monitoring should be carried out for the parameters listed in Appendix 1, Schedule 3 of the permit using the methods and to the frequencies specified in Table S3.1 for laying hens and laying hens in non-caged housing. These monitoring requirements have been introduced in order to demonstrate compliance with the best available techniques (BAT) conclusions for the intensive rearing of poultry or pigs, as set out in the Commission Implementing Decision (EU) 2017/302 of 15 February 2017.

Table S3.2 in the permit, requires modelling from point source emissions to air. The applicant is required to monitoring ammonia emissions from the air scrubbing units on both poultry sheds four times a year (quarterly). This will ensure the air scrubbing units are working effectively and reducing ammonia emissions by 70% as stated in the report 'IPPC Update statement ammonia', submitted to NRW (14/06/2019). Table S3.5 sets the annual ammonia emission limit of 1183kg-NH₃ (there are no quarterly ammonia emission limits).

If the applicant can supply sufficient evidence that the air scrubbing unit are working effectively, the modelling frequency could potentially be decreased to annual monitoring. However, this would first have to be agreed in writing by NRW.

6.3 Reporting

We have specified reporting requirements in Appendix 2, Schedule 4 of the Permit to ensure compliance with permit conditions and to monitor the efficiency of farming activities at the site in line with BAT. We made this decision in accordance with EPR 6.09 "*How to Comply with your Permit for Intensive Farming*".

ANNEX 1: Consultation Responses

A) Advertising and Consultation on the Application

The Application has been advertised and consulted upon in accordance with Natural Resources Wales Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our draft decision is summarised in this Annex. Copies of all consultation responses have been placed on Natural Resources Wales public register.

1) Consultation Responses from Statutory and Non-Statutory Bodies

Response Received from: Public Health Wales	
Brief summary of issues raised:	Summary of action taken / how this has been covered
1. A site ammonia and odour management scheme should be implemented and maintained.	1. See section 5.2 for odour assessment. Site operating techniques will be used to manage ammonia at the site.
2. Maintain a Manure Management Plan (MMP)	2. The applicant has provided us with a MMP as part of the permit application.
3. Appropriate assessment and operational management of any dusts or bio-aerosols is recommended.	3. See Section 5.5
4. All on-site storage of liquids is accompanied by bunding in compliance with industry practice and guidance.	4. See Section 4.2.1
5. The applicant should seek external accreditation for the Environmental Management System (EMS) e.g. ISO14001 standard.	5. The Environmental Management System is addressed within this decision document, in particular at section 4.3.3.

2) Consultation Responses from Members of the Public and Community Organisations

a) Representations from Local MP, Assembly Member (AM), Councillors and Parish / Town / Community Councils

Response Received from	
Brief summary of issues raised:	Summary of action taken / how this has been covered
None	N/A

b) Representations from Community and Other Organisations

Response Received from	
Brief summary of issues raised:	Summary of action taken / how this has been covered
None	N/A

c) Representations from Individual Members of the Public

Response Received from	
Brief summary of issues raised:	Summary of action taken / how this has been covered
None	N/A