Natural Resources Wales ('NRW') permitting decisions

Bespoke permit

We have decided to grant Daniel Jones a permit to operate an egg-laying poultry unit at Brynrorin Farm.

On issue the permit number has been changed from EPR/NP3038WF to EPR/AB3191CV. This is as a result of the introduction of a new NRW permit and licencing system which has allocated the new permit number. This does not impact the content of the permit or this supporting decision document.

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.

What this document is about

This document explains how we have considered the Applicant's Application, and why we have included the specific conditions in the permit we have issued to the Applicant. It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position. Unless the document explains otherwise, we have accepted the Applicant's proposals.

Preliminary information and use of terms

We gave the application the reference number EPR/NP3038WF/A001. We refer to the application as "the Application" in this document in order to be consistent.

The number we have given the permit is EPR/AB3191CV. We refer to the permit as "the Permit" in this document.

The Application was duly made on 9th October 2014.

The Applicant is Daniel Jones and the proposed facility is to be located on land at Brynrorin Farm, Abermule.

Our decision

We have decided to grant the Permit to the Applicant. This will allow the permit holder 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.

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 condition appropriate. This document does, however, provide an explanation of our use of "tailor-made" or installation-specific conditions.

How we reached our decision

The Application was duly made on 9th October 2014. 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.

The Applicants made no claim for commercial confidentiality. We have not received any information in relation to the Application that appears to be confidential in relation to any party.

We carried out consultation on the Application in accordance with the Environmental Permitting Regulations (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 Industrial Emissions Directive (IED), including telling people where and when they could see a copy of the Application.

We sent copies of the Application to the following bodies:

- Powys County Council Local Planning Department

- Powys County Council Environment Protection Department (Environmental Health)
- Public Health Wales
- Food Standards Agency
- Health and Safety Executive

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

Public Health Wales forwarded our Application consultation letter to Betsi Cadwaladr University Health Board, who sent us comments on the Application. Their response is summarised in Appendix 2.

What the Regulated Facility Does

The installation will comprise two poultry houses, accommodating a maximum of 48,000 egg-laying chickens. The birds will be brought to the site at point of lay and depopulated approximately one year later. The birds will be delivered and removed on an "All In, All Out" basis, which means that the entire flock will be removed from both houses before a new flock cycle begins. As a result, there will be no overlap between different flocks of birds.

The birds will be housed in two buildings; house 1 contains a deep manure and litter pit, which will be cleaned out following each depopulation; house 2 will operate a manure belt system which will be operated twice weekly to remove litter from the house. Both houses are equipped to the best environmental standards. The buildings will be equipped with high velocity ridge mounted ventilation fans.

After it is removed from the houses the litter will be taken off-site immediately and stored on operator controlled land outside the installation boundary. The buildings will then be cleaned, disinfected and dried prior to the next re-stocking of birds. All wash waters will be collected and disposed of appropriately as described in the **Dirty Water** section below.

Structure of this document

- Key issues of the decision
- Annex 1 the decision checklist
- Annex 2 responses to the consultation on the application

Key issues of the decision

This section describes the key aspects of our assessment of the application which includes addressing the public concerns raised in response to the application and our draft decision.

Location of the Regulated Facility

Location of the installation is outside the scope of the Environmental Permitting Regulations (England and Wales) 2010 and is a matter for consideration by the Local Planning Authority. The environmental impact of the installation in terms of the receptors (including the impact on human health, water courses, groundwater, habitats and species) surrounding it has been thoroughly assessed as part of the determination process. These assessments are site specific and take into account the physical setting of the installation in relation to environmental impact, including consideration of local topography and prevailing weather conditions.

Bird Numbers

The original environmental permit application was for an 80,000 bird place installation, based on three poultry houses that had capacity for 16,000, 32,000 and 32,000 birds respectively. The 16,000 bird place house was constructed following the granting of planning permission in 2009.

During the determination process, the applicant informed NRW that he wished to reduce the number of bird places applied for to 48,000, which would be split between two houses with capacities of 16,000 and 32,000 bird places respectively. Our determination assessment has therefore been based on the lower figure of 48,000 bird places and the draft permit limits operation to no more than this permitted level via Table S1.1 of Schedule 1 of the permit.

Odour

As noted above, the applicant's original application was for three poultry houses. House 1 would be naturally ventilated and houses 2 and 3 would be ventilated using high velocity ridge mounted extraction fans. However, during the determination, the applicant informed NRW that his proposal had changed to include the installation of high velocity ridge mounted fans on the roof of house 1 and to remove house 3 from the application entirely, reducing total bird numbers from 80,000 to 48,000. We have included an improvement condition to require the operator to install the high velocity ridge mounted fans on house 1 before commencement of operations (see **Pre-Operation Conditions** section).

As part of the determination process we consulted with Powys County Council with regard to historical complaints of odour associated with Brynrorin Farm. Their response indicated that they are not aware of any odour complaints associated with the existing operation.

Odour modelling

A consultant acting on behalf of the applicant carried out a detailed assessment of predicted odour from the installation using computer modelling software. The applicant submitted a report on this assessment to us with his application. This assessment was based on the original proposal for an installation comprising of three poultry houses with capacity for 80,000 birds and natural ventilation (i.e. no ridge mounted fans) in house 1. The odour modelling used meteorological datasets which took into account local weather factors such as prevailing wind conditions and historical temperatures at the installation. It also used digital elevation data of the surrounding area to incorporate the mixing influence of local topography.

The consultant's assessment was checked by technical specialists within NRW who noted that the report referenced two papers, Nimmermark and Gustafsson (2005)[1] and Fournel et al. (2012)[2], in justification of the derived emission rates used in the assessment. Our specialists noted that the consultant made assumptions relating to ventilation rates and internal odour concentration to derive the odour emission rates which did not represent a worst case impact assessment when considering other available literature.

A paper by Hayes et al. (2006)[3] derives a mean value of 1.35ou_E/bird/s for summer for layers with a deep litter system with the manure stored in the house beneath plastic slats and 24 hour access to a scratching area. This is approximately 2-3 times the average value assumed by the consultant for the existing housing. However, it should be noted that the Hayes figure is based on a summer measurement and is therefore unlikely to be representative of year-round emission rates when temperatures are typically lower.

The Hayes paper also derives a mean value of 0.47ou_E/bird/s for spring for caged layers with belt removal of manure. This is approximately double the average value used by the consultant in the odour modelling assessment. However, regarding the maximum value, the consultant used a figure that was more than two times lower than the maximum measured in the Hayes paper.

The consultant used meteorological data from the Global Forecast System (GFS) (0.5 degree grid), the efficacy of which in detailed impact assessments has not yet been demonstrated. The Environment Agency's guidance

[1] Influence of Temperature, Humidity and Ventilation Rate on the Release of Odour and Ammonia in a Floor Housing System for Laying Hens, 2005 - S. Nimmermark and G. Gustafsson.
[2] Odour emissions, hedonic tones and ammonia emissions from three cage layer housing systems, 2012 – Fournel et al.
[3] E.T. Hayes 1, T.P. Curran *, V.A. Dodd, Odour and ammonia emissions from intensive poultry units in Ireland, Bioresource Technology 97 (2006) 933–939.

document H4 Odour Management guidance document recommends the use of meteorological data from the following sources:

- A representative meteorological station;
- If such a station (a representative meteorological station) is not available or the site has specific local features that are likely to influence dispersion significantly, consideration should be given to the use of site specific predictive meteorological datasets derived from analysis of synoptic data. Data of sufficient quality for use in steady state and non steady state models is available commercially from a number of sources (e.g. TAPM data from the Air Pollution Model; MM5 data derived from the fifth generation Mesoscale Model).
- Your (the applicant's) own weather station if you have one on the site. You should demonstrate that the siting of this will give a true representation of the conditions of the site.

Our specialists undertook check modelling using ADMS 5, with Met Office Numerical Weather Prediction meteorological data extracted at the site location, which included sensitivity checks of the consultant's modelling using constant emission rates from various literatures. Our checks using emission factors from Hayes et al. and SCAIL Agriculture[4] indicated that predicted odour concentrations at receptors were likely to be higher than those predicted by the consultant.

We requested that the applicant provide us with a revised odour modelling assessment that used a meteorological dataset that is compliant with the guidance set out in H4 and used emission factors set out in the Hayes paper or the SCAIL Agriculture tool, or, if these emission factors were not used, then the reasons for using other emission factors must be fully justified.

The applicant's consultant submitted a revised odour modelling assessment which took into account the changes to the configuration and size of the proposed installation (namely the intention to install ridge mounted high velocity fans on the roof of house 1 and to reduce the number of bird places to 48,000 split between two houses).

With regard to meteorological data, the revised assessment used observed meteorological readings from Lake Vyrnwy, Shobdon and Sennybridge meteorological stations, along with meteorological data obtained from the Global Forecast System (GFS). The model was run several times using meteorological datasets from these sources. With regard to emission factors, the revised assessment applied an odour emission factor of $0.47ou_E$/bird-place/s for hens in houses with belt collection of manure and $0.94ou_E$/bird-place/s for hens in houses where manure collects within the house for the lifetime of the flock. Our specialists reviewed the revised work and agreed with the applicant's consultant's use of meteorological datasets and emission factors presented. With regard to the use of $0.94ou_E$/bird-place/s for hens in houses where manure collects within the house for the lifetime of the flock, it should be noted that this figure is based on a summertime measurement and

[4] Sniffer ER26: Final Report - SCAIL-Agriculture update – Appendix B, March 2014

therefore is unlikely to be representative of year-round emission rates, when temperatures are typically lower. Taking this into account, we consider that the emission factor used is appropriate.

The maximum 98th percentile hourly mean odour concentration at any of the receptors within the vicinity of the installation predicted in the revised odour assessment was 1.19 OU_E/m^3. This is the highest figure generated by the modelling across all of the various sources of meteorological data used. The consultant therefore concludes that there is unlikely to be an exceedance of the odour benchmark level of 3 OU_E/m^3 (as the 98th percentile of the hourly mean) as set out in the H4 guidance. Our specialists reviewed the revised assessment and concurred with the applicant's consultant's conclusion. Our specialists carried out check modelling of the using Met Office Numerical Weather Prediction meteorological data extracted at the site location, which produced similar results to those produced by the consultant.

Permit Conditions

Odour is controlled at intensive agriculture sites in several ways, from the design of the building to the handling of manure. Permit condition 3.3.1 requires that emissions from the activities are free from odour at levels likely to cause pollution outside the site. Therefore, in the unlikely event of unacceptable odour nuisance from the site, we will be able to require the operator to resolve the issue.

The applicant has submitted an odour management plan for the installation as required by EPR 6.09 "How to Comply with your Permit for Intensive Farming" because there are sensitive receptors within 400 metres of the installation. The Odour Management Plan describes the measures and controls in place to minimise odour and includes twice daily olfactory checks at the site boundary. Odour mitigation is also addressed in the following application documents: "Non-Technical Summary", "Odour Assessment at Brynrorin Farm" and "Technical Standards at Brynrorin Farm". We have compared these to the BAT standards in EPR 6.09 and are satisfied that the techniques represent appropriate measures for the installation. The techniques described the Odour Management Plan document and Technical Standards document have been incorporated into table S1.2 of the permit as operating techniques. Permit condition 2.3.1 requires the operator to operate the installation in accordance with the techniques listed in Table S1.2 of the permit.

In summary, we are satisfied that pollution due to odour will be managed to acceptable levels. This is because predicted odour levels are not expected to in excess of the benchmark level of 3 OU_E/m^3 (as the 98th percentile of the hourly mean) as set out in the H4 guidance. It has therefore been assessed as not being a significant enough reason to refuse the application. We also consider the permit conditions and operating techniques to be sufficiently protective.

Noise

Plant Noise Assessment

We requested the Matrix plant noise assessment (prepared for Powys County Council in support of the planning application), as part of the permit determination process. This report was reviewed by noise specialists in Natural Resources Wales, who recommended that further assessment of noise impact was required as the assessment did not include assessment of noise from the original poultry house (House 1) and did not take account of background noise levels at sensitive receptors within the vicinity of the proposed installation. All subsequent noise impact assessments received from the applicant were also reviewed by our noise specialists, and their recommendations actioned.

A second noise impact assessment was submitted by the applicant which considered the impact from two noise generating activities; extraction fans on the poultry shed and the HGV movements which included loading and unloading. Noise was been predicted at five sensitive receptors. The methodology used in this assessment agreed with the methodology detailed in BS4142:2014 "Methods for Rating and Assessing Industrial and Commercial Sound". BS4142:2014 assesses the likelihood of adverse impact at sensitive receptors by subtracting the measured background noise level (outdoor) from the measured / calculated rating level (outdoor). Therefore a BS4142:2014 assessment requires that existing background noise levels at sensitive receptors are measured and used in the assessment.

The significance of sound of an industrial nature depends on both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs:

a) Typically the greater this difference, the greater the magnitude of impact.
b) A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.
c) A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.
d) The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

The assessment included a background noise survey at three locations. The assessment predicted a maximum rating level at sensitive receptors of 1dB above typical background during the night-time operations. All other predictions were equal to or below typical backgrounds.

Noise modelling

The second noise impact assessment did not, however, take into account noise from poultry house 2, and therefore we requested that the applicant carry out further noise assessment that takes account of noise from both poultry houses using noise modelling software. A third report was submitted which included the impact of noise from poultry house 2, and again followed the BS4142:2014 methodology. However, our noise specialists noted that the assessment did not follow the methodology for aggregating the cumulative impact of noise sources detailed in ISO 9613-2 "Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation", which requires that equivalent continuous downwind sound pressure levels as a result of attenuation are calculated for each octave band and then combined to find the total equivalent continuous downwind sound pressure level. From the report it appeared that the applicant's consultant had calculated total attenuation terms for the whole spectrum which were then applied to find the total equivalent continuous downwind sound pressure level. The guidance set out in ISO 9613-2 states that:

"The equivalent continuous downwind octave-band sound pressure level at a receiver location, $L_{fT}(DW)$, shall be calculated for each point source, and its image sources, and for the eight octave bands with nominal midband frequencies from 63 Hz to 8 kHz, from equation (3):"

And

"The equivalent continuous A-weighted downwind sound pressure level shall be obtained by summing the contributing time-mean-square sound pressures calculated according to equations (3) and (4) for each point sound source, for each of their image sources, and for each octave band, as specified by equation (5):"

The applicant's consultant assessed the impact from the high velocity roof mounted fans and HGVs separately, however, correct application of ISO 9613-2 (as described above) requires that total impact of both activities together at receptors is assessed, and then compared with typical background values. In addition, our noise specialists noted that the attenuation values used in the applicant's assessment appeared not to have been calculated in octave frequency bands.

As a result we requested that the applicant provide an additional assessment that included the impact from the roof fans in combination with the impact of HGV movements, and also addressed our noise specialist's concerns that the appropriate octave frequency bands had been used. An addendum report was submitted by the applicant which described this assessment.

Regarding on-site movements of HGVs the addendum report states "the aggregate of the transport movements and extract fan noise was not considered in the previous assessment as the:

- Transport movements already occur at the existing free-range egg unit (house 1); the frequency over any 1 hour period will not increase and therefore there will be no change in the BS 4142 noise impact;
- Aggregate extract fan Rating Levels during the working day are significantly below the transport Rating Levels; and
- Transport activities only occur during the working day"

Regarding use of appropriate octave frequency bands the predicted noise levels contained in the addendum report use aggregated attenuation for each octave band. The noise level predictions included in the new assessment indicated that during day-time operations the impact will not exceed background L_{A90} levels. During night-time activities the highest predicted impact level when calculating across the octave band is 21dB which is +2dB above background.

Permit conditions

Permit condition 3.4.1 requires that emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site. This will be checked during NRW site inspections and if this is not the case, we will take appropriate action. The Environment Agency guidance EPR 6.09 Appendix 5 provides guidance on noise management for farms. NRW have adopted this guidance. An effective noise management plan and use of appropriate measures is required for EPR intensive farming applications with sensitive receptors located within 400m of the proposed installation, which is the case for Brynrorin Farm. EPR 6.09 also explains that "The appropriate measures for this sector prevent and where that is not possible minimise these noise emissions." We are satisfied that appropriate control measures are in place as part of the noise management plan for Brynrorin Farm. See ***Application of Best Available Techniques (BAT)*** subsection below.

Noise management plan and assessment

The potential for noise pollution is controlled through the noise management plan. The noise management plan describes the controls in place to minimise noise. A number of these controls are also described in the subsection below on ***Application of Best Available Techniques (BAT)***. In addition, the noise management plan states that there are no audible alarms on site. The Noise Management Plan has been incorporated into Table S1.2 of the permit as an operating technique and is therefore enforceable.

The noise management plan states that roof mounted ventilation fans will be subject to regular, end of cycle maintenance by qualified electricians and that noisy roof mounted ventilation fans will be isolated and an electrician notified. Good maintenance and cleaning procedures will ensure additional noise from out of balance or worn roof mounted ventilation fans is unlikely to occur. Effective inspection and maintenance forms a key part of compliance with permit condition 1.1.1 on environmental management systems and condition

1.1.2 on associated record keeping. We will check this during our routine inspection visits and we will take appropriate action if required.

The noise management plan states that silencers will be fitted to feed delivery lorries and that vehicle reversing alarms associated with bird catching lorries will be scheduled to minimise the duration of the catching process. Finally the noise management plan states daily walk around inspections will be conducted three times per day at (07:00 – 09:00hrs, 16:00hrs – 18:00hrs and 22:00hrs – 23:00hrs). It also explains the mechanism by which any noise complaints will be recorded and investigated.

Application of best available techniques (BAT)

Noise is not generally a source of complaints for the intensive farming sector in Wales. This conclusion is supported by information on noise complaints from NRW's own databases. In addition, we have consulted Powys Country Council on the issue (telephone call to Environmental Health Department on 15th July 2015) and they have confirmed that although some noise complaints have been received for the sector in the past, these were regarding feed deliveries at night which were addressed by ensuring that feed is only delivered to sites during waking hours. They have not received any complaints about roof mounted ventilation fan noise from intensive farms. On the basis that noise is not generally an identifiable issue at intensive farming installations in Wales, NRW can reasonably expect that the operator will be able to comply with permit condition 3.4.1 on noise by operating in accordance with the noise management plan for the installation which has been incorporated into the operating techniques table of the permit and is therefore enforceable. We also require the operator to operate the installation in compliance with Best Available Techniques (BAT).

In summary, we are satisfied that pollution due to noise will be managed to acceptable levels. This is because predicted noise levels are not expected to be significantly in excess of background noise levels, so as to result in adverse effect as defined in BS4142:2014. It has therefore been assessed as not being a significant enough reason to refuse the application. We also consider the permit conditions and operating techniques to be sufficiently protective.

Air Quality

Dust, PM_{10} and $PM_{2.5}$

When an application is made, NRW assess all of the information and require the operator to comply with our guidance documents (EPR 6.09). These documents detail what the operator must do to ensure their emissions are controlled. There are no requirements for the operator to monitor the emissions as these are controlled throughout the operation by adherence to the guidance. NRW will react to any reports of air pollution from a regulated installation. Monitoring may be undertaken by the operator or NRW if problems

are identified or suspected. Emissions from the exhausts of heavy goods vehicles (HGVs) travelling to and from the site for deliveries etc. will happen outside the installation boundary and are therefore outside the control of the permit.

All operators of intensive farming installations are required to operate at Best Available Techniques (BAT). Controls on the production of dust and the use of high velocity ridge mounted ventilation fans ensures dust formation is reduced and where emitted is done at high velocity to ensure adequate dispersion. NRW are of the opinion that the implementation of Best Available Techniques and the current control on dust emissions imposed on intensive farming is adequate to prevent adverse health effects.

Dust generation is also controlled through permit condition 3.2.1. This condition requires that emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. We will check compliance with this condition during our site inspections to ensure that dust production is kept to a minimum. If this is not the case, we will take the appropriate action.

Dust of varying particle size will be produced by an intensive poultry unit. The amount of dust produced will vary depending on the management of the flock and litter within the houses. Appendix 11 “Assessing Dust Control Measures on Intensive Poultry Unit Installations” of Environment Agency of Sector Guidance Note EPR6.09 “How to Comply with Your Environmental Permit for Intensive Farming” explains that operators should use appropriate measures to minimise dust emissions by the adoption of Best Available Techniques (BAT). Natural Resources Wales have adopted this guidance.

Defra Research project final report (2009) “Characterising Poultry Dust Properties, assessing the human health implications, quantifying emission levels and assessing the potential for abatement” states that PM_{10} particulate levels were reduced to background levels by 100m downwind of even the highest emitting poultry houses, therefore are unlikely to pose a risk to those living in the vicinity of poultry operations. On the basis that there are no sensitive receptors within 100m of the nearest air emission point, we have not required the operator to undertake dust modelling and we are satisfied that the permit conditions, operating techniques and application of BAT will be sufficient to minimise dust emissions from the installation.

In summary, we are satisfied that the risk of pollution due to dust is not significant. This is based on the evidence from Defra contained in Defra Research project final report (2009) “Characterising Poultry Dust Properties, assessing the human health implications, quantifying emission levels and assessing the potential for abatement”. We also consider that the permit conditions and operating techniques will be sufficiently protective and are satisfied that the measures taken to minimise dust are compliant with future BAT standards. As such we do not require additional monitoring or controls to manage dust and we are satisfied that the techniques to control poultry dust to be used at Brynrorin Farm will be sufficient to protect the health of all members of the public living in its vicinity.

Water Abstraction and Water Usage

Private water supplies from springs, wells and boreholes are regulated under the Private Water Supplies (Wales) Regulations 2010 (as amended). The local authority is responsible for any monitoring and initial investigation required under the Private Water Supplies Regulations.

The applicant has indicated that water will be supplied to the installation via borehole, but that abstraction rates will be lower than the threshold at which an abstraction licence is required from NRW (i.e. abstraction of water at a volume lower than $20m^3$ of water per day).

Pests

NRW are responsible for ensuring that pests and other emissions from any permitted poultry facility are controlled to ensure that they do not cause pollution of the surrounding environment. For pests (defined in Schedule 6 of the permit as birds, vermin and insects), this responsibility also includes ensuring that pests which are likely to cause hazard or annoyance outside the boundary of the site are not present. Permit conditions 3.5.1 and 3.5.2 have been set to address the pest aspect of this responsibility. However, NRW do not have any regulatory control over the land-spreading of chicken manure unless pollution is caused.

Biodiversity, Heritage, Landscape and Nature Conservation

Ammonia

The only source of ammonia emission from the permitted site is via aerial emission from the roof mounted ventilation fans and rivers and streams are not sensitive to aerial emissions of ammonia and nitrogen deposition. Manure storage and spreading takes place outside the installation boundary, so run-off associated with this activity is outside the scope of the environmental permitting process (see **Manure Management** section). Also there are no point source emissions to water from the installation. The assessment is based on the contribution from the unit to the appropriate ammonia critical level.

The applicant has provided an assessment of the impact of emissions of ammonia from the installation using dispersion modelling software on designated habitats within the vicinity. The ammonia modelling used meteorological datasets which took into account local weather factors such as prevailing wind conditions and historical temperatures at the installation. It also used digital elevation data of the surrounding area to incorporate the mixing influence of local topography.

This assessment considers all habitats within the relevant screening distances of the site and uses the methodology described in EPR 6.09 to characterise the ammonia emissions from the installation. A full list of the habitats included in the assessment is provided in Annex 1. The assessment includes consideration of the Montgomery Canal Special Area of Conservation, Hollybush Pastures Site of Special Scientific Interest, Dolforwyn Castle Local Wildlife Site and ancient woodlands.

The ammonia modelling assessment was supplied with the original application and therefore it is based on the original application scenario of 80,000 bird places spread over three poultry houses. The results in this report are therefore a significant overestimate of the volume of ammonia released from the smaller, 48,000 bird place unit.

In summary:

- there is one European sites (SAC, SPA, Ramsar) within 10km of the installation. This is the Montgomery Canal SAC, which is aquatic in nature and therefore no ammonia critical levels or loads can be applied, because riverine habitats are not sensitive to aerial emissions of ammonia and nitrogen deposition. Vegetation found in the watercourse are protected from the atmospheric sources because any deposition will be washed away by the river itself and therefore cannot accumulate or cause adverse effects. As such, no assessment of the process contribution is required for this habitat because there is no critical load or level for ammonia to assess against.

- There are 2 Sites of Special Scientific Interest (SSSI) within 5km of the installation. The Montgomery Canal SSSI is aquatic in nature and therefore no ammonia critical levels or loads can be applied for the reasons outlined above. The highest process contribution for ammonia emissions of the three receptor points within the Hollybush Pastures site is 0.54µg/m^3, which is 18.1% of the relevant critical level for this habitat. (Hollybush Pastures is neutral grassland with no lower plants: a critical level of 3µg/m^3 is therefore applicable.) This is within the 20% significance benchmark set for SSSIs. Therefore we are satisfied that ammonia releases from the installation are not likely to damage the features of the Hollybush Pastures SSSI. The highest process contribution for deposition of nitrogen at Hollybush Pastures is 2.83 kgN/ha/yr. The applicant has assessed this process contribution against a critical load of 10 kgN/ha/yr; however, on consultation with the Conservation Body in Wales (which is now part of NRW), it became apparent that a critical load of 20 kgN/ha/yr was appropriate for this habitat as there are no lower plants present. The process contribution as a percentage of the critical load is therefore 14.15% which is within the 20% significance benchmark set for SSSIs. Therefore we are satisfied that nitrogen deposition from this installation is not likely to damage the features if the Hollybush Pastures SSSI.

- There are 88 non-statutory sites in the form of Ancient Woodland and Local Wildlife Sites within 2km of the installation. The predicted PC for ammonia

release for the closest Ancient Woodland is 1.68µg/m^3 which is 55.9% of the relevant critical level. The predicted PC for nitrogen deposition for the same woodland is 8.71µg/m^3 which is 87.1% of the relevant critical load. The predicted PC for ammonia release for Dolforwyn Castle LWS is 0.29µg/m^3 which is 9.7% of the relevant critical level. The predicted PC for nitrogen deposition for the same site is 2.27µg/m^3 which is 22.7% of the relevant critical load. The non-statutory sites are assessed based on the likelihood of significant pollution being caused. Process contributions below 50% will not cause significant pollution. Although the process contribution for the ancient woodland located nearest to poultry houses is slightly above this threshold, this result must be assessed in view of the fact that the the applicant's assessment is based on the cumulative impact of three poultry houses with a total capacity of 80,000, which represents the original application. The revised application reduces bird numbers by 32,000, which is a reduction of 40. Actual ammonia levels are therefore likely to be significantly lower than those predicted, and therefore also very likely to be below the 50% significance threshold. On this basis we are satisfied that the PCs for all non-statutory sites are below the 50% benchmark and that significant pollution will not be caused at this site or any of the other non-statutory sites.

Great crested newts

Great crested newts (GCN) have been recorded in four of six ponds located within the vicinity of the installation. This species is protected under the Wildlife and Countryside act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 (as amended). Legislation protects both individual newts and their breeding sites and resting places.

As part of the determination of the permit application we consulted with the conservation body in Wales (now part of NRW) on the impact of the proposed facility on the great crested newt population and its breeding habitat and foraging areas. The conservation body in Wales indicated that without mitigation measures, the proposal was likely to result in:

- The killing or injury to great crested newts (i.e. through predation by poultry);
- Damage to and destruction of their breeding sites and resting places; and
- Adverse changes to the water chemistry of the ponds caused by contaminated run-off, potentially affecting the suitability of the ponds for GCN.

The body therefore concluded that, without mitigation measures, the proposal was likely to effect the maintenance of the favourable conservation status of the great crested newt in this location.

The conservation body in Wales recommended that the following information be submitted by the applicant in order to demonstrate that the proposal would not affect the favourable conservation status of the great crested newt:

- an assessment of potential impacts of the installation on GCN, including consideration of the impact of:
    - direct damage to the terrestrial habitat used by GCN;
    - adverse changes to the water chemistry of the ponds caused by contaminated run-off (which could potentially affect the suitability of the ponds for GCN);
    - direct impact on GCN, i.e. though predation of GCN by poultry;
    - details of the area(s) around the poultry houses to which poultry will have access; and
- avoidance and mitigation measures to protect the great crested newt;

We requested that the applicant submit a scheme to safeguard the great crested newt that incorporated these elements. However, the applicant's response did not address these points and did not assess the impact of the installation on the great crested newt population. We therefore requested again that the applicant submit a scheme to safeguard the great crested newt that that addressed / included the following:

- an assessment that considers and addresses the potential impacts on the GCN from the proposed installation, including assessment of the risks associated with:
    - impacts during construction of the poultry houses;
    - predation of GCN by poultry;
    - deterioration in water quality and chemistry;
    - terrestrial habitat degradation; and
    - displacement of foraging areas.
- a clear map showing the proposed poultry ranging area (i.e. the ranging area associated with Houses 1 and 2 together), together with proposals for illustrating dedicated GCN compensation or offsetting areas (i.e. areas to be used only for amphibian conservation purposes);
- an approved biosecurity risk assessment; and
- a dedicated GCN compensation / offsetting scheme that included areas of land specifically available to the newt population, including a habitat management plan.

A further assessment was submitted by the applicant which addressed some, but not all, of these issues. In particular the following points were not addressed in the assessment:

- Provision of an overall conservation plan that identifies a dedicated compensation area(s) for the great crested newt and all ponds and terrestrial habitats required for breeding, foraging, sheltering, hibernation and dispersal purposes;
- Provision of a habitat management plan for the great crested newt conservation area;
- Confirmation of the intent to undertake annual surveillance and reporting of survey results for the great crested newt; and
- Provision of a biosecurity risk assessment for the site.

We have incorporated these requirements into the permit through the inclusion of pre-operational conditions. This means that the operator will need to complete these actions and submit reports on the work that he has done to

NRW before operation of the installation can commence. NRW will need to be satisfied that this work has been undertaken to an appropriate standard before operations can commence at the installation (see **Pre-Operational Conditions** section). We have also included a requirement for the operator to undertake annual surveys of the great crested newt population to monitor population levels. The operator will be required to provide a report on the surveys every year to NRW for approval.

Impact on other fauna

We have consulted with the conservation body in Wales on this application with regard to designated habitats sites and we are not aware of any other protected species that may be impacted by this installation.

Dirty Water

In summary, there will be no point source emissions to water from the installation. Clean rainwater run-off from the roofs of the poultry houses and yard area will drain to a settlement area via pipeline. During clean out of the houses, all wash water from the installation will be segregated from clean rainwater run-off using a diverter valve and will drain into a separate sealed system, comprising three dirty water tanks.

Wash down water will be removed from each of the dirty water tanks as soon as possible after washing by means of a farm vacuum tanker and taken for landspreading outside of the installation boundary. We are therefore satisfied that any storage of wash water within the tanks is temporary pending collection by vacuum tanker and subsequent removal.

The European Commission is shortly to publish BAT conclusions for the intensive farming sector. We have compared descriptions of the handling of dirty water from the operation with the draft BAT conclusions. The following measures to be employed at the installation represent BAT:

- An emergency plan referencing Site Layout / Drainage Plan showing the drainage systems and water / effluent sources; describing actions to be taken for various scenarios including fire, pollution prevention measures, fuel and chemical leaks as well as describing the equipment available for dealing with this type of incident. The emergency plan also explains that the operator and staff will undertake appropriate training.
- Segregation of uncontaminated rainwater from waste water streams
- Drainage of waste water to dedicated tanks.

The Technical Standards document states that “The wash water tanks will be built to conform to specifications in SGN EPR6.09 ‘How to comply with your environmental permit for intensive farming’”.

Permit condition 3.1.1 requires that there shall be no point source emissions to water, air or land except from the sources and emission points listed in Schedule 3, Tables S3.1 and S3.2. Also, permit condition 3.2.1 requires that emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. We will ensure that these permit conditions are being complied with for all aspects of the installation's operations during our regular inspection visits. If this is found not to be the case, we will take appropriate action.

In summary, we consider that application of BAT, use of appropriate operating techniques and compliance with the above permit conditions will be sufficiently protective to prevent potential pollution associated with dirty water.

Manure Management

Spreading of chicken manure outside of the boundary of a permitted site does not require a permit. It is therefore outside the regulatory scope of the Environmental Permitting (England and Wales) Regulations 2010 (as amended). NRW also does not have regulatory powers to control the storage and application of manure to land through the Environmental Permitting (England and Wales) Regulations 2010 (as amended) unless this takes place within the green installation boundary shown on the site plan in Schedule 7 of the permit.

In the case of Brynrorin Farm Poultry Unit, manure storage and spreading does not take place within the installation boundary, although manure may be stored and spread on operator-controlled land at Brynrorin farm outside the installation boundary. Any surplus will be sold to third parties. As all manure will be removed off-site a manure management plan is not required, however, we have set condition 2.3.4 which requires the operator to maintain and implement a system to record the quantities of solid manure or slurry exported from the installation. The record must include the date of export from the site, quantity exported and details of the receiving site. This condition will enable us to establish if there is any relationship between manure export and any reported pollution incident. It will also enable us to discuss best practice with the receiving farm owner to minimise the risk to local water courses.

The Code of Good Agricultural Practice applies to all farms in England and Wales and provides guidance on nutrient management (including landspreading of manure). This is a guidance document and not enforceable by law.

Water quality and fish populations are affected by a wide range of activities including land use over a wide area. NRW will continue, in association with other authorities, to work with land owners and farmers to help ensure the nutrients in manures are applied following best practice and where it is clear this is not the case and results in detriment to the environment, we will take the appropriate action.

The revised management plans submitted by the applicants have described the controls in place for manure management within the installation boundary. These include: use of sheeted trailers to transport manure loads and no storage of manure within the installation boundary at any time. The control measures are described in the "Odour Management Plan" and "Fugitive Emissions at Brynrorin Farm". The Odour Management Plan has been incorporated into Table S1.2 of the permit as operating techniques and is therefore enforceable.

Surface water

Pollution of Water Courses

NRW have regulatory powers in connection with ensuring that potential water borne pollutants are controlled within the boundary of the permitted process to ensure that they do not cause pollution of the surrounding environment. However, land-spreading of chicken manure outside of a permit boundary for agricultural purposes does not require a permit and so is outside NRW's regulatory role. The applicant has confirmed to NRW via his agent that manure and litter produced from the poultry houses will not be spread within the installation boundary and we have included this communication in the operating techniques table. Condition 2.3.4 of the permit requires the applicant to maintain and implement a system to record the quantities of solid manure or slurry exported from the installation.

Please see the individual section on **manure management** and for a more detailed discussion of the environmental controls in place relevant to this issue and our explanation of why these are satisfactory in relation to this application.

Water pollution as a result of manure run-off

NRW are responsible for ensuring that potential water borne pollutants are controlled within the confines of the permitted process to ensure that they do not cause pollution of the surrounding environment. However the land-spreading of chicken manure outside the boundary of a permitted facility does not require a permit and so is outside the scope of EPR and the permitting process. (See section on **Manure Management** for further information).

Phosphate excretion can be minimized at source through the use of BAT for feeding and nutrition. We have reviewed EPR 6.09 and we are satisfied that the installation will employ the following techniques which are BAT:

- Reduction of phosphorus levels in poultry rations over the rearing and production cycle; and
- Multiphase feeding with a diet formulation adapted to the specific requirements of the production period.

More specifically, birds are fed a minimum of three diets during their growth, with gradually reducing levels of protein and phosphorous as bird age increases.

NRW are continuing to work with Powys County Council to consider this issue on a more strategic level. Where NRW have been notified of specific pollution incidents, these are assessed and investigated where required. NRW recognises the potential risk of pollution through poor practice or inadequate infrastructure at non-permitted sites and will investigate specific pollution incidents. There are a number of potential sources of phosphate affecting watercourses in the area and NRW works to reduce these. The risk of pollution from a permitted site – those over 40,000 places is reduced, as the units are built to industry standard to ensure emissions are minimised and risks managed to prevent pollution. The wider cumulative impact from the growth of the poultry sector in a given area is primarily a consideration for the local authority and NRW will contribute to any strategic approach.

Potential risk to habitats sites due to run-off

For the reasons described in the **Biodiversity, Heritage, Landscape and Nature Conservation** section above, we consider that aerial emissions from the installation are unlikely to cause a deterioration in adjacent water courses. With regard to phosphate, atmospheric deposition from the site is likely to contain very low levels of phosphate. This is because phosphorus levels in the feed will be reduced over the cycle to minimise phosphorus excretion in line with EPR 6.09. Therefore the levels deposited onto land or directly into watercourses will not be significant.

As stated in the **Manure Management** section, litter and manure will not be spread within the installation boundary. Spreading of manure outside of the boundary of a permitted site does not require a permit and is therefore outside the regulatory scope of EPR and the permitting process.

Potential risk to local watercourses resulting from contamination of surface water

Clean uncontaminated surface water run-off (in the form of rainwater from the roof and yard area) will drain to a settlement area. This area is for uncontaminated surface water drainage only, therefore there is no water quality treatment requirement for surface water.

As described in the **Dirty Water** section, contaminated wash water from the poultry houses and lightly contaminated water from yard wash downs will be collected in a separate sealed drainage system, prior to removal off site. This represents BAT for the installation and we are satisfied that this will prevent contamination of surface and ground water. In addition, the operator's Technical Standards document states that the buildings at the installation will be constructed to BAT standards.

Permit conditions and application of best available techniques

Permit condition 3.1.1 states that "there shall be no point source emissions to water, air or land except from the sources and emission points listed in Schedule 3, Tables S3.1 and S3.2. This limits the releases to uncontaminated roof water releases to land via a settlement area. Also, Permit condition 3.2.1 requires that "emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution". We are satisfied that these conditions are sufficiently protective to ensure that releases from the installation are properly controlled.

We are also satisfied that the controls described in the operator's management plans (addressed under the individual topic headings elsewhere in this document) represent the appropriate measures for preventing water pollution and therefore water pollution will not be caused by the regulated installation.

Management Plans

Emergency Plan

The Emergency Plan provides for emergency supply of food and water, describes the action to be taken in respect of interruptions to food and water supplies, as well as actions to be taken in the event of power failure and equipment failure. We are satisfied that emergency arrangements for feeding and watering the birds will not have a significant effect on ammonia, dust and odour emissions from the installation.

Review cycles for Emergency, Odour, Noise and Management Techniques plans

Any reviews associated with the operation of the installation form part of the overall environmental management system, required by permit condition 1.1.1. Sector guidance note EPR 6.09 "How to Comply with Your Environmental Permit for Intensive Farming" states the following:

"To keep your management system up to date you should review its content and associated accident management plans, site closure plans etc. at least once every four years. You should also review it if there is a significant change to the activities such as a company takeover, major re-structure or expansion of the activities. You should review the relevant parts following an accident or if you find a non-compliance, in an audit for example, in order to find the root cause. We too will be looking to identify the management system failure in these cases. You also should regularly audit your own performance against your management system".

Sector guidance note EPR 6.09 constitutes BAT for the sector, therefore we will ensure that the operator is operating the installation in accordance with this guidance during inspection visits and that the environmental management

system is being maintained and is fit for purpose. If this is not the case, we will take the appropriate action.

Quality of the Application

Document Control

Whilst there is not a comprehensive list of each individual application document supplied as part of this permit application, all the documentation supplied is archived on our electronic public register and we are satisfied that it is complete for the purposes of assessing the permit application. The document date is recorded by our database systems when it is uploaded to the public register, so we are always able to identify the most up to date version of the document. The documents which are important to the management of the installation going forward during the life of the permit, are the operating techniques documents. This is because these describe the controls which will be in place at the installation and are therefore enforceable.

Errors and inconsistencies

As part of the determination process we required that the applicant revise a number of the documents submitted in support of his application. This was due to a number of inconsistencies between the documents, errors such as inclusion of the incorrect farm name, and incorrect details of house configuration and design specification. We have also required the applicant to provide a number of additional plans to clarify the layout of the site and allow us to better understand the clean and dirty water drainage and collection arrangements and configuration of the high velocity roof mounted extraction fans. Drawings of the insides of the units and conveyor system are not considered pertinent to the determination process and have therefore not been requested. As described in the **Manure Management** section, a manure management plan is not required.

Site Layout / Drainage Plan

The Site Layout / Drainage Plan has been amended to show the correct number of roof mounted ventilation fans, location of dirty water tanks and drainage layout at the installation. The amended plan is at Schedule 7 of the Permit.

We are satisfied that the Site Layout / Drainage Plan is adequate for the purposes of determining the permit application and that no further drawings are required.

Planning and Development Control

We received a number of comments and concerns relating to:

- Potential for detrimental impact on the local tourism industry;
- Capacity of Brynrorin Farm to support 80,000 birds;
- Contesting the applicant's statement in the planning application that two jobs would be created;
- That there has been no meaningful enforcement of the planning conditions placed on the existing planning permission;
- The fact that the planning application does not mirror the permit application;
- Impact of off-site movements of heavy goods vehicles on public safety and damage to road-side vegetation, transport of waste on residents and traffic volumes;
- Visual impact of the development; and
- Impact on future generations

These concerns are not within the regulatory scope of the Environmental Permitting (England and Wales) Regulations 2010 (as amended), because the environmental permit only regulates the operation of the listed activity (i.e. intensive rearing of poultry in an installation with more than 40,000 places) within the defined installation boundary, as shown on the site plan in Schedule 7 of the permit. The above issues are therefore planning matters for Local Planning Authority consideration. The potential for detrimental impacts on the local tourism industry and impact on future generations is an issue for consideration through wider government policy.

Pre-operational conditions

We have specified a number of pre-operational conditions which the operator will need to demonstrate have been actioned before operation can commence. These are summarised below:

1. Ten working days before the commencement of operations, the operator shall submit written confirmation to NRW that high velocity roof mounted fans have been installed and commissioned in poultry House 1;
2. Three calendar months before the commencement of operations the operator shall submit a written report for approval to NRW that describes a conservation plan for the great crested newt which identifies dedicated compensation for the species. This plan shall:
    a. identify all ponds and terrestrial habitats required by the species for breeding, foraging, sheltering, hibernation and dispersal purposes; and
    b. contain a programme of works for implementation of all elements of the conservation plan;
3. Three calendar months before the commencement of operations the operator shall submit a written report for approval to NRW that describes a habitat management plan for the compensation scheme;

4. Three calendar months before the commencement of operations the operator shall complete a biosecurity risk assessment and submit a written report for approval to NRW that describes this risk assessment;
5. Ten working days before the commencement of operations the operator shall submit to NRW copies of the necessary legal agreements or other approved documentation with appropriate Third Parties to ensure the delivery and long term sustainability of the proposed mitigation and compensation measures identified within the compensation scheme.

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 NRW guidance EPR RGN 6 Determinations involving Sites of High Public Interest, 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 applicants (now the operator) are the persons 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	The operator has provided a plan which we consider is satisfactory, showing the 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 NRW guidance on site condition reports – guidance and templates (H5).
Biodiversity, Heritage, Landscape and Nature Conservation	The application is within the relevant distance criteria of a number of nature conservation sites. More specifically: - There is one European site (SAC, SPA, Ramsar) within 10km of the installation. This is the Montgomery Canal Special Area of Conservation (SAC).

Aspect considered	Justification / Detail
	- There are two Sites of Special Scientific Interest (SSSI) within 5km of the installation. These are Montgomery Canal and Hollybush Pastures. - There is one Local Wildlife Sites within 2km of the installation. This is Dolforwyn Castle. - There are 87 Ancient, Semi-Ancient and Restored Ancient Woodlands, and Plantations on Ancient Woodlands within 2km of the installation. A full assessment of the application and its potential to affect these sites has been carried out as part of the permitting process. We consider that the application will not affect the features of the European sites, SSSIs, Local Wildlife Sites and Ancient Woodlands listed above. See **Biodiversity, Heritage, Landscape and Nature Conservation** section for a more detailed discussion of the findings with regard to Nature Conservation sites and in-combination assessment of predicted emissions.
Environmental Risk Assessment and operating techniques	
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The point source emissions to air specified in the permit are: • High velocity roof mounted ventilation fan outlets, which will draw air from within the buildings and propel it upwards into the atmosphere; • the exhaust from the back up diesel generator; and • a vent from the oil. Uncontaminated rainwater run-off will drain to a settlement area via field drains. There are no point source emissions of process waters from the facility. The wash down water from the poultry houses and yard area is collected in three below ground storage tanks during the wash down process after each flock cycle and removed from the facility. This is described in more detail in the **Dirty Water** section. Risks identified were Ammonia releases to air; Odour; Dust; Noise; Zoonoses Notifiable Diseases; spillage of feed, litter, wash water; Pests; and storage of fuel and chemicals. We have reviewed the risk assessment and the mitigation measures. This includes the management techniques and infrastructure which are in accordance with the Best Available Techniques (BAT). We are

Aspect considered	Justification / Detail
	satisfied that with the use of Best Available Techniques, these risks are adequately controlled. Zoonoses and notifiable diseases are public health protection matters, which Natural Resources Wales does not have regulatory powers for. Public Health Wales have recommended within a communication received in relation to another intensive poultry farm permit application on 24th February 2015 that emissions of bio-aerosols can be minimised by using best available techniques as well as adhering to strict regulatory guidance and industry practices. We are satisfied that the proposed operational controls at Brynrorin Farm poultry unit are in line with this recommendation.
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant NRW guidance notes. This includes EPR 6.09 "How to Comply with your Environmental Permit for Intensive Farming", 2014. The proposed techniques are in line with the Technical Guidance Notes and we consider them to represent appropriate techniques for the facility.
The permit conditions	
Use of conditions other than those from the template	Based on the information in the application, we consider that we need to impose conditions other than those in our permit template, which was developed in consultation with industry having regard to the relevant legislation. Condition 2.3.4 has been included in order to ensure that adequate records are kept of manure or slurry exported from the installation, in terms of how much is being exported and to where. The Operator is required to record the date that manure and slurry is exported from the site, the quantity exported and details of the receiving site. This condition will enable us to establish if there is any relationship between manure export and any reported pollution incident. It will also enable us to discuss best practice with the receiving farm owner to minimise the risk to local water courses.
Pre-operational conditions	Based on the information in the application, we consider that we need to impose pre-operational conditions. See **Pre-Operational Conditions** section.
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.

Aspect considered	Justification / Detail
	These descriptions are specified in the Operating Techniques table in the permit.
Emission Limits, Monitoring and Reporting	We have reviewed the risk assessment for this site and the relevant technical guidance including the European Commission BAT Reference Document entitled "Best Available Techniques for Intensive rearing of Poultry and Pigs July 2003". The BAT reference document does not propose the setting of emission limits for this sector. The requirements of this BAT Reference Document are incorporated into NRW technical guidance note EPR 6.09 "How to Comply with your Environmental Permit for Intensive Farming" (October 2014). There are currently no BAT emission benchmarks set for the sector. We are satisfied that compliance with the BAT standards at this site means that emission limits and associated monitoring are not required. We have specified monitoring requirements in relation to the great crested newt populations of pond adjacent to the installation. We have also specified reporting requirements as a result of the requirements to monitor the great crested newt population. See **Great Crested Newts** section.
Operator Competence	
Environment management system	NRW is satisfied that the operator will have a management system that enables it to comply with the permit conditions. The decision was taken in accordance with NRW guidance EPR RGN 5 on Operator Competence. The applicant has provided a summary of their proposed environmental management system, which includes maintenance, reference to the Emergency Plan, provision for staff training and also covers logging of complaints and routine checks. Written odour and noise management plans have also been supplied and these have been incorporated into Table S1.2 of the permit as operating techniques. Permit condition 1.1.1 requires the operator to have a written management system in place. As such we will plan our compliance assessment activities to check the adequacy and implementation of the management system at the installation and we will take appropriate action if this permit condition is breached.
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: Responses to consultations and web publicising on the application.

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
Betsi Cadwaladr University Health Board (BCUHB)
Brief summary of issues raised
1. Emissions of ammonia and odour must be considered and regulated appropriately, preferably through the implementation and maintenance of site ammonia and odour management schemes. 2. Manure stores should be designed, constructed and managed to prevent accumulations of flies and disease transmission. Emissions from manure stores should be controlled through standard permit conditions and the implementation and maintenance of a manure management plan. 3. Fugitive emissions (including dust and bioaerosols) from the installation should be controlled using Best Available Techniques (BAT). Any manure and / or dust management plan should contain measures to avoid and mitigate for offsite dusts and bioaerosols during adverse dispersion weather conditions. 4. Noise from the installation must not cause nuisance at nearby sensitive receptors. 5. The cumulative impact of the above issues must be considered for any additionally proposed poultry units.
Summary of actions taken or show how this has been covered
The points below indicate how we have addressed BCUHB's points: 1. We have requested modelling of odours from the installation which has shown that odour levels are likely to be below the Horizontal Guidance H4 odour threshold of 3 OUE/m^3 (98th percentile hourly mean concentration). We have also included conditions stipulating that the operator must control odours by implementing their odour management plan and that odours must not be at levels likely to cause offence outside the site. We have assessed emissions of ammonia and found them to be at levels that are unlikely to have a significant effect on European habitat sites and are unlikely to damage the features of SSSIs within the relevant screening distances of the installation. 2. Litter from the poultry houses will be removed from the houses following the end of each crop cycle and removed immediately from site. No manure or litter will be stored within the installation boundary. 3. We have included a condition in the permit requiring the operator to control emissions of substances not controlled by emission limits (including dust and bioaerosols) so that they do not cause pollution. 4. The operator has submitted a noise management plan which we consider is satisfactory. We have requested modelling of noise from the installation which has shown that daytime noise levels are not likely to be in excess of existing night-time background levels: in line with the guidance given in BS EN 4142:2014, we have concluded that the noise levels associated with the operation of the installation are unlikely to give rise to complaints.

We have included conditions in the permit stipulating that the operator must control noise by implementing their noise management plan. 5. During the determination the operator requested to reduce the number of bird places applied for from 80,000 to 48,000. Should the operator wish, in future, to increase the number of permitted bird places through the construction of additional poultry houses, he will need to submit to us an application for a variation to the current permit. As part of the determination process for any variation application, we will consider the cumulative impacts of any additional poultry house(s) in combination with the existing houses.

No response received from
Public Health Wales
Brief summary of issues raised
No issues raised
Summary of actions taken or show how this has been covered
No actions necessary

No response received from
Food Standards Agency
Brief summary of issues raised
No issues raised
Summary of actions taken or show how this has been covered
No actions necessary

No response received from
Health and Safety Executive
Brief summary of issues raised
No issues raised
Summary of actions taken or show how this has been covered
No actions necessary

No response received from
Powys County Council – Planning
Brief summary of issues raised
No issues raised
Summary of actions taken or show how this has been covered
No actions necessary

No response received from
Powys County Council – Environmental Protection Department (Environmental Health)
Brief summary of issues raised
No issues raised
Summary of actions taken or show how this has been covered
No actions necessary