

## **Environment Agency permitting decisions**

### **Bespoke permit**

We have decided to grant the permit for Church Farm operated by RGC Farms Limited.

The permit number is EPR/ZP3935WF.

This application was duly made on 04/02/2015.

The application was applied for and determined as a new bespoke application.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

### **Purpose of this document**

This decision document:

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

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

### **Structure of this document**

- Key issues – Industrial Emissions Directive; Groundwater and Soil Monitoring; Ammonia Emissions Assessment; Biomass Boilers; Noise Emissions Assessment; Odour Emissions Assessment
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

## Key issues of the decision

### Industrial Emissions Directive

The Environmental Permitting (England and Wales) (Amendment) Regulations 2013 were made on the 20 February and came into force on 27 February. These Regulations transpose the requirements of the Industrial Emissions Directive (IED).

This permit implements the requirements of the European Union Directive on Industrial Emissions.

### Groundwater and Soil Monitoring

As a result of the requirements of the Industrial Emissions Directive, all permits are now required to contain condition 3.1.3 relating to groundwater monitoring. However, the Environment Agency's H5 Guidance states that it is only necessary for the operator to take samples of soil or groundwater and measure levels of contamination where the evidence that there is, or could be existing contamination and:

- The environmental risk assessment has identified that the same contaminants are a particular hazard; or
- The environmental risk assessment has identified that the same contaminants are a hazard and your risk assessment has identified a possible pathway to land or groundwater.

H5 Guidance further states that it is not essential for the Operator to take samples of soil or groundwater and measure levels of contamination where:

- The environmental risk assessment identifies no hazards to land or groundwater; or
- Where the environmental risk assessment identifies only limited hazards to land and groundwater and there is no reason to believe that there could be historic contamination by those substances that present the hazard; or
- Where the environmental risk assessment identifies hazards to land and groundwater but there is evidence that there is no historic contamination by those substances that pose the hazard.

The site condition report for Church Farm (dated 12<sup>th</sup> January 2015) demonstrated that the hazards to land or groundwater have been mitigated/minimised such that there is little likelihood of pollution and there is no evidence of historic contamination on site. **Therefore, although this condition is included in the permit, no groundwater or soil monitoring will be required at this installation as a result.**

## **Ammonia Emissions Assessment**

There are two Special Area of Conservation (SACs) located within ten kilometres of the installation. There are two Sites of Special Scientific Interest (SSSIs) located within five kilometres of the installation. There is also one Local Nature Reserve (LNR), nine Local Wildlife Sites (LWSs) and two Ancient Woodlands (AWs) within two kilometres of Church Farm.

### Ammonia Assessment – SACs

The following trigger thresholds have been designated for assessment of European sites:

- if the process contribution (PC) is below 4% of the relevant critical level (CLe) or critical load (CLo) then the farm can be permitted with no further assessment;
- where this threshold is exceeded an in combination assessment is required; and
- an in combination assessment will be completed to establish combined PCs for all existing farms identified within 10 km of the application.

Screening using the ammonia screening tool (AST) version 4.4 has determined that the PC on the SACs for ammonia, acid and nitrogen deposition from the application site are under the 4% significance threshold and can be screened out as having no likely significant effect. Screening using has indicated that emissions from Church Farm will only have a potential impact on European designated sites with a CLe of 1 µg/m<sup>3</sup> if they are within 4,002 metres of the emission source. Screening indicates that beyond this distance, the PC at European conservation sites is less than 0.4 µg/m<sup>3</sup> or less than 4% of the CLe and therefore beyond this distance the PC is insignificant. In this case both SACs are beyond this distance.

**Table 1 – Distance from source**

| <b>Site</b>             | <b>Distance (m)</b> |
|-------------------------|---------------------|
| Cannock Chase           | 5,967               |
| Cannock Extension Canal | 8,072               |

The PC at these sites has been screened out as insignificant. It is possible to conclude no likely significant effect will occur at these sites and no further assessment is required.

### Ammonia Assessment – SSSIs

The following trigger thresholds have been applied for the assessment of SSSIs:

- if the process contribution (PC) is below 20% of the relevant critical level (CLe) or critical load (CLo) then the farm can be permitted with no further assessment;
- where this threshold is exceeded an in combination assessment is required; and
- an in-combination assessment will be completed to establish combined PCs for all existing farms identified within 5 km of the application.

Screening using the AST v.4.4 has determined that the PC on the SSSIs for ammonia, acid and nitrogen deposition from the application site are under the 20% significance threshold and can be screened out as having no likely significant effect. Screening using AST v4.4 has indicated that emissions from Church Farm will only have a potential impact on sites with a CLe of 1 µg/m<sup>3</sup> if they are within 1,372 metres of the emission source. Screening indicates that beyond this distance, the PC at SSSIs is less than 0.2 µg/m<sup>3</sup> or less than 20% of the CLe and therefore beyond this distance the PC is insignificant. In this case both SSSIs are beyond this distance.

**Table 2 – Distance from source**

| Site                              | Distance (m) |
|-----------------------------------|--------------|
| Four Ashes Pit                    | 3,666        |
| Stowe Pool And Walk Mill Clay Pit | 3,310        |

The PC at these sites has been screened as insignificant. It is possible to conclude that no damage will occur at these sites and no further assessment is required.

#### Ammonia Assessment – LNR / LWS / AW

The following trigger thresholds have been applied for the assessment of LNRs, LWSs and AWs:

- if the process contribution (PC) is below 100% of the relevant critical level (CLe) or critical load (CLo) using the ammonia screening tool (version 4.4); and
- if further modelling shows the PC is < 100% then the farm can be permitted.

Screening using the AST v4.4 has determined that the PC on the LNR, LWSs and AWs for ammonia, acid and nitrogen deposition from the application site are under 100% significance threshold and can be screened out as having no likely significant effect. Screening using AST v4.4 has indicated that emission from Church Farm will only have a potential impact on sites with a CLe of 1 µg/m<sup>3</sup> if they are within 470 metres of the emission source. Screening

indicates that beyond this distance, the PC at these conservations sites is less than 1 µg/m<sup>3</sup> or less than 100% of the CLe and therefore beyond this distance the PC is insignificant. In this case all the statutory sites below are beyond this distance.

**Table 3 – Distance from source**

| <b>Site</b>                           | <b>Distance (m)</b> |
|---------------------------------------|---------------------|
| Shoal Hill Common LNR                 | 1,773               |
| Fullmoor Wood (south) LWS             | 898                 |
| Hatherton Hall LWS                    | 1,232               |
| Pennymore Hay Farm, Four Ashes LWS    | 2,135               |
| Staffs and Worcs Canal, Penkridge LWS | 2,172               |
| Gailey Reservoirs LWS                 | 480                 |
| Gailey Old Reservoir LWS              | 588                 |
| Hatherton Bridge (by), Hatherton LWS  | 1,799               |
| Otherton Marsh, Penkridge LWS         | 2,184               |
| Shoal Hill LWS                        | 1,831               |
| Mansty Wood AW                        | 1,282               |
| Unnamed AW                            | 687                 |

The PC at these sites has been screened as insignificant. It is possible to conclude no significant pollution will occur at these sites and no further assessment is required.

### **Biomass Boilers**

The applicant is installing two biomass boilers with a net rated thermal input of 1.99 megawatts to assist the heating of the poultry houses.

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

- the fuel will be derived from virgin timber, miscanthus or straw, and;
  - the biomass boiler appliance and installation meets the technical criteria to be eligible for the Renewable Heat Incentive, and;
- A. the aggregate net rated thermal input is less than 0.5MWth, or:

- B. the aggregate boiler net rated thermal input is less than or equal to 4 MW<sub>th</sub>, and no individual boiler has a thermal input greater than 1 MW<sub>th</sub>, and;
- the stack height must be a minimum of 5 meters above the ground (where there are buildings within 25 meters the stack height must be greater than 1 meter above the roof level of buildings within 25 meters) and:
  - there are no sensitive receptors within 50 meters of the emission points

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

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

### **Noise Emissions Assessment**

As part of the application a noise modelling assessment (report reference: Noise Impact Assessment, Acoustics report M1452/R01, 18<sup>th</sup> December 2014) to quantify the noise impact from the proposed new roof top extraction fans and Heavy Goods Vehicles (HGV) movements and loading at the existing poultry farm in Penkridge, Staffordshire. The survey and corresponding assessment focuses on the closest three residential properties to the poultry farm. The study was undertaken by Matrix Acoustic Design.

The ambient noise survey has been completed, in accordance with British Standard 4142:2014 and BS 7445 (Parts 1 to 3), the survey includes measurements at two proxy receptor locations; one adjacent to the A5, the other adjacent to Gailey Lea Lane. Near field measurements were also undertaken close to one of the existing fan units at the farm, to provide an indicative plant source sound pressure level for noise propagation/calculation purposes.

Noise levels from the roof top fans and HGV movements have been predicted using standard acoustic calculation methods, which include the ISO 9613 correction for ground absorption and a correction for plant on time, (the fans are proposed to be used on a 24hr basis, whereas HGV loading and movements have the potential to be variable throughout the day and night time).

The predicted plant noise level (specific noise) from the farm has been adjusted with the appropriate acoustic feature corrections (as set out in

BS4142) to provide the rating level at each sensitive receptor location. The measured background noise level (LA90) has then been subtracted from the rating level to give the assessment level at the sensitive receptors. In all cases the assessment level is predicted to be significantly below the measured LA90 at each receptor location, during both the daytime and night time periods.

From this assessment the report concludes that noise created by the poultry farm rooftop fans and HGV operations will have a low impact at nearby sensitive receptors.

The methodologies used in this study for the ambient noise survey, noise propagation calculations and noise impact assessment are all in accordance with the appropriate British Standards and guidance. The results of the study are therefore approved.

### **Odour Emissions Assessment**

An odour impact assessment has been provided in support of the application (report reference: An odour dispersion modelling study of the impact of the proposed broiler rearing unit at Pool Farm, Gailey Lea Lane, Penkridge in Staffordshire. AS Modelling & Data. 25th November 2014.) The study assesses the impact of odour emissions from the proposed poultry unit with a capacity of 300,000 broilers housed in six new poultry sheds with high velocity ventilation.

The modelling was conducted to predict odour concentrations at nearby receptors. This was done using UK Atmospheric Dispersion Modelling System (ADMS) version 5. Nineteen discrete receptors were identified and assessed in the odour modelling.

The following benchmark levels have been set in the H4 Odour Management horizontal guidance. The benchmark levels are based on the 98<sup>th</sup> percentile of hourly average concentrations of odour modelled over a year. The benchmarks are:

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

Odours from livestock are usually placed in the 'moderately offensive' group and therefore the 3 ou<sub>E</sub> m<sup>-3</sup> as the 98<sup>th</sup> percentile of hourly averages criteria applies. Any modelled results that project exposures above this benchmark level, after taking uncertainty into account, indicates the likelihood of unacceptable odour pollution.

The report predicted no exceedences of the  $3\text{ou}_E \text{m}^{-3}$  at any relevant receptors and therefore odour exposure would be below the benchmark for 'moderately offensive' odours. The report predicted a maximum odour concentration of  $2.79 \text{ou}_E \text{m}^{-3}$  at the worst affected receptor, R1.

Air Quality Modelling and Assessment Unit (AQMAU) audited the modelling and identified several observations that have the potential to affect predicted impacts; meteorological data that has a 50 kilometre resolution and time-varying emissions based on growth rate may not be worst case.

AQMAU carried out their own check modelling using ADMS 5.0. They used meteorological data which was more representative of the locality and also carried out sensitivity checks. The checks indicated that, although the numerical values do not exactly match the consultant's, AQMAU's predicted impacts at receptors (with the exception of R1 and R3) to be similar to those predicted by the consultant and agree that they are below the odour benchmark of  $3 \text{ou}_E \text{m}^{-3}$  as a worst case.

The check modelling indicated that there could be a potential exceedance of the  $3 \text{ou}_E \text{m}^{-3}$  odour benchmark at receptors R1 and R3, however, the likely maximum odour concentration of  $3.14 \text{ou}_E \text{m}^{-3}$  as a worst case is only slightly over the benchmark. The Operator has an Odour Management Plan in place which has been reviewed and accepted by the Environment Agency. We have agreed with the scope and suitability of key measures which the Operator will employ to manage odours at the installation. We are satisfied that the control measures that will be employed on site will be robust enough to control odour emissions from the site.

## Annex 1: decision checklist

This document should be read in conjunction with the Duly Making checklist, the application and supporting information and permit/ notice.

| Aspect considered                             | Justification / Detail   | Criteria met<br>Yes |
|---|--|---------------------|
| <b>Consultation</b>                           |  |                     |
| Scope of consultation                         | The consultation requirements were identified and implemented. The decision was taken in accordance with Regulatory Guidance Notes (RGN) 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.   | ✓                   |
| Responses to consultation and web publicising | The web publicising and consultation responses (Annex 2) were taken into account in the decision.<br><br>The decision was taken in accordance with our guidance.   | ✓                   |
| <b>Operator</b>                               |  |                     |
| Control of the facility                       | We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with Environmental Permitting Regulations (EPR) RGN 1 Understanding the meaning of operator. | ✓                   |
| <b>European Directives</b>                    |  |                     |
| Applicable directives                         | All applicable European directives have been considered in the determination of the application.<br><br>The permit implements the requirements of the EU Directive on Industrial Emissions.<br><br><b>See key issues 'IED' section above for further information.</b>                          | ✓                   |
| <b>The site</b>                               |  |                     |
| 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.<br><br>A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.  | ✓                   |

| Aspect considered   | Justification / Detail  | Criteria met |
|---|---|--------------|
|   |   | Yes          |
| Site condition report   | <p>The operator has provided a description of the condition of the site.</p> <p>We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED–guidance and templates (H5).</p>  | ✓            |
| Biodiversity, Heritage, Landscape and Nature Conservation     | <p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat .</p> <p>A full assessment of the application and its potential to affect the sites has been carried out as part of the permitting process. We consider that the application will not affect the features of the site.</p> <p><b>See key issues ‘Ammonia Emissions Assessment’ section above for further information.</b></p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p> <p>An Appendix 11 was completed and sent to Natural England ‘for information only’ on 06/02/2015.</p> <p>An Appendix 4 was completed and saved to EDRM ‘for audit only’ on 06/02/2015.</p> | ✓            |
| <b>Environmental Risk Assessment and operating techniques</b> |   |              |
| Environmental risk  | <p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator’s risk assessment is satisfactory.</p> <p>The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.</p>   | ✓            |

| Aspect considered             | Justification / Detail  | Criteria met |
|-------------------------------|---|--------------|
|                               |   | Yes          |
| Operating techniques          | <p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.</p> <p>The operator has proposed the following key techniques:</p> <ul style="list-style-type: none"> <li>• Dirty water storage facilities are in place on site;</li> <li>• Nipple drinkers are used to reduce wastage of water and maintain dry litter;</li> <li>• Chemical storage is within a purpose built store on site that is fully bunded;</li> <li>• All fuels are stored in bunded fuel stores;</li> <li>• Emergency generator on site in case of power failure;</li> <li>• Carcasses stored in sealed bins before being sent for incineration by an approved contractor;</li> <li>• Biomass boiler fuel is derived from virgin timber; and</li> <li>• The biomass boilers and their installation meets the technical criteria to be eligible for the Renewable Heat Incentive.</li> </ul> <p>The proposed techniques for priorities for control are in line with the benchmark levels contained in the Sector Guidance Note (SGN) EPR 6.09 'How to comply with your environmental permit for intensive farming (version 2)' and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs.</p> | ✓            |
| <b>The permit conditions</b>  |   |              |
| Incorporating the application | <p>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.</p> <p>These descriptions are specified in the Operating Techniques table in the permit.</p>  | ✓            |
| <b>Operator Competence</b>    |   |              |
| Environment management system | <p>There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator</p>   | ✓            |

| Aspect considered    | Justification / Detail  | Criteria met |
|----------------------|---|--------------|
|                      |   | Yes          |
|                      | Competence.   |              |
| Relevant convictions | <p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The operator satisfies the criteria in RGN 5 on Operator Competence.</p> | ✓            |
| Financial provision  | There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.                                     | ✓            |

## **Annex 2: Consultation and web publicising responses**

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

The following organisations were consulted, however no responses were received:

- Health and Safety Executive (HSE)
- Environmental Health department – South Staffordshire Council

This proposal was also publicised on the Environment Agency's website between 09/02/2015 and 09/03/2015, but no representations were received during this period.