

Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Didlington Farm Poultry Unit operated by Mr Robert Anderson, Mrs Rosamond Anderson and Mr Marcus Anderson.

The permit number is EPR/EP3937EP.

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

Purpose of this document

This decision document:

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

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

Structure of this document

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

Key Issues

1) Ammonia Impacts

There are two Special Areas for Conservation (SAC) within 3.4km, one Special Protection Area (SPA) within 850m, seven Sites of Special Scientific Interest (SSSI) within 4.9km and six Local Wildlife Sites (LWS) within 1.4km of the facility, one of which is within 250m.

Assessment of SAC and SPA

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. Initial screening using Ammonia Screening Tool (AST) v4.4 has indicated that the PC for Breckland SAC, Norfolk Valley Fens SAC and Breckland SPA is predicted to be greater than 4% of the CLe for ammonia. It is not possible to conclude that there is not a potential risk of damage at the sites from this installation. The results of the ammonia screening are given in Tables 1 and 2 below.

Table 1: Assessment of ammonia emissions (SAC)

| Name | Ammonia CLe | PC | PC of CLe |
|---------------------|----------------------|------------------------|-----------|
| Breckland | 1µg/m ³ * | 0.115µg/m ³ | 11.5% |
| Norfolk Valley Fens | 1µg/m ³ * | 0.042µg/m ³ | 4.2% |

* Where 1µg/m³ is used and the process contribution is assessed to be <4% insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification Critical Load values. In these cases the 1µg/m³ level used has not been confirmed but it is precautionary.

Table 2: Assessment of ammonia emissions (SPA)

| Name | Ammonia CLe | PC | Ammonia deposition (N) | Acidification (N) | PC of CLe |
|-----------|--------------------|------------------------|------------------------|-------------------|-----------|
| Breckland | 3µg/m ³ | 0.341µg/m ³ | 1.771kg/ha/yr | 0.127keq/ha/yr | 11.4% |

For the SPA a CLe of 3µg/m³ has been assigned. Environment Agency held data confirms that Natural England has concerns over the potential for airborne ammonia to hasten habitat changes to the detriment of birds for which the SPA is designated. However, the stance agreed with the Environment Agency is that it is not appropriate to identify the SPA as sensitive without evidence of habitat change. Therefore, it has been agreed that when considering applications CLe3 will apply.

Where emissions of ammonia or ammonia deposition (nutrient nitrogen or acid) are between Y% and Z% of the relevant CLe or CLo the proposal requires in-combination screening. This was undertaken for all three designated sites as there are other intensive farming installations with a PC above 4% of the CLe within 10km acting in-combination with this application. If the in-combination screening does not screen the site out then detailed modelling will be required.

Table 3: Assessment of ammonia, nutrient nitrogen deposition and acid deposition emissions

| Name | PC | Y% to Z% | Nutrient N CLe | Acid CLo | PC of CLe |
|-------------------------|------------------------|----------|----------------|----------------|-----------|
| Breckland SAC | 0.115µg/m ³ | 4 to 20 | - | - | 11.5% |
| Norfolk Valley Fens SAC | 0.42µg/m ³ | | - | - | 4.2% |
| Breckland SPA | 0.341µg/m ³ | | 1.771kg/ha/yr | 0.127keq/ha/yr | 11.4% |

The assessment has indicated that the PC as a percentage of the CLe for Breckland SPA, Breckland SAC and Norfolk Valley Fens SAC is between Y% and Z% therefore, detailed modelling has been requested and undertaken.

Assessment of SSSI

If the PC is below 20% of the relevant CLe or CLo then the farm can be permitted with no further assessment. Initial screening using AST v4.4 has indicated that the PC for Cranwich Camp, Breckland Farmland, Gooderstone Warren, Foulden Common and The Brinks, Northwold SSSIs are predicted to be less than 20% CLe for ammonia, therefore it is possible to conclude no damage and consultation with Natural England is not required. Therefore, no further assessment is necessary.

However, initial screening using AST v4.4 has indicated that the PC for Breckland Forest and Didlington Park Lakes SSSIs are predicted to be between 20% and 50% CLe for ammonia and therefore may cause damage to features of the SSSI. The results of the ammonia screening are given in Tables 4a and 4b below.

Table 4a: Assessment of ammonia emissions (SSSI)

| Name | Ammonia CLe | PC | PC of CLe |
|-----------------------|---------------------|------------------------|-----------|
| Breckland Forest | 3µg/m ³ | 0.348µg/m ³ | 11.6% |
| Cranwich Camp | 1µg/m ^{3*} | 0.114µg/m ³ | 11.4% |
| Breckland Farmland | 1µg/m ^{3*} | 0.063µg/m ³ | 6.3% |
| Gooderstone Warren | 1µg/m ^{3*} | 0.023µg/m ³ | 2.3% |
| Didlington Park Lakes | 3µg/m ³ | 1.053µg/m ³ | 35.2% |
| Foulden Common | 1µg/m ^{3*} | 0.042µg/m ³ | 4.2% |
| The Brinks, Northwold | 3µg/m ³ | 0.224µg/m ³ | 7.5% |

* Where precautionary level of 1µg/m³ is used and the process contribution is assessed to be <20% insignificance threshold in this circumstance it is not necessary to further consider Nitrogen Deposition or Acidification CLo values. In these cases the 1µg/m³ level used has not been confirmed, but it is precautionary.

Table 4b: Assessment of ammonia emissions (SSSI)

| Name | Ammonia CLe | Ammonia deposition (N) | Acidification (N) | PC |
|-----------------------|--------------------|------------------------|-------------------|---|
| Breckland Forest | 3µg/m ³ | 1.807kg/ha/yr | 0.129keq/ha/yr | CLo for N and acid deposition are between Y% and Z% (36.1% and 24.1% respectively). |
| Didlington Park Lakes | 3µg/m ³ | 5.484kg/ha/yr | 0.392keq/ha/yr | CLo for ammonia is between Y% and Z% (35.2%). |

Where emissions of ammonia or ammonia deposition (nutrient nitrogen or acid) are between Y% and Z% of the relevant CLe or CLo the proposal requires in-combination screening. This was undertaken for both the designated sites in Table 4b as there are other intensive farming installations with a PC above 20% of the CLe within 5km acting in-combination with this application. If the in-combination screening does not screen the site out then detailed modelling will be required.

Table 5: Assessment of ammonia, nutrient nitrogen deposition and acid deposition emissions (SSSI)

| Site | PC | Y% and Z% | Nutrient Nitrogen CLe | Acid CLo | PC of CLe |
|--------------------|------------------------|-----------|-----------------------|----------------|-----------|
| Breckland Forest | 1.807kgN/ha/yr | 20 to 50 | 5kg N/ha/yr | - | 36.1% |
| | 0.129keq/ha/yr | | - | 0.536keq/ha/yr | 24.1% |
| Didlington Park \$ | 1.056µg/m ³ | | - | - | 35.2% |

\$ - if evidence of air pollution risks, apply Cle3.

The assessment has indicated that the PC as a percentage of the CLe for Breckland Forest SSSI and Didlington Park Lakes SSSI is between Y% and Z% therefore, detailed modelling has been requested and undertaken.

Assessment of LWS

The following trigger thresholds have been applied for the assessment of non-statutory LWS:

- If PC is <100% of relevant CLe or CLo then the farm can be permitted (H1 or ammonia screening tool)
- If PEC < CLe or CLo then the farm can be permitted
- If further modelling shows PC <100%, then the farm can be permitted.

For the following sites listed in Table 6, this farm has been screened out as set out above using results of the AST v4.4.

Table 6: Assessment of ammonia emissions (LWS)

| Name | PC | PC of CLe |
|---------------------------------|------------------------|-----------|
| Fosseditch | 0.229µg/m ³ | 22.9% |
| Eastwood Farm Meadow | 0.378µg/m ³ | 37.8% |
| String Drain | 0.362µg/m ³ | 36.2% |
| Part of Oak Covert | 0.153µg/m ³ | 15.3% |
| Adjacent River Wissey | 0.299µg/m ³ | 29.9% |
| Watermill Broad (Cranwich Pits) | 4.250µg/m ³ | 141.7% |

NOTE: Where the precautionary level of 1µg/m³ is used and the process contribution is assessed to be <100% the site automatically screens out as insignificant and no further assessment of CLo is necessary. In these cases the 1µg/m³ level used has not been confirmed, but it is precautionary.

The proposed activity will not result in damage to the conservation sites or species at all the sites listed above with the exception of Watermill Broad (Cranwich Pits) due to this site being within 250m of the installation. Detailed modelling for Watermill Broad (Cranwich Pits) has been undertaken to assess the affects of ammonia emissions.

Detailed Modelling and Formal Consultation Response

The pre-application ammonia screening report dated March 2014 has indicated that emissions from Didlington Farm Poultry Unit may have a potential impact on the following ecological sites requiring formal consultation with Natural England:

- Breckland SPA – nutrient N and acidification CLo >20% and in-combination impact >20%. The nutrient nitrogen CLo is predicted to be 35.4% and the acid CLo is predicted to be 23.6%
- Breckland SAC - in-combination impact >20%
- Norfolk Valley Fens SAC - in-combination impact >20%
- Breckland Forest SSSI - nutrient N and acidification CLo >20% and in-combination impact >50%
- Didlington Park Lakes SSSI - in-combination impact >50%
- Watermill Broad (Cranwich Pits) LWS - within 250m of the installation boundary.

In this case further detailed air emission modelling was required as part of the application. A detailed air modelling report was provided within the application supporting document (AS Modelling & Data, Appendix 13) dated 07 April 2014. An audit of the detailed modelling report was conducted by the Air Quality Modelling and Assessment Unit (AQMAU) on 16/06/2014.

The Environment Agency Guidance on modelling the concentration and deposition of ammonia emitted from intensive farming - Air Quality Modelling and Assessment Unit, 22 November 2010, v3 was used to cross check the model version, input parameters, meteorological dataset, emission rate calculation, emission rate used in the modelling, data sets and data source types. On this basis we accept that the results and conclusions presented in the modelling report are correct.

The model indicates that there is no likelihood of a significant effect on and no perceived affect from ammonia emissions (including nitrogen and acid deposition) from the installation at the following sites:

- Breckland SAC
- Norfolk Valley Fens SAC
- Breckland Forest SSSI.

However, potentially significant PCs still remain from the following sites:

Breckland SPA:

The modelling indicates that the PC for the annual acid deposition rate currently (turkey farm under the permit threshold) exceeds 20% of the CLo of 0.536keq/ha over the northern parts of the SPA, south of Thetford Road and possibly along parts of the south-eastern edge of the forest (north-east of the installation).

Under the proposed scenario (200,000 broiler places) there is no exceedance of 20% of the CLo at the SPA. There is an exceedance of 4% of the CLo predicted over the northern edge of the SPA to the south of Thetford Road.

Didlington Park Lakes SSSI:

The modelling indicates that the PC to the annual nitrogen deposition rate currently (turkey farm under the permit threshold) exceeds 50% of the CLo of 10kg/ha over the south-western quarter of the SSSI. The PC to annual nitrogen deposition rate probably exceeds 20% of the CLo over most of the remainder of the SSSI.

Under the proposed scenario (200,000 broiler places) there is no exceedance of 50% of the CLo and exceedance of 20% of the CLo would be restricted to about 6.1ha of the south-western corner of the SSSI.

Watermill Broad (Cranwich Pits) LWS:

The modelling indicates that the PC to the annual nitrogen deposition rate currently (turkey farm under the permit threshold) exceeds 100% of the CLo of 10kg/ha over much of the western end of the LWS. The PC to annual nitrogen deposition rate probably exceeds 50% of the CLo over much of the western half of the LWS.

Under the proposed scenario (200,000 broiler places) the exceedance of 100% of the CLo would be confined to the western most tip of the LWS. Exceedance of 50% of the CLo would be restricted to about 5.7ha of the western end of the LWS.

In accordance with our guidance, as there are statutory sites within 10km (SACs and SPAs) and 5km (SSSIs) of the installation, we completed an Appendix 11 Habitats Directive Assessment for SACs and SPAs and an Appendix 4 CRoW Act Assessment for SSSIs for consultation. These were sent to Natural England for formal comment on 01 July 2014. In return, advice was provided under Section 281 of the Wildlife and Countryside Act 1981 (as amended).

Didlington Farm is in proximity to several SSSIs most of which are also component sites of the Breckland SPA, Breckland SAC and Norfolk Valley Fens SAC. A number of SSSIs in this area show clear evidence of impacts on the grassland and heathland vegetation communities which form interest features for which these SSSIs have been notified. These impacts are consistent with the effects of high ammonia concentrations and/or the associated increased deposition of nitrogen.

Despite the large increase in bird numbers, the switch from turkeys to broilers will result in a significant reduction in the total ammonia emissions. Natural England acknowledges and welcomes the predicted reduction in the ammonia emissions from Didlington Farm as a result of the proposed change from turkey to broiler production.

Despite these reductions, part of the Breckland SPA would still be subject to process contributions of deposition of nitrogen and of acidity which would be greater than 4% of the relevant critical loads. Also, the ammonia process contributions to parts of both the Didlington Park Lakes SSSI and the Breckland Forest SSSI would still be greater than 20% of the relevant critical level. However, for each of these sites, the areas thus affected would be relatively small and, more importantly, would also be significantly smaller than the areas which are currently subject to similarly high process contributions as a result of the ongoing unpermitted turkey production.

In view of the very significant reductions; both in the ammonia emissions, and to the areas of designated sites which are subject to excessive process contributions, Natural England has no objection to the issuing of the permit.

2) Industrial Emissions Directive (IED)

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 IED. Amendments have been made to the conditions of this permit so that it now implements the requirements of the EU Directive on Industrial Emissions.

Soil and Groundwater Monitoring

As a result of the IED requirements all permits must now have condition 3.2.4 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 and/or groundwater and measure levels of contamination where there is evidence that there is or could be existing contamination and:

- The environmental risk assessment has identified that the same contaminants are a particular hazard; or

- The environmental risk assessment has identified that the same contaminants are a hazard and 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 and/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.

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 Yes |
|--|---|---------------------|
| Consultation | | |
| Scope of consultation | The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements. | ✓ |
| Responses to consultation, web publicising | The web publicising, consultation responses (Annex 2) were taken into account in the decision. The decision was taken in accordance with our guidance. | ✓ |
| Operator | | |
| Control of the facility | We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator. | ✓ |
| European Directives | | |
| Applicable directives | All applicable European directives have been considered in the determination of the application. This permit has implemented the requirements of the Industrial Emissions Directive (IED). Please refer to the key issues section for more details. | ✓ |
| 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 | <p>The operator has provided a description of the condition of the site. We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED – guidance and templates (H5).</p> <p>The underlying site geology is Chalk overlain by a thin cover of Superficial Deposits (Glacial Till). The Chalk is a principal aquifer designated as highly vulnerable and is within a NVZ. The site is not within a groundwater source protection zone, a groundwater or surface water safeguard zones or at risk from flooding.</p> <p>The application Site Condition Report (SCR) for</p> | ✓ |

| Aspect considered | Justification / Detail | Criteria met |
|---|--|--------------|
| Yes | | |
| | <p>Didlington Farm Poultry Unit (dated 11 April 2014) makes reference to no previous pollution incidents being identified during desktop and site investigations as well as visual/olfactory investigations showing no evidence of existing land contamination.</p> <p>The SCR demonstrates that there are no significant hazards or likely pathways to land or groundwater and no historic contamination sources on site that may present a significant risk. Therefore, on the basis of the assessment presented in the SCR the Environment Agency accepts that no baseline reference data needs to be provided for the site soil and groundwater conditions as part of application EPR/EP3937EP/A001.</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. A full assessment of the application and its potential to affect the site has been carried out as part of the permit application EPR/EP3937EP/A001.</p> <p>Detailed air emission modelling for ammonia was undertaken as part of the application. Conclusions in the report included that whilst there is a potential risk to some designated sites, changing from turkey to broiler production actually reduces emissions to air of ammonia and therefore has an overall positive environmental benefit. Please refer to the key issues section for more details.</p> | ✓ |
| Environmental Risk Assessment and operating techniques | | |
| Environmental risk | <p>We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory.</p> <p>The assessment shows that by applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant or, in the case of ammonia emissions to air, a positive environmental improvement due to the significant reduction in emissions.</p> | ✓ |
| Operating techniques | <p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The proposed techniques for priorities for control are in line with the benchmark levels contained in the SGN EPR6.09 and we consider them to represent appropriate techniques for the facility.</p> | ✓ |

| Aspect considered | Justification / Detail | Criteria met |
|-------------------------------|---|--------------|
| | | Yes |
| The permit conditions | | |
| Improvement conditions | <p>Based on the information on the application, we consider that we need to impose improvement conditions. We have imposed the following improvement conditions:</p> <ul style="list-style-type: none"> ➤ review of the five existing poultry houses and the management practices at the installation ➤ review of the collection of site drainage from the poultry houses and water from cleaning out poultry houses. | ✓ |
| Incorporating the application | We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process. These descriptions are specified in the Operating Techniques table in the permit. | ✓ |
| Operator Competence | | |
| Environment management system | There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence. | ✓ |
| Relevant convictions | The National Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found. The operator satisfies the criteria in RGN 5 on Operator Competence. | ✓ |
| 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, web publicising

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

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| Response received from |
| Health and Safety Executive, Norwich. Dated 17 June 2014. |
| Brief summary of issues raised |
| No issues raised. |
| Summary of actions taken or show how this has been covered |
| N/A. |

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| Response received from |
| Natural England. Dated 25 July 2014. |
| Brief summary of issues raised |
| In view of the very significant reductions; both in the ammonia emissions, and to the areas of designated sites which are subject to excessive process contributions, Natural England has no objection to the issuing of the permit. |
| Summary of actions taken or show how this has been covered |
| N/A. |

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| Response received from |
| Local Authority Planning Department. Dated 30 July 2014. |
| Brief summary of issues raised |
| None. |
| Summary of actions taken or show how this has been covered |
| N/A. |

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| Response received from |
| Local Authority Environmental Health (Community Safety and Neighbourhood Nuisance Officer and Contaminated Land Co-ordinator). Dated 31 July 2014. |
| Brief summary of issues raised |
| <u>Air Quality</u> Concerned that the application does not cause an exceedance of the Air Quality Standard for PM10 at nearby receptors. |
| <u>Noise</u> Siting and Sound Power Levels for fixed and moveable machinery to be used on site (not vehicles), expected delivery times and frequency for feed and supplies, and proposed working hours. |
| <u>Odour</u> What mitigation measures will be put in place should odour become an issue. |
| Summary of actions taken or show how this has been covered |
| As part of the application assessment process systems are in place to technically assess the application. These transpose themselves as permit Conditions to which the applicant must operate their site as well as ensuring that the applicant is aware |

of their operational and environmental requirements. If this assessment process flags up any concerns Conditions are added/amended, further details/submissions are requested from the client or in extreme cases the application is refused/returned. On the basis of the submitted application, the Environment Agency concludes that the site does not present any unacceptable issues.

The application was advertised externally on the GOV.UK website between 17 June and 15 July to invite any responses and comments from the general public. No responses were received.