

Environment Agency permitting decisions

Variation

We have decided to issue the variation for Peels Farm operated by Mr Graham Shadrack and Mr Mark Shadrack (trading as A.J. Garrod & Son).

The variation number is EPR/HP3937GU/V002.

This application was duly made on 19/06/15.

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.

Description of the changes introduced by the Variation

This is a Substantial Variation. This variation authorises the addition of five pig sheds (buildings 7-11), which increases the capacity of Peels Farm from 3,200 to 8,200 places for production pigs (over 30kg). Buildings 7-11 will each have the capacity of 1,000 pig places, and will be straw based solid floor systems. Each of the new pig sheds will have high velocity roof fan controlled ventilation.

Purpose of this document

This decision document:

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

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

Structure of this document

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

Key Issues

Ammonia emissions

There are two Special Areas of Conservation (SAC) sites, and one Special Protection Area (SPA) within ten kilometres of the installation. There are four Sites of Special Scientific Interest (SSSI) located within five km of the installation. There are 15 Local Wildlife Sites (LWS), and one Ancient Woodland (AW) within two km of the installation.

Ammonia assessment – SAC & SPA sites

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

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

Screening using the ammonia screening tool (version 4.4) and detailed modelling (reference: Air Quality Impact Assessment, dated April 2015) 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. Natural England advised that It was not appropriate to identify the Breckland SPA as sensitive receptor without evidence of habitat change. It was therefore excluded from the assessment. See results below.

Table 1 – Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of Critical level
Norfolk Valley Fens SAC	1*	0.012	1.2
Breckland SAC	1*	0.005	0.5
Breckland SPA	N/A**	N/A**	N/A**

* A precautionary critical level of $1 \mu\text{g}/\text{m}^3$ has been assigned to this site. Where the precautionary level of $1 \mu\text{g}/\text{m}^3$ is used, and the PC is assessed to be less than the 4% insignificance threshold in this circumstance it is not necessary to further consider nitrogen deposition or acid deposition critical load values.

**Natural England advised that It was not appropriate to identify the SPA as sensitive without evidence of habitat change.

Table 2 – Nitrogen deposition

Site	Critical load kg N/ha/yr*	Predicted PC kg N/ha/yr	PC % of critical load
Norfolk Valley Fens SAC	10	0.060	0.6
Breckland SAC	8	0.024	0.3

Breckland SPA	N/A**	N/A**	N/A**
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* Critical load values taken from Air Pollution Information System (APIS) website

(www.apis.ac.uk) - 30th May 2013

**Natural England advised that It was not appropriate to identify the SPA as sensitive without evidence of habitat change.

Table 3 – Acid deposition

Site	Critical load keq/ha/yr*	Predicted PC keq/ha/yr	PC % of critical load
Norfolk Valley Fens SAC	0.66	0.005	0.7
Breckland SAC	0.558	0.002	0.3
Breckland SPA	N/A**	N/A**	N/A**

* Critical load values taken from Air Pollution Information System (APIS) website

(www.apis.ac.uk) - 30th May 2013

**Natural England advised that It was not appropriate to identify the SPA as sensitive without evidence of habitat change.

No further assessment is necessary.

Ammonia assessment – SSSIs

The following trigger thresholds have been applied for 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 and/or detailed modelling may be required.

Screening using the ammonia screening tool (version 4.4) and detailed modelling has indicated that the PC for Swangey Fen, Breckland Forest, Thompson Water Carr & Common and Cranberry Rough is predicted to be less than 20% critical level for ammonia, acid and nitrogen deposition, and therefore it is possible to conclude that there will be no damage. The results of the ammonia screening tool (version 4.4) and detailed modelling are given in the tables below.

Table 4 – Ammonia emissions

Name of SSSI	Ammonia CLe (µg/m3)	PC (µg/m3)	PC as % of Critical level
Swangey Fen	1*	0.020	2.0
Breckland Forest	3**	0.012	0.4
Thompson Water Carr & Common	1*	0.155	15.5
Cranberry Rough, Hockham	1*	0.125	12.5

* A precautionary level of 1 µg/m3 has been used during the screen. Where the precautionary level of 1 µg/m3 is used, and the process contribution is assessed to be less than the 20% insignificance threshold in this circumstance it is not necessary to further consider nitrogen deposition or acid deposition critical load values. In these cases the 1 µg/m3 level used has not been confirmed, but it is precautionary.

**Natural England advised that a CLe of 3 for ammonia should be applied for the Breckland Forest SSSI

Table 5 – Nitrogen deposition

Site	Critical load kg N/ha/yr*	Predicted PC kg N/ha/yr	PC % of critical load
Swangey Fen	10	0.160	1.6

Breckland Forest	5	0.060	1.2
Thompson Water Carr & Common	10	0.803	8.0
Cranberry Rough, Hockham	10	0.649	6.5

* Critical load values taken from Air Pollution Information System (APIS) website (www.apis.ac.uk) - 30th May 2013

Table 6 – Acid deposition

Site	Critical load keq/ha/yr*	Predicted PC keq/ha/yr	PC % of critical load
Swangey Fen	1.29	0.012	0.9
Breckland Forest	0.536	0.004	0.8
Thompson Water Carr & Common	1.229	0.057	4.7
Cranberry Rough, Hockham	0.564	0.046	8.2

* Critical load values taken from Air Pollution Information System (APIS) website (www.apis.ac.uk) - 30th May 2013

No further assessment required.

Ammonia assessment – LWSs and AWs

There are 15 Local Wildlife Sites (LWS) and one Ancient Woodlands (AW) within 2 km of the Peels Farm. The following trigger thresholds have been applied for the assessment of these sites.

1. If PC is <100% of relevant critical level or load, then the farm can be permitted (H1 or ammonia screening tool)
2. If further modelling shows PC <100%, then the farm can be permitted.

Screening using ammonia screening tool (version 4.4) has indicated that emissions from Peels Farm will only have a potential impact on sites with a critical level of 1 µg/m³ if they are within 1,264 metres of the emission source. Screening indicates that beyond this distance, the PC at conservation sites is less than 1 µg/m³. 1 µg/m³ is 100% of the 1 µg/m³ CLe and therefore beyond this distance the PC is insignificant. All LWS and AW in Table 7 are beyond this distance, and 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.

Table 7 – distance from source

Site	Distance (m)
The Spinney LWS	2,050
Lake in Shropham LWS	2,074
South-east of Stow Bedon Hall LWS	1,593
Near Stow Bedon Hall LWS	1,400
East of Stow Bedon LWS	1,976
South of Mount Pleasant LWS	1,829
Breckles Moor LWS	2,020
Shropham Hall Grounds LWS	1,594
South of Shropham Hall LWS	1,997
Land in Stow Bedon LWS	1,997
Land near Rockland All Saints LWS	1,353
Unnamed Ancient Woodland AW	1,540

Detailed modelling has determined that the LWS which initially screened in using ammonia screening tool (version 4.4), has a PC for ammonia, acid and nitrogen deposition under the 100% significance threshold and can be screened out as having no likely significant effect. See results below.

Table 1 – Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of Critical level
Lower Stow Bedon	3	1.290	43.0
East of Lower Stow Bedon	3	1.041	34.7
Stafford's Meadow	3	1.599	53.3

* Natural England advised that a CLe of 3 for ammonia should be applied for the Lower Stow Bedon, East of Lower Stow Bedon and Stafford's Meadow.

Table 2 – Nitrogen deposition

Site	Critical load kg N/ha/yr*	Predicted PC kg N/ha/yr	PC % of critical load
Lower Stow Bedon	10	3.690	36.9
East of Lower Stow Bedon	10	2.970	29.7
Stafford's Meadow	10	4.570	45.7

* Critical load values taken from Air Pollution Information System (APIS) website (www.apis.ac.uk) - 30th May 2013

Table 3 – Acid deposition

Site	Critical load keq/ha/yr*	Predicted PC keq/ha/yr	PC % of critical load
Lower Stow Bedon	1.27	0.263	20.7
East of Lower Stow Bedon	1.27	0.212	16.7
Stafford's Meadow	1.27	0.326	25.7

* Critical load values taken from Air Pollution Information System (APIS) website (www.apis.ac.uk) - 30th May 2013

Detailed modelling identified that segments of North of Stow Bedon LWS exceeded the critical levels or critical loads. Norfolk Wildlife Trust have confirmed that, as long as the current environmental management measures implemented by AJ Garrod are continued, and the ecology of the LWS are appropriately monitored, then they would have no objection to the proposed development. Specifically, they recommended monitoring of the ecological condition of the County Wildlife Site every 5 years, in order that management of the CWS can be adjusted if there is any deterioration in condition of the site.

No further assessment is necessary.

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 Regulatory Guidance Note (RGN) 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.	✓
Responses to consultation and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision. The decision was taken in accordance with our guidance.	✓
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application. The permit implements the requirements of the EU Directive on Industrial Emissions.	✓
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 our guidance on site condition reports and baseline reporting under IED - guidance and templates (H5). This variation authorises the inclusion of an additional area of land south of the site. This is where the additional pig houses (buildings 7-11) are planned to be built. A site condition report was required to provide evidence on the condition of this additional area.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	The site condition report identified that there has been no notifiable pollution incidents within the proposed site boundary and no pollution incidents within 1km of the site. There is also no known prior site use other than agriculture.	
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 designated sites</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 17/07/2015.</p> <p>An Appendix 4 was completed and saved to EDRM 'for audit only' on 08/07/2015.</p> <p>Please see the 'Ammonia Emissions' sections in the Key Issues above.</p>	✓
Environmental Risk Assessment and operating techniques		
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>	✓
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.</p> <p>The proposed techniques for priorities for control are in line with the benchmark levels contained in the Technical Guidance Note (TGN) 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 and Best Available Techniques</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	(BAT) Conclusions.	
The permit conditions		
Updating permit conditions during consolidation.	We have updated previous permit conditions to those in the new generic permit template as part of permit consolidation. The operator has agreed that the new conditions are acceptable.	✓
Raw materials	We have specified limits and controls on the use of raw materials and fuels.	✓
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.	✓

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, and one response was received from Public Health England:

- Health and Safety Executive (HSE)
- Public Health England (PHE)
- Local Authority Environmental Health Department - Norfolk County Council

This proposal was also publicised on the environment Agency's website between 21/07/2015 and 17/08/2015, but no representations were received during this period.

Response received from
Public Health England - Environmental Public Health Scientist
Brief summary of issues raised
<p>The main emissions of public health significance are emissions to air of bioaerosols, dust including particulate matter and odour. Given that there are residential receptors in close proximity of the site (within 250m), the Environment Agency (EA) may wish to ensure that any environmental permit issued for this site contains conditions to ensure that these emissions do not impact upon public health.</p> <p>Furthermore, the EA may wish to ensure that the Accident Management Plan has adequately considered the potential for fire; and that a sufficient procedure for complaints regarding dust is in place. Neither of these considerations appears to be addressed within the application documents.</p>
Summary of actions taken or show how this has been covered
<p>In their application, the Operator has committed to operating the site in accordance with the Best Available Techniques (BAT). We have assessed the design of the ventilation system and specification of exhaust fan units and are satisfied that they represent BAT by reference to our guidance and the European BREF for the Intensive Rearing of Poultry and Pigs, and that the equipment is comparable to that used in other Intensive Farming installations. The installation is subject to regular inspection to ensure all equipment is operating to BAT standards, as intended.</p> <p>The Operator has provided an Odour Management Plan, along with a complaints procedure and complaints record form. The Operator has outlined their monitoring and continual improvement procedures. The Odour Management Plan, including the operational techniques undertaken to reduce odour emissions has been provided as an attachment to this letter.</p> <p>The Operator has provided a Dust, Bioaerosols and Fugitive Emissions Risk Assessment and Management Plan which states the operation techniques</p>

adopted to reduce the impact of emissions. This includes the use of pelleted feed delivered in sealed systems and stored in covered containers, and the ventilation and heating control systems designed to provide optimal environment and regularly monitored and maintained. Additionally we have worked with the Operator to ensure that they have included the complaints procedure and provided a complaints record form.

The Environmental Permit contains conditions 3.2.1, 3.2.2, 3.3.1 and 3.3.2, which require the operator to minimise emissions of odour and emissions from the site through the management plans in addition to being regulated by the Environment Agency.

We ensured that the Accident Management Plan adequately considered the potential of fire. The site has since sent us a copy of their Accident Management Plan, dated February 2015, which sufficiently covers the key risks, preventative measures and procedures in the event of a fire.