

Environment Agency permitting decisions

Variation

We have decided to issue the variation for Twinwoods Pig Unit operated by Bedfordia Farms Limited.

The permit number is EPR/NP3432SL

The variation number is EPR/NP3432SL/V003

This was applied for and determined as a substantial variation.

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 following changes:

- Increase of production pigs (>30 kg) by 1,755 to a total of 6,555 places.
- The addition of 2 new pig houses bringing the total to 8 houses. The 2 new houses are automatically ventilated using side inlets and high velocity roof fans and have the benefit of temperature control.
- The construction of a new 1,426 m² slurry lagoon with a floating cover of hydrophobic clay aggregate balls. The slurry lagoon will conform with technical measures detailed in the Water Resources (Control of Pollution)(Silage, Slurry and Agricultural Fuel Oil)(England) Regulations 2010 as amended 2013 (SSAFO). The lagoon will therefore meet Best Available Techniques (BAT).

The rest of the installation is unchanged.

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 of the decision

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 2013. These Regulations transpose the requirements of the IED.

Amendments have been made to the conditions of this variation so that it now 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 a condition relating to protection of soil, groundwater and 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 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 the 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 (SCR) for Twinwoods Pig Unit (dated 15/08/15) demonstrates that there are no hazards or likely pathway to land or

groundwater and no historic contamination on site that may present a hazard from the same contaminants. **Therefore, on the basis of the risk assessment presented in the SCR, we accept that they have not provided base line reference data for the soil and groundwater at the site at this stage.**

Odour/Noise

There are no sensitive receptors within 400 metres of the installation boundary. No odour or noise management plan was therefore required to be submitted by the operator.

Ammonia emissions

There are 3 Sites of Special Scientific Interest (SSSI) located within 5 km of the installation. There are also 10 Local Wildlife Sites (LWS), Ancient Woodlands (AW), and Local Nature Reserves (LNR) within 2 km of the installation.

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.

Initial screening using Ammonia Screening Tool v4.4 has indicated that emissions from Twinwoods Pig Unit will only have a potential impact on SSSI sites with a precautionary critical level of $1\mu\text{g}/\text{m}^3$ if they are within 4,229 metres of the emission source.

Initial screening indicates that beyond 4,229 metres the PC is less than $0.2\mu\text{g}/\text{m}^3$ (i.e. less than 20% of the precautionary $1\mu\text{g}/\text{m}^3$ critical level) and therefore beyond this distance the PC is insignificant. Stevington Marsh SSSI and Biddenham Pit SSSI are beyond this distance (see table 1 below) and therefore screen out of any further assessment.

Where the precautionary level of $1\mu\text{g}/\text{m}^3$ is used, and the process contribution is assessed to be less than 20% the sites automatically screen out as insignificant and no further assessment of critical load is necessary. In this case the $1\mu\text{g}/\text{m}^3$ level used has not been confirmed by Natural England, but it is precautionary. It is therefore possible to conclude no likely damage to the Stevington Marsh SSSI and Biddenham Pit SSSI.

Table 1 – SSSI Assessment

Name of SSSI	Distance from site (m)
Stevington Marsh SSSI	4,521

Biddenham Pit SSSI	4,962
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Screening using the ammonia screening tool (version 4.4) has indicated that the PC for Tilwick Meadow SSSI is predicted to be less than 20% critical level for ammonia, acid and nitrogen deposition therefore it is possible to conclude no damage. The results of the ammonia screening tool (version 4.4) are given in the tables below.

Table 2 – Ammonia emissions

Name of SSSI	Ammonia CLe ($\mu\text{g}/\text{m}^3$)	PC ($\mu\text{g}/\text{m}^3$)	PC as % of Critical level
Tilwick Meadow SSSI	3*	0.236	7.9

*The Air Pollution Information System (APIS) confirms that a CLe of 3 for ammonia should be applied across the Tilwick Meadow SSSI (March 2015)

Table 3 – Nitrogen deposition

Site	Critical load kg N/ha/yr [1]	PC kg N/ha/yr	PC % critical load
Tilwick Meadow SSSI	20	1.227	6.1

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 17/03/2015

Table 4 – Acid deposition

Site	Critical load keq/ha/yr [1]	PC keq/ha/yr	PC % critical load
Tilwick Meadow SSSI	4.395	0.088	1.99

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 17/03/2015

Ammonia assessment - LWS/AW/LNR

There are 10 Local Wildlife Sites (LWS), Ancient Woodlands (AW) and Local Nature Reserves within 2 km of Twinwoods Pig Unit. 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.

For Judge Spinneys LWS this farm has been screened out at stage 1, as set out above, using results of the ammonia screening tool (version 4.4).

Screening using ammonia screening tool (version 4.4) has indicated that emissions from Twinwoods Pig Unit will only have a potential impact on sites with a critical level of $1 \mu\text{g}/\text{m}^3$ if they are within 1,766 metres of the emission source. Screening indicates that beyond this distance, the PC at conservation sites is less than $1 \mu\text{g}/\text{m}^3$. $1 \mu\text{g}/\text{m}^3$ is 100% of the $1 \mu\text{g}/\text{m}^3$ CLe and therefore beyond this distance the PC is insignificant. In this case Judge Spinneys LWS is beyond this distance.

Table 5 – distance from source

Site	Distance (m)
Judge Spinneys LWS	1,889

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

For River Great Ouse LWS and Thurleigh Cutting LWS this farm has been screened out, using the ammonia screening tool (version 4.4). The predicted PC on the LWS for ammonia, acid and nitrogen deposition from the application site are under the 100% significance threshold and can be screened out as having no likely significant effect.

Table 6 - Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of critical level
River Great Ouse LWS	3*	1.077	35.9
Thurleigh Cutting LWS	3*	1.386	46.2

* CLe 3 applied as no protected lichen or bryophytes species were found when checking the relevant layer on our internal mapping system, Easimap.

Table 7 – Nitrogen deposition

Site	Critical load kg N/ha/yr [1]	Predicted PC kg N/ha/yr	PC % of critical load
River Great Ouse LWS	20	5.596	28.0
Thurleigh Cutting LWS	10	7.201	72.0

Note [1] Critical load values taken from APIS website (www.apis.ac.uk)– 17/03/2015

Table 8 – Acid deposition

Site	Critical load keq/ha/yr [1]	Predicted PC keq/ha/yr	PC % of critical load
River Great Ouse LWS	N/A	N/A	N/A
Thurleigh Cutting LWS	10.82	0.514	4.8

Note [1] Critical load values taken from APIS website (www.apis.ac.uk)– 17/03/2015

No further assessment is required.

For the following sites this farm has been screened out, as set out above, using results of the detailed modelling supplied by the applicant as part of the application (Document reference: CEN4120_3, 16 November 2015).

Detailed modelling provided by the applicant has been audited in detail by our Air Quality Modelling and Assessment Unit (AQMAU) and we have confidence that we can agree with the report conclusions.

Table 9 - Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of critical level
Browns Wood LNR/LWS	3*	0.243	8.1
Twin Wood LWS/AW	1**	1.274	42.5
Yarl's Wood LWS	1**	0.678	22.6

* CLe 3 applied as no protected lichen or bryophytes species were identified during detailed assessment of ecology.

**CLe 3 was applied during pre-application screening, however, detailed modelling subsequently identified bryophyte species within these sites therefore CLe 1 was applied.

The pre-application assessment also identified an unnamed AW less than 250 metres from the farm boundary. This AW sits within Oakley Little Wood LWS. It has been confirmed by the Local Wildlife Trust on 21 December 2015 that this site '...does not meet the requirement for further investigation...as the ground flora already shows distinct signs of excess nutrient deposition.' Therefore Oakley Little Wood LWS and the unnamed AW that sits within this LWS did not require further modelling.

Table 10 – Nitrogen deposition

Site	Critical load kg N/ha/yr [1]	Predicted PC kg N/ha/yr	PC % of critical load
Browns Wood LWS/LNR	10	1.896	19.0
Twin Wood LWS/AW	10	9.927	99.3
Yarl's Wood LWS	10	4.856	48.6

Acid deposition was not included as part of the detailed modelling assessment for the sites included in tables 9 and 10 as the results from the pre-application assessment shows the percentage process contribution was not the same as or greater than 100% for any of these sites. The results from the pre-application assessment for acid deposition are set out in table 11 below.

Table 11 – Acid deposition

Site	Critical load keq/ha/yr [1]	Predicted PC keq/ha/yr	PC % of critical load
Browns Wood LWS/LNR	10.81	0.981	9.1
Twin Wood LWS	10.79	3.660	33.9
Brown's Wood LWS	10.81	0.984	9.1
Yarl's Wood LWS	10.81	1.453	13.4
Twin Wood AW	10.79	3.421	31.7

No further assessment for these sites is required.

Annex 1: decision checklist

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

Aspect considered	Justification / Detail	Criteria met Yes
Consultation		
Scope of consultation	<p>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.</p> <p>For this application we consulted the following bodies:</p> <ul style="list-style-type: none"> • Health and Safety Executive. • Local Authority Environmental Health Department. • Bedfordshire, Cambridgeshire and Northamptonshire Wildlife Trust. 	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>The decision was taken in accordance with our guidance.</p>	✓
Operator		
Control of the facility	<p>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.</p>	✓
European Directives		
Applicable directives	<p>All applicable European directives have been considered in the determination of the application.</p>	✓
The site		
Extent of the site of the facility	<p>The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility.</p> <p>A plan included in the permit and the operator is required to carry on the permitted activities within the site boundary.</p>	✓
Site condition	<p>The operator has provided a description of the condition</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
report	<p>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 sites. See key issues for further details.</p> <p>Formal consultation has been carried out with Bedfordshire, Cambridgeshire and Northamptonshire Wildlife Trust. The consultation responses (Annex 2) were taken into account in the permitting decision.</p> <p>We have not formally consulted on the application with Natural England. The decision was taken in accordance with our guidance.</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. See key issues for further details.</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 operator has proposed the following key techniques:</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	<ul style="list-style-type: none"> • Slurry storage on site. • High velocity roof ventilation for the new pig houses. <p>The proposed techniques for priorities for control are in line with the benchmark levels contained in the Sector Guidance Note EPR6.09 and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant Best Available Techniques Reference documents (BREFs).</p>	
The permit conditions		
Updating permit conditions during consolidation.	<p>We have updated previous permit conditions to those in the new generic permit template as part of permit consolidation. The new conditions have the same meaning as those in the previous permit(s).</p> <p>The operator has agreed that the new conditions are acceptable.</p>	✓
Use of conditions other than those from the template	<p>Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template, which was developed in consultation with industry having regard to the relevant legislation.</p>	✓
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>	✓
Operator Competence		
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 Competence.</p>	✓

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.

Response received from
Bedfordshire, Cambridgeshire and Northamptonshire Wildlife Trust
Brief summary of issues raised
Confirmation on 21 December 2015 that Oakley Little Wood LWS does not meet the requirement for further investigation because the ground flora already shows distinct signs of excess nutrient deposition.
Summary of actions taken or show how this has been covered
As a result of the conclusions of the Wildlife Trust, this LWS did not need to be included as part of the detailed modelling assessment.

1) Responses not received

The Local Authority Environment Health and the Health and Safety Executive (HSE) were consulted; however, consultation responses were not received.

2) Web publicising

This proposal was also publicised on the Environment Agency's website between 03 December 2015 and 05 January 2016, but no representations were received during this period.