

## **Environment Agency permitting decisions**

### **Bespoke permit/Variation**

We have decided to issue the variation for Hill Farm Pig Unit operated by Mr Christopher John Miles, Mrs Ivy Miles, Mr Darren Giles and Miss Jane Miles.

The variation number is EPR/ZP3339ZH/V003.

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

## Key issues of the decision

### Ammonia Emissions

There are no Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramsar sites located within 10km of the installation. There are 4 Sites of Special Scientific Interest (SSSI) located within 5 kilometres of the installation. There are also 11 Local Wildlife Sites (LWS), within 2km of the installation. Two of the Local Wildlife sites are also designated Ancient Woodlands.

### Ammonia Assessment – SSSI's

The following trigger thresholds have been applied for assessment of SSSI's. 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 (v4.4) has indicated that the PC is predicted to be less than 20% Critical Level for ammonia, or the 20% Critical Load for acid and N deposition at all sites other than Gosbeck Wood. The results of the ammonia screening tool v4.4 are given in the tables below.

**Table 1 – Ammonia Emissions**

Site	Critical Level Ammonia $\mu\text{g}/\text{m}^3$	Predicted Process Contribution $\mu\text{g}/\text{m}^3$	% of Critical Level
Barking Woods	1	0.142	14.2
Creeping St Mary Pits	N/A	0.497	N/A
Lingwood Meadows, Earl Stonham	3	0.311	10.4
Gosbeck Wood	3	0.391	13.0
Sandy Lane Pit, Barham	1	0.127	12.7

A Critical level (Cle) of  $3\mu\text{g}/\text{m}^3$  has been applied to Lingwood Meadows and Gosbeck Wood because Natural England has confirmed that lower plants are not a significant feature of the site.

Natural England has also confirmed the Creeping St. Mary Pits Site is designated for geological features. Therefore, no Cle or CLo has been applied.

A precautionary critical level of  $1\mu\text{g}/\text{m}^3$  has been assigned to Barking Woods and Sandy Lane Pit although they have no features listed on the Website.

**Table 2 – Nitrogen deposition**

Site	Critical Load kg N/ha/yr	PC Kg N/ha/yr	PC % Critical Load
Barking Woods	5	0.738	14.8
Creeping St Mary Pits	N/A	2.583	N/A
Lingwood Meadows, Earl Stonham	15	1.615	10.8
Gosbeck Wood	5	2.030	40.6
Sandy Lane Pit, Barham	N/A	0.660	N/A

Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) – 08/07/2014

Creeping St. Mary Pits and Sandy Lane Pit, Barnham have no features listed on the Website.

**Table 3– Acid deposition**

Site	Critical Load keq/ha/yr	PC Kg N/ha/yr	PC % Critical Load
Barking Woods	10.999	0.053	0.5
Creeping St Mary Pits	N/A	0.184	N/A
Lingwood Meadows, Earl Stonham	4.928	0.115	2.3
Gosbeck Wood	10.999	0.145	1.3
Sandy Lane Pit, Barham	N/A	0.047	N/A

Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) - 08/07/2014

Because the process contribution of N deposition from the application site is over the 20% threshold at Gosbeck Wood, it may cause damage to features of this SSSI. An in-combination assessment has therefore been carried out.

A search of all existing active intensive agriculture installations permitted by the Environment Agency has identified the following farms within 5km of the maximum concentration point for Gosbeck Wood. A detailed assessment has been carried out as shown below.

**Table 4– In-combination assessment**

Name of Farm	PC, µg/m <sup>3</sup>	Critical Load kg N/ha/yr	PC as % of Critical Load
Henley, Poultry Unit	0.181	5	3.6
Walnut Tree Farm	0.773	5	15.5
Henley Manor Farm	0.099	5	2.0
Old Hall Farm	0.141	5	2.8
Stonham Poultry Unit	0.125	5	2.5
Hill Farm	2.030	5	40.6
<b>Total PC</b>	<b>3.349</b>	<b>5</b>	<b>40.6</b>

Critical load values taken from APIS website ([www.apis.ac.uk](http://www.apis.ac.uk)) - 08/07/2014

The predicted process contributions for each of the farms listed above are calculated using the Environment Agency's ammonia screening tool v4.4. The values are conservative in their estimate of process contribution and thus greater than would be the case if detailed modelling was undertaken for each farm. The In-combination total PC ( $\Sigma$ PC) is therefore calculated from only the individual farms with a PC on Gosbeck Wood exceeding 20%.

Table 4 shows that the  $\Sigma$  process contribution at Gosbeck Wood SSSI from all farms where an individual PC is greater than 20% is 40.6%. In line with Environment Agency guidelines, where the  $\Sigma$ PC is <50% of the Critical load, in-combination impacts can be considered as not being likely to damage the features of the SSSI for which it has been designated. The  $\Sigma$ PC for Gosbeck Wood SSSI from all farms is 40.6%, and therefore we have concluded no likely significant effect from in-combination impacts at the SSSI.

No further assessment is required.

## **Ammonia assessment - LWS/AW.**

There are 11 Local Wildlife Sites (LWS), within 2 km of Hill Farm Pig Unit. Two of these are also designated as Ancient Woodland (AW). 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 4.4 has indicated that emissions from Hill Farm Pig Unit will only have a potential impact on sites with a critical level of 1 µg/m<sup>3</sup> if they are within 1,433m of the emission source. Screening indicates that beyond this distance, the Process Contribution at conservation sites is less than 1ug/m3. 1ug/m3 is 100% of the 1ug/m3 critical level and therefore beyond this distance the PC is insignificant. In this case the local wildlife sites below are beyond this distance.

**TABLE 5 – distance from source**

Site	Distance (m)
Crowfield Wood	1,982
River Gipping (sections)	1,904
Manor Farm Meadows	1,866
RNR 143	1,596
Whitegate Cottage Grassland	1,458

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

For the following sites this farm has been screened out, as set out above, using results of the Ammonia Screening Tool version 4.4. The Process Contribution on the LWS/AW for ammonia, acid and N 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 LWS's and AW**

Site	Critical Level Ammonia µg/m <sup>3</sup>	PC µg/m <sup>3</sup>	PC % Critical Level
Shrubland Park	3	1.201	40.0
Dial Farm Plantation	3	1.478	49.3
Blowers Pightle Grove	3	1.152	38.4
Long Strops	3	1.169	39.0
Coddenham wood	3	2.048	68.3

A Critical Level of 3µg/m<sup>3</sup> has been applied because, based on APIS data 11/03/2014, no protected lichen or bryophytes species were present.

**Table 7 - Nutrient enrichment LWS's and AW**

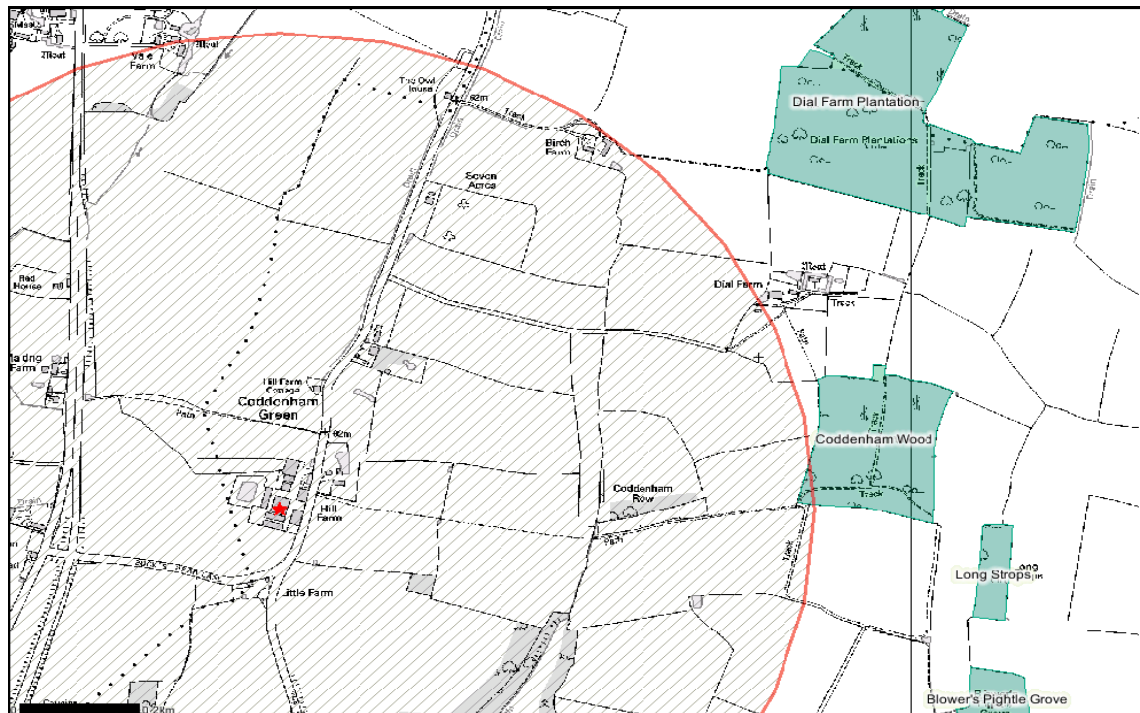
Site	Critical nutrient enrichment kg N/ha/yr	Load kg N/ha/yr	PC N/ha/yr	Kg	PC % Critical Load
Shrubland Park	10		6.239		62.4
Dial Farm Plantation	10		7.676		76.8
Blowers Pightle Grove	10		5.981		59.8
Long Strops	10		6.074		60.7
Coddenham wood	10		10.636		106.4

Critical Load values are based on APIS data 11/03/2014.

Although the Critical Load for nutrient enrichment at Coddenham Wood exceeds 100%, it was decided not to require Air Dispersion Modelling from the Operator.

Coddenham Wood LWS is located 971m away from the installation and therefore screens out for airborne ammonia. However it screens in at 106% of the Critical load (CLo) for Nitrogen deposition.

The Ammonia screening tool (v.4.4) calculated that any site over 789m away from the farm will screen out for airborne ammonia. Figure 1 below shows how only a small section of the LWS screens in for the need for modelling and the rest of the designation is over 789m away and therefore screens out.



Given the precautionary design of the version 4.4 Screening Tool, a risk based decision has been made that detailed modelling is not required for the impacts of Hill Farm Pig Unit on Coddenham Wood as from experience it is known that modelling would screen out this section of the LWS for nitrogen deposition.

No further assessment is required.

**Table 8 – Acidification**

Site	Critical Load keq/ha/yr	PC keq/ha/yr	PC % Critical Load
Shrubland Park	10.92	0.446	4.1
Dial Farm Plantation	2.73	0.548	20.1
Blowers Pightle Grove	11.01	0.427	3.9
Long Strops	11.01	0.434	3.9
Coddenham wood	11.01	0.760	6.9

Critical Load values are based on APIS data 11/03/2014.

The Process Contribution at these LWS's is below 100% of relevant Critical Load, Ammonia Screening Tool version 4.4

No further assessment is required.

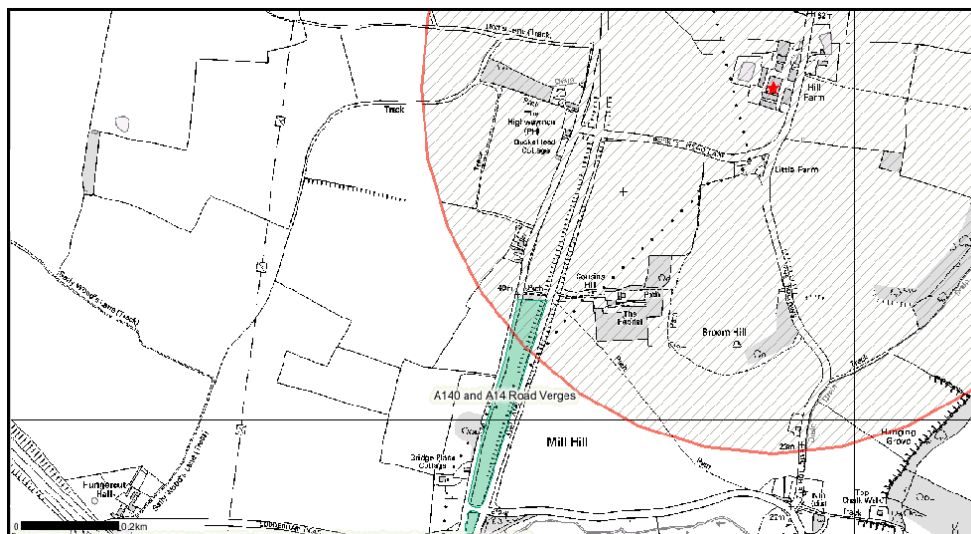
However, the A140 and A14 Road Verges LWS, which is located 685m away from the installation, screens in for ammonia at 130% of the Critical level (CLe).

**Table 9 - Ammonia Emissions A140 and A14 Road Verges**

Site	Critical Level Ammonia $\mu\text{g}/\text{m}^3$	PC $\mu\text{g}/\text{m}^3$	PC %Critical Level
A140 and A14 Road Verges	3	3.895	129.8

A140 and A14 Road Verges LWS is located 685m away from the installation and screens in at 130% of the Critical level (CLe). No critical loads were applied for Nitrogen or Acid deposition as APIS states that 'No comparable habitat with established critical load estimate available' and that the habitat is not sensitive to acidity. This was based on APIS data 11/03/2014, which was verified 14/07/2014.

The Ammonia screening tool (v.4.4) calculated that any site over 789m away from the farm will screen out for airborne ammonia. Figure 1 below shows how only a small section of the LWS screens in for the need for modelling and the rest of the designation is over 789m away and therefore screens out.



A risk based decision has been made that detailed modelling is not required for Hill Farm Pig Unit on this occasion as from experience it is known that modelling would screen these sections of the two Local wildlife sites out for airborne ammonia and nitrogen deposition. This is because the screening is always more conservative than that of a detailed modelling assessment.

No further assessment for these sites is required.

### **Slurry/Dirty water storage capacity**

The Installation is within a Nitrate Vulnerable Zone. This means a slurry/dirty water storage capacity of 6 months is required, which should be evidenced by appropriate calculations. The Operator has confirmed the Installation has sufficient capacity for the increased numbers, which can be supported by calculation.

### **Sufficient land to support proposed stock numbers.**

Manure is spread on fields owned by the Operator, who has confirmed there sufficient land for the new stock numbers proposed based on Whole Farm calculation.

## 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
<b>Receipt of submission</b>		
Confidential information	No claim for commercial or industrial confidentiality has been made.	✓
Identifying confidential information	We have not identified any information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on commercial confidentiality.	✓
<b>European Directives</b>		
Applicable directives	All applicable European directives have been considered in the determination of the application.  This variation incorporates the changes required by the Industrial Emissions Directive. It includes amendment to the wording of several permit conditions. It also includes the addition of a condition relating to a requirement for routine monitoring, and an associated reporting condition.	✓
<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 and the proposed additions. The plan, dated 11/07/14, identifies the location of the 9 sheds.  The new layout plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.	✓
Biodiversity, Heritage, Landscape and Nature Conservation	The site is within the relevant distance criteria for Intensive Farm sites. There are no SACs, SPAs or Ramsars within 10km but there are 5 SSSI's within 5km. The nearest are Creeting St Mary pits, 2.1km to the West and Gosbeck Wood, 2.3km to the east of the installation. There are no NNR's or LNR's, within 2km of the installation. There are 11 Local Wildlife Sites within 2km of the installation, 2 of which are also Ancient Woodlands. The nearest of these is the A140 and A14 road verges, approximately 700 metres to the South West. These sites have been screened out using The Ammonia screening tool (v.4.4).	✓



<b>Environmental Risk Assessment and operating techniques</b>		
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 SGN EPR6.09 and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs and BAT Conclusions.</p>	✓
<b>The permit conditions</b>		
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.</p> <p>The operator has agreed that the new conditions are acceptable.</p>	✓
Raw materials	<p>We have not specified limits and controls on the use of raw materials and fuels. The Operator has provided details of the changes of raw materials and quantities, which arise from the change in stocking numbers.</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>	✓
<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 Competence.</p>	✓
Relevant convictions	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>The Applicant has submitted details of relevant convictions together with a post-conviction plan. We have referred to the Central Assessment Panel list and are satisfied we have not previously refused or revoked a permission to this Operator.</p>	✓
Financial Provision	<p>There is no known reason to consider that the Operator will not be financially able to comply with the permit conditions. This decision was taken in accordance with RGN 5 on Operator Competence</p>	✓