

Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Park Farm operated by Moy Park Limited.

The permit number is EPR/AP3337ZU.

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 and web publicising responses

Key issues of the decision

Ammonia emissions

Ammonia assessment - LWS/AW/LNR

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

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

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

Screening using ammonia screening tool (version 4.4) has indicated that emissions from Park Farm will only have a potential impact on sites with a critical level of $1 \mu\text{g}/\text{m}^3$ if they are within 640 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 the following LWSs are beyond this distance.

Table 1 – distance from source

Site	Distance (m)
Road Wood LWS	1,376
Darnsyke Marsh LWS	1,108
Spring Wood, Thorney LWS	1,469
The Ring, Thorney LWS	1,978
Disney Nook Lane Drain, Thorney LWS	1,991
Lodge Farm Grassland, Thorney LWS	1,127

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

For the sites in Table 2 which were within 640m further assessment was carried out. As a result of this the farm has been screened out, using the ammonia screening tool (version 4.4) . The predicted PC on the LWS and AW 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 2 - Ammonia emissions

Site	Critical level ammonia $\mu\text{g}/\text{m}^3$	Predicted PC $\mu\text{g}/\text{m}^3$	PC % of critical level
Blackthorn Wood LWS	3**	1.106	36.9
Unnamed Woodland AW	3**	1.300	43.3

** CLe $3 \mu\text{g}/\text{m}^3$ applied as no protected lichen or bryophytes species were found when checking easimap layer

Table 3 – Nitrogen deposition

Site	Critical load kg N/ha/yr [1]	Predicted PC kg N/ha/yr	PC % of critical load
Blackthorn Wood LWS	10	5.743	57.4
Unnamed Woodland AW	10	6.751	67.5

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 7th April 2015

Table 4 – Acid deposition

Site	Critical load keq/ha/yr [1]	Predicted PC keq/ha/yr	PC % of critical load
Blackthorn Wood LWS	10.92	0.41	3.8
Unnamed Woodland AW	10.92	0.482	4.4

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 7th April 2015

No further assessment is required.

Biomass boilers

The applicant has included 2 biomass boilers with a net rated thermal input of 2.4 MW in their application.

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;
- the aggregate boiler net rated thermal input is:
 - A. less than 0.5MWth, or;
 - B. less than 1MWth where the stack height is greater than 1 metre above the roof level of adjacent buildings (where there are no adjacent buildings, the stack height must be a minimum of 3 metres above ground), and there are:
 - no Special Areas of Conservation, Special Protection Areas, Ramsar sites or Sites of Special Scientific Interest within 500 metres of the emission point(s);
 - no National Nature Reserves, Local Nature Reserves, ancient woodlands or local wildlife sites within 100 metres of the emission point(s), or;
 - C. less than 2MWth where, in addition to the above criteria for less than 1MWth boilers, there are:
 - no sensitive receptors within 150 metres of the emission point(s).

In line with the Environment Agency's May 2013 document "Biomass boilers on EPR Intensive Farms", 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 do not meet the above criteria and therefore require further assessment.

Further screening was undertaken using the boiler specifications provided by the operator.

Parameters	
Number of biomass boilers	2
Flue diameter	400mm
Stack height (from ground level)	8.5m
Thermal input in MW or kW per hour of each boiler	1147 kW
Adjacent Building heights	5.5m
Flue gas exit minimum temperature	76 Deg C
Flue nominal load temperature in°C	149 Deg C
Exit velocity (m/s)	4.8-6.2 m/s
NO _x concentration in mg/Nm ³	156
CO concentration in mg/Nm ³	100
PM ₁₀ concentration in mg/Nm ³	34
O ₂ concentration %	6

The Air Quality Monitoring and Assessment Unit (AQMAU) screening tool (Version 5.1) was run for Carbon Monoxide (CO), Nitrogen Dioxide (NO₂) and PM₁₀. The impacts of the emissions were assessed for the following receptors:

Receptor 1	Nutrel Works, Park Farm, Park Farm Road, Kettlethorpe, Lincoln, LN1 2LD. SK 85557 74660
Receptor 2	White Rose Works, Park Farm, Park Farm Road, Kettlethorpe, Lincoln, LN1 2LD. SK 85568 74520
Receptor 3	Park Farm, Park Farm Road, Kettlethorpe, Lincoln, LN1 2LD. SK 85496 74563
Receptor 4	Thurles Farmhouse, Park Farm Road, Kettlethorpe, Lincoln, LN1 2LD. SK 85428 74547
Receptor 5	Hall Farm, Kettlethorpe Lane, Kettlethorpe, Lincoln, LN1 2GZ. SK 85410 75641
Receptor 6	Hall Farm Cottage, Kettlethorpe Lane, Kettlethorpe, Lincoln, LN1 2GZ. SK 85543 75700
Receptor 7	Carnalea, Ferry Lane, Kettlethorpe, Lincoln, LN1 2LF. SK 86324 75179
Receptor 8	Lodge Farm House, Kettlethorpe Lane, Kettlethorpe, Lincoln, LN1 2GZ. SK 85717 75752

Sulphur Dioxide was not assessed as the boiler fuel will be comprised of wood pellets which contain very little or no sulphur.

Process Contributions (PC)

For NO₂, the short term Air Quality Standard (AQS) is 200 µg/m³ and for long term, 40 µg/m³. Process contribution significance thresholds are 10% of the AQS for short term and 1% for long term.

For PM₁₀, the short term AQS is 50 µg/m³ and for long term, 40 µg/m³. Process contribution significance thresholds are 10% of the AQS for short term and 1% for long term.

For CO the short term AQS is 10 mg/m³, there is no long term AQS. Process contribution significance threshold is 10% of the AQS for the short term.

Pollutant	Term	PC µg/m ³	AQS µg/m ³	PC %age of AQS
Receptor 1 – Nutrel Works				
NO ₂	Short	6.5	200	3.25
NO ₂	Long	0.29	40	0.73
PM ₁₀	Short	0.22	50	0.44
PM ₁₀	Long	0.064	40	0.16
CO	Short	2.0	10000	0.02
Receptor 2 – White Rose Works				
NO ₂	Short	4.4	200	2.2
NO ₂	Long	0.18	40	0.45
PM ₁₀	Short	0.14	50	0.28
PM ₁₀	Long	0.040	40	0.1
CO	Short	1.8	10000	0.02
Receptor 3 – Park Farm				
NO ₂	Short	5.0	200	2.5
NO ₂	Long	0.20	40	0.5
PM ₁₀	Short	0.16	50	0.32
PM ₁₀	Long	0.044	40	0.11
CO	Short	1.4	10000	0.01
Receptor 4 – Thurles Farmhouse				
NO ₂	Short	3.6	200	1.8
NO ₂	Long	0.17	40	0.43
PM ₁₀	Short	0.14	50	0.28
PM ₁₀	Long	0.038	40	0.1
CO	Short	1.3	10000	0.013
Receptor 5 – Hall Farm				
NO ₂	Short	2.4	200	1.2
NO ₂	Long	0.11	40	0.28
PM ₁₀	Short	0.08	50	0.16
PM ₁₀	Long	0.02	40	0.05
CO	Short	0.87	10000	0.01
Receptor 6 – Hall Farm Cottage				
NO ₂	Short	2.5	200	1.25
NO ₂	Long	0.1	40	0.25
PM ₁₀	Short	0.07	50	0.14
PM ₁₀	Long	0.02	40	0.05
CO	Short	0.68	10000	0.01

Pollutant	Term	PC µg/m ³	AQS µg/m ³	PC %age of AQS
Receptor 7 - Carnalea				
NO ₂	Short	3.8	200	2
NO ₂	Long	0.2	40	1
PM ₁₀	Short	0.14	50	0.28
PM ₁₀	Long	0.04	40	0.1
CO	Short	1.3	10000	0.01
Receptor 8 – Lodge Farm House				
NO ₂	Short	2.2	200	1.1
NO ₂	Long	0.1	40	0.24
PM ₁₀	Short	0.06	50	0.12
PM ₁₀	Long	0.02	40	0.05
CO	Short	0.79	10000	0.01

The PC values for short term emissions are less than 10% and less than 1% for long term emissions, therefore all emissions screen out from requiring further assessment.

We are satisfied that the emissions from the biomass boilers do not pose a significant risk to the sensitive receptors.

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.

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 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 Park Farm (dated 17/07/2015) demonstrates that there are no hazards or likely pathways 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.**

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 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.	✓
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.	✓
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).	✓
Biodiversity, Heritage, Landscape and Nature Conservation	The application is within the relevant distance criteria of sites of heritage, landscape or nature conservation, and/or protected species or habitat. A full assessment of the application and its potential to affect the sites has been carried out as part of the	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>permitting process. We consider that the application will not affect the features of the sites.</p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p> <p>See Key Issues above for further information.</p> <p>In accordance with the Environment Agency's Air Quality Technical Advisory Guidance 14: "for combustion plants under 5MW, no habitats assessment is required due to the size of combustion plant". Therefore this proposal is considered acceptable as the biomass boilers are less than 5MW and no further assessment is required.</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>We have carried out a risk assessment on behalf of the operator for biomass boiler emissions.</p> <p>See Key Issues section for further explanation.</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 Sector Guidance Note EPR 6.09 and we consider them to represent appropriate techniques for the facility.</p> <p>The operating techniques are as follows:</p> <ul style="list-style-type: none"> • non-leaking drinkers are used; • houses have a concrete base; • litter and manure is removed regularly and exported to a nearby power station; • fuel for the biomass boilers is derived from virgin timber; • the biomass boiler appliance and it's installation meets the technical criteria to be eligible for the Renewable Heat Incentive; and • the stacks are 1m or more higher than the apex of the adjacent buildings. 	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	The permit conditions ensure compliance with relevant BREFs.	
The permit conditions		
Raw materials	<p>We have specified limits and controls on the use of raw materials and fuels.</p> <p>We have specified that only virgin timber (including wood chips and pellets), straw, miscanthus or a combination of these can be used in the biomass boilers. These materials are never to be mixed with or replaced by, waste.</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	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	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found.</p> <p>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. (Newspaper advertising is only carried out for certain application types, in line with our guidance.)

Response received from
Public Health England
Brief summary of issues raised
PHE stated that, based on the information contained in the application, they have no significant concerns regarding the risk to the health of the local population from the installation. PHE concluded that if the installation complies with the Regulatory requirements and uses Best Available Techniques the emissions present a low risk to human health.
Summary of actions taken or show how this has been covered
None required

Response received from
Director of Public Health- Lincolnshire
Brief summary of issues raised
The response stated that the Director of Public Health (DoPH) has no significant concerns regarding the risk to the health of the local population from this installation. There is potential for complaints about odour and every effort to minimise this should be encouraged. The DoPH also noted that the biomass boiler meets Defra emissions to qualify for the Renewable Heat Incentive and so should pose no problem.
Summary of actions taken or show how this has been covered
None required

Responses not received

The Health and Safety Executive (HSE), Food Standards Agency (FSA) and local authority were also consulted; however, consultation responses from these parties were not received.

We did not receive any responses to the web publicising.