

Environment Agency permitting decisions

Bespoke Variation

We have decided to issue the variation for Pickenham Farm operated by Bernard Matthews Foods Limited.

The variation number is EPR/MP3133UP/V003.

The permit number is EPR/MP3133UP.

This was applied for and determined as a normal 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.

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

Emissions to Air

The applicant is varying their permit to include 34 biomass boilers with a net rated thermal input of 5.134 MW.

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.

This guidance states that the Environment Agency has assessed the pollution risks and have 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 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).

The biomass boilers **do not** meet the requirements of criteria A, B or C above, as the aggregated boiler net rated thermal input is 5.134MW and therefore a more detailed screening assessment is required.

An ADMS model was used to assess if detailed dispersion modelling was required, in accordance with Environment Agency guidance H1 Environmental Risk assessment Annex (f) Air Emissions. The biomass boilers were screened with the following input parameters:

Flue diameter	0.2 m																		
Stack height (from ground level)	6 m																		
Adjacent Building heights	4.5 m																		
Flue nominal load temperature	160°C																		
Flue minimum temperature	70°C																		
Thermal input in kW	151kW/boiler																		
Exit velocity in m/sec	2.89m/s																		
NO _x concentration in mg/Nm ³	94 mg/m ³																		
CO concentration in mg/Nm ³	5 mg/m ³																		
PM ₁₀ (dust) concentration in mg/Nm ³	14 mg/m ³																		
O ₂ concentration %	13%																		
The exact grid references of the stacks:																			
<table border="1"> <thead> <tr> <th>Stack Number</th> <th>Easting</th> <th>Northing</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>584874</td> <td>306232</td> </tr> <tr> <td>2</td> <td>584912</td> <td>306229</td> </tr> <tr> <td>3</td> <td>584876</td> <td>306373</td> </tr> <tr> <td>4</td> <td>584930</td> <td>306367</td> </tr> <tr> <td>5</td> <td>585023</td> <td>306502</td> </tr> </tbody> </table>		Stack Number	Easting	Northing	1	584874	306232	2	584912	306229	3	584876	306373	4	584930	306367	5	585023	306502
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6	585048	306474
7	584922	306538
8	584886	306583
9	584925	306583
10	584899	306827
11	584930	306703
12	584902	306960
13	584955	306949
14	584907	307059
15	584942	307058
16	584914	307217
17	584951	307217
18	584588	307266
19	584564	307237
20	584705	307178
21	584805	307058
22	584826	307090
23	585035	306889
24	585057	306920
25	585139	306812
26	585162	306844
27	585166	306629
28	585193	306598
29	585390	306820
30	585412	306791
31	585490	306907
32	585515	306879
33	585510	306924
34	585535	306898
The grid reference of the centre of the farm		585050, 306750

The model was used to assess the impact of carbon monoxide (CO), nitrogen dioxide (NO₂) and particulate (PM₁₀) emissions from the proposed boiler units. Sulphur dioxide (SO₂) has not been assessed due to the boiler fuel being clean woodchip which is likely to contain very little or no sulphur. CO results have produced zero (insignificant) values when compared with the relevant Environmental Standard, and therefore no further assessment has been carried out.

Process contributions can be considered insignificant if:

- The short term process contribution is <10% of the short term environmental standard; and
- The long term process contribution is <1% of the long term environmental standard.

The table below shows which Process Contributions (PCs) that as a percentage of the relevant environmental standard cannot be considered insignificant.

Pollutant	Term	Environmental Standard $\mu\text{g}/\text{m}^3$	Long Term PC < 1 % of environmental standard	Short Term PC < 10 % of environmental standard
NO ₂	Short	200	No	Yes
NO ₂	Long	40		
PM10	Short	50	No	Yes
PM10	Long	40		

The following PCs cannot therefore be considered as insignificant:

- NO₂ (long term), and
- PM₁₀ (long term)

Therefore, we need to take background concentrations into consideration to examine whether a PC is going to contribute significantly to a possible exceedance of its environmental standard in this circumstance. PC plus background is described as the Predicted Environmental Concentration (PEC).

Long term emissions are considered unlikely to give rise to an exceedance of an environmental standard where:

$\text{PC}_{\text{long term}} + \text{background concentration}^* < 70\% \text{ of the environmental standard}_{\text{long term}}$.

*Background concentrations can be found on Defra Local Air Quality Management 2010 background maps (<http://laqm.defra.gov.uk/maps/maps2010.html>)

Pollutant	Term	Environmental Standard $\mu\text{g}/\text{m}^3$	PEC < 70% of environmental standard
NO ₂	Long	40	Yes
PM10	Long	40	Yes

Therefore, all emissions from the biomass boilers on the site screen out from needing further detailed assessment, as they are unlikely to cause a breach of any Environmental Quality Standard or Environmental Assessment Level, in accordance with our H1 Assessment methodology.

Groundwater and soil monitoring

As a result of the requirements of the Industrial Emissions Directive, all permits are now required to contain condition 3.1.3 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 or groundwater and measure levels of contamination where the 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 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 original application site condition report for Pickenham Farm was assessed by the Environment Agency on 15/04/2008 and the conclusion was that the report demonstrated that the hazards to land or groundwater have been mitigated/minimised such that there is little likelihood of pollution and there is no evidence of historic contamination on site. **Therefore, although this condition is included in the permit, no groundwater/soil monitoring will be required at this installation as a result.**

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 the Industrial Emissions Directive (IED).

This variation implements the requirements of the EU Directive on Industrial Emissions.

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
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 permit has been updated to modern conditions which take into account the Industrial Emissions Directive (IED) – see 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.	✓
Biodiversity, Heritage, Landscape and Nature Conservation	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat . There are two Special Areas of Conservation (SAC), a Special Protection Area (SPA) within 10km of the site. There are two Sites of Special Scientific Interest (SSSI) and four local wildlife sites within 2km of the site boundary. The combustion process at the installation is not considered 'relevant' for assessment under the Environment Agency's procedures which cover the Conservation (Natural Habitats &c.) Regulations 1994 (Habitats Regulations). This was determined by referring to the Agency's guidance 'AQTAG014: Guidance on	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>identifying 'relevance' for assessment under the Habitats Regulations for installations with combustion processes.' Thus no detailed assessment of the effect of the releases from the installation's combustion processes on SACs, SPAs and Ramsar sites is required.</p> <p>A full assessment of the application and its potential to affect the sites (excluding the SPAs, SACs and SSSIs as outlined above) has been carried out as part of the original permitting process. We consider that this 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>	
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>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>See key issues section for further information.</p>	✓
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.</p> <p>The operating techniques are as follows:</p> <ul style="list-style-type: none"> • the fuel is derived from virgin timber, • the biomass boiler appliance and its 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. <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.</p>	✓
The permit conditions		

Aspect considered	Justification / Detail	Criteria met
		Yes
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> <p>Vents from Liquefied Petroleum Gas (LPG) tanks are no longer included as emission points within the emissions to air table within modern format intensive farming permits because the vents are for use in emergency/relief situations only. Reference to these has been removed through this variation.</p>	✓
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. 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> <p>The table includes a reference to the risk assessment which gives details on how the facility will be operated in a way that minimises the environmental risk.</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>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
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.	✓