Environment Agency permitting decisions

Variation

We have decided to issue the variation for Swinmoor Poultry Farm operated by E C Drummond (Agriculture) Limited.

The permit number is EPR/KP3439RZ

The variation number is EPR/KP3439RZ/V002

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.

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

- Description of the changes introduced by the variation
- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

Description of the changes introduced by the Variation

This is a Substantial Variation.

This variation authorises the stocking capacity to be increased from 73,000 to 130,000 broilers. The site area has also been increased to include the new poultry house, which is located north of the site.

A 995kW biomass boiler will be installed for heating the poultry houses and is to be fuelled by means of Grade A waste wood (EWC code 19 12 07). The fuel source and capacity will result in this becoming a Part B activity listed in Schedule 1 of the Environmental Permitting Regulations as follows:

- Section 5.1 B(a)(v) incineration in a small waste incineration plant with

an aggregate capacity of 50 kilogrammes or more per hour of wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coatings.

Table S2.2 has been added to the permit to identify the waste types for use as a fuel for the biomass boiler unit. Schedule 6 is amended to include a description for the interpretation of Grade A recycled waste wood.

The biomass boiler and fuel storage area will be situated in a new building to the east of the site. All ash will be removed by a third party company, with non-hazardous grate ash being spread to land under a U14 exemption. The cyclone ash will remain on site in the boiler ash containers and will be removed by a licenced contractor for disposal.

The permit has been updated to modern permit conditions and has removed Table S1.4 Appropriate measures for odour and Table S1.5 Appropriate measures for noise.

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.

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 Swinmoor Poultry Farm (dated 29/07/16) 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

There are sensitive receptors within 400 metres of the installation and therefore an odour management plan has been prepared, as required in chapter 3, section 3.3 of guidance Sector Guidance Note (SGN) How to comply – Intensive Farming - The EPR Sector Guidance Note 6.09 for intensive pig and poultry farmers, Version 2, published January 2010 (SGN EPR 6.09). The nearest residential properties are as follows:

- Moor Cottage – 185m
- Swinmoor Cottage Farm – 195m
- Cherry Trees Farm – 145m
- The Birches – 310m
- Yew Tree Farm – 350m

The residences occupied by people associated with the farm are not considered as sensitive receptors for odour as it is unlikely that odour will be perceived by them as a nuisance. The other properties are located to the north, east and south and are over 150m from the installation boundary.

The operator is required to manage activities at the installation in accordance with condition 3.3.1 and this odour management plan. A revised Odour Management Plan (OMP), received 08/08/16 (reference Odour Management Plan). The odour management plan includes odour control measures, which cover; procedural controls, feed selection, feed delivery and storage, ventilation techniques, carcass disposal and storage, fluctuations of stocking densities, management of drinking water systems, bird movement on and off site, house washing operations, dust build up, and unexpected odour events. The odour management plan is required to be reviewed at least every 4 years and/or after a complaint is received, whichever is the sooner.

We are satisfied that operations carried out on the farm will minimise the risk of odour pollution from the installation.

Noise

There are sensitive receptors within 400 metres of the installation boundary as stated above in the odour section. The applicant has provided an updated

noise management plan (NMP), received 08/08/16 (reference Noise Management Plan).

Operations with the most potential to cause noise nuisance have been assessed as those involving vehicle movements into and around the site, ventilation systems and operations, de-populating (thinning and final depletion), cleanout (machines and loading of trailers) and standby generators and other mobile plant. The noise management plan covers control measures for each of these potential noise hazards.

As for odour, the residences occupied by people associated with the farm are not considered as a sensitive receptors as it is unlikely that noise will be perceived as a nuisance. The other five residences within 400m of the boundary are located over 140m from the installation boundary.

There is the potential for noise from the installation beyond the installation boundary. However the risk of noise beyond the installation boundary is considered unlikely to cause a nuisance.

Biomass boiler

This variation includes a change to the permit to include Grade A recycled waste wood as a source of fuel for a biomass boiler with a net rated thermal input of 995 kilowatts.

We are satisfied that the operator will not burn waste wood originating from their own installation. All Grade A recycled waste wood being burnt in the biomass boiler will come from a third party as EWC code 19 12 07 – sawdust, shavings, cuttings, wood, particle board and veneer. We have specified the permitted waste code in table S2.2 of the permit. The operator is only permitted to accept this waste code for biomass fuel.

Grade A clean recycled wood means visibly ‘clean’ recycled waste wood mainly originating from packaging waste, pallets, packing cases and process off-cuts from the manufacture of untreated wood products. As defined in BSI PAS 111: 2012.

We are satisfied that the waste wood is from a manufacturing source and that it will not be contaminated.

Due to the fuel source and the capacity of the unit, the biomass boiler are included in the permit as a Part B activity listed in Schedule 1 of the Environmental Permitting Regulations as follows:

- Section 5.1 B (a)(v) incineration in a small waste incineration plant with an aggregate capacity of 50 kilogrammes or more per hour of wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coatings.

The biomass boiler is permitted to burn biomass chips or pellets comprising virgin timber, straw, miscanthus, Grade A waste biomass; or a combination of these.

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 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 less than or equal to 4 MWth, and no individual boiler has a net thermal input greater than 1 MWth, and;
- the stack height must be a minimum of 5 metres above the ground (where there are buildings within 25 metres the stack height must be greater than 1 metre above the roof level of buildings within 25 metres) and:
- there are no sensitive receptors within 50 metres of the emission point(s).

This is in line with the Environment Agency's document "Air Quality and Modelling Unit C1127a Biomass firing boilers for intensive poultry rearing", an assessment has been undertaken to consider the proposed addition of the biomass boiler.

The Environment Agency's risk assessment has shown that the biomass boiler meets the requirements of criteria above, and are therefore considered not likely to pose a significant risk to the environment or human health and no further assessment is required.

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 and no further assessment is required.

Ammonia emissions

There is one Special Area of Conservation (SAC) site located within 10 kilometres of the installation. There are five Sites of Special Scientific Interest (SSSI) located within 5 km of the installation. There are also six Local Wildlife Sites (LWS), and two Ancient Woodlands (AW) within 2 km of the installation.

Ammonia assessment – SAC/SPA/Ramsar

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 (CLe) or critical load (CLo) 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.

Ammonia Emissions

Detailed modelling (reference: *AS Modelling & Data Ltd. A report on the Modelling of the Dispersion and Deposition of Ammonia from the Existing and Proposed Broiler Chicken Rearing Houses at Swinmoor Farm, near Madley in Herefordshire*, dated: 22/06/16) has determined that the PC on the SAC for ammonia emissions from the application site are under the 4% significance threshold and can be screened out as having no likely significant effect. See results in Table 1 below.

A critical level of 3 μg/m^3 has been assigned to the River Wye SAC as confirmed through discussions with Natural England (email reference: *river critical loads and hotspot near River Lugg/ River Wye confluence*, dated 25/08/16).

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 1 – Ammonia emissions

Site	Critical level ammonia μg/m^3	Predicted PC μg/m^3	PC % of Critical level
River Wye SAC	3	0.104	3.5

No further assessment for ammonia emissions is necessary.

Nitrogen Deposition

Nitrogen deposition was confirmed as not needing to be considered for the River Wye SAC by Natural England (email reference: *river critical loads and hotspot near River Lugg/ River Wye confluence*, dated 25/08/16).

Acid Deposition

The detailed modelling submitted with the application did not assess the process contributions of acid deposition from the application site, and therefore it could not be screened out as insignificant.

An in combination assessment has been carried out to determine the process contributions of acid deposition. A detailed assessment has been carried out as shown below.

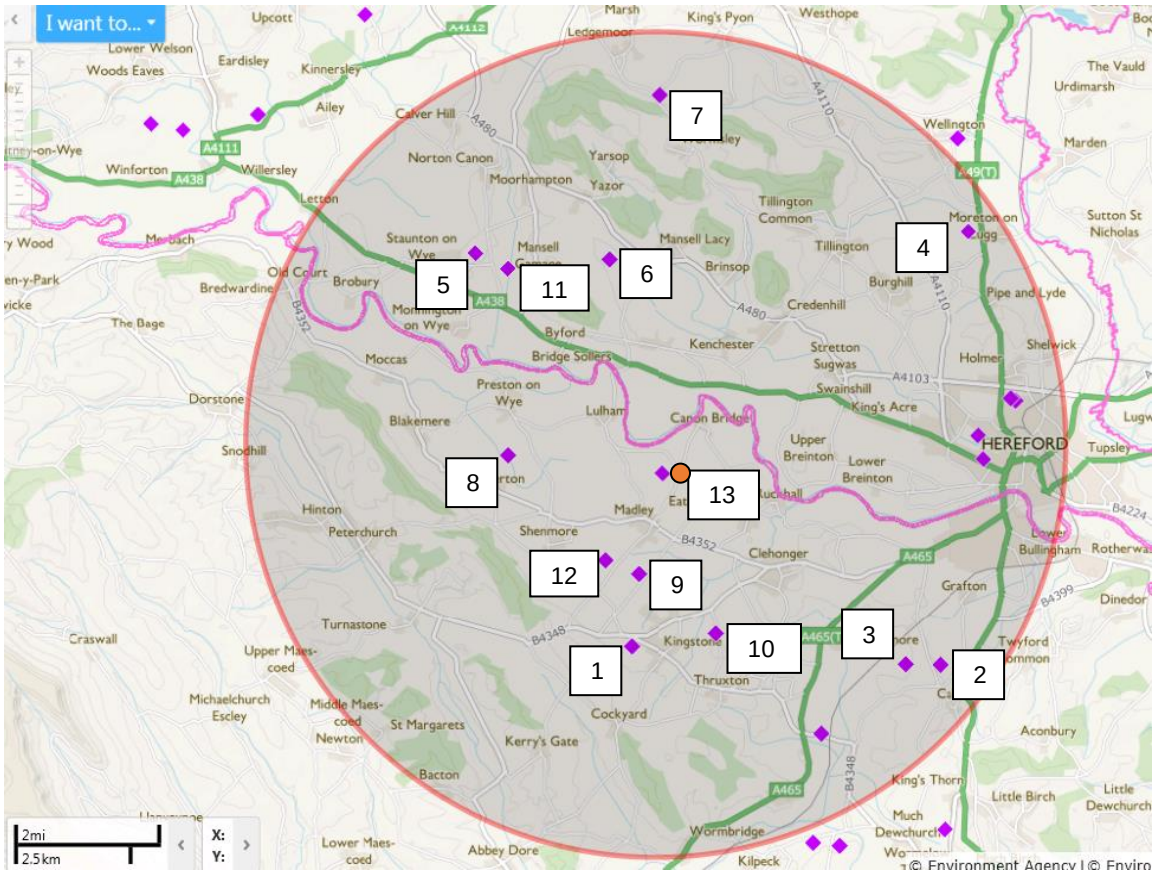
A search of all existing active intensive agriculture installations permitted by the Environment Agency has identified the following farms within 10 km of the maximum concentration point for River Wye SAC.

Table 2 – In combination farms

Ref.	Name of Farm	Permit number	Easting	Northing
1	Gooses Foot Farm	EPR/JP3037UL	341640	235840
2	Callow Poultry Unit	EPR/PP3333XH	349160	235390
3	Merryhill/Callow	EPR/QP3436KX	348320	235410
4	Upper House Poultry Farm	EPR/TP3536MZ	349840	245900
5	Kilington Manor	EPR/GP3336MD	337820	245370

Ref.	Name of Farm	Permit number	Easting	Northing
6	Flag Station Poultry Unit	EPR/MP3839EH	341063	245231
7	Wootton Farm	EPR/FP3436MY	342361	249235
8	Lower Bellamore	EPR/HP3834VC	338705	240435
9	Stoney Court Poultry Farm	EPR/PP3833UW	341992	237498
10	Arlstone Court	EPR/EP3236ZU	343689	236151
11	Scutt Mill	EPR/TP3739AF	338608	245064
12	Parkway	EPR/KP3636MX	340984	237958
13	Cherry Trees Poultry Farm	EPR/AP3931RY	342439	240053

Figure 1 – Location of in combination farms



The assessment will consider the deposition of acidification against relevant critical loads (CLo). APIS (http://www.apis.ac.uk/) states that the river habitat is not sensitive to acidity. However, in agreement with Natural England the adjacent habitats to the river have been selected. As the majority of the habitat adjacent to the river was improved grassland, which is also not sensitive to acidity, broadleaved woodland was selected as a conservative option for the appropriate sensitive habitat as there are a number of trees lining the river (email reference: *river critical loads and hotspot near River Lugg/ River Wye confluence*, dated 25/08/16).

The results for Swinmoor Farm and the neighbouring Cherry Trees Poultry Farm have been assessed in-combination (reference: *AQMAU_C1447_RP01 In-combination assessment for Cherry Tree Farm and Swinmoor Farm*, dated: 06/09/16). The combined results as identified by the Environment Agency have therefore been provided in Table 3 below.

The results presented below for the in combination assessment are for the maximum point of concentration on the River Wye SAC.

Table 3 - In combination process contribution of acidification.

Application	Reference Number	Receptor location [1]	Estimated acid deposition PC (keq/ha/yr)	PC % of Clo[2]
Gooses Foot Farm	EPR/JP3037UL	SAC	0.016	0.9
Callow Poultry Unit	EPR/PP3333XH	SAC	0.002	0.1
Merryhill/Callow	EPR/QP3436KX	SAC	0.014	0.8
Upper House Poultry Farm	EPR/TP3536MZ	SAC	0.018	1.1
Kilington Manor	EPR/GP3336MD	SAC	0.007	0.4
Flag Station Poultry Unit	EPR/MP3839EH	SAC	0.013	0.7
Wootton Farm	EPR/FP3436MY	SAC	0.007	0.4
Lower Bellamore	EPR/HP3834VC	SAC	0.037	2.2
Stoney Court Poultry Farm	EPR/PP3833UW	SAC	0.031	1.9
Arlstone Court	EPR/EP3236ZU	SAC	0.024	1.4
Scutt Mill	EPR/TP3739AF	SAC	0.028	1.6
Parkway	EPR/KP3636MX	SAC	0.035	2.1
Swinmoor Farm[3]	EPR/KP3439RZ	SAC	0.105	6.2
Cherry Trees Poultry Farm[3]	EPR/AP3931RY	SAC		
Total (ΣPCs)			0.105	6.2

Note 1: This was taken as the point greatest impact on the River Wye SAC by Swinmoor Farm, x,y: 342606, 240975

Note 2: For in-combination assessments we only consider PCs over 4% of the Clo

Note 3: The results for Cherry Trees Poultry Farm and Swinmoor Farm have been combined following an assessment by the Environment Agency

For the farms whose process contribution is more than 4%, the combined sum of the PCs at the habitats site is less than 20% of the CLo for acid deposition. It is therefore possible to conclude no adverse effect in combination.

Table 3 shows that the total process contribution at River Wye SAC from all farms in combination is 6.2% for acid deposition. In line with Environment Agency guidelines, where the total PC is less than 20% of the critical level/load, in combination impacts can be considered as having no adverse effect.

No further assessment is required.

Ammonia assessment – SSSI

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 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 5 km of the application.

Initial screening using the ammonia screening tool version 4.5 has indicated that emissions from Swinmoor Farm will only have a potential impact on SSSI sites with a precautionary critical level of 1µg/m^3 if they are within 787m of the emission source.

Beyond 787m the PC is less than 0.2µg/m^3 (i.e. less than 20% of the precautionary 1µg/m^3 critical level) and therefore beyond this distance the PC is insignificant. In this case the SSSIs beyond this distance (see table below) and therefore screen out of any further assessment.

Where the precautionary level of 1µg/m^3 is used, and the process contribution is assessed to be less than 20% the site automatically screens out as insignificant and no further assessment of critical load is necessary. In this case the 1µg/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 these sites.

Table 4 – SSSI Assessment

Name of SSSI	Distance from site (m)
Bishon Meadow	3,436m
The Filts	4,168m
Cage Brook Valley	2,849m
Littlemarsh Common	2,532m

Screening using the ammonia screening tool version 4.5 has indicated that the PC for the River Wye SSSI is predicted to be less than 20% of the critical level for ammonia emissions and acid deposition therefore it is possible to conclude no damage. The results of the ammonia screening tool version 4.5 are given in the tables below.

Table 5 – Ammonia emissions

Site	Ammonia CIe (µg/m^3)	PC (µg/m^3)	PC % critical level
River Wye SSSI	3*	0.227	7.6

*e.g. Natural England advised that a CLe of 3 for ammonia should be applied across the River Wye SSSI (email reference: *river critical loads and hotspot near River Lugg/ River Wye confluence*, dated 25/08/16).

Table 6 – Acid deposition

Site	Critical load keq/ha/yr [1]	PC keq/ha/yr	PC % critical load
River Wye SSSI	1.69	0.084	5.0

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – 29/08/16

No further assessment is required.

Ammonia assessment – LWS & AW

The following trigger thresholds have been applied for the assessment of these sites:

- If the process contribution (PC) is below 100% of the relevant critical level (CLe) or critical load (CLo) then the farm can be permitted with no further assessment.

Initial screening using ammonia screening tool version 4.5 has indicated that emissions from Swinmoor Farm will only have a potential impact on the LWS & AW sites with a precautionary critical level of 1µg/m^3 if they are within 270 metres of the emission source.

Beyond 270 metres the PC is less than 1µg/m^3 and therefore beyond this distance the PC is insignificant. In this case all LWS & AW are beyond this distance (see table below) and therefore screen out of any further assessment.

Table 10 – LWS & AW Assessment

Name of LWS or AW	Distance from site (m)
Field near Bage Mill LWS	984
Warlow Pool LWS	751
Pond near Longmoor cottage LWS	1,179
Honeymoor Common LWS	1,740
Bucknall's Wood LWS	1,717
River Wye LWS	724
Eaton Bishop Church LWS	1,717
Ash Coppice AW	1,131
Bucknells Wood AW	1,717

No further assessment is necessary

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
Receipt of submission		
Confidential information	A claim for commercial or industrial confidentiality has not been made.	✓
Identifying confidential information	We have not identified 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.	✓
Consultation		
Scope of consultation	The consultation requirements were identified and implemented. The decision was taken in accordance with our Public Participation Statement and our Working Together Agreements. For this application we consulted the following bodies: • Herefordshire County Council Environmental Protection Department • Health and Safety Executive • Public Health England • Director of Public Health • Food Standards Agency	✓
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 European Union (EU) Directive on Industrial Emissions. **See key issues 'Industrial Emissions Directive (IED)' section above for further information.**	✓
The site		
Extent of the site of the facility	The operator has provided plans which we consider are satisfactory, showing the extent of the site of the facility.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary. No extra land was required as a result of this variation.	
Site condition report	The operator has provided a description of the condition of the site. The site has been used for poultry production since the 1960s. Previously this area was used for arable farming. There is no evidence of existing contamination on the site at present, and the site is not in a groundwater source protection zone. 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 a site 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 permitting process. We consider that the application will not affect the features of the site. Please see Ammonia section of Key Issues for further details. Formal consultation on Appendix 11 and 12 has been carried out with Natural England. The consultation responses (Annex 2) were taken into account in the permitting decision. 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 and no further assessment is required.	✓
Environmental Risk Assessment and operating techniques		
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory. The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	may be categorised as environmentally insignificant.	
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The operating techniques are as follows: • dirty water storage facilities are in place on site; • high velocity 11m/s roof ventilation on each poultry house; • nipple drinkers are used to reduce wastage of water and maintain dry litter; • the fuel is derived from Grade A waste wood; • the biomass boiler 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. 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 BREFs. See key issues relating to biomass boiler fuel specification. We are satisfied that Grade A waste wood can be used as a fuel source for the biomass boilers and have incorporated the relevant operating techniques into Table S1.2 of the permit. **Odour Management Plan** There is the potential for odour pollution from the installation. The operator's compliance with their Odour Management Plan, submitted with this application, will minimise the risk of odour pollution beyond the installation boundary and the risk of odour pollution at sensitive receptors beyond the installation boundary is not considered significant.	✓
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 new conditions have the same meaning as those in the previous permit. The operator has agreed that the new conditions	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	are acceptable.	
Waste types	We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility. We are satisfied that the operator can accept this waste. See key issues relating to biomass boilers.	✓
Incorporating the application	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. These descriptions are specified in the Operating Techniques table in the permit.	✓
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 our guidance on what a competent operator is.	✓

Annex 2: External 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
Public Health England - Dr Manjit Singh, Environmental Public Health Scientist (18th October 2016)
Brief summary of issues raised
We recommend that any Environmental Permit issued for this site should contain conditions to ensure that the following potential emissions do not impact upon public health: noise and odour.
Summary of actions taken or show how this has been covered
We have reviewed the Odour Management Plan and Noise Management Plan for the site to ensure that odour and noise emissions from the site have been suitably managed to minimise the impact on nearby sensitive receptors.

No other responses have been received.