

Determination of an Application for an Environmental Permit under the Environmental Permitting (England & Wales) Regulations 2010

Decision document recording our decision-making process

The Permit Number is: EPR/YP3938WV

The Applicant / Operator is: Welland Waste Management Limited

The Installation is located at: Pebble Hall Farm TAD Facility

Pebble Hall Farm

Theddingworth

Leicestershire

LE17 6NJ

What this document is about

This is a decision document, which accompanies a permit.

It explains how we have considered the Applicant's Application, and why we have included the specific conditions in the permit we are issuing to the Applicant. It is our record of the decision-making process, to show how we have taken into account all relevant factors in reaching our position. Unless the document explains otherwise, we have accepted the Applicant's proposals.

We try to explain our decision as accurately, comprehensively and plainly as possible. Achieving all three objectives is not always easy, and we would welcome any feedback as to how we might improve our decision documents in future. A lot of technical terms and acronyms are inevitable in a document of this nature: we provide a glossary of acronyms near the front of the document, for ease of reference.

Preliminary information and use of terms

We gave the application the reference number EPR/YP3938WV/A001. We refer to the application as "the **Application**" in this document in order to be consistent.

The number we have given to the permit is EPR/YP3938WV. We refer to the proposed permit as "the **Permit**" in this document.

The Application was duly made on 11 November 2015.

The Applicant is Welland Waste Management Limited. We refer to Welland Waste Management Limited as “the **Applicant**” in this document. Where we are talking about what would happen after the Permit is granted, we call Welland Waste Management Limited “the **Operator**”.

Welland Waste Management Limited’s proposed facility is located at Pebble Hall Farm TAD Facility, Pebble Hall Farm, Theddingworth, Leicestershire, LE17 6NJ. We refer to this as “the **Installation**” in this document.

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Glossary of acronyms used in this document

ABPR	Animal By-Products Regulations
AD	Anaerobic digestion
ADQP	Anaerobic digestion Quality Protocol
BAT	Best Available Technique(s)
Bref	BAT Reference Note
CHP	Combined heat and power
CIRIA	Construction Industry Research and Information Association
CQP	Compost Quality Protocol
CROW	Countryside and rights of way Act 2000
DAA	Directly associated activity – Additional activities necessary to be carried out to allow the principal activity to be carried out
DD	Decision document
EAL	Environmental assessment level
EIAD	Environmental Impact Assessment Directive (85/337/EEC)
ELV	Emission limit value
EMS	Environmental Management System
EPR	Environmental Permitting (England and Wales) Regulations 2010 (SI 2010 No. 675) as amended
EWC	European waste catalogue
HRA	Human Rights Act 1998
IED	Industrial Emissions Directive (2010/75/EU)
MBT	Mechanical biological treatment
MSW	Municipal Solid Waste
OMP	Odour management plan
Opra	Operator Performance Risk Appraisal
PC	Process Contribution
PEC	Predicted Environmental Concentration
PHE	Public Health England
PPS	Public Participation Statement
PR	Public Register
SAC	Special Area of Conservation
SCR	Site condition report

SHPI(s)	Site(s) of High Public Interest
SPA(s)	Special Protection Area(s)
SSSI(s)	Site(s) of Special Scientific Interest
TAD	Thermophilic aerobic digestion
TGN	Technical guidance note
WAMITAB	Waste Management Industry Training & Advisory Board
WFD	Waste Framework Directive (2008/98/EC)

1 Our decision

We have decided to grant the Permit to the Applicant. This will allow it to operate the Installation, subject to the conditions in the Permit.

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the permit will ensure that a high level of protection is provided for the environment and human health.

This Application is to operate an installation which is subject principally to the Industrial Emissions Directive (IED) and Waste Framework Directive (WFD).

The Permit contains many conditions taken from our standard Environmental Permit template including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations and other relevant legislation. This document does not therefore include an explanation of these standard conditions. Where they are included in the permit, we have considered the Application and accepted the details are sufficient and satisfactory to make the standard condition appropriate. This document does, however, provide an explanation of our use of “tailor-made” or installation-specific conditions, or where our Permit template provides two or more options.

2 How we reached our decision

2.1 Receipt of Application

The Application was duly made on 11 November 2015. This means we considered it was in the correct form and contained sufficient information for us to begin our determination but not that it necessarily contained all the information we would need to complete that determination (see below).

The Applicant made no claim for commercial confidentiality. However, we received some information which we considered to be confidential during the determination. This information was in relation to third-party facilities and sensitive to the respective companies.

We consider that the public interest in maintaining the confidentiality of the information outweighs the public interest in including it in the register. Apart from the information just described, we have not received any information in relation to the Application that appears to be confidential in relation to any party.

2.2 Consultation on the Application

We carried out consultation on the Application in accordance with the EPR and our statutory PPS. We consider that this process satisfies, and frequently goes beyond the requirements of the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, which are directly incorporated into the IED, which applies to the Installation and the Application. We have also taken into account our obligations under the Local Democracy, Economic Development and Construction Act 2009 (particularly Section 23). This requires us, where we consider it appropriate, to take such steps as we consider appropriate to secure the involvement of representatives of interested persons in the exercise of our functions, by providing them with information, consulting them or involving them in any other way. In this case, our consultation already satisfies the Act's requirements.

We advertised the Application by a notice placed on our website, which contained all the information required by the IED, including telling people where and when they could see a copy of the Application. We also placed an advertisement in the *Harborough Mail* and *Leicester Mercury* on 3 December 2015.

We made a copy of the Application and all other documents relevant to our determination (see below) available to view on our Public Register at the Environment Agency Office, Waterside House, Waterside North, Lincoln, LN2 5HA. Anyone wishing to see these documents could do so and arrange for copies to be made.

We sent copies of the Application to the following organisations, which includes those with whom we have "Working Together Agreements":

- Daventry District Council Planning Authority
- Daventry District Council (Environmental Health Department)
- Public Health England
- Director of Public Health (Northamptonshire County Council)
- Health & Safety Executive
- Northamptonshire Fire & Rescue Service

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly. Note under our Working Together Agreement with Natural England, we only inform Natural England of the results of our assessment of the impact of the installation on designated Habitats sites.

Details along with a summary of consultation comments and our response to the representations we received can be found in Annex 3. We have taken all relevant representations into consideration in reaching our determination.

2.3 Requests for Further Information

Although we were able to consider the Application duly made, we did in fact need more information in order to determine it, and issued information notices on 5 January 2016 and 21 March 2016. A copy of each information notice was placed on our public register.

In addition to our information notices, we received additional information during the determination from the Applicant:

- Response to noise modelling queries – received 31 March and 12 April 2016.
- Clarification of steam generator details and operation – received 20 April 2016;
- Digester operational parameters – received 25 April 2016

We made a copy of this information available to the public in the same way as the responses to our information notices.

Finally we consulted on our draft decision from 23 May 2016 to 21 June 2016. A summary of the consultation responses and how we have taken into account all relevant representations is shown in Annex 3.

3 The legal framework

The Permit will be granted, under Regulation 13 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- a *waste installation* as described by the IED;
- an *operation* covered by the WFD, and
- subject to aspects of other relevant legislation which also have to be addressed.

We address some of the major legal requirements directly where relevant in the body of this document. Other requirements are covered in a section towards the end of this document.

We consider that, in granting the Permit, it will ensure that the operation of the Installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

4 The Installation

4.1 Description of the Installation and related issues

4.1.1 The permitted activities

The Installation is subject to the EPR because it carries out an activity listed in Part 1 of Schedule 1 to the EPR:

- Section 5.4 A(1) (b) (i) – Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving biological treatment

An Installation may also comprise “directly associated activities”, which at this Installation include:

- Storage of wastes pending recovery;
- Physical treatment for the purpose of recycling;
- Steam production;
- Raw material storage (including fuels);
- Storage of digestate;
- Storage of waste oil; and
- Handling of surface water

Together, these listed and directly associated activities comprise the Installation – a regulated facility.

4.1.2 The Site

The Installation is centred at grid reference SP 66154 84601 and located approximately 1.1 km south west of Theddingworth and 1.7 km east of Husbands Bosworth. It is bounded to the north by an existing open windrows composting facility, to the south and east by a gasification plant (under construction) and to the west by River Welland.

There are no European Designated habitat sites within 10 km of the Installation. One Site of Special Scientific Interest (Coombe Hill Hollow) and one Local Wildlife Site (Hothorpe Hill Woodlands) are located within 2 km of the Installation.

The Applicant submitted a plan which we consider is satisfactory, showing the site of the Installation and its extent. A plan is included in Schedule 7 to the Permit, and the Operator is required to carry on the permitted activities within the site boundary.

Further information on the site is addressed below at section 4.3.

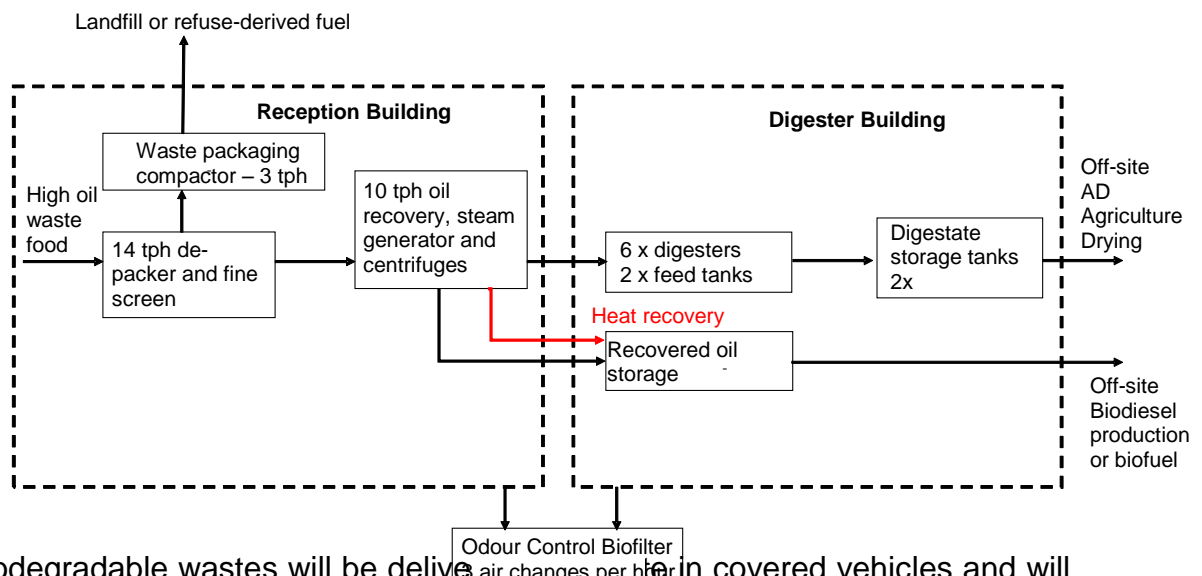
4.1.3 What the Installation does

The key features of the Installation can be summarised as follows:

The facility will process up to 36,000 tonnes per annum of non-hazardous biodegradable waste and will comprise the following:

- a waste reception building consisting pre-treatment plant and oil recovery /centrifuge system; and
- a waste treatment building consisting aerobic digesters and storage tanks

Welland Farm TAD – Process flow diagram



Biodegradable wastes will be delivered to the facility in covered vehicles and will be deposited in a sealed waste reception building which is fitted with odour abatement. Wastes will undergo pre-treatment (de-packaging and maceration) using a de-packaging machine with a maceration size of 20 mm diameter. The waste (in slurry form) will undergo screening to 6 mm to remove residual packaging materials prior to transfer to the oil recovery system or the thermophilic aerobic digestion (TAD) system.

The oil recovery system consists of heating vessels and centrifuges which remove 98 per cent of the oil from the biodegradable waste. The resulting oil is pumped to oil storage tanks and despatched off-site for recovery by licensed third-party waste oil processors. The remaining solids are transferred to the TAD system where it undergoes digestion under aerobic conditions within a sealed treatment building. To ensure pathogen kill, the waste is held for 1 hour at 70°C in accordance with the Animal By-products Regulations. Leachate from the pre-treatment process will be collected and fed back into the TAD system.

Each digestion tank is fitted with a variable speed vertical mixer to ensure efficient mixing and digestion. Temperature will be continuously monitored in

each digester. Samples will be taken from the digesters to check pH and dissolved oxygen on a daily basis.

The by-product from the process (whole digestate) will be transferred to two storage tanks in the sealed treatment building prior to removal off-site for use in landspreading or to third-party anaerobic digestion facilities for use as feedstock.

All activities will take place in sealed, negatively aerated, buildings to prevent the release of odour, bioaerosols, noise or dust to the external atmosphere. Air from the waste reception and treatment buildings will be treated through one biofilter consisting of four media beds. This Permit requires process monitoring of the biofilter to confirm its effectiveness.

4.1.4 Key Issues in the Determination

The key issues arising during this determination were emissions to air (and their impact), odour and noise and we therefore describe how we determined these issues in most detail in this document.

During the determination, the Applicant changed their proposals to exclude the combustion of biodiesel /oil via CHP engines and the drying of digestate at the facility. The site will have a steam generator which will be used to raise steam for the oil recovery system in the waste reception building. This permit does not authorise the combustion of biodiesel /oil via engines, drying of digestate and spreading of digestate on land.

4.2 The site and its protection

4.2.1 Site setting, layout and history

The site is located in a rural area. The nearest human receptors are approximately 500 metres to the north of the site. There are also other human residences along A4304 Theddingworth Road. Hothorpe Hall is situated approximately 900 metres to the north east of the site. The surrounding area comprises mainly agricultural land. The entire site has an area of approximately 2.4 hectares. The topography generally falls towards the River Welland.

Operations at the site have diversified over a number of years to include a variety of industrial /commercial and waste management operations. As well as ongoing agricultural uses, operations on site include a number of waste uses. Current operations at the site include the importation of up to 40,000 tonnes per annum of wood waste for shredding and subsequent despatch off-site. Composting is also undertaken on site in open windrows under permit EPR/DB3102GV.

4.2.2 Proposed site design: potentially polluting substances and prevention measures

The Applicant reports that all treatment and storage tanks will be provided with appropriate secondary containment. Bunds will be constructed to appropriate standards and lined with materials that are impervious to the content of the material which they hold. Procedures will be in place to deal with any spillages, including inspection records of all pollution prevention measures. All internal operational areas will be located on hardstanding with sealed drainage to prevent pollution of surface water and groundwater.

Under Article 22(2) of the IED, the Applicant is required to provide a baseline report containing at least the information set out in paragraphs (a) and (b) of the Article before starting operation.

The Applicant has submitted a site condition report which does not include a report on the baseline conditions as required by Article 22. We have reviewed that report and consider that it does not adequately describe the condition of the soil and groundwater prior to the start of operations.

A site condition report (SCR) is required for any facility regulated under the EPR, where there may be a significant risk to land or groundwater. The SCR should include a baseline report, which is an important reference document in the assessment of contamination that might arise during the operational lifetime of the regulated facility and at cessation of activities.

At the definitive cessation of activities, the Operator has to satisfy us that the necessary measures have been taken so that the site ceases to pose a risk to soil or groundwater, taking into account both the baseline conditions and the site's current or approved future use. To do this, the Operator has to apply to us for surrender, which we will not grant unless and until we are satisfied that these requirements have been met.

In response to a request for additional information, the Applicant stated that the site is "agricultural land" (Greenfield site) which is not known to be contaminated from the site history.

Two options are available to the Applicant:

- We may include a Pre-operational Condition in the Permit, which requires the Applicant to undertake a site intrusive investigation to obtain the site baseline reference data prior to the commissioning of the proposed facility and site operation; or
- As an alternative approach, the Applicant can accept that there is "zero contamination" beneath the site, irrespective of the site history.

As the Applicant has determined that there is 'zero contamination' beneath the site, when the Operator applies to surrender the Permit, any contamination by substances used at, produced or released from the facility would be considered to have resulted from the operation of the facility. This is in accordance with the Environment Agency Guidance H5 – Site Condition Report.

4.2.3 Closure and decommissioning

Having considered the information submitted in the Application, we are satisfied that the appropriate measures will be in place for the closure and decommissioning of the Installation. Pre-operational condition POC 1 requires the Operator to have an Environmental Management System in place before the Installation is operational, and this will include a site closure plan.

4.3 Operation of the Installation – general issues

4.3.1 Administrative issues

The Applicant is the sole Operator of the Installation. We are satisfied that the Applicant is the person who will have control over the operation of the Installation after the granting of the Permit; and that the Applicant will be able to operate the Installation so as to comply with the conditions included in the Permit.

We are satisfied that the Applicant's submitted Opra profile is accurate. The Opra score will be used as the basis for subsistence and other charging, in accordance with our Charging Scheme. Opra is the Environment Agency's method of ensuring application and subsistence fees are appropriate and proportionate for the level of regulation required.

4.3.2 Management

The Applicant has stated in the Application that they will implement an Environmental Management System (EMS). A pre-operational condition (POC 1) is included in the Permit which requires the Operator to provide a written copy of the EMS and to make available for inspection all EMS documentation prior to the commencement of plant commissioning.

We are satisfied that appropriate management systems and management structures will be in place for this Installation, and that sufficient resources are available to the Operator to ensure compliance with all the Permit conditions.

The treatment of biodegradable waste by thermophilic aerobic digestion requires a Technically Competent Manager (TCM) under an approved scheme. The Applicant has provided evidence that they have a TCM that holds a relevant qualification at the Installation.

4.3.3 Site security

Having considered the information submitted in the Application, we are satisfied that appropriate infrastructure and procedures will be in place to ensure that the site remains secure.

4.3.4 Accident management

The Applicant submitted an Accident Management Plan in response to a request for additional information. Having considered the Plan and other information submitted in the Application, we are satisfied that appropriate measures will be in place to ensure that accidents that may cause pollution are prevented but that, if they should occur, their consequences are minimised.

4.3.5 Off-site conditions

We do not consider that any off-site conditions are necessary.

4.3.6 Operating techniques

We have specified that the Applicant must operate the Installation in accordance with the following documents contained in the Application:

Description	Parts	Date Received
Response to Schedule 5 Notice #1 dated 11/01/16	Response to questions 3, 4, 7 and 9; BAT assessment, Accident management plan.	05/02/16
Response to Schedule 5 Notice #2 dated 21/03/16	Response to question 1 (working plan version 4.1, odour management plan); Response to question 2 (details of steam generator); Response to questions 5 to 9 (pre-acceptance of wastes); Response to questions 10 and 11 (list of wastes); Response to question 12 (fire water management); Response to questions 13 to 17 (treatment); Response to questions 16 and 17 (biofilter); Response to questions 20 and 21 (secondary containment); Response to question 22 (technically competent manager)	15/04/16
Additional information	Additional information detailing operation of steam generator and clarification of power source.	20/04/16
Additional information	Additional information detailing TAD operational parameters.	25/04/16

The details set out above describe the techniques that will be used for the operation of the Installation that have been assessed by the Environment Agency as BAT; they form part of the Permit through Permit condition 2.3.1 and Table S1.2 in the Permit Schedules.

4.3.7 Waste types

Article 23 of the WFD requires that a Permit for any establishment or undertaking intending to carry out waste treatment must include the types and quantities of waste which may be treated. The Application contains a list of wastes coded by the European Waste Catalogue (EWC) number, which the Applicant will accept in the waste streams entering the plant and which the plant is capable of treating in an environmentally acceptable way. We have specified the permitted waste types, descriptions and quantities which can be accepted at the installation in Table S2.2.

We are satisfied that the Applicant can accept the wastes contained in Table S2.2 of the Permit because:

- (i) the wastes are all categorised as non-hazardous in the European Waste Catalogue; and
- (ii) the wastes are unlikely to contain harmful components that cannot be safely processed at the Installation.

For most waste codes in Table S2.2, we have used the waste descriptions specified in our standard rules permit (SR2012No11) for anaerobic digestion. These are wastes which are well categorised and understood. The wastes are considered amenable to biological treatment and produce outputs that can be used as a feedstock for other biowaste treatment plants or as a soil conditioner.

We have excluded waste code 19 05 99 (Wastes not otherwise specified – composting liquor). This is because we consider waste code 16 10 02 to be more appropriate for this waste stream.

We have limited the waste capacity of the TAD facility to 36,000 tonnes per annum. This is based on the designed capacity of the Installation.

4.3.8 Energy efficiency

We have considered the issue of energy efficiency i.e. the use of energy within, and generated by, the Installation which are normal aspects of all EPR permit determinations. This issue is dealt with in this section.

The Application details a number of measures that will be implemented at the Installation in order to maximise energy efficiency, as set out in Section 2.7 of the BAT assessment response received as part of the Application. All items of plant within the Installation are driven by electric motors and will be chosen for their energy efficiency. Plant will not be left to run when no material is being fed into the plant, whilst at the same time avoiding shutting down and re-starting the plant. Maintenance and housekeeping procedures will be implemented on site to ensure efficient operation of all plant.

There is no specific BAT requirement to reduce the energy consumption to a set level for the Waste Treatment Sector. There is no Climate Change Agreement (CCA) in place at the Installation. The Installation is not subject to a Greenhouse Gas Permit under EU ETS. The Applicant's commitment to

ensure efficient operation of all plant is considered to be BAT. Reporting of energy usage is required in the Permit under Schedule 4.

Having considered the information submitted in the Application, we are satisfied that appropriate measures will be in place to ensure that energy is used efficiently within the Installation.

There are no site-specific considerations that require the imposition of standards beyond indicative BAT, and so the Environment Agency accepts that the Applicant's proposals represent BAT for this Installation.

4.3.9 Efficient use of raw materials

Having considered the information submitted in the Application, we are satisfied that the appropriate measures will be in place to ensure the efficient use of raw materials and water.

We have specified the following limits and controls on the use of raw materials and fuels:

Raw Material or Fuel	Specifications	Justification
Fuel oil	< 0.1% sulphur content	As required by Sulphur Content of Liquid Fuels Regulations.

The Applicant will store diesel, oils and lubricants on site for operational use. All storage tanks will be appropriately bunded in accordance with the Environment Agency's Draft Technical Guidance Note for Composting and Aerobic Treatment (Version 1), CIRIA C736 – Containment Systems for the Prevention of Pollution – secondary, tertiary and other measures for industrial and commercial premises or other relevant industry standard.

The Operator will minimise fresh water use where possible. The waste reception and treatment buildings are designed to collect process water or leachate for re-use in the TAD system.

The Operator is required to report with respect to raw material and water usage under Permit condition 1.3 and Schedule 4.

4.3.10 Avoidance, recovery or disposal with minimal environmental impact of wastes produced by the activities

This requirement addresses wastes produced at the Installation and does not apply to the waste being treated there. The principal waste streams the Installation will produce are process waters and digestate.

The first objective is to avoid producing waste at all. Waste production will be avoided by re-using process waters whenever possible in the TAD system. Process waters from pre-treatment will be transferred to the feed tanks prior to

biological treatment. Whole digestate will be stored in two tanks within the sealed treatment building prior to removal off-site by tankers.

There will additionally be small amounts of waste generated at the pre-treatment stage when contraries (e.g. plastics and rubble) will be removed during pre-treatment. The presence of these wastes will be avoided as far as possible by robust pre-acceptance procedures. Any contraries that are removed at the pre-treatment stage will be bagged and stored within the sealed waste reception building in a secure designated area prior to transfer off-site to a suitably regulated facility for recovery or disposal.

Having considered the information submitted in the Application, we are satisfied that the waste hierarchy referred to in Article 4 of the WFD will be applied to the generation of waste and that any waste generated will be treated in accordance with this Article.

We are satisfied that waste from the Installation that cannot be recovered will be disposed of using a method that minimises any impact on the environment. Standard condition 1.4.1 will ensure that this position is maintained.

5. Minimising the Installation's environmental impact

Regulated activities can present different types of risk to the environment, these include odour, noise and vibration; accidents, fugitive emissions to air and water; as well as point source releases to air, discharges to ground or groundwater, global warming potential and generation of waste and other environmental impacts. All these factors are discussed in this and other sections of this document. For an installation of this kind, the principal emissions are those to air, although we also consider those to land and water.

The next sections of this document explain how we have approached the critical issue of assessing the likely impact of the emissions to air from the Installation on human health and the environment and what measures we are requiring to ensure a high level of protection.

5.1 Environmental Risk Assessment

A methodology for risk assessment of point source emissions to air, which we use to assess the risk of applications we receive for permits, is set out in our Guidance on Risk Assessment and has the following steps:

- Describe emissions and receptors
- Calculate process contributions
- Screen out insignificant emissions that do not warrant further investigation
- Decide if detailed air modelling is needed
- Assess emissions against relevant standards
- Summarise the effects of emissions

The risk assessment uses a concept of “process contribution (PC)”, which is the estimated concentration of emitted substances after dispersion into the receiving environmental media at the point where the magnitude of the concentration is greatest. The guidance provides a simple method of calculating PC primarily for screening purposes and for estimating process contributions where environmental consequences are relatively low. It is based on using dispersion factors. These factors assume worst case dispersion conditions with no allowance made for thermal or momentum plume rise and so the process contributions calculated are likely to be an overestimate of the actual maximum concentrations. More accurate calculation of process contributions can be achieved by mathematical dispersion models, which take into account relevant parameters of the release and surrounding conditions, including local meteorology – these techniques are expensive but normally lead to a lower prediction of PC.

The Applicant submitted a risk assessment in accordance with our Guidance on Risk Assessment covering odour, dust, noise, pests and accidents.

We have reviewed the assessment of the environmental risk from the facility and consider that it is satisfactory. The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.

5.2 Assessment of impact on air quality – odour emissions

The Applicant's assessment of the impact of air quality is set out in Appendix H of the Application. The assessment comprises dispersion modelling of odour emissions from the operation of the TAD facility. Amenity impacts during construction and air quality impacts arising from additional road traffic have not been considered as these are essentially matters for the local planning authority and outside the scope of our determination under the Environmental Permitting Regulations.

This section of the decision document deals primarily with the dispersion modelling of odour emissions from the biofilter stack and its impact on local air quality.

The Applicant has assessed the Installation's potential odour emissions against the relevant Environment Agency odour benchmark. This assessment predicts the potential effects on local air quality from the Installation's biofilter emissions using the ADMS (version 5) dispersion model, which is a commonly used computer model for regulatory dispersion modelling. The model used 5 years of meteorological data (2008 to 2012) collected from the UK Met Office's mesoscale model using the grid reference 466100 284500. The impact of the terrain surrounding the site upon plume dispersion was considered in the dispersion modelling.

The odour impact assessment is based on the assumption that the Installation will operate continuously at the maximum permitted emission rate. We are in agreement with this approach. The assumptions underpinning the model have been checked and are reasonably precautionary. As well as calculating the peak ground level concentration, the Applicant has modelled the concentrations at a number of specified locations (human receptors) within the surrounding area.

The way in which the Applicant used the dispersion model, the selection of input data, use of background data and the assumptions made have been reviewed by the Environment Agency's modelling specialists to establish the robustness of the Applicant's odour impact assessment. The odour source included in the model is the air collected from the waste reception and treatment buildings. Air is transported from the buildings to a four-compartment biofilter for treatment before release to atmosphere.

The Applicant's modelling predictions are presented in Table 1 below.

Table 1 Maximum ground level odour concentrations at all human receptors close to the TAD facility

Receptor	Receptor Name	Mean 98 th percentile hourly mean odour concentration (ou _E /m ³) ¹
R1	The Bungalow	0.41
R2	Hothorpe Hall	0.34
R3	Pebble Hall	0.51
R4	Dene Lodge	0.29
R5	Residence at Woodside Farm	0.27
R6	Bosworth Hall	0.09
R7	Residences on Hothorpe Road	0.24
R8	Residences on Bosworth Road	0.22
R9	Residences at Manor Farm	0.12
R10	Quiet Fields	0.19
R11	Welland Paddocks	0.15
R12	Residence at Home Farm	0.14
R13	Residence	0.75
R14	Buckle Hill	0.19
Note 1 – The Environment Agency benchmark for the most offensive odours is 1.5 ou _E /m ³ .		

Results from the modelling show that odour concentrations from the TAD facility are less than the indicative criterion of 1.5 ou_E/m³ at all human receptors (see Table 1 above). The emissions from the biofilter are predicted to be not significant and unlikely to give any reasonable cause for annoyance due to odour. The Applicant concludes that it is unlikely that odour emissions from the TAD facility will have any significant impact at the human receptor locations considered in this assessment.

The Applicant's odour impact assessment was reviewed by the Environment Agency's technical specialists for modelling, air quality, conservation and ecology technical services, who agreed with the assessment's conclusions, that the proposal will not have a significant impact on nearby human receptors. This is based on the plant operating at the parameters quoted in the modelling report.

5.3 Impact on Habitats sites, SSSIs and other conservation sites

Conservation sites are protected by legislation. The Habitats Directive provides the highest level of protection for SACs and SPAs; domestic legislation provides a lower but important level of protection for SSSIs. Finally the Environment Act provides more generalised protection for flora and fauna rather than for specifically named conservation designations. It is under the Environment Act that we assess other sites (such as local wildlife sites) which prevents us from permitting any facility that may cause significant pollution;

and which offers a level of protection proportionate with other European and national legislation.

However, it should not be assumed that because levels of protection are less stringent for these other sites that they are not of considerable importance. Local sites link and support EU and national nature conservation sites together and hence help to maintain the UK's biodiversity resilience.

5.3.1 Sites Considered

There are no Habitats (i.e. Special Areas of Conservation, Special Protection Areas and Ramsar) sites within 10 km of the proposed Installation. Coombe Hill Hollow (Site of Special Scientific Interest) and Hothorpe Hill Woodlands (Local Wildlife Site) are located within 2 km of the Installation.

5.3.2 Assessment of impact on ecological receptors

We undertook an assessment of the impact of the TAD facility on the SSSI and Local Wildlife Site. Coombe Hill Hollow SSSI is located approximately 1.9 km to the south east of the proposed TAD facility. Hothorpe Hill Woodlands is located 1.3 km to the south west of the TAD facility.

All activities will take place in sealed buildings minimising emissions of odour, bioaerosols, noise and dust. The drying of digestate and combustion of oil /biodiesel via CHP engines have been excluded from this application. Therefore there is no mechanism for impact from acidification and /or deposition as a result of combustion emissions at the ecological sites. Proposed site measures will ensure that the proposal will not damage the features of the ecological receptors through habitat loss, smothering and /or disturbance.

6. Application of Best Available Techniques

We have reviewed the operating techniques proposed by the Applicant and compared these with the relevant guidance as set out in the Environment Agency's Draft Technical Guidance Note for Composting and Aerobic Treatment Version 1, (which is our current understanding of BAT for aerobic digestion). Where necessary, we have requested further information from the Applicant.

The Installation will be designed, constructed and operated using BAT for the treatment of the permitted wastes. We are satisfied that the operating and abatement techniques are BAT for these types of waste. Our assessment of BAT is set out below.

6.1 Assessment of Best Available Techniques

6.1.1 Waste pre-acceptance and acceptance procedures

The Applicant will have appropriate waste pre-acceptance and acceptance procedures. These are described in Sections 1 and 2 of the BAT assessment document provided in response to a request for additional information dated 5 January 2016.

At the pre-acceptance stage, the Applicant will obtain written information and samples of waste from prospective waste suppliers to determine the suitability of the waste for treatment. Verification of the written information may be required and the Applicant will visit the waste producer when a third party, e.g. waste broker, is involved. Following characterisation of the waste, a technical assessment will be made of its suitability for treatment by technically competent staff.

The Applicant will have a waste tracking system that starts at the pre-acceptance stage. Records will be kept for 3 years and will include the relevant details required by our Draft Technical Guidance Note for Composting and Aerobic Treatment.

On arrival at site, all waste will be weighed and associated documentation checked. Waste will not be accepted on site unless there is sufficient storage capacity and the site is adequately manned to receive waste.

Wastes will be inspected immediately upon offloading. The Applicant will have criteria in place for the rejection of wastes. Rejected wastes will be stored in a quarantine area for a maximum of 5 working days in accordance with the Draft Technical Guidance Note.

6.1.2 Storage of wastes

All waste received for treatment at the TAD facility will be stored in the waste reception building on impermeable surfacing with a sealed drainage system.

All leachate generated from waste storage and treatment (including the biofilter) will be collected in the buffer tanks for processing in the TAD system.

The waste storage area will be regularly checked and cleaned. The Applicant reports that the facility is designed to process waste as soon as it is deposited. Waste will be processed within 24 hours and will not be stored for more than 5 days.

Site employees will check the quality of feedstock and perform any pre-treatment in the waste reception area. In the event the inspection indicates that the wastes fail to meet the acceptance criteria, the waste loads will be stored in a dedicated quarantine area and removed from site. Storage of unacceptable wastes will be for a maximum of 5 working days.

The Applicant reports that the waste reception building is designed taking the feedstock properties into account. The reception building has sufficient space and flexibility to manage changes in the volume and properties of feedstock. Sufficient space will be available to provide safe storage for a short time in the event of an emergency or plant breakdown.

All liquid storage and treatment tanks will be designed to be fit for purpose and will be provided with appropriate secondary containment that can accommodate at least 110% of the volume of the largest vessel or 25% of the total tankage volume, whichever is the greater. External bunds will be regularly inspected to ensure that rainwater is regularly emptied and all connections and fill points will be within the bunded area with no pipe work penetrating the bund wall.

Wheel-wash facilities will be provided for disinfecting delivery vehicles on exit from the waste reception building.

Following treatment in the TAD system, the digestate will be transferred to two storage tanks in the sealed treatment building for a maximum period of 4 weeks. The Applicant reports that the main digestate route will be as a feedstock to local AD plants. An alternative route for the digestate will be for use as a soil conditioner.

6.2 Other Emissions to the Environment

6.2.1 Emissions to water

There will be a discharge of uncontaminated rain water from the TAD building roofs to land. This water will be collected and discharged to an off-site lagoon within the installation boundary of the adjacent gasification plant regulated under Permit EPR/GP3432WP.

6.2.2 Fugitive emissions to air, land and water

The IED specifies that plants must be able to demonstrate that they are designed in such a way as to prevent the unauthorised and accidental release of polluting substances into soil, surface water and groundwater. In addition, storage requirements for waste and for contaminated water must be arranged.

All waste received at the Installation will be stored within the waste reception building. The waste reception and treatment buildings will be sealed and kept under negative pressure. Extracted air will be directed to a biofilter for treatment. Material is expected to be moist at all stages of the aerobic treatment process and is therefore unlikely to result in emissions to air.

Activities on site will be operated in accordance with the site's management systems. This will include regular inspections and maintenance of equipment including odour abatement and air extraction systems to ensure they continue to operate at optimum conditions.

Good housekeeping practices will be applied, such as minimising any dust generating activities on very dry or windy days; regular inspection and cleaning/sweeping of all paved areas on site; and sheeting of lorries or use of sealed containers for transportation of feedstock to the site and/or export of whole digestate from the site.

Roller shutter doors of the reception building will remain closed when waste is being deposited. This will assist in the prevention of odours escaping the reception building.

The waste treatment operations will benefit from a number of process control features and prevent the development of abnormal operating conditions. Operations will be controlled and monitored using the Supervisory Control and Data Acquisition (SCADA) system which creates documentation that can be accessed in remote locations. The system will provide a range of control and monitoring functions that automate and monitor actions throughout the plant. These procedures are designed to ensure the integrity of the plant throughout the life of the facility.

The Applicant reports that all areas within the waste reception and treatment buildings will benefit from an impermeable surface which will prevent the release of potentially polluting liquids to surface water and groundwater.

The external yard area will consist of a concrete apron extending in 10 m deep and 30 m wide in front of the waste reception building door where food waste haulage vehicles will enter. This area contains the wheel wash. The digester entrance door has hard standing made up of crushed base material finished in road plantings. Only digestate product tankers will cross this area.

Secondary containment will be provided for all tanks containing liquids whose spillage could be harmful to the environment. The proposed site secondary containment is designed to hold a minimum of 110% of the capacity of the largest tank or 25% of total tank volume, whichever is the greater. We have included a Pre-operational condition (POC 2) which requires the submission of a report confirming that the construction and integrity of the proposed site surfacing and secondary containment are fit for purpose and in accordance with industry standards prior to plant commissioning. This will ensure that the proposed site surfacing and secondary containment are properly designed to reduce the risks of accidents and their consequences.

We have also included a pre-operational condition (POC 5) which requires the Operator to submit a final drainage plan which details the flow of site surface water within the installation.

The Environment Agency considers that the Applicant has proposed appropriate measures to minimise any impact of fugitive emissions on nearby sensitive receptors. The proposed procedures satisfy the requirements as set out in the Environment Agency's Draft Technical Guidance Note for Composting and Aerobic Treatment and are considered BAT for this Installation. The permit conditions (3.2.1 to 3.2.3) are sufficient to ensure that emissions of substances not controlled by emission limits do not cause pollution. The Applicant is required to implement mitigation measures in line with an approved emissions management plan in the event activities on site are causing pollution.

Based upon the information provided in the Application, we are satisfied that appropriate measures are in place to prevent fugitive emissions to air, land and water.

6.2.3 Pests, scavenging birds and animals

Pests, scavenging birds and animals will be minimised by undertaking the receipt, storage, pre-treatment and treatment of waste within sealed, negatively aerated buildings.

The waste reception building will be fully washed down at the end of each working day to prevent the build-up of waste residues which could attract any pests, scavenging birds or animals that may gain access into the building.

The site will be inspected on a daily basis and any occurrences will be recorded and dealt with. On detection or notification of any pests, scavenging birds or animals, the Operator will immediately secure the attendance of a professional contractor to remove or deter them from site.

We have included condition 3.5.2 in the Permit. In the event that pests become an issue at the site, this condition requires the Operator to submit to the Environment Agency for approval, a management plan specifically for pests which identifies and minimises risks of pollution from pests.

Based upon the information provided in the Application, we are satisfied that appropriate measures are in place to prevent the presence of pests, scavenging birds and animals.

6.2.4 Litter

We are satisfied that the Applicant will have in place measures to prevent litter on site. All wastes will be accepted within the sealed waste reception building. Any contraries within the waste will be removed and collected in a sealed

container within the building. The Applicant proposes to undertake weekly litter picking within the Installation boundary.

Based upon the information provided in the Application, we are satisfied that appropriate measures are in place to prevent the presence of litter.

6.2.5 Odour

The Applicant submitted an Odour Management Plan (OMP) with the Application. During the determination, we requested more information on the OMP from the Applicant. Consequently, the OMP has been revised a number of times in order to ensure it contains the technical information and operating techniques necessary to prevent odour pollution.

6.2.5.1 Inventory of materials

We are satisfied that the Applicant has provided an inventory of odourous materials that will be at the facility. The inventory provides an assessment of the odour potential of waste that will be accepted according to its source i.e. abattoirs, commercial restaurants, supermarkets and food producers.

The OMP addresses the impact of seasonal variation in the waste and describes the management controls that will be put in place to mitigate odour. The Applicant will accept waste from specific suppliers – chilled abattoir cutting room waste which are removed daily to minimise odours. We are satisfied that all waste will be processed immediately following receipt on site. The Operator will have contractual arrangements in place with all waste suppliers that set out the expected quality of waste delivered to site. This will be constantly reviewed and feedback will be provided to suppliers to ensure the odour potential of waste is minimised at the acceptance stage.

We consider robust pre-acceptance procedures to be key to ensuring complete understanding of the odour potential of wastes accepted on site. The Applicant has provided pre-acceptance procedures in the Application that are in accordance with the Environment Agency's Draft Technical Guidance Note for Composting and Aerobic Treatment. The Applicant reports that the designated TCM will visit the waste suppliers to sample the waste, verify loading procedures and identify possible variation in feedstock. The Applicant will also obtain written information from the suppliers to determine the odour potential of the waste.

For specific new waste or waste not well characterized or understood, the Operator will obtain the results of sampling for Total oil per cent, pH, Total solids, nitrogen, potassium, phosphorus and C:N ratio. This is to ensure that the waste does not inhibit the digestion process and/or generate odour emissions that cannot be controlled or abated. We expect any subsequent supply agreement to include details of procedures that will be undertaken to ensure the required feedstock quality is maintained during acceptance. This may include periodic sampling based on the variability of the feedstock.

We are satisfied that the Operator will have criteria in place for the rejection of wastes and that rejected wastes will be stored in a quarantine area for no longer than 5 working days.

6.2.5.2 Management of sources of odour on site

The Applicant has provided an inventory of odour sources according to the various stages of the aerobic digestion process. The Applicant proposes to minimise the volumes and age of wastes held in the waste reception building, active extraction of air to the odour abatement plant and regular operational and performance checks on the biofilter.

We are also satisfied that the Applicant is committed to the processing of all wastes as soon as they are deposited in the waste reception building. To prevent material becoming odorous in the reception building, the Applicant has the option of blending the wastes with compost material from the adjacent composting facility.

During the aerobic digestion process, the Applicant proposes to carry out monitoring of moisture, temperature and oxygen to ensure that the TAD system is working effectively. We are satisfied that the process monitoring will be employed to maintain optimum conditions.

6.2.5.3 Containment and abatement of odorous emissions

Fugitive emissions to air are expected to occur at the TAD facility from waste acceptance, storage and pre-treatment activities in the waste reception building, and as a result of aerobic degradation in the six sealed digesters. The air treatment system is designed to treat odours from the air extracted from the reception and treatment buildings. It will consist of a ventilation and extraction system to keep the buildings under negative pressure and provide aeration of the reception, pre-treatment and digestion areas.

We accept that even though appropriate management of the TAD facility will minimise the potential for odour, containment and abatement of odour is still required. All waste will be accepted, stored and pre-treated in the waste reception building. Fast action roller doors will open only during waste delivery.

The Applicant determined the rate of air changes in the waste reception and treatment buildings to be 3 air changes per hour with an air flow rate of 12 m³/seconds. This is based on the calculation of the volume of air in the waste reception and treatment buildings that requires abatement (14,440 m³).

The Applicant proposes to use a four-compartment biofilter unit to abate odour emissions prior to discharge to atmosphere. A biofilter is described in the Waste BREF (Waste Treatment BREF for the Waste Treatments Industries, August 2006) as:

'...an apparatus filled with decomposable material such as compost, bark or a mixture of turf and leather, etc. Micro-organisms (fungi, bacteria, viruses and algae) are resident on the material. The exhaust air flows through the material while the micro-organisms decompose the harmful substances. Water and airflow normally run counter-currently. A biofilter is not a filter in the mechanical sense (i.e. it does not lead to a separation of particles), but it is a reactor where a certain range of harmful substances are metabolised to harmless substances.'

The Applicant reports that the biofilter has a total volume of 720 m³ (each unit will have a volume of 180 m³) and will provide an “empty bed” or “residence time” of 60 seconds. The media depth is 2.5 m consisting of 20 mm shredded wood chips and compost oversize. The biofilter is designed to handle an odour load of 24,000 ouE/s. The odour load has been estimated from similar biowaste treatment facilities in England.

The supply ductwork to the biofilter has been designed to provide an even distribution of airflow over the biofilter and includes a purpose-designed aerated floor. The ductwork will collect air from the waste reception and treatment buildings and will maintain an airflow in the breach ducts of 10 m/s and in the main ducts of 15 m/s. The fan is of centrifugal design that is pressure-rated to overcome the biofilter back-pressure. The air from the fan is ducted to an air manifold which is transferred via air distribution pipes and into the biofilter.

Over time, the biofilter material will lose its coarseness. The Operator will identify this by visual inspection of the biofilter media and back-pressure measurements. The biofilter is designed to operate at a maximum back-pressure of 45 mm wg. The biofilter will be equipped with an adjustable over-pressure alarm that will be set at 65 – 70 mm wg. This will be used to determine whether or not the media needs to be changed. Once the media has been identified as requiring replacement, fresh wood chip material will be introduced in one unit whilst the remaining units are in operation.

The biofilter will be fitted with an irrigation system connected to moisture probes to maintain the appropriate levels (30 to 60 per cent by mass). Monitoring of pH will be undertaken using pH probes at different depths in the media bed (the optimum pH being 7 to 8). The base of the biofilter will be sloped to >1:40 and contain adequate drainage to allow leachate collection in a sump.

The Applicant proposes to monitor the biofilter inlet and outlet at the start of each day. Biannual testing (quarterly in the first year) will be conducted by an odour specialist in accordance with BS EN 13725 – Dynamic Dilution Olfactometry to verify the emission rate provided in the odour impact assessment. We have therefore included a pre-operational condition (POC 6) in the Permit which requires the Operator to undertake an initial biofilter baseline monitoring to inform future monitoring requirements. The Environment Agency will compare the initial results with future results as a measure of biofilter efficiency.

We are satisfied that the biofilter arrangement will provide appropriate removal of odorous pollutants and is BAT for this installation.

6.2.5.4 Emergencies and incidents

The Applicant has adequately considered the impact of emergencies and incidents on odour emissions. We are satisfied that contingency actions will be taken should there be any plant breakdown. We are satisfied with the timescales that the Applicant has proposed for plant or parts repair or replacement and the Applicant's commitment to cease waste acceptance in the event of plant breakdown.

6.2.5.5 Our assessment

Overall, we consider that the Applicant has proposed appropriate odour management measures to minimise any impact on nearby sensitive receptors. In the event that odour emissions are causing pollution, the permit conditions require the Operator to comply with the measures proposed in the OMP. The odour conditions in the permit are sufficient to ensure that odour emissions from the facility do not cause annoyance. Process monitoring conditions including daily olfactory tests at the site boundary will also ensure that emissions of odour are not causing annoyance.

We have reviewed and approved the OMP in its revised format. We consider that the revised OMP complies with the requirements of our H4 Odour management guidance note. We agree with the scope and suitability of key measures but this should not be taken as confirmation that the details of equipment specification design, operation and maintenance are suitable and sufficient. That remains the responsibility of the Operator.

Based upon the information in the approved OMP, we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise odour and to prevent pollution from odour. The Applicant is required to operate in accordance with the approved OMP.

6.2.6 Noise and vibration

Based upon the information in the application, we are satisfied that appropriate measures will be in place to prevent or where that is not practicable to minimise noise and vibration and to prevent pollution from noise and vibration outside the site.

The Application contained a noise impact assessment which identified local noise-sensitive receptors, potential sources of noise at the proposed plant and noise attenuation measures. Measurements were taken of the prevailing ambient noise levels to produce a baseline noise survey and an assessment was carried out in accordance with BS 4142:1997 to compare the predicted plant rating noise levels with the established background levels. Noise predictions were made using the noise software modelling program Mithra.

The Applicant's noise impact assessment was reviewed by the Environment Agency's technical specialists for modelling, air quality, conservation and ecology technical services, who agreed with the assessment's conclusions, that the proposal will not have a significant impact on nearby human receptors. This is based on the plant operating at the parameters quoted in the modelling report.

The Application did not contain a noise management plan. We have therefore included condition 3.4.2 which requires the Operator to, if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration.

6.3 Commissioning

The proposed Installation will undergo a period of commissioning before becoming fully operational. The IED and the conditions set out in the permit cover activities at the Installation once operational – accepting wastes for treatment.

At the commissioning stage, Operators are required to demonstrate that the plant (including the proposed odour abatement system – air extraction and biofilter system) is working effectively and that appropriate measures are in place to protect the environment and human health during this period (prior to the commencement of operations). As the plant is undergoing construction, we have included a pre-operational condition (POC 3) in the Permit which requires the Operator to submit a commissioning plan for approval.

The commissioning plan should include the expected emissions to the environment during the different stages of commissioning, the expected durations of commissioning activities and the measures to be taken to protect the environment and report to us in the event that actual emissions exceed expected emissions. Commissioning can only be undertaken in accordance with the approved commissioning plan. As odour and noise emissions were the main concerns during the determination, we expect the Applicant to pay particular attention to these issues in the commissioning plan.

It is recognised that certain information provided in the Application are based upon design data or data from similarly designed operational plant. The commissioning stage provides an early opportunity to verify much of the information submitted in the Application and to demonstrate compliance with the conditions of the Permit. Improvement condition 1 (IC 1) has been set in the Permit requiring the submission of a report which includes an assessment of the performance of the Installation following the commencement of site operations and any deviation from the Application. This will ensure that any impacts on human and ecological receptors can be identified and rectified at the earliest opportunity.

6.4 Monitoring

We have specified that monitoring should be carried out for the parameters listed in Schedule 3 table S3.2, S3.3 and S3.4 in the Permit using the methods and to the frequencies (where specified) in those tables.

Visual monitoring has been specified in the Permit to ensure early detection of contaminated water entering the off-site lagoon (see Table S3.2 in the permit).

We have specified monitoring of the TAD process as a whole (see Table S3.3 in the Permit). Monitoring parameters include temperature, moisture, daily olfactory checks, biofilter maintenance and structural integrity checks of the digesters and storage tanks. These monitoring checks are imposed as a measure of the stability of the aerobic digestion process and to ensure that any malfunction of plant/equipment on site is detected early to prevent significant pollution.

Although the TAD facility is located about 500 meters from the nearest human receptor, the Applicant proposes to undertake bioaerosols monitoring following the commencement of site operations. We have therefore included bioaerosols monitoring requirements in the Permit. We have also included a pre-operational condition POC 4 in the Permit which requires the Operator to submit a bioaerosols background sampling report to inform future bioaerosols monitoring.

Based on the information in the Application and the requirements set in the conditions of the Permit, we are satisfied that the Operator's techniques, personnel and equipment will have either MCERTS certification or MCERTS accreditation as appropriate.

6.5 Reporting

We have specified the reporting requirements in Schedule 5 of the Permit either to meet the reporting requirements set out in the IED, or to ensure data is reported to enable timely review by the Environment Agency to ensure compliance with permit conditions and to monitor the efficiency of material use and energy recovery at the Installation.

7 Other legal requirements

In this section, we explain how we have addressed other relevant legal requirements, to the extent that we have not addressed them elsewhere in this document.

7.1 The EPR 2010 and related Directives

The EPR delivers the requirements of a number of European and national laws.

7.1.1 Schedules 1 and 7 to the EPR 2010 – IED Directive

We have addressed the requirements of the IED in the body of this document. There is one requirement not addressed above, which is that contained in Article 5(3) of the IED. Article 5(3) requires that “In the case of a new installation or a substantial change where Article 4 of Directive 85/337/EC (the EIA Directive) applies, any relevant information obtained or conclusion arrived at pursuant to articles 5, 6 and 7 of that Directive shall be examined and used for the purposes of granting the permit.”

- Article 5 of the EIA Directive relates to the obligation on developers to supply the information set out in Annex IV of the Directive when making an application for development consent.
- Article 6(1) requires Member States to ensure that the authorities likely to be concerned by a development by reason of their specific environmental responsibilities are consulted on the Environmental Statement and the request for development consent.
- Article 6(2)-6(6) makes provision for public consultation on applications for development consent.
- Article 7 relates to projects with transboundary effects and consequential obligations to consult with affected Member States.

The grant or refusal of development consent is a matter for the relevant local planning authority. The Environment Agency’s obligation is therefore to examine and use any relevant information obtained or conclusion arrived at by the local planning authorities pursuant to those EIA Directive articles.

In determining the Application, we have considered the following documents:

- The Environmental Statement submitted with the planning application (which also formed part of the Environmental Permit Application);
- The decision of Northamptonshire County Council to grant planning permission on 24 October 2014; and
- The report and decision notice of Northamptonshire County Council accompanying the grant of planning permission.

From consideration of all the documents above, the Environment Agency considers that no additional or different conditions are necessary.

The Environment Agency has also carried out its own consultation on the Environmental Permitting Application. The results of our consultation are described elsewhere in this decision document.

7.1.2 Schedule 9 to the EPR 2010 – Waste Framework Directive

As the Installation involves the treatment of waste, it is carrying out a *waste operation* for the purposes of the EPR 2010, and the requirements of Schedule 9 therefore apply. This means that we must exercise our functions so as to ensure implementation of certain articles of the WFD.

We must exercise our relevant functions for the purposes of ensuring that the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste and that any waste generated is treated in accordance with Article 4 of the Waste Framework Directive (See also section 4.3.10).

The conditions of the Permit ensure that waste generation from the facility is minimised. Where the production of waste cannot be prevented, it will be recovered wherever possible or otherwise disposed of in a manner that minimises its impact on the environment. This is in accordance with Article 4.

We must also exercise our relevant functions for the purposes of implementing Article 13 of the Waste Framework Directive; ensuring that the requirements in the second paragraph of Article 23(1) of the Waste Framework Directive are met; and ensuring compliance with Articles 18(2)(b), 18(2)(c), 23(3), 23(4) and 35(1) of the Waste Framework Directive.

Article 13 relates to the protection of human health and the environment. These objectives are addressed elsewhere in this document.

Article 23(1) requires the Permit to specify:

- (a) the types and quantities of waste that may be treated;
- (b) for each type of operation permitted, the technical and any other requirements relevant to the site concerned;
- (c) the safety and precautionary measures to be taken;
- (d) the method to be used for each type of operation;
- (e) such monitoring and control operations as may be necessary; and
- (f) such closure and after-care provisions as may be necessary.

These are all covered by permit conditions.

We consider that the intended method of waste treatment is acceptable from the point of view of environmental protection so Article 23(3) does not apply. Energy efficiency is dealt with elsewhere in this document but we consider the conditions of the Permit ensure that the recovery of energy takes place with a high level of energy efficiency in accordance with Article 23(4).

Article 35(1) relates to record keeping and its requirements are delivered through permit conditions.

7.1.3 Schedule 22 to the EPR 2010 – Groundwater, Water Framework and Groundwater Daughter Directives

To the extent that it might lead to a discharge of pollutants to groundwater (a “groundwater activity” under the EPR 2010), the Permit is subject to the requirements of Schedule 22, which delivers the requirements of EU Directives relating to pollution of groundwater. The Permit will require the taking of all necessary measures to prevent the input of any hazardous substances to groundwater, and to limit the input of non-hazardous pollutants into groundwater so as to ensure such pollutants do not cause pollution, and satisfies the requirements of Schedule 22.

No releases to groundwater from the Installation are permitted. The Permit also requires material storage areas to be designed and maintained to a high standard to prevent accidental releases.

7.1.4 Directive 2003/35/EC – The Public Participation Directive

Regulation 59 of the EPR 2010 requires the Environment Agency to prepare and publish a statement of its policies for complying with its public participation duties. We have published our Public Participation Statement.

This Application is being consulted upon in line with this Statement, which addresses specifically extended consultation arrangements for determinations where public interest is particularly high. This satisfies the requirements of the Public Participation Directive.

Our decision in this case has been reached following a programme of extended public consultation, on the original application. The way in which this has been done is set out in Section 2.2. A summary of the responses received to our consultations and our consideration of them is set out in Annex 3.

7.2 National primary legislation

7.2.1 **Environment Act 1995**

(i) Section 4 (Pursuit of Sustainable Development)

We are required to contribute towards achieving sustainable development, as considered appropriate by Ministers and set out in guidance issued to us. The Secretary of State for Environment, Food and Rural Affairs has issued *The Environment Agency’s Objectives and Contribution to Sustainable Development: Statutory Guidance (December 2002)*. This document:

“provides guidance to the Agency on such matters as the formulation of approaches that the Agency should take to its work, decisions about priorities for the Agency and the allocation of resources. It is not directly applicable to individual regulatory decisions of the Agency”.

In respect of regulation of industrial pollution through the EPR, the Guidance refers in particular to the objective of setting permit conditions “*in a consistent and proportionate fashion based on Best Available Techniques and taking into account all relevant matters...*”. The Environment Agency considers that it has pursued the objectives set out in the Government’s guidance, where relevant, and that there are no additional conditions that should be included in this Permit to take account of the Section 4 duty.

(ii) Section 7 (Pursuit of Conservation Objectives)

We considered whether we should impose any additional or different requirements in terms of our duty to have regard to the various conservation objectives set out in Section 7, but concluded that we should not.

We have considered the impact of the installation on local wildlife sites within 2 km which are not designated as either European Sites or SSSIs. We are satisfied that no additional conditions are required.

(iii) Section 81 (National Air Quality Strategy)

We have had regard to the National Air Quality Strategy and consider that our decision complies with the Strategy, and that no additional or different conditions are appropriate for this Permit.

7.2.2 Human Rights Act 1998

We have considered potential interference with rights addressed by the European Convention on Human Rights in reaching our decision and consider that our decision is compatible with our duties under the Human Rights Act 1998. In particular, we have considered the right to life (Article 2), the right to a fair trial (Article 6), the right to respect private and family life (Article 8) and the right to protection of property (Article 1, First Protocol). We do not believe that Convention rights are engaged in relation to this determination.

7.2.3 Countryside and Rights of Way Act 2000 (CROW 2000)

Section 85 of this Act imposes a duty on the Environment Agency to have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty (AONB). There is no AONB which could be affected by the Installation.

7.2.4 Wildlife and Countryside Act 1981

Under section 28G of the Wildlife and Countryside Act 1981, the Environment Agency has a duty to take reasonable steps to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which a site is of special scientific interest. Under section 28I, the Environment Agency has a duty to consult Natural England in relation to any permit that is likely to damage SSSIs.

We assessed the Application and concluded that the Installation will not damage the special features of any SSSI. This was recorded on a CROW Appendix 4 form.

The CROW assessment is summarised in greater detail in section 5.3 of this document. A copy of the full Appendix 4 assessment can be found on the public register.

7.2.5 Natural Environment and Rural Communities Act 2006

Section 40 of this Act requires us to have regard, so far as is consistent with the proper exercise of our functions, to the purpose of conserving biodiversity. We have done so and consider that no different or additional conditions in the Permit are required.

7.3 National secondary legislation

7.3.1 The Conservation of Natural Habitats and Species Regulations 2010

The habitat assessment is summarised in greater detail in section 5.3 of this document.

7.3.2 Water Framework Directive Regulations 2003

Consideration has been given to whether any additional requirements should be imposed in terms of the Environment Agency's duty under regulation 3 to secure the requirements of the Water Framework Directive through (inter alia) EP permits, but it is felt that existing conditions are sufficient in this regard and no other appropriate requirements have been identified.

7.4 Other relevant legal requirements

7.4.1 Duty to Involve

S23 of the Local Democracy, Economic Development and Construction Act 2009 require us where we consider it appropriate to take such steps as we consider appropriate to secure the involvement of interested persons in the exercise of our functions by providing them with information, consulting them or involving them in any other way. S24 requires us to have regard to any Secretary of State guidance as to how we should do that.

The way in which the Environment Agency has consulted with the public and other interested parties is set out in section 2 of this document. The way in which we have taken account of the representations we have received is set out in Annex 3. Our public consultation duties are also set out in the EP Regulations, and our statutory Public Participation Statement, which implement the requirements of the Public Participation Directive. In addition to meeting our consultation responsibilities, we have also taken account of our guidance, the Environment Agency's Building Trust with Communities toolkit.

ANNEX 1: Pre-Operational Conditions

Based on the information in the Application, we consider that we do need to impose pre-operational conditions. These conditions are set out below and referred to, where applicable, in the text of the decision document. We are using these conditions to require the Operator to confirm that the details and measures proposed in the Application have been adopted or implemented prior to the operation of the Installation.

Reference	Pre-operational measures
POC1	<p>At least 2 weeks (or any other date as agreed with the Environment Agency) prior to the commencement of commissioning of the installation, the operator shall submit a written copy of the site Environmental Management System (EMS) and make available for inspection all documents and procedures which form part of the site EMS.</p> <p>The EMS shall cover all activities at the installation and shall be in accordance with the indicative BAT requirements specified in the Draft Technical Guidance Note for Composting and Aerobic Treatment (Version 1). The EMS shall include the techniques the operator relies upon to manage the operation, accidents (including flooding), closure and decommissioning of the site. The documents and procedures set out in the EMS shall form the written management system referenced in condition 1.1.1 (a) of the permit. No site operations shall commence or waste accepted at the installation unless the Environment Agency has given prior written permission under this condition.</p>
POC2	<p>At least 8 weeks (or any other date as agreed with the Environment Agency) prior to the commencement of commissioning of the installation, the operator shall ensure that a review of the design, method of construction and integrity of the proposed site secondary containment and site surfacing is carried out by a qualified structural /civil engineer. The review shall compare the constructed secondary containment and site surfacing against the indicative BAT requirements specified in the Draft Technical Guidance Note for Composting and Aerobic Treatment (Version 1) and CIRIA C736 – Containment Systems for the Prevention of Pollution – secondary, tertiary and other measures for industrial and commercial premises or other relevant industry standard.</p> <p>The review shall include:</p> <ul style="list-style-type: none"> • the physical condition of the secondary containment and site surfaces; • the suitability for providing containment when subjected to the dynamic and static loads caused by catastrophic tank failure; • any work required to ensure compliance with the standards set out in the above technical guidance documents; and • a preventative maintenance and inspection regime <p>A written report of the review shall be submitted to the Environment</p>

Reference	Pre-operational measures
	<p>Agency detailing the review's findings and recommendations. Remedial action shall be taken to ensure that the secondary containment and site surfacing meet the standards set out in the guidance documents and implement the maintenance and inspection regime.</p> <p>No site operations shall commence or waste accepted at the facility unless the Environment Agency has given prior written permission under this condition.</p>
POC3	<p>At least 8 weeks (or any other date as agreed with the Environment Agency) prior to the commencement of commissioning of the installation, the operator shall provide a written commissioning plan (including timescales for completion) for approval by the Environment Agency. The commissioning plan shall include, but not limited to:</p> <ul style="list-style-type: none"> • the expected emissions to the environment during the different stages of commissioning; • the details of building smoke-testing; • the expected durations of commissioning activities; and • the measures to be taken to protect the environment and report to the Environment Agency in the event that actual emissions exceed expected emissions. <p>Commissioning shall be carried out in accordance with the commissioning plan as approved by the Environment Agency. No site operations shall commence or waste accepted at the installation unless the Environment Agency has given prior written permission under this condition.</p>
POC4	<p>At least 8 weeks (or any other date as agreed with the Environment Agency) prior to the commencement of commissioning of the installation, the operator shall undertake a background sampling of bioaerosols to inform future monitoring requirements. The sampling shall be as agreed in writing with the Environment Agency. No site operations shall commence or waste accepted at the installation unless the Environment Agency has given prior written permission under this condition.</p>
POC5	<p>At least 4 weeks (or any other date as agreed with the Environment Agency) prior to the commencement of commissioning of the installation, the operator shall submit the final site drainage plan to the Environment Agency for approval. The plan shall include details of:</p> <ul style="list-style-type: none"> • the site surface water flow and destination within the yard area; • the movement of building roof water; and • the details of site monitoring procedures to ensure that no contaminated site surface water is released from the site into the environment.
POC6	<p>At least 4 weeks (or any other date as agreed with the Environment Agency) prior to the commencement of site operations, the operator shall undertake an initial baseline monitoring of the proposed biofilter to inform future monitoring requirements. The sampling shall be as</p>

Reference	Pre-operational measures
	agreed in writing with the Environment Agency. No site operations shall commence or waste accepted at the installation unless the Environment Agency has given prior written permission under this condition.

ANNEX 2: Improvement Conditions

Based on the information in the Application, we consider that we need to set an improvement condition. This condition is set out below – justification for this is provided in section 6.3 of the decision document. We are using this condition to require the Operator to provide the Environment Agency with details that need to be established or confirmed after commissioning.

Reference	Improvement measure	Completion date
IC1	The operator shall submit a post-commissioning report to the Environment Agency which shall include, but not be limited to: <ul style="list-style-type: none">• a review of the environmental performance of the facility against the design parameters set out in the Application;• a review of the performance of the facility against the conditions of this permit and the pre-commissioning report proposals; and• details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions	Within 4 months following the completion of commissioning.

ANNEX 3: Consultation Responses

A) Advertising and Consultation on the Application

The Application has been advertised and consulted upon in accordance with the Environment Agency's Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our decision is summarised in this Annex. Copies of all consultation responses have been placed on the Environment Agency Public Register.

The Application was advertised on the Environment Agency website from 3 December 2015 to 5 January 2016 and in the Harborough Mail and Leicester Mercury on 3 December 2015. The Application was made available to view at the Environment Agency Public Register, Waterside House, Waterside North, Lincoln, LN2 5HA.

The following statutory and non-statutory organisations were consulted:

- Daventry District Council Planning Authority
- Daventry District Council (Environmental Health Department)
- Public Health England
- Director of Public Health (Northamptonshire County Council)
- Health & Safety Executive
- Northamptonshire Fire & Rescue Service

1) Consultation Responses from Statutory and Non-Statutory Bodies

Response received from Public Health England dated 10/12/15	
Brief summary of issues raised	Summary of action taken / how this has been covered
PHE recommend that representative screening and any further assessment of emissions to air be undertaken from phases 1 and 2 (if these are all going ahead).	Combustion of biodiesel /oil via CHP engines has been excluded from this application. The permitted activities considered in this determination are specified in section 4.1.1 in this document. We have audited the Applicant's odour impact assessment (see section 5.2) and agree that the conclusions drawn in the report are acceptable, that the facility will not give rise to annoyance from site activities.
PHE recommend that the Environment Agency should ensure that the site has a final approved odour management plan in place.	The Applicant has submitted a revised odour management plan in response to a request for additional information. We have assessed the Applicant's proposals and consider that they are in accordance with our technical guidance note – H4 Odour management. We have approved the revised site odour management plan.

No comments or response received from the following organisations

- Daventry District Council Planning Authority
- Daventry District Council (Environmental Health Department)
- Director of Public Health (Northamptonshire County Council)
- Health & Safety Executive
- Northamptonshire Fire & Rescue Service

2) Consultation Responses from Members of the Public and Community Organisations

The consultation responses received were wide ranging and a number of the issues raised were outside the Environment Agency’s remit in reaching its permitting decisions. Specifically, questions were raised which fall within the jurisdiction of the planning system, both on the development of planning policy and the grant of planning permission.

Guidance on the interaction between planning and pollution control is given in the National Planning Policy Framework. It says that the planning and pollution control systems are separate but complementary. We are only able to take into account those issues, which fall within the scope of the Environmental Permitting Regulations.

a) Representations from Local MP, Councillors and Parish / Town / Community Councils

Representations were received from Marston Trussell Parish Meeting, who raised the following issues.

Response received from Marston Trussell Parish Meeting dated 05/01/16	
Brief summary of issues raised:	Summary of action taken / how this has been covered
The dispersion modelling is based on desktop studies and despite purporting to reflect local topographical or climatic conditions, have little or no regard for either. In addition to being flawed, erroneous and non-specific in the effects the development may have on the surrounding population and land, they cannot be considered as impartial.	Emissions to air from the facility and their potential impacts are discussed in section 5.2 of this decision document. We have audited the Applicant’s odour impact assessment and agree that the conclusions drawn in the report are acceptable, that the facility will not give rise to annoyance from site activities.
The Applicant’s H1 assessment of emissions from combustion of fuel shows that emissions exceed the relevant air quality objectives.	Combustion of biodiesel /oil via CHP engines has been excluded from this application. The permitted activities are specified in section 4.1.1 in this document.
Noise mitigation measures to alleviate the impact of noise have not been provided by the Applicant.	The impact of noise and vibration is addressed in section 6.2.6 of this decision document. The Applicant submitted a noise impact assessment. We have carried out our own check modelling including sensitivity to our observations and agree

	<p>with its conclusions, that emissions of noise and vibration will not give rise to complaints.</p> <p>Permit conditions 3.4.1 and 3.4.2 will ensure that emissions of noise and vibration do not cause pollution off-site.</p>
<p>Odour emissions from the drier would be considerable if waste were directed to this plant prior to the TAD system. It is not uncommon for concentrations to be in excess of 100,000 ou_E/m³.</p>	<p>The drier has been excluded from this application. Please see section 4.1.3 of this decision document for details of the site activities.</p>
<p>Concerns about the design of the biofilter, in relation to the depth of biofilter and the distribution of air within the four beds.</p>	<p>The Applicant provided further information in response to a request for additional information. The Applicant reports that the biofilter has been designed by a technology provider experienced in commissioning biofilters. The biofilter will be validated during commissioning and performance monitored.</p> <p>The Applicant states that routine monitoring will be undertaken to ensure that the biofilter is performing well.</p> <p>In the event the biofilter is ineffective in reducing odour emissions at the facility, we would require the Operator to propose further measures to mitigate odours via enforcement.</p>
<p>The odour in the main reception area is likely to be significantly greater than 15,000 ou_E/m³ given that wastes may be stored on site for 7 days (including wastes in the feed tank).</p>	<p>The Applicant provided further information in response to a request for additional information. The Applicant reports that the estimate given in the odour impact assessment is based on measured field data from other biowaste treatment facilities in England. Typical data obtained from site measurement of inlet air to the biofilter are lower than the odour concentration of 15,000 ou_E/m³ used in the odour impact assessment which is considered conservative.</p>
<p>The cumulative impact of odour emissions from the nearby open windrow composting facility has not been taken into account in the odour impact assessment.</p>	<p>We do not take cumulative impacts into account in quantitative odour modelling. An Operator is only liable for odour pollution they themselves cause, therefore modelling other sources is not appropriate. In reality, there may be many complexities around other odour-emitting activities sited nearby. We assess emissions from the proposed facility only, in order to judge likely complaints from that site. If a series of odour complaints were to occur, we</p>

	<p>would need to investigate the sources of odour and identify the Operator(s) causing the pollution. In the event of persistent complaints, it may be appropriate to reduce the odour benchmark further.</p>
<p>A number of comments about the odour management plan in relation to negative pressure, health & safety of site employees, power failure, site emergencies, technically competent manager, monitoring and BAT.</p>	<p>The impact of emissions of odour is addressed in sections 5.2 (dispersion modelling) and 6.2.5 (odour management plan) of this decision document. The Applicant submitted an odour impact assessment as part of the application. Additional information was submitted in response to a request for further information dated 05/01/16.</p> <p>The odour impact assessment was reviewed by the Environment Agency and we are satisfied that emissions of odour will not have a significant impact on human receptors.</p> <p>We have reviewed and approved the OMP in its revised format. We consider that the revised OMP complies with the requirements of our H4 Odour management guidance note. We agree with the scope and suitability of key measures but this should not be taken as confirmation that the details of equipment specification design, operation and maintenance are suitable and sufficient. That remains the responsibility of the Operator.</p> <p>We have included condition 3.3.1 in the permit which will ensure that emissions of odour do not cause pollution off-site.</p>
<p>The TAD building is not fit for purpose and unsuitable. As a consequence, both noise and odour have the potential to escape through joints and cracks in the concrete panels.</p>	<p>The Applicant reports that the waste reception and treatment building will be constructed from insulated “cold store” type panels and will be fitted with high speed roller shutter doors to control odour emissions.</p> <p>There are no current mandatory BAT requirements for the construction of waste treatment buildings which requires the Operator to comply with them. It is up to the Applicant to choose which construction material for building works in so far as it is fit for purpose and able to contain emissions of noise and odour.</p> <p>We have included a pre-operational condition which requires the Operator to</p>

	<p>submit a commissioning plan which includes proposals to undertake a building “smoke test” to confirm that the waste reception and treatment buildings are capable of containing emissions. We have also included an improvement condition (IC1) in the permit which requires the Operator to submit a review of the performance of the facility against the design parameters stated in the Application.</p> <p>The Applicant has undertaken a noise impact assessment (including modelling). We have carried out our own check modelling including sensitivity to our observations and agree with its conclusions.</p> <p>The permit requires the Operator to undertake the reception, storage and treatment of wastes in sealed buildings to reduce the emissions of odour and noise. We will regulate the site to ensure that this is the case during compliance checks throughout the life of the permit. We are satisfied that emissions of noise and odour will not have a significant impact on residential receptors.</p>
<p>The risk assessment provided by the Applicant is inadequate to demonstrate the activity will not cause harm to the environment.</p>	<p>We have reviewed the Applicant's assessment of the environmental risk from the facility with regard to dust, scavenging birds and animals, litter, pests and accidents. The Applicant’s risk assessment is satisfactory. The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.</p>
<p>The risk of bioaerosols on immune-suppressed patients at two hospitals within 5 miles of the facility has not been taken into account.</p>	<p>Our ‘Position Statement on Composting and the potential health effects from bioaerosols: our interim guidance for permit applicants’ (V1.0 November 2010) requires an Operator of a new composting operation within 250 metres of a ‘sensitive receptor’ (typically a dwelling or workplace) to undertake a risk assessment.</p> <p>In this case, there are no sensitive receptors within 250 metres of the TAD facility. The nearest sensitive receptor is 500 metres north of the site. All waste reception, storage and treatment activities will be undertaken within enclosed tanks in</p>

	<p>sealed buildings fitted with air extraction and abatement. Consequently we consider that there is no significant impact of bioaerosols on any sensitive receptors near the facility.</p> <p>The Applicant has produced a qualitative site-specific bioaerosols risk assessment (SSBRA) with the Application and has proposed initial monitoring of bioaerosols. We have therefore included bioaerosols monitoring requirements in the permit.</p>
<p>The risk of interest features on Coombe Hill Hollow SSSI has not been taken into account.</p>	<p>We have examined the impact of site operations on the Coombe Hill SSSI in section 5.3 of this decision document.</p>
<p>The accident management plan is insufficiently detailed on measures to prevent accidents and limit consequences.</p>	<p>The Applicant submitted an accident management plan in response to a request for additional information. We have reviewed the plan and we are satisfied that appropriate measures will be in place to ensure that accidents that may cause pollution are prevented but that, if they should occur, their consequences are minimised.</p>
<p>The Applicant's environmental policy is inadequate. Consequently, the OPRA spreadsheet should be amended.</p>	<p>The Applicant is required by pre-operational condition 1 (POC1) to submit the full Environmental Management System to the site inspector prior to the commencement of commissioning of the installation. We consider the Opra spreadsheet and score to be correct.</p>
<p>The novel nature of the process and resultant uncertainty and inaccuracies must warrant a stringent regime of independent testing, monitoring and reporting of air quality, noise, odour and dust at several locations surrounding the site. We urge the EA to make this a condition of the permit if it is to be granted.</p>	<p>The United Kingdom Interdepartmental Liaison Group on Risk Assessment (UK-ILGRA) state in their paper "The Precautionary Principle: Policy and Application" that the precautionary principle should be invoked when there is good reason to believe that harmful effects may occur and the level of scientific uncertainty about the consequences or likelihood of the risk is such that the best available scientific advice cannot assess the risk with sufficient confidence to inform decision making.</p> <p>The treatment of wastes by thermophilic aerobic digestion (TAD) is not a novel process. The TAD process has been used historically for the treatment of sewage sludge but is now used to treat other biodegradable waste.</p> <p>We consider there are no grounds for</p>

	<p>adopting the 'precautionary principle' to restrict the processing of biodegradable waste via TAD at the facility or to impose stringent monitoring requirements on the Operator. We are satisfied that the process can be undertaken with no significant impact to people and the environment.</p> <p>We consulted PHE during the determination of the permit application. Their comments on the application are summarised in Annex 3 of this decision document.</p>
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b) Representations from Individual Members of the Public

A total of three responses were received from individual members of the public. Some of the issues raised were the same as those considered above. Only those issues additional to those already considered are listed below:

Response received from individual members of the public	
Brief summary of issues raised:	Summary of action taken / how this has been covered
<p>Noise from the development will be above the readings at Hothorpe Hall and so complaints will be likely.</p> <p>Details of the noise assessment and how it compares to the noise assessment prepared by Sound Barrier Solutions are required, in order for the EA to make a determination of the noise impact of the TAD, and how this affects the environmental permit.</p> <p>Details of how, exactly where and when these measurements are to be taken needs to be clarified.</p>	<p>The Applicant's noise impact assessment was reviewed by the Environment Agency's technical specialists for modelling, air quality, conservation and ecology technical services, who agreed with the assessment's conclusions, that the facility will not give rise to annoyance due to noise emissions from site activities.</p>
<p>HGV noise must be taken seriously, particularly in the area of the woodland eco-lodges.</p>	<p>Noise from heavy goods vehicle movements within the installation have been taken into account in the noise modelling. Vehicle movements outside the installation boundary are the responsibility of the local authority and not within the remit of the Environmental Permitting Regulations.</p>
<p>Appendix J relating to "TAD NOISE Assessment" does not seem to be present.</p>	<p>Appendix J – TAD Noise Assessment was submitted with the Application and is on the public register.</p>
<p>The EMS provided is exceedingly brief and lacks any detail.</p>	<p>The Applicant submitted a summary of the site Environmental Management System (EMS) with the Application. We have included a pre-</p>

	operational condition (POC 1) in the permit which requires the Operator to submit the full EMS to the site inspector for approval prior to the commencement of site commissioning.
There is very little data within the EMS or working plan regarding how, where and when monitoring (noise, exhaust emissions and noise monitoring) will be carried out.	The odour management plan specifies when and how odour monitoring will be undertaken. Combustion of oil / biodiesel is excluded from this Application. The activities will be undertaken within sealed buildings. Consequently, there are no exhaust monitoring requirements imposed on the Operator. In the event there is significant pollution of noise, the Operator is required by the permit to submit a management plan to mitigate noise emissions.
There is also no mention of the monitoring and procedures involved in the removal and spreading of the solid digestate from the TAD and the removal and disposal of the leachate.	The spreading of digestate is not authorised by this permit. If the Operator wishes to spread the digestate on land, they would require a separate permit to carry out this activity. The digestate is also proposed to be used as feedstock material at off-site biowaste treatment facilities.
Information provided by Applicant is based on desktop studies and do not take into account the local terrain or atmospheric conditions. The novel nature of the processes exclude empirical support. Neither do the reports take account of the local terrain or atmospheric conditions. Continuous emissions monitoring and reporting should be imposed in order to secure the health of the local population.	The Applicant has provided information we require to determine a permit application including modelling which takes account of local terrain and atmospheric conditions. Thermophilic aerobic digestion is not a novel waste treatment process. There is no requirement in the Waste Bref Notes and our technical guidance for continuous monitoring of air, odour, noise and bioaerosols emissions at biowaste treatment plants. We consider that the permit conditions and compliance are sufficient to ensure the protection of the environment and human health.

B) Advertising and Consultation on the Draft Decision

This section reports on the outcome of the public consultation on our draft decision carried out between 23 May 2016 and 21 June 2016.

We received one response from a member of the public. Some of the issues raised in the consultation were the same as those raised previously and already reported in section A of this Annex. Where this is the case, the Environment Agency response has not been repeated and reference should be made to section A for an explanation of the particular concerns or issues.

Response received from individual members of the public

Brief summary of issues raised:	Summary of action taken / how this has been covered
<p>Will the local communities or parish councils be notified if subsequent applications for these processes are made?</p>	<p>This would largely depend on the type of variation application that is submitted by the Operator. We would consult on substantial variation applications and on normal variation applications where there is considerable public interest.</p>
<p>Would it not be possible to stipulate that new sound measurements should be stipulated to determine any increase in noise levels at the nearest residential receptors?</p>	<p>We do not consider there is a need to impose additional noise monitoring at this facility due to the location and the enclosed nature of the treatment process. In the event noise emissions are causing annoyance, the Operator is required to submit a noise management plan in accordance with condition 3.4.2 in the permit.</p> <p>Noise emissions from vehicles delivering waste to the facility is outside of the environmental permitting regime and is the responsibility of the local authority.</p>
<p>Could this up to date OMP be provided on the public register?</p>	<p>The updated odour management plan is on the public register.</p>
<p>Table S3.3 of the draft permit indicates that monitoring of odours from the site will be by “daily olfactory monitoring at the site boundary”. Relying on an employee of the plant to subjectively sniff the air at the edge of the site would appear to be a very inaccurate and subjective way of monitoring odour.</p>	<p>Daily olfactory monitoring at the site boundary is a requirement for bespoke biowaste treatment facilities as specified in the permit. This is only one of the measures the Applicant will be implementing to manage odour emissions on site. We consider that the proposed measures as specified in the odour management plan are in accordance with our technical guidance document H4 – Odour management.</p>
<p>Why are the more stringent odour methods stated in the Northamptonshire planning decision notice not being actively requested?</p>	<p>The planning permission process is completely independent to our process for determining an Environmental Permit and it is not for us to comment on the specifics of the planning permission. The planning permission process considers the need, scope and scale of proposed developments in the context of local and regional plans and local infrastructure requirements. The environmental permitting process considers the design and operational techniques associated with the plant in the context of its on-going operation against its stated purpose.</p> <p>Legislation sets out the criteria that this application must meet in order for the Environment Agency to approve an environmental permit. The Environment</p>

	<p>Agency has a duty to determine the permit application and that is what we have done.</p> <p>Emissions of odour from the facility and its potential impact is discussed in section 5.2 of this document. We have reviewed the odour impact assessment provided in the Application which assessed the maximum potential impact of the facility. We are therefore satisfied that the Applicant has used appropriate methodology and that the conclusions presented in the report represent a reasonable assessment of the predicted emissions from the facility and their potential impact on human health. This assessment concludes that there will be no significant impact to health caused by operation of the plant alone. As the assessment has been based on the maximum potential impact, we are therefore satisfied that there would be no significant impact to the environment and human health at any receptor within the locality of the TAD facility.</p> <p>Measures to control odour emissions will be put in place and are discussed in section 6.2.5 of this document. Conditions within the permit will ensure that odour resulting from the facility will be minimised and will not cause pollution beyond the boundary of the site. We are satisfied that the operation of the site, as described within the Application, will minimise odour nuisance.</p>
<p>The draft permit allows the storage of solid processed digestate awaiting collection for off-site use. It does not state where this processed solid digestate is to be stored. The digestate will not be dried yet (drying of digestate not allowed by this permit) and thus will be very malodorous and also will leach fluid which could pollute the groundwater. The storage of digestate should occur in the sealed building with an impermeable floor.</p>	<p>The storage of dry digestate is not stated in the permit. Separation of whole digestate (slurry) via a physical treatment creates a liquid and dry digestate.</p> <p>The Operator will not be undertaking separation of whole digestate at the facility. Therefore, this activity is not authorised by the permit (see Table 1.1 in the permit).</p> <p>Whole digestate will be stored in sealed tanks on impermeable surface with sealed drainage and located within an enclosed building fitted with odour abatement.</p>
<p>For the groundwater to be protected, an impermeable surface and floor is essential. How is this to be ensured and monitored?</p>	<p>The Operator is required to take appropriate measures to ensure that emissions of substances not covered by emission limits are not causing pollution. This includes the monitoring of all impermeable surfaces within the facility. Monitoring of site surfaces will form part of the site's management system. The Environment Agency will ensure that this is the case during compliance inspections.</p>

<p>The monitoring of surface run-off water flowing into the attenuation lagoon before entering the River Welland is very basic. Visual inspection only at undefined intervals is an inadequate method.</p>	<p>Only rainwater from the facility's building roofs are authorised to discharge into the off-site lagoon which is controlled by the Operator of the adjacent gasification plant. Discharges from the off-site lagoon are covered in the permit issued to the Operator of the gasification plant (permit reference EPR/GP3432WP).</p> <p>We do not consider that it is necessary or appropriate to insert stringent monitoring conditions for uncontaminated rainwater from building roofs. We have taken the same approach in other permit applications.</p>
<p>The Applicant should include monitoring of the internal area of each digester tank to check the level of oxygen saturation and ensure that only aerobic digestion is occurring.</p>	<p>The Operator submitted parameters to be monitored during aerobic digestion and this includes the level of oxygen in the digesters. These monitoring procedures form part of the site's management system and are included in Table S1.2 of the permit.</p>
<p>Monitoring methods of measuring the temperature and level of compaction in the biofilter are not given – how can they be monitored as specified if there is no specification?</p>	<p>There is no current standard for monitoring biofilter temperature and compaction in the Waste Treatment Bref Notes. Until such a time monitoring methods are specified, Operators can choose which methods to use provided they are fit for purpose.</p> <p>The monitoring of parameters as specified in the permit is consistent with our regulation of biowaste treatment facilities in England.</p>

No comments or response received from the following organisations

- Public Health England
- Director of Public Health (Northamptonshire County Council)