Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Eye Composting Facility operated by Biffa Waste Services Limited.

The permit number is EPR/AP3433WD.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Structure of this document

- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

Key issues of the decision

Background to the Facility

Biffa Waste Services have applied for a bespoke permit to undertake composting at Eye Landfill. The facility will accept, store and process biodegradable wastes that will meet the requirements of the PAS 100 protocol – specification for composted materials. The facility will process a mix of food wastes, animal wastes and green wastes to generate PAS 100 compliant compost. The maximum annual tonnage of waste accepted at the facility will not exceed 24,000 tonnes, with no more than 10 tonnes per day of animal carcases or animal wastes to be accepted at the site for composting. We have specified that the operator cannot accept more than 10 tonnes per day of animal carcases or animal wastes at any acceptance over this tonnage would be a S6.8 A(1) (c) activity under the Environmental Permitting Regulations – which the operator has not applied for.

The site will share some of the facilities with Eye Landfill and the current recycling operations, namely the existing site office and weighbridge. However, the Composting Facility will operate as a standalone operation and is not technically connected to the existing permitted facilities.

The Composting Facility is located adjacent to Eye Landfill, Peterborough (TF 23380 01470) and approximately 900 m Southeast of the Village of Eye and 1.4 km East of Peterborough. The nearest residential receptor to the facility is Tanholt Farm, located approximately 216 m from the site boundary. There are a number of Sites of Special Scientific Interest, Local Nature Reserves, Special Areas of Conservation, Special Protection Areas and RAMSAR sites within relevant distance of the facility.

The Process

The facility will be split into two different composting stages, the first being in-vessel composting (which will contain two stages of sanitisation) and the second being open windrow composting.

All waste brought onto the site will be stored within the site's reception and processing building which will be fitted with fast acting shutter doors and will be under negative pressure. Wastes will be tipped and inspected to ensure compliance with the waste acceptance procedures before being screened and shredded (using an electric powered static shredder located within the site's building). The processed waste may then be mixed with other wood chip, green waste or other suitable materials to ensure the correct structure for composting.

Once the correct structure of waste is achieved, the waste will be loaded into In-vessel composting (IVC's) and the IVC's will be moved outside to begin the first stage of the composting process which involves sanitisation of the waste. Once the compost has undergone sufficient sanitisation, the compost will be transferred to the maturation pad to undergo open windrow composting.

The IVC containers are connected to a scrubber/humidifier and biofilter (one scrubber/humidifier and biofilter for each stage of the sanitisation process), a thermocouple is inserted and the temperature raised to 80^{o}C and the waste undergoes the first stage of the sanitisation process. The operator will ensure the temperature reached within the vessels stays at a constant 60^{o}C for a period of two days to ensure pathogens and weed seeds are killed. The waste stays within the IVC's for approximately one week, before being unloaded onto a concrete pad to be blended, bulked and reloaded into IVC's to undergo stage two of the sanitisation

process. Any material not suitable to be moved to the second stage of the sanitisation process is moved back into the building where it will be put into a dedicated bay so as to avoid cross contamination with unprocessed wastes.

Wastes which are suitable to be reloaded into IVC's for stage two of the sanitisation process will undergo an additional week of sanitisation. At the end of the second week, the material will be moved to the maturation pad where it will be windrowed. Each windrow is expected to be 7 m wide at the base and 3.5 m high with a separation of 3 – 4 m to allow access of a loader for turning purposes. Windrows will be turned every two weeks and temperature and moisture will be monitored weekly using a probe which will be inserted 0.5 m into the waste.

Waste Acceptance Procedures

Waste acceptance procedures employed by the operator will include ensuring records are provided as to the processes which have produced the waste to be accepted on the site, the type and quantity of waste to be accepted, the form the waste takes (i.e. solid etc) and if there are any special handling requirements.

All wastes to be accepted at the site will be weighed at the weighbridge and visually inspected at the point of deposit within the composting facility's building. Any nonconforming wastes will either be redirected to a suitable facility or, if they have already been deposited within the building, moved to the quarantine area to await removal. All wastes identified by the operator as 'high' odour potential wastes in accordance with the permit application, will be processed within 24 hours of deposit.

Odour Management

The building utilised for initial processing, loading of wastes into IVC's and waste storage will be fitted with a scrubber/humidifier and biofilter (emission point A1). The building will operate under negative pressure to prevent fugitive emissions of dust and odour. The filtration system in the building will act to draw air into the building which will be passed through the biofilter before being discharged.

The stage one and two IVC's will each be fitted to an additional scrubber/humidifier and biofilter, identified as emission points A2 and A3 respectively.

The operator has undertaken air dispersion modelling using our H4 guidance for offensive odours and has measured discharges against an odour unit of 1.5ouE/m^3.

The operator originally split the odour impacts into two stages, odour impacts from Stage 1 processing (initial sanitisation) and odour impacts from the Stage 2 processing (final sanitisation). The operator's odour modelling initially showed that the odour units at the nearest receptor would be in the vicinity of 2.6 ouE/m^3 at R01 Farmhouse at the end of the second stage of sanitisation. The operator concluded that this would be unlikely to have an impact as the operator had measured the odour impacts against odour criteria of 3 ouE/m^3 as the waste, at the end of the second stage of sanitisation, would be consistent with green waste.

Agency guidance (H4) contains odour unit benchmarks to use for odour modelling based on waste inputs. While it is suitable to measure green waste against an odour benchmark of 3 ouE/m^3, landfill wastes, high odourous wastes, food wastes and animal wastes odour should be measured against a benchmark of 1.5 ouE/m^3 as

these wastes are considered to be more likely to cause nuisance at receptors. Given that the site will process a number of highly odourous wastes, food wastes and animal wastes, we informed the operator that we would not accept the modelling as submitted. We required them to investigate what could be done at the site to bring the predicted odour units into compliance with our H4 guidance in order to be confident that the site would not cause a nuisance with neighbours.

The operator has since redesigned the layout of the site to move those processes most likely to cause odour away from the receptors of concern. The operator has moved the positions of the stage 1 and 2 sanitisation process and associated scrubbers/biofilters and the maturation pad southwards so that all sensitive receptors are now more than 250 m away from the areas of concern. The operator then re-ran the odour modelling based on the new distance criteria and determined that odour levels at receptors complied with our benchmark of 1.5 ouE/m^3. However the operator did not take into account the area source emissions from the windrows. We asked the operator to re-run the model again taking into account the area source emission from the maturation pad windrows.

The operator has since re-run the model to take into account our requests and confirms that the odour units at the nearest sensitive receptor will be 1.48 odour units, which complies with our guidance. We have assessed the information submitted by the operator and consider the odour units are at the limit of the benchmark for odourous wastes. This leaves no room for error, therefore, we have inserted an improvement condition into the permit which requires the operator to undertake odour sampling at the receptor of concern once the facility is operational. If the results of the sampling show that odour exceeds 1.5 ouE/m^3, the operator will be expected to review operations. This is discussed in detail under 'Improvement Conditions'.

Fugitive Emissions

Noise

The applicant has identified the main sources of noise from the facility, namely the construction, operation and traffic generation associated with the site and specifically:

- Off loading, storage and mixing of wastes (to be undertaken within a building)
- Shredding, mixing and loading of wastes into the IVC containers (to be undertaken within a building)
- Machinery for the operation of the open windrow composting (to be undertaken outside on the maturation pad).

The operator has stated in the application that the facility will operate between 7 am and 6 pm, Monday to Saturday and will be closed on Public Holidays and Sundays. All unloading of waste, storage, shredding mixing and loading of waste will take place in the building which is equipped with rapid action roller-shutter doors which will be used to control noise emissions. Excessively noisy machinery will not be operated before 8 am and will be located as far as possible from sensitive receptors and, where possible, noisy machinery will be fitted with mufflers, silencers and/or enclosures to reduce noise.

To control potential impacts from traffic on the site, the operator will maintain a strict 10 mph speed limit and any vehicles waiting or queuing to make deliveries will be required to turn their engines off.

We have assessed the operator's noise impact assessment and are satisfied that the operation of the composting facility should not adversely impact upon nearby receptors.

Birds, Pests and Vermin

The operator has stated that the control of birds, pests and vermin will be by a combination of site design and operational procedures. Waste brought to the site will placed inside the site's building for initial screening and shredding before being placed in the IVC's for sanitisation. In order to ensure activities will not result in pest infestations, the operator will rely on the enclosed nature of the activities coupled with the quick 24 hour turnaround times for wastes likely to attract scavengers (food and animal wastes). After the sanitisation process is complete, the waste is considered to be of low pest potential and will be low risk.

Upon detection or notification that pests are causing a nuisance, action will be taken to:

- Employ methods to deter scavengers such as birds of prey and birdscarers; and
- Retain a specialist pest contractor who will inspect the site at regular intervals.

We have assessed the operator's proposals and consider them sufficient to ensure the operation of the facility will not have adverse impacts due to pest infestations.

The operator has considered the impact of flies on nearby receptors and considers the risk to be low due to the enclosed nature of the process as the initial screening and shredding and loading and unloading of wastes will be undertaken within a building which is under negative pressure and the sanitisation process will be undertaken within enclosed IVC's. While the initial stages of the process will have the ability to attract flies, we are satisfied that the operator will have sufficient controls in place to ensure flies are managed and infestations are avoided.

Litter

The operator has stated that the composting feedstock should not be unduly contaminated with material that could cause litter. Any wastes which were brought onto the site with evidence of significant contamination would be treated as unacceptable wastes. These wastes will either be rejected, or the contamination will be removed. The operator will employ manual litter pickers prior to the maturation process and to remove any litter which does become windblown around the site. However due to the strong prevailing winds, the operator has stated that the area around the composting facility will be inspected daily and uncontained wastes including litter will be collected for appropriate disposal.

Improvement Conditions

We have included two improvement conditions in the permit. The first (IC1) relates to the odour modelling that was undertaken by the Applicant in support of the application. While the Applicant has been able to demonstrate through the modelling that odour units at the nearest receptor should not exceed 1.5 ouE/m^3, the odour modelling indicates that they are at the very limit of what we consider to be acceptable. We consider that the operator should demonstrate that the modelling submitted with the application is accurate by undertaking odour sampling at or near the sensitive receptor once the facility is operational. Should the odour assessment undertaken for this improvement condition indicate that the modelling predictions were flawed and odour is above 1.5 ouE/m^3, we will require the operator to completely revise the odour abatement at the site. This will include revising the effectiveness of the biofilters, the waste inputs, the effectiveness of the building and the odour management plan.

The second improvement condition (IC2) requires the operator to revise the odour management plan within six months of operations commencing. This is to ensure that the odour management plan is fit for purpose and sufficient to ensure that the site is operated in accordance with Best Available Techniques (BAT) for controlling odours. The operator will be required to revise all operational techniques employed at the site and will be required to determine if any additional techniques are needed, or if any tweaks are required to the current operations to ensure odour does not impact at the nearby receptors.

Annex 1: decision checklist

This document should be read in conjunction with the Duly Making checklist, the application and supporting information and permit/ notice.

Aspect considered	Justification / Detail	Criteria met Yes
Consultation		
Scope of consultation	The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.	✓
Responses to consultation, and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision. The decision was taken in accordance with our guidance.	✓
Operator		
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.	✓
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓
The site		
Extent of the site of the facility	The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.	✓
Site condition report	The operator has provided a description of the condition of the site. We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED– guidance and templates (H5).	✓

Aspect considered	Justification / Detail	Criteria met Yes
Biodiversity, Heritage, Landscape and Nature Conservation	The application site is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat . The operator has identified that there are: • seven Sites of Special Scientific Interest (SSSI), the closest of which is Eye Gravel Pit, located approximately 2.2 km north of the site, • six Local Nature Reserves (LNR), the closest of which is Eye Green, located approximately 1.75 km north of the site, • two Special Areas of Conservation (SAC), the closest of which is Nene Washes, located approximately 6.6 km south east of the site, • one Special Protection Area (SPA), Nene Washes, located approximately 6.5 km to the east' and • one RAMSAR site, Nene Washes, located approximately 4.5 km east of the site. We have assessed the operator's risk assessments and determined, as per the 'Key Issues' section of this document, that potential impacts from this facility will be limited to odour, noise, dust, pests/vermin and litter. As part of the determination process we have assessed the risk assessments and management plans which specify how these potential impacts will be controlled. We consider that there are sufficient management techniques in place to control discharges of contaminants to air, water and land from the facility. All initial activities (screening, shredding, loading and unloading) will take place within a building fitted with fast acting roller doors which will be under negative pressure to ensure fugitive emissions are controlled. The operator has specified that litter pickers will be employed to ensure litter does not leave the site and all potentially noisy equipment will be fitted with noise abatement equipment. The operator will monitor the site for pests and a specialist contractor will be employed in the event that the site has any issues with birds, mice, rats or flies. All wastes undergoing the sanitisation process will be stored outside of the site processing building, within enclosed air tight IVC's which are situated on an impermeable surface with sealed drainage. All open windrow composting will take place on an impermeable maturation pad which will	✓

Aspect considered	Justification / Detail	Criteria met Yes
	slope towards an internal lagoon to ensure that any leachates generated by the process will drain to a central point. The leachate will either be reused within the process, or removed from site for disposal. The operator has assessed the likely impacts of dust from the facility and determined that the part of the process most likely to produce dust is the open windrow composting and vehicle movements. The operator has proposed to ensure dust is minimised and controlled by the use of water sprays to keep site tracks and windrows damp to prevent dust emissions. The operator will also employ the use of biofilters, containment of materials during the pre-treatment process by way of the building, and containment of any particulates during the sanitisation process by way of enclosed IVC's. As demonstrated within the application, the operator has management plans in place to manage risks from the facility such that we do not consider that the site will impact on the habitats and wildlife sites of interest detailed above. We have not formally consulted on the application. The decision was taken in accordance with our guidance.	
Environmental Risk Assessment and operating techniques		
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory. This is discussed in the 'Key Issues' section above.	✓
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The TGNs for this sector are SGN S5.06 ' Guidance on the Recovery and Disposal of Hazardous and Non Hazardous Waste' and 'How to comply'. The key relevant sections of SGN S5.06 which apply to this process are: • Waste pre-acceptance - The composition of the waste will be assessed prior to acceptance to site which will include information about the processes producing the wastes, predicted quantities, the form of the waste and any hazards associated with the wastes. Their suitability for treatment or storage prior to acceptance at the facility will be assessed.	✓

Aspect considered	Justification / Detail	Criteria met Yes
	• Waste acceptance – On arrival the loads will be weighed at the weighbridge and all documents checked. Waste will be visually inspected at point of discharge and during the processing of wastes. Any non conforming wastes will be deposited in quarantine area pending removal to an appropriate facility. The waste acceptance procedures are included in the operating techniques table (Table S1.2) in the permit. • Waste storage – All wastes accepted at the site will be stored within an enclosed building as will any wastes which require reprocessing. The surfacing within the building will be concrete. IVC's will be stored outside of the building on an impermeable surface with sealed drainage. The windrows will be situated upon an impermeable maturation pad which will slope to enable contaminated surface water runoff to be collected and disposed of. • Point source emissions to air – There are three point source emissions to air from the facility. One point source emission (A1) is from the site's building which will operate under negative pressure, one point source emission will be from the IVC's undergoing the first stage of sanitisation (A2) and the third point source will be from the biofilter fitted to the IVC's undergoing the second stage of sanitisation (A3). The odour dispersion modelling concludes that there is unlikely to be an exceedance of the odour benchmark of 1.5 ouE/m^3 as specified in our H4 Odour Management guidance at receptor locations, however we have included an improvement condition within the permit which requires the operator to confirm this once the facility is operational. • Fugitive emissions to air – All waste processing will take place within the building with enough space within the building for vehicles to enter and the roller shutter doors to be closed prior to emptying of the vehicle. Fugitive emissions to air will be minimised by operations and waste storage will be undertaken within the building. Mitigating measures are in place to reduce the impact of dust on sensitive receptors. • Odour – Waste will be stored or processed inside the building. The building is fitted with fast acting doors which will only be open for vehicles to enter	

Aspect considered	Justification / Detail	Criteria met
		Yes
	and leave the building. The building will be operated under negative pressure which will draw fresh air into and through the building and discharge the collected air through the biofilter (emission point A1). The waste will undergo further processing within air tight IVC's for stage one and two sanitisation. Air from each sanitisation stage is passed through a biofilter (emission points A2 and A3) for treatment before being discharged to air. Once wastes have been sufficiently sanitised, the waste will be placed in open windrows where they will undergo the final stages of composting, wastes will be turned every two weeks. • Fugitive emissions to surface water and land – The surfacing within the building will be concrete with sealed drainage as will the storage area for the IVC's. The windrows will be placed on an impermeable surface which will drain to lagoons, the leachate collected in the lagoons will either be reused in the process or removed from the site for disposal. All fuels and lubricants will be stored within a bund which has sufficient capacity to hold 110% of the largest tank, or 25% of the total volume. • Raw materials/ waste minimisation/ water use – Raw materials used on site are limited to fuels and oils for site plant and process equipment. The opportunities for waste minimisation are limited given the nature of the installation. Water use is limited to use in the site's offices and facilities. Surface water and leachates which arise from activities will be stored on site and utilised in the process as required. • Accidents – An Accident Management Plan has been submitted which identifies the hazards, associated risks and measures required to reduce the risks at the facility. A Fire Risk Assessment has been included in the accident management plan which identifies that a fire detection system will be installed on site, the operator will rely on pre-acceptance and acceptance checks to ensure only permitted wastes are brought onto site. No explosive, flammable or oxidising wastes will be accepted. • Noise – Good practice measures are proposed to reduce noise and vibration at the facility. These	

Aspect considered	Justification / Detail	Criteria met Yes
	include the storage and treatment of wastes within a building, maintenance of plant and equipment, fitting of vehicles and noisy equipment with mufflers and silencers. The proposed techniques for control of priorities are in line with the benchmark levels contained in the TGN and we consider them to represent appropriate techniques for the facility. The permit conditions will ensure compliance with relevant BREFs and BAT Conclusions.	
The permit conditions		
Raw materials	We have specified limits and controls on the use of raw materials and fuels.	✓
Waste types	We have specified the permitted waste types, descriptions and quantities which can be accepted at the regulated facility. We have assessed the waste codes proposed by the operator and consider them to be acceptable and consistent with the PAS 100 protocol. We have specified the requirements of the protocol in the description column for those wastes where the PAS 100 protocol was stricter than that of the generic EWC description to ensure the operator does not accept any wastes outside of what was applied for.	✓
Improvement conditions	Based on the information on the application, we consider that we need to impose improvement conditions. We have imposed two improvement conditions, both relating to odour. These are discussed in the Key Issues Section above.	✓
Incorporating the application	We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process. These descriptions are specified in the Operating Techniques table in the permit.	✓
Monitoring	We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods	✓

Aspect considered	Justification / Detail	Criteria met Yes
	detailed and to the frequencies specified. We have required monitoring to be undertaken in the permit, this is to ensure the facility is operated in such a way as to control bioaerosols and to ensure that the facility is operated in accordance with BAT.	
Reporting	We have specified reporting in the permit.	✓
Considerations of foul sewer	We agree with the operator's justification for not connecting to foul sewer.	✓
Operator Competence		
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓
Technical competence	Technical competency is required for activities permitted. The operator is a member of an agreed scheme.	✓
Relevant convictions	The National Enforcement Database has been checked to ensure that all relevant convictions have been declared. Relevant convictions were found and declared in the application. A post conviction plan was submitted by the operator and assessed as satisfactory. The operator satisfies the criteria in RGN 5 on Operator Competence.	✓
Financial provision	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓

Annex 2: Consultation and web publicising responses

Response received from
Planning Services Peterborough Council
Brief summary of issues raised
Operator has a planning application pending for an IVC facility and continued use of the existing recycling facility.
Summary of actions taken or show how this has been covered
No actions taken – Planning permission is outside the scope of the permit determination process. It should be noted that if the operator operates the site prior to planning being granted, this would be a breach under the powers of the planning authority.

Response received from
Public Health England
Brief summary of issues raised
No issues raised provided the permit contains conditions to ensure odour, export of degradable wastes and bioaerosols do not impact upon public health.
Summary of actions taken or show how this has been covered
These matters have been considered as part of the application and we are satisfied that the operator has sufficient controls in place to contain dust. The operator has undertaken a bioaerosol risk assessment which concludes there should not be any risk to residents due to bioaerosols and we have included an improvement condition within the permit to ensure odour from the site does not become a fugitive emission of concern.