

Environment Agency permitting decisions

Variation

We have decided to issue the variation for Blaise Farm Quarry Closed Vessel Composting operated by New Earth Solutions (Kent) Limited.

The variation number is EPR/CP3298LQ/V003.

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

This variation implements the changes brought about by the IED for “existing facilities operating newly prescribed activities” and completes the transition of this facility from a waste operation to an IED Installation.

Section 5.4 Part A (1)(b)(i) – Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving... biological treatment.

The permit for the site is being varied from a SR2008No17 to a Bespoke permit, due to a workplace receptor within 250 metres meaning that the activities do not meet the criteria for a SR2012No4 permit.

Blaise Farm Quarry Closed Vessel Composting is located within West Malling in Kent at National Grid Reference TQ 66337 56372, and has been operating since 2008. The facility has an annual throughput of 75,000 tonnes including source segregated green waste, co-mingled food and green waste, and source segregated food waste. Waste is deposited in a reception building where the green waste and co-mingled waste are shredded. The source segregated food waste is stored prior to transfer to an appropriately licensed facility. The homogenised waste materials are then transferred to the compost halls and formed into windrows, which are positioned above sub-surface aeration ducts. On completion of the active phase of the composting operations, which are undertaken in accordance with the Animal By-Products Regulations to sanitise the wastes, the resultant materials are then transferred to the maturation halls following screening. The resultant compost is produced to a PAS 100 standard.

There are no changes to operation as a result of this variation; the types and quantities of wastes which are received into the facility are not amended by this application.

Emissions to air

Biofilter:

Whilst not considered a point source emission, the biofilter is still a source of emissions to air (an area source of emission), and is therefore referenced within the permit in the process monitoring requirements and is required to be regularly checked and maintained to ensure appropriate temperature and moisture content. The biofilter has a surface area of 600 m² and contains 900 m³ of bark material. The media comprises a 300 mm layer of double shredded and broken root wood, mainly from rhizomes, and 1.7 m layer of uncomposted, chopped bark mixed with spruce chips. Only fresh, untreated bark and chips will be used as raw material. The time when the media needs to be changed can be determined by the degradation of the material which can be cross checked by the pressure losses from the collection sump to the biofilter entry point (at the media). This can be checked either on site or remotely by the manufacturer.

The site already has a maintenance schedule in place for the biofilter, which includes daily maintenance and weekly visual checks. The pressure and temperature are constantly monitored by the SCADA system, and the biofilter is automatically irrigated as required. Biofilter flow surveys and odour bag analysis are routinely undertaken. Any channels of high flow detected by the flow monitoring are remedied by regularly agitating the media.

Bioaerosol emissions:

Bioaerosols are controlled through the full enclosure of all activities. The aim is to prevent long-term exposure to bioaerosols. Access to the buildings is restricted. Staff entering the buildings will be provided with personal protective equipment (including filter masks).

The site already undertakes bioaerosol monitoring every 6 months during normal operating conditions. Monitoring is undertaken at three locations; upwind of the facility, downwind of the facility and adjacent to the nearest receptor.

There are sensitive receptors within 250 metres of the composting activity. This meant that a qualitative site specific bioaerosols risk assessment was required. Following the publication of the Environment Agency's Technical Guidance Note M9 – Environmental monitoring of bioaerosols at regulated facilities in February 2017, we have included new conditions for the management of bioaerosols in the permit. We have also updated the bioaerosols monitoring requirements in accordance with the M9 monitoring guidance. The Environment Agency requires quarterly monitoring for the first year of operation and twice a year thereafter, unless another frequency is agreed in writing.

Emissions to sewer, surface water and groundwater

There are no direct discharges to water or sewer. Effluents arising from the facility are as follows:

- Leachate produced from the biological treatment stage and biofilter sump.
- Effluent from the aqueous scrubber (this is a closed loop system, however the process produces extra water).
- Surface water from roof drainage, road and other impermeable surface drainage (clean surface water).
- Surface water from concrete pad in front of reception building.
- Foul water from site offices and staff welfare facilities.
- Leachate storage area.

Emission to	Unit process or activity
Leachate holding tank (to off-site treatment)	Leachate from composting halls and biofilter sump. Aqueous scrubber liquor. Vehicle wash down area. Hand washing from sanitation stations. Surface water from pad in front of reception building.
On-site lagoon	Water from building roofs.
On-site lagoon, via oil interceptors	Water from external paved areas (clean surface water).
On-site cess pit (to off-site treatment)	Staff offices and welfare facilities

Leachate:

Sealed concrete floors throughout the complex of buildings prevent any seepage, with an underlying sealed membrane providing secondary protection.

A dedicated sealed drainage system within the composting halls uses gravity to collect leachate in knock out pots, from where it is piped via a silt trap to the leachate holding tank. Condensate collected in the biofilter sump is also routed to the leachate holding tank via the silt trap. There are two leachate holding tanks sited within a concrete bund, only one is routinely used and the other is contingency storage.

Effluent from the aqueous scrubber:

Water within the ammonia scrubber is replaced automatically on a cyclical basis. By the end of the cycle the acid dose is neutralised and the effluent is discharged to the leachate holding tank.

Surface water lagoon:

There is an onsite surface water lagoon that acts as a soak away with water slowly percolating through the bedrock to the groundwater below. Only clean surface water is discharged to the lagoon via hydrogen interceptor and sediment trap (surface water from the front of the reception building is captured and sent to the leachate holding tank). The water quality is monitored quarterly for suspended solids, ammonia, pH, COD, heavy metals, BOD, nitrogen, potassium and phosphorus. There are management procedures in place to ensure interceptor inspection, emptying, maintenance and cleaning procedures are in place.

The surface water stored within the lagoon is also used to supplement the water supply for the irrigation system for the composting windrows within the composting halls.

There is a Groundwater Management Plan in place at the site, which is incorporated within the Environment Management System (document reference 4.3 (16 BLA) Groundwater Management Plan, version 5, dated April 2015).

Fugitive emissions of substances

The storage and treatment of wastes is carried out within buildings provided with impermeable surfacing and sealed drainage; the internal floors are sealed concrete with an underlying sealed membrane providing secondary protection. All external road ways, turning areas and parking areas are sealed concrete or tarmac bounded by concrete kerbs.

The site infrastructure and operations will be managed in order to minimise the risk of fugitive emissions. These controls include:

- Materials will only be used within the processing building.
- Storing liquids only on impermeable surface.
- Planned, preventative and reactive maintenance programmes to minimise leaks.
- Effective housekeeping to ensure all site surfaces are kept clean and in a good state of repair.

Odour

The installation has the potential for causing odorous emissions through various stages of the process, such as delivery of waste, processing of waste and removal of compost product.

The site has previously received complaints from local residents due to issues with odour, which began in 2011 and have since been brought under control. This was due to a number of measures including:

- Biofilter replacement.
- Replacement of pipework liable to corrode to prevent escape of malodour.
- Review of operating techniques and odour management plan.
- Improved housekeeping.

The process is fully enclosed with all operations being carried out within purpose built buildings provided with a dedicated air handling system for building ventilation. Under floor aeration ducts within the composting halls also draw through the composting windrows to maintain aerobic conditions. This has the added benefit of creating negative pressure within the composting halls, preventing localised escapes of odours when the doors are opened for access. Air drawn through the underfloor ducts is released to atmosphere via the aqueous scrubber and biofilter.

The aqueous scrubber and biofilter ensure that trace odour within the ventilation air is clean before being emitted to atmosphere. The aqueous scrubber targets ammonia and the biofilter residual trace odours through

microbial activity. A process monitoring condition has been included within the permit for both the biofilter and scrubber system to ensure optimum functional conditions.

A community liaison meeting is held on a quarterly basis, with attendees including the operator, Environment Agency, Environmental Health, Local Authority and local residents. The meeting provides the opportunity for the operator to update the committee on operations, improvements, developments and any problems that have occurred on site since the last meeting.

There is an Odour Management Plan in place at the site, which is incorporated within the Environment Management System (document reference 4.3 (7 BLA) Odour Management Plan, version 5, dated February 2014).

Noise and vibration

The installation has the potential to cause noise and vibration through the site operation. The sources of noise at the facility are:

- Deposit of waste from vehicles into the main reception hall.
- Mobile plant in the reception hall.
- Primary shredder.
- Mobile plant for moving shredded material.
- Fans for aeration of the windrows that draw air to the scrubber and fans for building ventilation.
- Pumps for overhead irrigation system.
- Mobile turner.
- Mobile plant for removal of stabilised/sanitised material.
- Screen for removal of residual contaminants from compost.

All plant utilised at the facility is silenced in accordance with the manufacturers' specification and maintained as such, and only operated within enclosed buildings. Deliveries only take place during normal working hours, and noise produced by the shredding operation will be minimised by the enclosure of the shredding mechanism. Basic good practice measures for the control of noise and vibration, including planned preventative maintenance, are employed throughout the facility. Additionally the site is operated in accordance with the conditions and limits for noise attached to the planning permission granted.

At this time we are satisfied that a site specific Noise and Vibration Management Plan is not required beyond the controls detailed in the EMS. However, the permit conditions contain a provision for the Environment Agency to request the operator to produce and implement an Noise and Vibration Management Plan should the activities give rise to pollution outside the site due to noise and/or vibration.

Dust

The site infrastructure and operations will be managed in order to minimise the risk of dust emissions. These measures include:

- All operations are contained within buildings under negative pressure to prevent the escape of dust.
- All buildings have fast acting roller shutter doors that remain closed at all times unless vehicles are passing through.
- All vehicles are covered.
- All access roads are hard standing.
- Effective housekeeping to ensure all site surfaces are kept clean; there is a road sweeper available on site at all times, which is utilised on a frequent basis and can be increased if deemed necessary.
- The wind sifter used during the screening process incorporates bag filters, which reduces the accumulation of atmospheric dust from this process.

Pests

The site infrastructure and operations will be managed in order to minimise the risk of pests. These measures include:

- Effective housekeeping to ensure all site surfaces are kept clean.
- All operations are carried out within a building under controlled conditions.
- Waste is not stored on site for periods exceeding 72 hours prior to processing, and is handled on a 'first in – first out' basis.
- The buildings were built with seals to prevent the ingress of rodents and all voids or spaces in which they might hide/nest have been eliminated.
- All staff are trained in fly control techniques and the necessary equipment is available on site.
- Daily monitoring is undertaken by site staff for the presence of pests, and monthly by an approved pest control contractor.

At this time we are satisfied that a site specific Pest Management Plan is not required beyond the controls detailed in the EMS. However, the permit conditions contain a provision for the Environment Agency to request the operator to produce and implement a Pest Management Plan should the activities give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site.

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
Receipt of submission		
Confidential information	A claim for commercial or industrial confidentiality has not been made.	✓
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on commercial confidentiality.	✓
Consultation		
Scope of consultation	<p>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. For this application we consulted the following bodies:</p> <ul style="list-style-type: none"> • Public Health England • Health and Safety Executive. • Food Standards Agency. • Local Authority – Planning. • Local Authority – Environmental Health. • Fire and Rescue Service • 	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>The decision was taken in accordance with our guidance.</p>	✓
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.	✓
The facility		
The regulated facility	The regulated facility is an installation which comprises the following activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations and the following	✓

Aspect considered	Justification / Detail	Criteria met Yes
	directly associated activities: <ul style="list-style-type: none"> • Storage of waste pending recovery or disposal. • Physical treatment for the purposes of recovery. • Raw material storage. • Process water collection. 	
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.	✓
Biodiversity, Heritage, Landscape and Nature Conservation	The application included an environmental impact assessment, which covered all potential sources of emission and both local and non-local impacts. There are no changes to operation as a result of this variation; the types and quantities of wastes which are received into the facility are not amended by this application. The application is within the relevant distance criteria of protected sites for a bespoke permit. An Appendix 11 was not previously completed due to the site originally having a Standard Rules permit. <ul style="list-style-type: none"> • North Downs Woodlands SAC – 6.2 km • Peters Pit SAC – 7.9 km Therefore an assessment of the application and its potential to affect the sites has been carried out as part of the permitting process for the variation. We consider that	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>the application will not affect the features of the sites.</p> <p>We have not formally consulted on the application. An Appendix 11 has been completed for information only. The decision was taken in accordance with our guidance.</p>	
Environmental Risk Assessment and operating techniques		
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p>	✓
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes –</p> <ul style="list-style-type: none"> • Sector Guidance S5.06 – Guidance for the Treatment of Hazardous and Non-Hazardous Waste; • BRMA BAT recommendation document; • Noise assessment and control; • Odour Management <p>The proposed techniques/emission levels for priorities for control are in line with the benchmark levels contained in the above technical guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>We are satisfied with the BAT assessment provided by the operator which adequately addresses the following points:</p> <ul style="list-style-type: none"> • pre-acceptance of waste • acceptance of waste • storage and handling of waste • process (treatment) description • fugitive emissions to air • fugitive emissions to surface and groundwater (secondary containment, site drainage plan) • odour management • point source emissions to air, water or land (where relevant) • monitoring • accidents <p>Further discussions regarding emissions from the installation are detailed in the key issues section.</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
The permit conditions		
Waste types	<p>We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility. We are satisfied that the operator can accept these wastes because they have the necessary infrastructure, operating systems and technical capability to manage these wastes in an appropriate manner.</p> <p>The wastes types can be treated via composting as they are included in the Composting Quality Protocol (CQP).</p>	✓
Incorporating the application	<p>We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process. These descriptions are specified in the Operating Techniques table in the permit.</p>	✓
Emission limits	<p>We have decided that emission limits should be set for the parameters listed in the permit.</p> <p>The following bioaerosols (Total bacteria and <i>Aspergillus fumigatus</i>) have been identified as being emitted in significant quantities and ELVs and/or equivalent parameters or technical measures based on BAT have been set for these substances and others. We have made these decisions in accordance with the M9 monitoring guidance.</p>	✓
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>These monitoring requirements have been imposed in order to demonstrate compliance with the conditions of the permit for operations requiring the management of bioaerosols emissions and have been made in accordance with the M9 monitoring guidance.</p> <p>Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
Reporting	<p>We have specified reporting in the permit.</p> <p>Reporting requirements for bioaerosol monitoring, biofilter efficiency, annual compost production and performance parameters have been included. These reporting requirements are deemed sufficient and proportional for the Installation. We made these decisions in accordance with Sector Guidance S5.06 and the M9 monitoring guidance.</p> <p>Reporting forms have been prepared to facilitate reporting of data in a consistent format.</p>	✓
Operator Competence		
Environment management system	<p>There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with our guidance on how to develop a management system for environmental permits.</p> <p>There is an EMS in place at the facility that is certified to ISO 14001.</p>	✓
Technical competence	<p>Technical competency is required for activities permitted. The operator is a member of an agreed scheme.</p>	✓
Relevant convictions	<p>The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>The operator satisfies the competence requirements for environmental permits.</p>	✓
Financial provision	<p>There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The operator satisfies the competence requirements for environmental permits.</p>	✓

Annex 2: Consultation and web publicising responses

Summary of responses to consultation and web publication and the way in which we have taken these into account in the determination process.

Response received from
Public Health England (received 13/01/2016).
Brief summary of issues raised
<p>We recommend that any Environmental Permit issued for this site should contain conditions to ensure that the following potential emissions do not impact upon public health: fugitive emissions of dust, bioaerosols and odour during the processing of waste and compost.</p> <p>We note that the applicant states that 6 monthly bioaerosol monitoring will be undertaken at off-site locations, including the nearest receptor and that monitoring results from June 2014 have been included within the applications Schedule 5 information. The results suggest that concentrations are below acceptable levels; however the Environment Agency may wish to ensure that more recent monitoring has been undertaken to confirm bioaerosol concentrations continue to be acceptable off-site.</p> <p>Based solely on the information contained in the application provided, PHE has no significant concerns regarding risk to health of the local population from this proposed activity, providing that the applicant takes all appropriate measures to prevent or control pollution, in accordance with the relevant sector technical guidance or industry best practice.</p>
Summary of actions taken or show how this has been covered
<ol style="list-style-type: none">1. Dust – The site infrastructure and operations are managed in such a way as to minimise the risk of dust emissions. These measures include effective housekeeping, undertaking operations within buildings under negative pressure, and all access roads are hand standing.2. Bioaerosols – A monitoring condition is included within the permit for total bacteria and <i>Aspergillus Fumigatus</i>. This decision was made in accordance with the Environment Agency’s Technical Guidance Note M9 – Environmental monitoring of bioaerosols at regulated facilities , which was published in February 2017.3. Odour – The site operations are undertaken in order to minimise the risk of odour, which include both management controls and abatement through the use of an acid scrubber and biofilter. The site also has an Odour Management Plan in place, and a community liaison meeting is held on a quarterly basis.

No responses were received from the following:

- Members of the public via web publication.
- Health and Safety Executive.
- Food Standards Agency.
- Local Authority – Planning.

- Local Authority – Environmental Health.
- Fire and Rescue Service.