

# Permitting decisions

## Bespoke permit

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We have decided to grant the permit for Swindon Clinical Waste Transfer and Treatment Facility operated by Tradebe Healthcare National Limited.

The permit number is EPR/CP3138QD.

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 provides a record of the decision making process. It summarises the decision making process in the decision checklist to show how all relevant factors have been taken in to account.

This decision document provides a record of the decision making process. It:

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision checklist](#) to show how all relevant factors have been taken into account
- shows how we have considered the [consultation responses](#).

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

Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit covers.

### Key issues of the decision

The installation comprises of the treatment of hazardous clinical healthcare wastes and the storage of hazardous waste pending treatment or prior to transfer for disposal or recovery. These activities are described under Schedule 1, Part 2, section 5.3 A(1)(a)(ii) and section 5.6 A(1)(a) of the Environmental Permitting Regulations 2016 (as amended).

The following are directly associated activities to the treatment plant:-

- Gas fired boiler used to generate steam for the process (1.74 MW);
- Washing of re-usable clinical waste containers;
- Storage of raw materials;
- Vehicle washing.

In addition the following waste operations are undertaken:-

- Light compaction of non-hazardous offensive waste;
- The storage of non-hazardous waste pending treatment or transfer prior to disposal or recovery.

The site provides for the reception, segregation, storage and transfer of various waste types, including Clinical Wastes. A restricted range of wastes are permitted to be treated via submission to an Alternative Treatment activity comprising steam treatment, with subsequent shredding of the steam treated wastes.

The waste treatment process is undertaken within a building. Waste is stored in designated storage areas inside the building. All waste is stored in fully enclosed, leak proof containers and the containers are stored on impermeable surfaces with a sealed drainage system.

The treatment plant consists of a shredder, a single chamber rotoclave and pollution abatement equipment. The internal drum of the rotoclave will rotate and steam will be pumped into the chamber at an elevated pressure and temperature until the target temperature has been reached. A combination of heat, moisture and residence time will disinfect the waste. The treated waste is automatically discharged from the rotoclave onto a conveyor belt which takes it to a shredder. The shredded waste material is then subjected to compaction before being taken off site by road in sealed containers. This system will process around 29 tonnes of clinical waste per day.

Off-gases from the rotoclave are cooled in a condenser and the resulting water discharged to foul sewer.

The abatement system from the treatment process comprises of a high efficiency particulate air (HEPA) filter, and a carbon filter bed that in combination are designed to remove any infectious bioaerosols, excess moisture and any residual organic compounds and odours from the off-gases before release to atmosphere.

There are three emission points to air, from the treatment process and the associated gas fired steam boiler, and from the associated shredder hood. There is also an emission to foul sewer arising from the treatment process condensate and container washing process. There are no emissions to surface water from the activities.

The total waste storage capacity for the site is 120 tonnes, of which a maximum of 102 tonnes is for hazardous waste and a maximum of 18 tonnes for non-hazardous waste.

## **AIR EMISSIONS:**

There are three emission points to air, from the rotoclave treatment process and the associated gas fired steam boiler\*, and from the associated shredder hood.

We have carried out an examination of the applicant's Air Quality Assessment submission using the Environment Agency's screening tool and have run an assessment both with and without the presence of buildings. It can be observed that the PCs and PECs do not vary significantly between both scenarios, and therefore it can be concluded that:

1. The annual Process Contribution (PC) for NO<sub>2</sub> at relevant human health receptors is insignificant (less than 1% of the Ambient Air Directive (AAD) Limit Value) at most receptors. However the Predicted Environmental Concentrations (PEC) are not significant (below 100% of the Ambient Air Directive (AAD) Limit Value) at all human health receptors.
2. The short term PCs for NO<sub>2</sub> at all but two relevant human health receptors are insignificant. However the Predicted Environmental Concentrations (PEC) are not significant (below 100% of the Ambient Air Directive (AAD) Limit Value) at those receptors.
3. Based on the background NO<sub>2</sub> concentration of 17.4 µg/m<sup>3</sup> (used in the screening tool), we believe there is considerable headroom before the 1.74 MWth natural gas engine can cause an exceedance.

However, it should be noted that the applicant's PCs are conservative as they have included emissions from traffic in their assessment.

\*The boiler is to be installed to provide steam for injection to the rotoclave system. The boiler to be used on site is an existing refurbished system that will be serviced prior to use and will be fired on natural gas.

The rated thermal input of the boiler is >1 MWth (approx. 1.74 MWth based on 167 m<sup>3</sup>/hour gas at a calorific value of 37.5 MJ/m<sup>3</sup>).

As a generator with a rated thermal input equal to or greater than 1 MWth and as it originally came into operation before the 1st December 2016, it is regarded as an existing combustion plant and hence benefits from the transitional arrangements within the Medium Combustion Plant Directive (MCPD). A permit in compliance with MCPD for this boiler will therefore be required by the 1st January 2029 as the MWth input is >1 and <5.

As an existing boiler there is a requirement to achieve NO<sub>x</sub> emissions <250 mg/Nm<sup>3</sup> to be in compliance with the requirements of the MCPD by 1<sup>st</sup> January 2030. Currently the boiler achieves 154 mg/Nm<sup>3</sup> or less NO<sub>x</sub> at around 4.9% O<sub>2</sub> (approx. 172 mg/Nm<sup>3</sup> at 3% O<sub>2</sub>).

### **Emissions to foul sewer:**

There are emissions to foul sewer arising from the treatment process condensate and container washing process, as well as effluent from yard and car park run-off and vehicle washing (via an interceptor). There are no emissions to surface water from the activities.

#### **Rotoclave Condensate (Emission Point 4)**

The Condenser is installed on the steam extraction system from the rotoclave. Small quantities of condensed water will be routed directly to the trade effluent drainage point on-site from the condenser system located within the process building. This will be an intermittent discharge when operational. When the rotoclave was operating at Tradebe's Rochester site the discharge rate was measured at up to 10 litres per hour. No treatment is envisaged as being required prior to discharge to sewer and the flowrate will not be directly monitored.

#### **Vehicle washing (Emission Point 5)**

On occasions it will be necessary to wash the external surfaces of road vehicles. This would be done on an impermeable surface with sealed drainage that is routed directly to the trade effluent drainage system on-site.

#### **Other emission to foul sewer**

Other sources which are routed directly into the trade effluent drainage system on-site include

a) Boiler blowdown - The boilers will be used to raise steam for use in the rotoclave system. Steam condensate will be collected from the rotoclave and returned to the boiler hotwell for reuse. However, some steam condensate will be "lost" to the air extraction systems described above and this will need to be replenished. Periodically it will also be necessary to replace some of the boiler water feed to remove impurities. This boiler blowdown discharge will contain some traces of boiler treatment chemicals. This boiler blowdown will be directed to the trade effluent drainage system on-site. This will be a periodic discharge only and will be automated to ensure it discharges only when required. No treatment is envisaged as being required prior to discharge to sewer and the flowrate will not be directly monitored. This is deemed as acceptable and is consistent with the methods at the operator's Rochester site.

b) Bin washing units - After the waste has been tipped from the incoming waste bins into the process, the bins will be washed in a dedicated bin washer. The bin washer is a self-contained unit which will ensure that the water used for washing is recycled as far as practicable until it becomes "dirty" and needs to be replaced. Periodically there will be a discharge from the bin washer direct to the trade effluent drainage system on-site within the process building. No treatment is envisaged as being required prior to discharge to sewer and the flowrate will not be directly monitored. This will be a periodic discharge and will depend upon how often the system is used.

c) Site cleaning - It will be necessary to periodically wash the external and internal floor areas to maintain the working environment and water used (via hose, sweeper etc.) will be discharged directly to the nearest

drainage system. This will be directly to the trade effluent drainage system on-site from drains within the process building and on some parts of the external concrete impermeable hardstanding pad (vehicle washdown area). This will be a periodic discharge.

Other sources which are routed directly into the trade effluent drainage system on-site include domestic foul (toilets/showers etc) and from the canteen areas. These will be periodic discharges.

The trade effluent drainage system on-site discharges into the public foul drainage system at a point offsite on Dunbeath Road (see the drainage layout plan in Appendix 1 Figure 6).

The applicant is currently in the process of negotiating a trade effluent discharge consent with Thames Water, to allow the discharge of the above emissions to the adjacent public sewer network.

### **Light compaction of offensive waste**

The applicant has also applied for permission for the light compaction of offensive waste to the permit in accordance with the Environment Agency guidance note on the compaction of offensive waste (published 6 November 2018).

The guidance note states that there is unlikely to be a risk of pollution if compaction is limited to “light compaction” that is, compaction of offensive waste in bags where the nature of the compaction is such that is unlikely to result in any bags splitting and which is carried out only to move bags along a container. “Offensive waste” means waste that –

- a) is not clinical waste,
- b) contains body fluids, secretions or excretions, and
- c) falls within code 18 01 04, 18 02 03 or 20 01 99.

The applicant proposes to compact the following waste streams:

<b>Table S2.3 Permitted waste types for offensive waste compaction</b>	
<b>Maximum quantity</b>	<b>Maximum treatment capacity shall not exceed 4 tonnes/day.</b>
<b>Waste code</b>	<b>Description</b>
<b>18</b>	<b>Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)</b>
<b>18 01</b>	<b>wastes from natal care, diagnosis, treatment or prevention of disease in humans</b>
18 01 04 <sup>1</sup>	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
<sup>1</sup> <b>Note:</b> These entries are limited to those wastes that are not described, packaged, labelled or transported as infectious or clinical wastes.	

Tradebe have proposed that the maximum treatment capacity shall not exceed 4 tonnes/day. An assessment of the light compaction and operating techniques have been assessed against compliance with the aforementioned guidance mentioned above. The applicant has confirmed that the activity will be carried out in accordance with the latest Environment Agency guidance.

A request for information was issued on 31/03/2020 & 06/04/2020 to assess compliance against the guidance in addition to the statement above received from the operator. The operator confirmed that the waste is not compacted using a compactor. An attachment to a FLT moves the bags in the skip to level them out. Only this light compaction is utilised to ensure that primary packages are not split. This process takes place within the building itself on hard standing.

We are satisfied that subject to the controls in the permit the activities can be carried out without causing and significant pollution of the environment or harm to human health.

## Noise emissions:

The applicant submitted a noise impact assessment with their application, which has a number of deficiencies. The derivation of source noise levels is not clear, and we have some concerns that the internal noise level of 81.9dB(A) is low, based on similar facilities. The noise levels presented in Appendix 2 are averages of several measurements, and we would need to see the raw data to determine the potential variation within the applicant's Rochester facility, which has a similar set up to that proposed at Swindon, and has been used as a proxy by the applicant. In addition, the survey provided was not undertaken over a weekend period. It is feasible (and common) for road traffic movements to be lower on Sundays, particularly during night-time hours. The Extrium data referred to in the Noise Impact Assessment is an annual average, so lower noise levels on a Sunday are not accounted for. We have deemed it necessary to include an improvement condition within the permit that requires the operator to carry out a detailed assessment of noise at the facility during normal operations, in order to validate the assessment provided within the permit application, which states that the predicted noise level contribution from the site to the nearest residential receptors, and with proposed operational parameters observed, will adhere to the low impact criteria set out in BS 4142:2014.

The improvement condition reads as follows:

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC1	<p>A detailed assessment of noise shall be carried out at the facility during normal operations in accordance with BS4142:2014 (Rating industrial noise affecting mixed residential and industrial areas) and BS7445:2003 (Description and measurement of environmental noise), or other methodology as agreed with the Environment Agency, in order to validate the assessment provided within the permit application EPR/CP3138QD/A001.</p> <p>The assessment shall consider all noise sources at the facility, including static plant and on-site vehicle movements. Where any noise sources are identified as exhibiting tonal contributions, they shall be quantified by means of frequency analysis.</p> <p>The results of the assessment together with conclusions and recommendations shall be submitted to the Environment Agency for approval in writing.</p>	28/10/2020 or otherwise agreed in writing by the Environment Agency
IC2	<p>Following the completion of IC1, if the assessment shows that emissions of noise and vibrations are likely to cause annoyance outside of the site boundary, the operator shall submit to the Environment Agency a report detailing proposals and timescales for the implementation of appropriate noise mitigation measures to ensure that site noise levels are below the background levels.</p> <p>The operator shall also update the site Noise Management Plan to ensure it is consistent with the proposals for noise mitigation and that it is a suitable tool for control of noise.</p> <p>The proposals for noise mitigation shall be in accordance with the requirements of the Environment Agency's Technical Guidance Note IPPC H3 Part 2. The proposals shall be implemented by the operator from the date of approval in writing by the Environment Agency subject to any such amendments or additions as notified by the Environment Agency.</p>	Within one month following completion of IC1

Should the report produced as required by IC1 show that emissions of noise and vibrations are likely to cause annoyance outside of the site Installation boundary, the operator must submit to the Environment Agency a report detailing mitigation measures. The operator must also update the site Noise Management Plan accordingly.

## Decision checklist

Aspect considered	Decision
<b>Receipt of application</b>	
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.
<b>Consultation</b>	
Consultation	<p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>The application was publicised on the GOV.UK website.</p> <p>We consulted the following organisations:</p> <p>Public Health England (PHE)            Director of Public Health (DoPH)            Food Standards Agency (FSA)            Health and Safety Executive (HSE)            Sewerage Undertaker</p> <p>The comments and our responses are summarised in the <a href="#">consultation section</a>.</p>
<b>Operator</b>	
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 our guidance on legal operator for environmental permits.
<b>The facility</b>	
The regulated facility	<p>We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN 2 'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1', guidance on waste recovery plans and permits.</p> <p>The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.</p>
<b>The site</b>	
Extent of the site of the facility	The operator has provided plans which we consider are satisfactory, showing the extent of the site of the facility. The plan is included in the permit.
Site condition report	The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial

Aspect considered	Decision
	Emissions Directive.
Biodiversity, heritage, landscape and nature conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p>
<b>Environmental risk assessment</b>	
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>
<b>Operating techniques</b>	
General operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.</p>
Operating techniques for emissions that screen out as insignificant	<p>Emissions have been screened out as insignificant, and so we agree that the applicant's proposed techniques are BAT for the installation.</p> <p>We consider that the emission limits included in the installation permit reflect the BAT for the sector.</p>
Odour management	<p>We have reviewed the odour management plan in accordance with our guidance on odour management.</p> <p>We consider that the odour management plan is satisfactory.</p>
Noise management	<p>We have reviewed the noise management plan in accordance with our guidance on noise assessment and control.</p> <p>We consider that the noise management plan is satisfactory.</p>
Fire prevention plan	<p>We have assessed the fire prevention plan and are satisfied that it meets the measures and objectives set out in the Fire Prevention Plan guidance.</p>
<b>Permit conditions</b>	
Use of conditions other than those from the template	<p>Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.</p>

Aspect considered	Decision
Waste types	<p>We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.</p> <p>We are satisfied that the operator can accept these wastes for the following reasons:</p> <ul style="list-style-type: none"> <li>• they are suitable for the proposed activities</li> <li>• the proposed infrastructure is appropriate</li> <li>• the environmental risk assessment is acceptable.</li> </ul> <p>We made these decisions with respect to waste types in accordance with sector guidance note for Clinical Waste EPR 5.07.</p>
Pre-operational conditions	<p>Based on the information in the application, we consider that we need to impose pre-operational conditions.</p> <p>PO1: The operator shall submit a written site commissioning validation report to the Environment Agency for approval, that demonstrates:</p> <ol style="list-style-type: none"> <li>(i) the treatment efficacy of the waste facility, in accordance with the appropriate measures in Sections 2.1, 2.3 and Annex 1 of the sector guidance note for Clinical Waste EPR 5.07;</li> <li>(ii) the proposals for routine monitoring of treatment efficacy that comply with the appropriate measures in section 3.2 and Annex 2 of the sector guidance note for Clinical Waste EPR 5.07;</li> <li>(iii) the installation's emissions, in accordance with the appropriate measures in Section 3.3 and Annex 3 of the sector guidance note for Clinical Waste EPR 5.07;</li> <li>(iv) the proposals for routine monitoring of emissions comply with the appropriate measures in section 3.3 and Annex 3 of the sector guidance note for Clinical Waste EPR 5.07.</li> </ol> <p>The treatment process (AR1) shall not be made operational until the Environment Agency has given prior written approval under this condition.</p> <p>PO2: A written justification for the treatment shall be submitted to the Environment Agency for approval. As a minimum, the justification shall take into account the principles specified in sections 2.1 and 2.3 of the sector guidance note for Clinical Waste EPR 5.07. The justification should address whether the treatment of the waste:</p> <ul style="list-style-type: none"> <li>• is effective, including validation of the process using worst case scenario conditions;</li> <li>• is an efficient use of energy and raw materials;</li> <li>• impedes waste recovery or recycling;</li> <li>• compromises the treatment of any hazardous waste;</li> <li>• has an effect on emissions from the activity.</li> </ul> <p>18 01 01, 18 01 02, 18 01 04, 18 02 01, 18 02 03 wastes specified in Table S2.2 shall not be accepted for treatment unless the Environment Agency has given prior written approval under this condition. We have included these pre-operational measures in accordance with EPR 5.07.</p>



<b>Aspect considered</b>	<b>Decision</b>
Improvement programme	Based on the information on the application, we consider that we need to impose an improvement programme.  Please refer to the key issues section (noise emissions) for an explanation as to why an improvement programme is required.
Emission limits	ELVs have been set for the following substances:  Bacillus Spores  We made these decisions in accordance with Clinical Waste EPR 5.07.
Monitoring	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.  We made these decisions in accordance with Clinical Waste EPR 5.07.
Reporting	We have specified reporting in the permit.  We made these decisions in accordance with EPR 5.07.
<b>Operator competence</b>	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.  The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.
Technical competence	Technical competence is required for activities permitted.  The operator is a member of an agreed scheme.  We are satisfied that the operator is technically competent.
Relevant convictions	The Case Management System has been checked to ensure that all relevant convictions have been declared.  No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.
Financial competence	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.
<b>Growth Duty</b>	
Section 108 Deregulation Act 2015 – Growth duty	We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.  Paragraph 1.3 of the guidance says:  “The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a

<b>Aspect considered</b>	<b>Decision</b>
	<p>factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.</p>

## Consultation

The following summarises the responses to consultation with other organisations, and our notice on GOV.UK and the way in which we have considered these in the determination process.

### Responses from organisations listed in the consultation section

<b>Response received from</b>
Public Health England (PHE) – Received 31/10/2019
<b>Brief summary of issues raised</b>
<p>PHE stated the following:</p> <p>The main emissions of potential concern are odours, particulate matter and combustion gases. The applicant assesses potential impacts on air quality and concludes there are no significant risks. We note the assessment was based on the assumption that emissions from the autoclave and shredder will not be significant and therefore have not been quantified. We recommend that the Environment Agency confirm that emissions from the autoclave and shredder do not require a quantitative risk assessment. Providing the site is well managed and regulated there should be minimal risk to public health from this installation.</p> <p>This consultation response is based on the assumption that the permit holder shall take all appropriate measures to prevent or control pollution, in accordance with the relevant sector guidance and industry best practice.</p>
<b>Summary of actions taken or show how this has been covered</b>
<p>The Environment Agency has assessed the risk of emissions from the site, including emissions to air, and further detail of this assessment can be read above. We have assessed the odour management plan and emissions to air from the processes on site. This included the issuing of requests for further information requiring the applicant to provide additional information relating to these subject matters.</p> <p>We have assessed these measures and submissions and have determined they represent best available techniques for this activity. We are satisfied that there will be no significant pollution of the environment or harm to human health from emissions from this site.</p>

We have consulted with the Health and Safety Executive, the Food Standards Agency, the Director of Public Health, and the sewerage undertaker but no responses were received. There were also no responses received from members of the public as a result of our notice on GOV.UK.