Project details	Environmental Permit Variation Application – EPR XP3602PF Sharpsmart Limited – Normanton Waste Transfer and Treatment Facility
Applicant details	Sharpsmart Limited Unit 1 Enterprise City Meadowfield Avenue Spennymoor County Durham DL16 6JF
Report details	**EP Variation Application – Supporting Statement** **Document reference: SHSMT_2022.01/01_v1**
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1 Introduction

1.1 General

Sharpsmart Ltd (the 'applicant') has requested that Reva Environmental Ltd (the 'agent') prepares an Environmental Permit (EP) variation application, for its Normanton Waste Transfer and Treatment Facility at Unit 1 Loscoe Close, Normanton Industrial Estate, Normanton, WF6 1TW.

The site currently houses two autoclave units that thermally treat (by steam sterilisation) the incoming soft clinical waste. It was formerly operated by HES, until the EP was transferred to the applicant in August 2019.

The EP allows the pre-shredding, autoclaving, and compaction of waste and the associated temporary storage of waste pending that process. The EP includes two directly associated activities (DAAs) which are the operation of a steam boiler and the washing of bins. Additionally, the EP allows the storage and repackaging of non-hazardous and hazardous waste as a Waste Operation.

1.2 Current Site Status

The facility is currently authorised by EP ref. EPR/XP3602PF. The EP history is shown in Table SS1.

Table SS1 Permit History

Description	Date	Details
Original permit EPR/VP3137TV	21/04/11	Permit issued to Healthcare Environmental Services Limited
Variation EPR/VP3137TV/V002	15/06/12	Variation to include the pre-shredding of waste
Variation EPR/VP3137TV/V003	10/05/13	Variation to change fuel input for dual fuel system generating boiler
Variation EPR/VP3137TV/V004	04/02/14	Variation to increase maximum annual waste tonnage for storage and repackaging activities
Variation EPR/VP3137TV/V005	05/03/14	EA led variation to implement changes introduced by IED
Transfer EPR/XP3602PF	13/08/2019	Transfer of permit in full to Sharpsmart Limited

The current EP allows the following listed activities to be carried out at the facility (explicitly stated in V005):

- A1 – Section 5.3 A(1)(a)(ii) Disposal or recovery of hazardous waste by physico-chemical treatment (shredding, autoclaving and compaction) with a capacity exceeding 10 tonnes per day (D9); and
- A2 – Section 5.6 A(1)(a) Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes. This activity includes the storage of hazardous and non-hazardous waste prior to treatment via the autoclaves (D15).

The following directly associated activities (DAAs) and Waste Operation are included in the EP:

- DAA A3 – Operation of a dual fuel steam raising boiler with a net rated thermal input of 3.9 MW, to be run on natural gas during standard operation;
- DAA A4 – Bin washing. This activity comprises the steam cleaning of bins used for the storage of treatable waste; and

- Waste Operation A5 – Waste Transfer Station. Storage of hazardous and non-hazardous waste pending transfer off site for disposal, repackaging of waste pending treatment on site or disposal of site, and storage of waste pending recovery off site (D14, D15 and R13).

The EP currently limits the acceptance of waste to 20,000 tonnes per annum (of which treatment of hazardous waste is limited to less than 72 tonnes per day), storage of hazardous waste pending treatment is limited to 144 tonnes at any one time whilst post treatment (floc) is limited to 40 tonnes, and storage of waste pending transfer off site for disposal is limited to 70 tonnes at any one time.

Copies of the original EP, issued to HES, and the subsequent variations (V002 to V005) and current Transfer Notice are provided in **Appendix A** of this variation application.

1.3 Application Objective

The objective of this application is to obtain a varied EP which enables the applicant to:

- Treat decanted and bulked sharps waste through the existing autoclave plants. This waste is received already repackaged and would be subject to pre-treatment shredding and post-treatment compaction. The proposed acceptance of sharps waste for treatment in the autoclaves will not affect the existing Listed Activity (A1) and the addition of the sharps waste code 18 01 03* (with or without 18 01 09) can be achieved through the amendment of Table S2.2 of the permit. **Variation of the existing autoclaving installation activity to add the additional waste stream is considered to represent a normal variation**.

- Operate a larger natural gas fuelled steam-raising boiler. The existing EP specifies the operation of the existing boiler as DAA A3. The applicant intends to install a new boiler to better meet the steam demand of the two autoclaves running in parallel. Whilst the input capacity of the boiler (2.5 MW) is below the threshold for a listed activity the applicant does recognise that as the input capacity will exceed 1 MWth the Medium Combustion Plant Directive (MCPD) is applicable and that emission limits will be imposed on this exhaust via permit conditions. **Variation of the existing DAA A3 to reflect the new boiler is considered to represent a minor variation**.

- Treat offensive waste (18 01 04) in two ways as follows:

  - Shredding through the existing shredders. For this short to medium term option, the waste stream would not be subject to autoclaving but would be subject to compaction. The shredded offensive waste can be compacted and can be transferred off site as RDF under EWC 19 12 10 / 19 12 12. It is proposed that this is achieved through the addition of a new Waste Operation (A6) for D9/R12 shredding of these non-hazardous wastes (<50 tonnes per day). **It is considered that the shredding of offensive waste in the existing plant would add a new waste operation (A6) to the EP so represents a normal variation.**

  - Shredding and autoclaving. For this medium to long term option, the waste stream would be shredded and autoclaved (not compacted) in order enable the recovery of plastic film from the waste. The uncompacted treated floc would be transferred off site via a national contractor under EWC 19 02 codes or suitable 19 12 codes. It is very unlikely that the autoclaving of offensive waste in the existing plant would exceed 50 tonnes per day (the threshold for 5.4 Part A(1)(a); it is therefore proposed that this is achieved through the addition of a new Waste Operation (A7) for D9/R5. **It is considered that the autoclaving of offensive waste in the existing plant would represent a normal variation.**

- Increase the storage capacity of floc (treated waste) from 40 tonnes to 80 tonnes to provide operational flexibility. **It is considered that an increase to the storage capacity of this non-hazardous waste represents a minor variation.**

The application supports the existing market for healthcare waste in the following ways:

- It supports the current market for reusable sharps containers (which can be used up to 500 times) and also promotes the future market for them. This is a more sustainable option and in turn removes a large quantity of plastic (burn bins) from autoclaving and incineration plants, a waste that can cause difficulties for such plants in relation to damage/maintenance and emissions; and
- It will reduce the burden on an ageing infrastructure across the UK for clinical waste incineration (there are few plants that can accept sharps repackaged in volume).
- It frees up capacity in the small network of clinical waste incinerators in the UK by diverting sharps waste to the autoclaves; and
- It supports the NHS strategy of 60/20/20 segregation, higher volumes of offensive waste expected and needs to be managed in accordance with NHS strategy and tender expectations, nil to landfill via innovative methods.

The applicant can confirm that, other than the storage of floc, the existing storage limits in the EP remain applicable; this is constrained by the capacity of the building. These are as follows:

- Storage of hazardous waste pending treatment is limited to 144 tonnes;
- Storage of waste pending transfer off site (no treatment) is limited to 70 tonnes; and
- Total acceptance of waste is 20,000 tonnes per year of which treatment of hazardous waste is limited to <72 tonnes per day.

The maximum storage period for any load of waste is 2 weeks; this provides allowance for the operational contingency plan to be implemented.

No offensive waste, cytotoxic or cytostatic, non-hazardous, pure pharmaceutical, or anatomical waste will be processed in the autoclave plant.

1.4 Process Description

The site currently houses two autoclave units that thermally treat (by steam sterilisation) the incoming soft (bagged) clinical waste. The EP allows the pre-shredding then autoclaving of the waste, subsequent compaction and storage of the resultant floc pending transfer off site for recovery, and the associated temporary storage of waste pending treatment. The EP includes two directly associated activities (DAAs) which are the operation of a steam boiler and the washing of carts, and a Waste Operation for the storage and repackaging of non-hazardous and hazardous waste.

The existing autoclaves are validated to each process 2 tonnes per cycle; each cycle is likely to be between 55 to 65 minutes. An outline process flow diagram for the proposed consolidated plant is provided in Appendix D alongside the site plans.

1.4.1 Wash Plant and Repackaging Activity

Clinical waste is currently accepted at the site in two forms:

- Bagged waste contained within rigid 770 litre waste bins/carts; and
- Re-packaged sharps waste from other applicant sites, within lined rigid 770 litre waste bins/carts.

Waste is both ‘in-house’ (in that it is from the applicant’s customers and collected under a service contract) and third party. Both forms are received at reception and weighed and stored in a dedicated area. For bagged waste, storage is pending either transfer off site for disposal at a permitted facility or for on-site treatment; for sharps waste this is currently stored pending transfer off site. Each bin is labelled with the information required for onward transfer. This application seeks to allow the on-site treatment of suitable sharps waste.

The waste that is received at the facility is stored in a dedicated area for safe storage, movement and handling of this type of waste, as shown in Figure SS1.

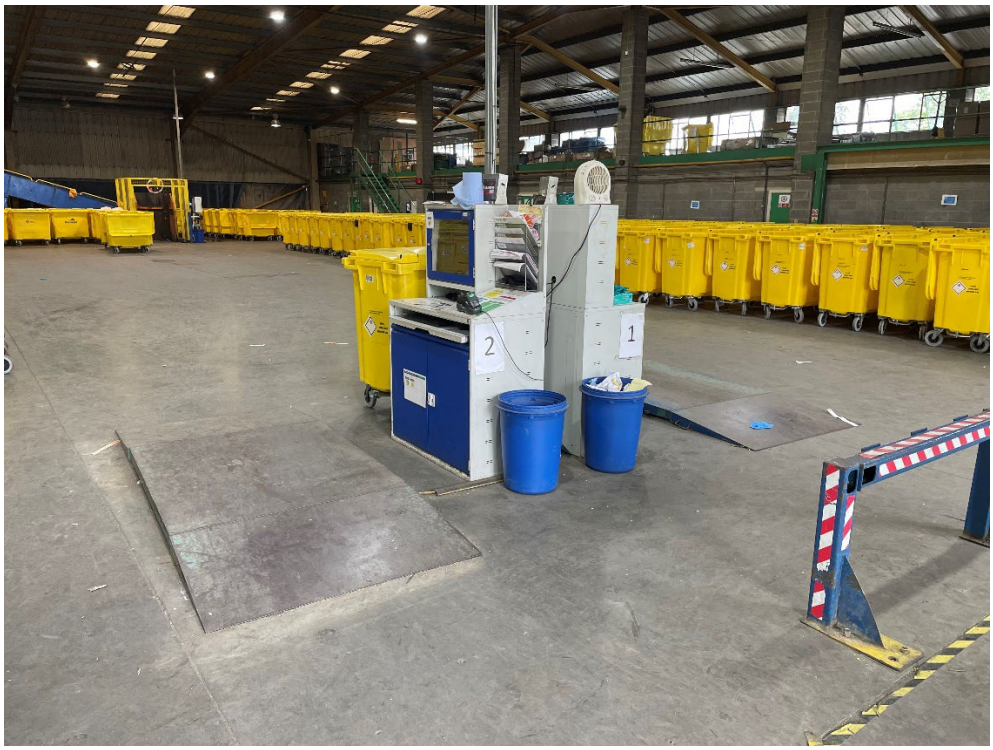

Figure SS1: Waste Reception

All bulk waste bins are scanned (each has a unique bar code enabling tracking and recording of all information pertaining to it) and weighed.

Waste is tipped into one of the shredders, the output from which will fall into a lined 1800 litre autoclave cart. Once the autoclave carts containing the contents from the emptied 770 litre bins are full, the heavy duty liner is folded over the top of the autoclave cart to enclose the waste and these are placed in the dedicated area ready for treatment. With respect to sharps waste, this stream is currently transferred off site for disposal; this permit variation application seeks to allow this waste stream to be treated on site.

Metal instruments are also accepted, repackaged into lined 770 litre bins prior to their arrival at the Normanton site. These are tipped into lined autoclave carts in the bin-to-bin tipper unit, retaining the original liner which is removed separately and pre-shredded and autoclaved i.e. treated as infectious waste. The bin-to-bin tipper unit has local air extraction and filtration (emission point 'A7').

The wash plant is a manual bin wash which is used to clean the 770 litre carts. It can operate independently of the existing autoclave plants and has its own built in electrical heaters to produce the hot water required for the washing process; it is not reliant on the steam raising boiler used for the autoclaves.

1.4.2 Treatment Processes

1.4.2.1 Proposed Treatment of Sharps

The current EP permits soft clinical waste (18 01 03*) to be treated in the shredders, autoclaves and compactors. This variation application proposes the following sharps wastes be accepted for treatment in the autoclave plants (and be subject to pre-shredding and compaction):

- 18 01 03* – wastes whose collection and disposal is subject to special requirements in order to prevent infection (from human source); and
- 18 01 03*/09 – dual coded medicinally contaminated sharps.

In addition to this, repackaged metal instruments (18 01 03*) are treated in the autoclave pending transfer off site for recovery. This is currently permitted under agreement with the local EA office.

The proposed additional waste types for treatment are already, and will continue to be, received in bulk form (lined 770 litre carts). The lined carts containing the decanted sharps waste are placed in a dedicated area of the building pending treatment.

No offensive waste, cytotoxic or cytostatic, non-hazardous, pharmaceutical, or anatomical waste will be processed in the autoclave treatment plant. All other incoming waste types will continue to be processed in the transfer facility as is currently permitted.

Other than the metal instruments which are for autoclave only, sharps waste will be pre-shredded and the shredded waste collected in lined 1800 litre autoclave carts. The purpose of the shredding is to render the material unusable and unrecognisable as healthcare waste, and to ensure that it is optimised in terms of its composition for steam penetration during the treatment process. The shredders each have an extraction hood which vents to atmosphere (emission points 'A4' and 'A5') via a HEPA air filter and a carbon pre-filter and filter system. The HEPA filter removes small particulates from the air and traps them, preventing their release to atmosphere. The carbon filter removes any contaminants and impurities from the extract, using chemical adsorption. This prevents the release of contaminants to atmosphere and also provides odour control. This abatement approach is considered appropriate in terms of its application to the additional waste streams.

Once the autoclave carts are full, the heavy duty liner is folded over the top of the autoclave cart to enclose the waste and these are placed in the dedicated area ready for treatment.

The autoclaves are both horizontally orientated cylindrical vessels that are subject to high vacuum and high pressure. The batch process runs for a single cycle which is approximately 55 - 65 minutes long. This includes the loading and unloading stages; the actual treatment cycle is between 40 – 60 minutes long.

To start the process, a vacuum is pulled to evacuate any air from the vessel to ensure that when high pressure steam is injected into it, there is a good level of penetration into the infectious waste in it. The treatment process involves the application of high pressure steam (at approx. 160 °C) to the waste, to achieve sterilisation of the waste. This sterilisation process renders the waste non-infectious, i.e. changes it from hazardous to non-hazardous. When all of the liquid in the vessel has evaporated, it leaves a finely shredded dry waste called floc.

There is no continuous emission to air from the autoclave units. Instead, venting is performed through a condenser unit to produce a small volume of liquid effluent, approximately 220 litres per cycle. The post-vacuum cycle removes residual steam from the autoclave and flashes residual liquids, drying the waste. This also controls odour. The condenser uses water as the cooling energy. In essence it is a water heat exchanger through which the autoclave process steam will travel. There is an emergency vent from the combined claves, and an emergency pressure vent; both are sterile steam and therefore unabated. The emission points are defined as 'A2' and 'A3'.

The condensate from the autoclave will be either non-hazardous and can be discharged to sewer under consent (current permit position), or potentially contaminated when sharps waste is treated. The two liquid effluent streams are managed in one of two ways, depending on the composition, as follows:

- If the effluent generated relates to the autoclaving of sharps bin waste, then it is considered potentially pharmaceutically contaminated and is not discharged to sewer. Instead it is collected in an engineered sump and pumped into a storage tank (20,000 litre) for transfer to a permitted energy from waste facility for disposal (and heat recovery).
- If the effluent generated relates to the autoclaving of a batch of solely orange categorised waste (or offensive), then it is considered that there is no pharmaceutical contamination and the effluent is no different to that currently produced by the facility and can be discharged to sewer under the existing consent.

The autoclaves drain to a sealed tank from which the effluent can be pumped. This will allow the operator to define the route, depending on the above. There is a direct connection from the sealed condensate tank to the permitted discharge point to sewer (S1). A valve will be installed to redirect this condensate to a small holding tank, then it can be pumped to the larger storage tank for off site transfer.

The sterilised waste floc exits the autoclave and is transported by forklift truck to one of three sealed compaction units which are located within the building whilst they are being filled. The compactors are 35 yd skip containers which reduce the volume of the floc by up to 60%. There are three positioned in the building at any one time, accepting waste. The most northerly one will be dedicated for shredded offensive waste; the middle one will be for floc from the autoclaving of soft waste; the most southerly one will be for the floc from the autoclaving of sharps waste. Whilst the floc from both autoclave streams is likely to be the same, local air extraction will be installed over the southerly one (emission point 'A8') and it will be filtered for particulates and VOCs.

Once full, a compactor is taken outside for storage pending transfer, on hardstanding with a sealed drainage system. The floc is stored temporarily at the facility pending transfer to a national outlet where the waste is further processed and blended to produce a fossil fuel replacement pellet fuel for use in power plants, energy from waste and cement kilns. The shredding of the waste prior to autoclaving enables the recovery of the floc as it meets the requirement of the R1 status for RDF which is that the waste cannot be recognisable as healthcare waste. The storage of floc is in the yard area, as shown on Drawing SHSMT-NMT-EP02 Site Layout Plan provide in **Appendix D** of this variation application. The current EP limits the storage of floc pending transfer off site to 40 tonnes. It is requested that the varied permit allows the storage of up to 80 tonnes of this waste, as part of the existing waste storage activity.

1.4.2.2 Offensive Waste Shredding and Compaction

The configuration of the plant is such that there is the ability to shred offensive (non-hazardous) waste (18 01 04) in isolation. The shredded offensive waste can be compacted with the autoclaved waste (non-hazardous) so it can be transferred off site as RDF. The offensive waste will only be subjected to shredding and compaction; it will not be treated in the autoclave. It is proposed that this is achieved through the addition of a new Waste Operation (A7) for D9/R12 shredding of these non-hazardous wastes.

The two shredders will be designated, one for bagged waste (infectious and offensive) and the second for sharps shredding. This avoids any cross-contamination between treatment of the waste streams. Should all wastes need to be processed through one shredder then, in order to 'clean' the shredder following its use for sharps wastes and prior to the shredding of any non-hazardous waste, a sacrificial load would be processed in it. The autoclaves fit 9 carts for treatment. For each batch of sharps waste, the first 8 carts will be sharps waste and the 9th will be orange bag/other non-hazardous waste). This will serve to clean the shredder in order to prevent any cross contamination of this waste from preceding hazardous waste loads.

2 Application Form

An application to vary a bespoke Waste Installation EP requires the completion of the EA application form parts A, C2, C3 and F1. Part C2.5 has also been completed as the variation seeks to include boiler plant that falls under the MCPD. Part C3 only covers the proposed variations to the listed activity and DAAs; Part C4 has also therefore been completed, to record the proposed amendments to the existing Waste Operations. As stated in the guidance notes for the form, details only need to be included in relation to the parts of the existing permit (and permitted activities) that will be affected by the variation application. Details have primarily been provided on the form.

This section provides additional supporting information and signposts to supplementary documents provided in support of the variation application.

The application form is provided at the front of this EP variation application document.

2.1 Form Part A

Contact details for the agent and the applicant are provided in this part of the application form. As required by Question 5c of the form, details are provided for the relevant persons as follows:

- Dean Justin McPhee (secretary) – Date of Birth: [redacted]
- Danny Boulas Daniels (Director) – Date of Birth: [redacted]

2.2 Form Part C2

Question 1a refers to pre-application discussions. A pre-application request was not submitted, instead this application follows the precedent set by the applicant's other site permits and the applications for those to allow the treatment of sharps. This application also considers post-application submission queries raised for the other sites in relation to the treatment of sharps by way of duly making information requests and Schedule 5 Notices, in order to address all previous concerns raised by the EA at other Sharpsmart sites during the permitting process for the same activities.

Question 2 refers to the type of variation being applied for. On the basis that no new listed activities are being added, in accordance with EA guidance this is considered to constitute a normal variation.

Question 3 refers to the applicants ability as an operator. This is relevant for the variation application as it seeks to add a new listed activity to the permit. A copy of the WAMITAB certificate (and continuing competence evidence) for the technically competent manager is provided in **Appendix B** of this variation application. They do not provide TCM cover at any other site. Their full date of birth is [redacted]

Question 3d specifically relates to management systems. The applicant will continue to operate the facility in accordance with its certified environmental management system (EMS). An extract of the Normanton EMS Manual is provided in **Appendix C**. The EMS is certified by The British Assessment Bureau and was last audited in March 2022 against the requirements of ISO 14001: 2015. A copy of the current certificate is also provided in **Appendix C**. The EMS will be updated (if required) to reflect the revised activities covered by this variation application.

Question 4 requires confirmation of the sewerage undertaker where a discharge is part of the activity being applied for. There is a discharge consent at the facility currently (for point S1). This will remain in place and will be unaffected by the inclusion of sharps treatment as effluent generated during those treatment cycles will be captured and transferred off site. A copy of the current discharge consent is provided in **Appendix A** alongside the current EP documents.

Question 5a requires site plans to be provided in support of the variation application. These are provided in **Appendix D** and are as follows:

- Drawing SHSMT-NMT-EP01: Site Location Plan
- Drawing SHSMT-NMT-EP02: Site Layout (including emission points)
- Drawing SHSMT-NMT-EP03: Site Setting
- Drawing SHSMT-NMT-EP04: Site Drainage Plan

Question 5c requires the provision of a non-technical summary. This is provided in **Appendix E** of the application (ref. SHSMT_2022.01/02_v1).

Question 5e requires the submission of a fire prevention plan (FPP) if the variation to the facility includes the storage of combustible waste. Advice provided by the EA is that they consider the accident and fire prevention measures specified in the healthcare waste appropriate measures guidance are appropriate and sufficient for the management the fire risk. As such, no FPP has been submitted with the variation application.

Question 5f requires the submission of a baseline (site condition) report where the application includes the addition of an installation. This is not the case for this application and is therefore deemed not to be required.

Question 6 requires the provision of an environmental risk assessment. A qualitative risk assessment is provided in **Appendix F** of this application (ref. SHSMT_2022.01/03_v1).

2.3 Form Part C2.5

The existing EP includes the operation of a dual-fuelled steam-raising boiler as a DAA to the listed activity (physico-chemical treatment).

The applicant intends to install a new boiler (natural gas fired) to better meet the steam demand of the two autoclaves running in parallel. Whilst the input capacity of the boiler (2.5 MW) is below the threshold for a listed activity the applicant does recognise that as the input capacity will exceed 1 MWth the Medium Combustion Plant Directive (MCPD) is applicable and that emission limits will be imposed on this exhaust via permit conditions

Part C2.5 of the application form has therefore been completed. The new boiler has been assessed via the completion of an H1 assessment, and air quality modelling, both of which are provided in **Appendix J** of this application.

2.4 Form Part C3

2.4.1 Question 1

This requires the provision of information relating to proposed waste streams, in accordance with the European Waste Catalogue. The existing autoclave processes soft clinical waste as permitted by Table S2.2a:

- 18 01 03* – wastes whose collection and disposal is subject to special requirements in order to prevent infection (from human source);
- 18 02 02* - wastes whose collection and disposal is subject to special requirements in order to prevent infection (from animal source); and
- 20 01 99* - other fractions, not otherwise specified (comprising only of non-clinical human and animal offensive/hygiene waste not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease which is subject to special requirements in order to prevent infections).

The permit specifically refers to the exclusion of sharps that are potentially contaminated with pharmaceuticals in any quantity. This application seeks to allow the processing of waste as follows:

- 18 01 03* (with or without 18 01 09 – dual coded) medicinally contaminated sharps – to be accepted for shredding, autoclaving and compaction; and
- 18 01 04 non-clinical human offensive/hygiene waste – to be accepted for shredding and compaction OR shredding and autoclaving once a viable recovery process is determined and available.

2.4.2 Question 3a

This requires confirmation of the status of documents previously submitted and referred to in the 'operating techniques' table of the extant EP. Whilst the current EP refers to a number of documents, none of these were produced by the applicant but were submitted by the previous site operator(s). As such this application provides a new set of documents such as site plans, risk assessment, BAT assessment and management plans. These will supersede any previous versions of the same, held by the EA.

2.4.3 Question 3b

This requires inclusion of management plans where the sector guidance or site risk assessment shows that certain emissions are an important issue. This includes odour and noise/vibration.

The proposed variation does not alter the types of waste that will be accepted at the site from those which already are and have been under the existing EP. However, an Odour Management Plant (OMP) has been produced, and is provided in **Appendix G** of the application (ref. SHSMT_2022.01/04_v1).

In relation to noise, no management plan is considered to be required at this stage. The potential noise sources, the pathway for propagation, and the sensitivity of the receptors have been considered in the qualitative risk assessment and deemed not to warrant a full noise assessment or management plan. The applicant's existing procedures include the receipt, and investigation, of any complaints and this will be extended to the proposed activities. Should complaints be received and found to be substantiated then the applicant will, in accordance with EA guidance, generate a management plan as a result.

2.4.4 Question 3c

The current operations at the facility use a disinfecting chemical ('Pine Disinfectant' and/or 'Apple Fresh' from CIS) to clean the 770 litre skip containers. The bin washer uses 'Pep Active' from Ecolab. This is a general purpose surface cleaner. There will be no change in the type of detergents used, nor an anticipated markable increase in use.

The quantity of chemicals used at the facility is recorded and tracked during the lifetime of the EP and assessed at regular intervals.

2.4.5 Question 4

This requires information regarding monitoring of any new emissions. The existing permit specifies only point A1 (Table S3.1) which is the exhaust from the boiler. The location of this remains unchanged by the variation application however the boiler is being replaced. The proposed new boiler has been modelled to determine its potential impact (using MCPD limits) and the report is provided in **Appendix J** of this application.

There are also a number of existing vents/exhausts that, whilst not specifically referred to in the permit, do exist. These are as follows:

- A2 and A3 – Autoclave emergency exhaust vents (sterile exhaust, no abatement);

- A4 and A5 – Shredder local exhaust ventilation (LEV), filtered for particulates via HEPA filter and for VOCs by way of carbon pre-filter and filter (no monitoring);
- A6 – Wash plant, no abatement or monitoring as is just air extraction from a drying process;
- A7 – Bin-to-bin tipper LEV, filtered for particulates via pre-filter and HEPA filter (no monitoring);
- A8 – LEV at autoclave doors, filtered for particulates via HEPA filter and for VOCs by way of carbon filter (no monitoring); and
- A9 – LEV over sharps floc compactor unit, filtered for particulates via HEPA filter and for VOCs by way of carbon filter (no monitoring).

Other than the introduction of A7 and A9, these are existing emission points. Emission point A7 is the LEV extract over the dedicated compactor for floc produced in the treatment of sharps waste. Monitoring of this at another Sharpsmart site has identified no issues with emissions from the compactor however it will be installed at Normanton as a precaution. Emission point A9 is for the LEV over the bin-to-bin tipper. The purpose of this unit is two-fold:

- It enables the tipping of the repackaged metals from bins into autoclave carts; and
- It enables the transfer of incineration wastes from one 770 litre cart to another so that the newer carts are kept in use at site and not sent to the incinerator sites

The existing discharge to foul sewer (S1) will remain unaffected by the proposed changes. Discharge is regulated under the existing consent which sets a number of limits.

Monitoring is undertaken of emissions of bio-aerosols from the treatment process, specifically around the shredder plant where the waste will be physically treated prior to sterilisation. This is in accordance with the Healthcare Waste Appropriate Measures Guidance.

2.4.6 Appendix 4

Appendix 4 of the form is applicable as it relates to the clinical waste sector.

Question 6 in Appendix 4 requires a summary of the treatment activities to be provided which covers the standards set out in the relevant best available techniques (BAT) document. A BAT assessment is provided in **Appendix H** of the application (ref. SHSMT_2022.01/05_v1).

Question 7 in Appendix 4 requires the provision of layout plans detailing the location of the treatment plant, main plant items and process flow diagrams for the treatment plant. A layout plan is provided in **Appendix D** of the variation application.

2.5 Form Part C4

This part of the form is required because the application seeks to add new Waste Operations; the shredding of offensive (non-hazardous) waste (18 01 04) in isolation and the future shredding and autoclaving of offensive waste to enable recovery of plastic film. When just subject to shredding, the shredded offensive waste can be compacted and transferred off site as RDF. When a suitable recovery outlet has been identified, the offensive waste can be shredded and autoclaved (not compacted) and transferred off site for the recovery of plastic film. These objectives are achieved through the addition of new Waste Operations A6 and A7.

No new / additional information is required above and beyond what is required by Forms C2 and C3 so this additional activity is covered in the other parts of this report.

2.6 Form Part F1

The application fee has been identified using the April 2019 EA guidance. It is made up of the following components:

- Normal variation for the addition of sharps waste for treatment – ref. 1.16.1 in Table 1.16: £8,000
- Normal variation for shredding of offensive waste – ref 1.16.12 in Table 1.16: £3,965
- Normal variation for shredding and autoclaving of offensive waste – ref 1.16.12 in Table 1.16: £3,965
- Odour Management Plan – ref. 1.19.6 in Table 1.19: £1,246

Payment of £17,176 has been made (ref. PSCAPPSHARP521) by BACS on 16/09/2022.