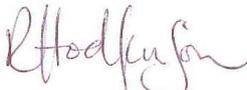


Project details	Environmental Permit Variation Application – EPR XP3493VP Sharpsmart Limited – Clinical Waste Facility Stoke on Trent
Applicant details	Sharpsmart Limited 9 Longport Enterprise Centre Scott Lidgett Road Stoke on Trent ST6 4NQ
Report details	EP Variation Application – Appendix F: Fire Prevention Plan Document reference: SHSMT_2018.01/04
Report date	4 February 2019
Submitted to	Permitting and Support Centre Environmental Permitting Team Environment Agency Quadrant 2 99 Parkway Avenue Parkway Business Park Sheffield S9 4WF Email: PSC@environment-agency.gov.uk
Author	Rebecca Hodkinson EHS Consultant
Signature	



Tel: [+44] 07949 178558 www.revaenvironmental.co.uk
Company Registered in England No. 11506654 at The Mills, Canal Street, Derby, DE1 2RJ

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1 Introduction

1.1 Context

Sharpsmart Ltd (the ‘applicant’) has requested that Reva Environmental Ltd (the ‘agent’) prepares an Environmental Permit (EP) variation application, for its clinical waste facility at 9 Longport Enterprise Centre, Scott Lidgett Road, Stoke on Trent, ST6 4NQ.

The applicant current supplies re-usable sharps containers to the healthcare sector and provides a collection service to its customers whereby the used containers are taken to one of the applicant transfer facilities, emptied and cleaned and sent back to the customer. The contents are transferred to an appropriately permitted facility for recovery or disposal. The applicant also collects bulk (bagged) healthcare waste which is not emptied but is simply transferred via one of its transfer facilities to an appropriate third party disposal or recovery facility.

The objective of the application is to obtain a varied EP for the existing Stoke on Trent transfer facility which enables the applicant to carry out a waste treatment activity as a supporting activity to the existing transfer operations. As the incoming waste, and the floc (solid treated waste), stored on site is combustible a fire prevention plan (FPP) is required to accompany the variation application.

This FPP, once approved, forms part of the EP for the whole facility (the existing transfer activity, and the new treatment activity). It is a live document that is made available to all employees and to other relevant third parties for example contractors. It will also be readily accessible for the emergency services in the event that a fire does occur.

1.2 Objectives

The FPP follows the requirements of the EA guidance and sets out the measures that will be used to reduce the likelihood and consequences of a fire at the facility. The objectives are to:

- Minimise the likelihood of a fire happening;
- Aim for a fire to be extinguished within four hours of detection; and
- Minimise the spread of fire within the installation and to neighbouring sites.

1.3 Management System

The applicant operates the current facility in accordance with a certified environmental management system (EMS). The EMS is certified by The British Assessment Bureau and was last audited in 2017 against the requirements of ISO 14001: 2015. The applicant will integrate the operation of the treatment plant into its existing environmental management system (EMS) for the facility. The EMS is subject to regular review; in the event that it is amended, changes made will be reflected in an update to the FPP if required.

A copy of the FPP will be kept in each operational area (1 in the transfer part of the building, 1 in the treatment part of the building) and at the offices/reception.

2 Site Setting Details

2.1 Site Location

The facility is located in the Longport Enterprise Centre which is a business park extending to approximately 1.7 ha located in a wider industrial area to the east of Scott Lidgett Road and west of

the Trent and Mersey Canal. It comprises 15 industrial and warehouse units, some of which have been subdivided. The units, apart from Units 7-10, are located around the perimeter of the Business Centre creating a central enclosed vehicle circulation and parking area which so ensure that activities on the business park are visual and acoustically relatively self-contained and do not significantly impact on the nearby residential area to the west. There is undeveloped green area with some trees and scrub grassland adjoining the north west side of the business park which partly screens it from Scott Lidgett Road.

The site setting, and surrounding area uses, is shown in **Drawing SHSMT-SoT3 “Site Setting”**.

2.2 Site Access

There is an existing site access from the northern end Scott Lidgett Road, which then joins the A5271 Longport Road/Station Street approximately 80 m north of the entrance into the Enterprise Centre. This links with the A500 approximately 300 m to the south west. The haul road into the industrial estate is wide and the incline is relatively shallow, allowing ease of access for fire engines. It is currently used by large heavy goods vehicles and is sufficiently wide for this.

Fire engines will be able to access operational areas of the site via the main entrance off the shared yard area. All other areas are accessible by pedestrian doors from the shared yard area.

The access routes shall be maintained at all times, and shall not be restricted by waste delivery, or temporary operations.

As part of the emergency response evacuation, under the direction of the Emergency Services, site vehicles and private vehicles shall be moved away from the source of the fire or smoke. The local roads will be maintained free from parked cars and congestion.

The removal of all site vehicles/plant and equipment shall also serve to clear all of the access route for the use of emergency services in case of a fire.

2.3 Local Receptors

Sensitive receptors within 1 km that could be potentially negatively impacted by a fire on the site are shown on **Drawing SHSMT-SoT3 “Site Setting”**, and listed in Table 1.

Table 1: Local Receptors within 1 km

Boundary	Receptor details
Northern	The Trent and Mersey canal runs adjacent to the enterprise centre, to the north/northeast, at 45 m. There is undeveloped green open land (trees and scrub grassland) to the north west side, providing screening from Scott Lidgett Road which lies beyond it. The Steelite International plant takes up most of the industrial area to the north.
Eastern	The Steelite International plant takes up most of the industrial area to the east, beyond the Trent and Mersey Canal which lies at 45 m from the site (at an elevated position). Residential properties on Port Vale Street lie 130 m to the east.
Southern	Residential properties on Harper Street lie some 130 m to the southeast. The A500 lies approximately 300 m to the southwest.
Western	Residential properties on Scott Lidgett Road lie 70 m to the west. Longport

	Railway Station (Grade II Listed) lies 295 to the west.
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The site geology comprises Estruria Formation which comprises red and grey mudstone with impersistent bands of sandstone. The muddy nature of the rock means that exposures are rare and very poor. The site is not located on an aquifer, although there is a Secondary Aquifer immediately to the south. Further details are provided in the Site Condition Report for the site.

The site is not within a flood zone 2 or 3 with respect to surface water but is susceptible to groundwater flooding. It is also in an Air Quality Management Area declared for NOx.

A site check (www.magic.defra.gov.uk) has confirmed that there are no environmentally sensitive sites (SPA, SAC, Ramsar, SSSI) within 1 km of the site, nor is the site in a groundwater source protection zone (SPZ). The nearest statutory designated sites are the Ford Green Reedbed Site of Special Scientific Interest (SSSI) which is 3.1 km north east of the site and the Metallic Tileries, Park House SSSI, 1.8 km north east of the site. The nearest local/non-statutory sites are the Westport Lake Local Nature Reserve 415 m north west of the site, the Whitfield Valley LNR, 2.9 km north east to the north east, and the Bradwell Woods SSSI, 1.9 km to the north west.

The applicant retains a list of the key sensitive receptors and contact details for each so that they can be alerted to an incident. The list will be appended to the FPP and kept up to date through regular review but at least on an annual basis.

2.4 Site Activity Details

2.4.1 General

The proposed treatment plant is an autoclave which will have the capacity to process more than 10 tonnes per day; it is therefore a 'listed activity' and the EP will be an Installation EP as a result of its inclusion. The plant also includes a shredder unit pre-treatment, and a compaction unit post-treatment. The listed activity that covers all 3 parts of the treatment activity is as follows:

- Section 5.3 Part A(1)(a)(ii) – Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day, by physico-chemical treatment.

The quantity of hazardous waste that will be stored at the facility, pending treatment, is constrained by the floor space in the existing building. It is limited to <50 tonnes and is therefore below the threshold for a listed activity; instead the temporary storage of hazardous waste is a directly associated activity (DAA) to the treatment activity.

The steam required for the autoclave process will be delivered by a new gas-fired steam-raising boiler. The input capacity of the boiler is below the threshold for a listed activity and will be a second DAA to the treatment activity. The applicant does recognise that as the input capacity exceed 1 MWth the Medium Combustion Plant Directive (MCPD) is applicable and that emission limits will be imposed on this exhaust via permit conditions.

2.4.2 Infrastructure

Ground and Flooring

All waste activities are carried out within the confines of the building, which has a well maintained impermeable concrete floor throughout.

Walls and Roofs

The outer building walls are brick around a steel portal frame, whilst the internal walls are concrete block. The roof is corrugated steel. The applicant has a building survey which includes confirmation that there is no asbestos at the site.

Drains and Sewers

There is a modern sealed drainage system that allows discharge to foul sewer under discharge consent from Severn Trent Water.

Chemical Storage

An area is designated in the bin store (for waste pending treatment) for the storage of chemicals. The quantity stored is limited, and comprises only disinfectant materials for the shredder and the bin washer plant. Chemicals are stored in proprietary containers and are away from any powered vehicle movements. No chemicals are stored outside the building. The forklift in use at the site is electric so there is no fuel storage at the facility.

Utilities

The facility has mains supplied electricity. Historically each unit (9, 9a, 10, 10a and 10b) has been operated separately; for this reason there is a separate supply to each unit, with a sub-meter at each. Electricity is used for lighting, heating, in the offices and in the warehouse units, and to power the majority of the equipment and plant at the facility. The only exception is the proposed steam-raising boiler for the autoclave which will be gas-fired. Historically there was a mains gas supply at the site however this was made redundant (and pipework closed off) prior to the applicant taking on the units. A new gas supply will be installed for the proposed boiler plant. The location of the connection is shown on **Drawing SHSMT-SoT5 “FPP Site Plan”**.

Heating

The existing boiler and air condenser in Unit 10 provide ambient heating of this area. In Unit 9a there is an air fan that is used to maintain appropriate temperatures during the winter months; this is a mobile unit. There is no fixed heating equipment within the operational areas of the units. The offices are heating by way of small wall-mounted electrical heaters.

2.4.3 Waste Activities

Delivery

Clinical waste arrives at the facility in two forms:

- Bagged waste contained within a yellow lidded 770 litre waste bins; and
- Sharps waste contained in the applicant’s own re-useable sharps containers.

The waste is all ‘in-house’ in that it is from the applicant’s customers, and is collected under a service contract. No third party waste is currently received at the facility.

The bagged waste is weighed in the bins and stored in a dedicated area pending transfer off site for disposal at a permitted facility. Each bin is labelled with the information required for onward transfer. The waste that is received at the facility in re-useable sharps bins is placed into metal enclosed trolley units designed specifically for the safe movement and handling of this type of waste and the bins are placed in a dedicated area (marked in red on the floor of the transfer building) pending emptying. When ready for processing, the bins are placed one by one into the repackaging unit. They are scanned (each has a unique bar code enabling tracking and recording of all information pertaining to it) and weighed. The automated system moves the bins to the emptying point, where the contents are safely emptied into a dedicated facility 770 litre skip bin.

Shredding

Incoming waste to be shredded will be loaded into a bin tipper mechanism that will load the batch into the shredder unit. The shredder will reduce the size of the waste to below 50 mm, promoting an even and consistent treatment of the waste in the autoclave. The shredded waste falls from the shredder into an autoclave cart, a container that holds the waste within the autoclave. Up to five autoclave carts can be placed into the autoclave per cycle.

The shredder will be a standalone unit which has an air extract system which will vent to atmosphere via a HEPA air filter and a carbon filter system, at Emission Point 'A2'. This prevents the release of contaminants to atmosphere and also provides odour control.

Autoclaving

The autoclave is a horizontally orientated cylindrical vessel that is subject to high vacuum and high pressure. The waste is placed into the vessel in its autoclave cart and the door is closed. There will be air extraction from around the autoclave door, to capture any remnant steam release when the doors are open. This will vent to atmosphere via a HEPA air filter and a carbon filter system, at Emission Point 'A3'.

The treatment process involves the application of high pressure steam (at 150 °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.

In addition to the floc the process generates a condensate, and a potentially contaminated effluent which generated when the shredder is cleaned. 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 yellow bagged or any 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 IBCs for transfer to a permitted energy from waste facility for disposal (and heat recovery). The same applies if the effluent contains wash water from cleaning the shredder.
- If the effluent generated relates to the autoclaving of a batch of solely orange bagged waste, then it is considered that there is no pharmaceutical contamination and the effluent is no different to that produced by the transfer facility and can be discharged to sewer under the existing consent.

The anticipated design of the drainage system from the treatment plant portion of the building will include a valve that will allow the operator to define the route, depending on the above.

Compaction

The sterilised waste floc exits the autoclave and the autoclave cart placed onto a bin lifter which tips the waste into a compacter. This reduces the volume of the floc by up to 60%. The compacted floc is placed into compactor skips or retained in the portable compactor and stored temporarily at the facility pending transfer to a permitted energy from waste facility with R1 status, where it is used as a refuse derived fuel (RDF) and energy is recovered from it.

Offices

The facility is run from a number of offices located within the transfer and treatment building. There are 4 small offices on the ground floor, 2 of which are within an area of Unit 9a. A new mezzanine level office in Unit 9a is to be built to free up the ground floor level. The design of the new mezzanine offices will include the requisite fire detection and prevention measures and the outer walls will be specified for prevention of fire spread. There is a small kitchen, 8 toilets and a changing room, all on the ground floor.

2.5 Permitted Wastes

2.5.1 Waste Types

The proposed 3 stage treatment plant will process only the following existing waste streams:

- 18 01 03* – wastes whose collection and disposal is subject to special requirements in order to prevent infection (from human source); and
- 18 02 02* – wastes whose collection and disposal is subject to special requirements in order to prevent infection (from animal source).

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.

The identified waste types for treatment will be diverted from the existing transfer process and, upon receipt and weighing in accordance with the existing waste acceptance procedures, will be placed in a dedicated area of the treatment side of the building pending thermal treatment.

The addition of the treatment facility will provide a significantly larger throughput capacity than that of the current transfer activity alone and, as such, in future the applicant may seek to fill this capacity with third party waste that is classified under the same waste codes above.

The facility does not accept dusty or powdery wastes, and operates in accordance with a non-conforming waste procedure.

2.5.2 Waste Quantities

The quantity of hazardous waste that will be stored at the facility, pending treatment, is constrained by the floor space in the existing building. It is limited to <50 tonnes, below the threshold for a listed activity.

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

2.6 Site Plans

The following site plans have been produced in support of the EP application:

- Drawing SHSMT-SoT1: Site Location Plan
- Drawing SHSMT-SoT2: Site Layout Plan
- Drawing SHSMT-SoT3: Site Setting
- Drawing SHSMT-SoT4: Site Drainage Plan
- Drawing SHSMT-SoT5: FPP Site Plan

Drawing SHSMT-SoT5 provides the level of detail required by the EA Guidance, including:

- The internal layout of the buildings, including specific areas where hazardous materials are stored on Site. This includes hazardous effluent and cleaning chemicals;
- The main access route for fire engines which is off Scott Lidgett Road. There is no alternative route;
- The location of the fire hydrant which is in the yard area near the entrance to Unit 10;
- The location of all fixed plant (process plant);
- Drainage runs and fire water containment systems; and
- Waste storage areas.

3 Managing Causes of Fire & Preventative Measures

3.1 Arson or Vandalism

The following measures are in place at the facility:

- There is an out of hours security contact and details are provided in the contact sheet in the Accident Management Plan;
- All operations take place within the confines of the building, which is secured when not occupied and continuously manned when operational;
- Entry to the wider estate is controlled off Scott Lidgett Road via a large steel gate which is locked outside of operational hours;
- Warning signs are fitted to the perimeter fence and notices are displayed within the business premises;
- A fire alarm system is installed, tested weekly by the operator, and serviced and tested every six months; and
- The integrity of security measures is inspected daily.

The site has the following visitor policy:

- All visitors must have an appointment, sign in, and identify any accompanying vehicles; and
- All visitors will be accompanied at all times and must sign out upon leaving the site.

The operator has the following employee policy:

- New employees are to provide references for checking;
- Employees are to be informed of all security procedures and will be disciplined in the event of a deliberate breach of company security procedures; and
- Employees leaving the company will be required to return any keys, codes or data prior to departure.

The operator will engage with the police and other regulatory authorities where there is a breach of security that poses a threat to environmental protection.

There is a CCTV system installed at the facility, covering the main access points to the building; there is also further coverage afforded by the other tenants on the same estate.

3.2 Plant and Equipment

There is limited plant and equipment at the facility, but what there is (both fixed and mobile) are inspected, serviced and maintained on a regular basis in accordance with either manufacturer's specifications (where this applies) and/or legislative requirements. This reduces the likelihood of failure. For the key pieces of equipment (the shredder, autoclave and compactor), pre-use checks will also be carried out at the start of each day and these checks will be recorded.

There is a visual inspection of the overall facility on a daily basis. This includes consideration of the building integrity (floors, roof, walls, doors), pollution control integrity (effluent IBCs, drains, sumps), and a of general housekeeping standards. In addition to this regular checks are made of PPE, fire extinguishers, and spill kits. Fire extinguishers, detectors and call points are maintained and serviced or replaced in line with the manufacturer's guidelines.

All equipment and site inspection documentation is retained on the premises, in the site office, and used during any scheduled inspection. In the event of a daily inspection highlighting an issue, a maintenance request is made and work undertaken. Should a daily inspection identify a serious problem, the equipment is isolated and clearly identified to all operatives that it is not fit for use. Upon completion of any repair to equipment or site infrastructure, the contractor will produce a record of repair. Only competent and qualified contractors will be allowed to work on any equipment or infrastructure.

Any mobile plant or equipment that may be required at the facility is kept away from combustible waste and stored in designated areas, when not in use.

Basic cleaning is scheduled at the end of each day to keep the operational areas free from hazards.

3.3 Electrical Faults

As detailed in Section 3.2 above, electrical equipment will be maintained to ensure it is safe, prevents harm to workers and minimises the risk of fire. If an equipment manufacturer recommends testing at regular intervals to ensure continual safety this shall be noted on the equipment and/or check list. For all other equipment, the frequency of inspections will be determined or assumed annually and noted on the equipment itself and/or a check list.

All buildings that have electrical installations will be fully certified by a qualified electrician on an annual basis or five year basis as required. Annual Portable Appliance Testing ('PAT') will be carried out on all relevant portable equipment (including in the kitchen and offices) to ensure it is safe to use.

The use of mobile power tools and power supplies is minimised to reduce the possibility of damage to electrical equipment and cables. Electrical heating appliances are installed within the offices and are maintained by a qualified electrician.

Firefighting equipment suitable for electrical fires (carbon dioxide) is available at all fire extinguisher points in the operational areas and offices. There is also a foam extinguisher at each point for other types of fire.

3.4 Smoking

No smoking is permitted at the facility. The nearest designated smoking area is outside the building, to the south of the offices, away from any waste storage or processing activities.

3.5 Hot Works

No hot works (e.g. welding) are undertaken at the facility during normal operations. Should hot works be required in relation to the maintenance or servicing of any plant or equipment at the site, this will be carried out by a suitably qualified contractor and under hot work systems.

3.6 Industrial Heating

In Unit 9a there is an air fan that is used to maintain appropriate temperatures during the winter months; this is a mobile unit. There is no fixed heating equipment within the operational areas of the units. The offices are heating by way of small wall-mounted electrical heaters. Once installed, the new boiler may be used for heating, removing the need for electrical heaters.

3.7 Ignition Sources and Hot Exhausts

No sources of ignition (naked flames) are allowed within the building. The Site operates a strict no smoking policy, with smoking only permitted in a designated area outside the building, away from any storage or processing of waste.

The delivery of waste is carried out outside. The delivery process is supervised, as wastes are sorted and prepared for processing. The potential impact of sparks from exhausts is minimised.

Within operational areas there is a forklift which is used to move full IBCs of effluent from the proposed treatment process, onto transfer vehicles removing them from the facility. The forklift is electric so there are no exhausts (or sparks). The charging point is located in Unit 10a and will be subject (as will the forklift) to scheduled inspection, service and maintenance. An exclusion area is maintained around the charging point for waste storage.

3.8 Build-up of Combustible Wastes

The facility is relatively small and, due to the nature of the business, waste does not remain on site for prolonged periods of time.

The efficient receipt of waste, and then processing and export of waste products is key to its operation and is a continuous process. The maximum storage period for any load of waste is 2 weeks; this provides allowance for the operational contingency plan to be implemented.

The facility is maintained in an orderly and tidy state, with areas clearly defined for incoming waste pending processing, effluent, compacted/treated waste awaiting transfer off site, and clean emptied bins.

All waste is received in UN approved containers; in the case of the sharps bins these are also sealed. This minimises the likelihood of a fire starting, and restricts the spread of fire.

3.9 Waste Storage

The EP currently limits the quantity of hazardous waste, to be stored or treated for disposal, to 10 tonnes per day and the annual waste acceptance is capped at 3,650 tonnes.

This Fire Prevention Plan is being submitted as part of an EP Application to increase the maximum amount of waste to be accepted, to up to 50 tonnes per day. In practice the facility currently has the potential to process 2,000 tonnes per year; the installation of the treatment plant will enable the operator to increase this as the throughput of waste will be higher.

As noted above, all waste is also received in UN approved containers; in the case of the sharps bins these are also sealed. This minimises the likelihood of a fire starting, and restricts the spread of fire.

Good housekeeping is recognised as being key to managing waste appropriately. Measures implemented at the facility include:

- All incoming and outgoing wastes are stored in UN approved containers, specified for this waste type;
- No waste is stored loose or in stockpiles; and
- All waste is contained within the confines of the building and is easily movable without compromising the integrity of its containment.

Visual inspections of all stored wastes will be made daily.

3.10 Containment

All waste is received in UN approved containers; in the case of the sharps bins these are also sealed. This minimises the likelihood of a fire starting, and restricts the spread of fire. No waste is stored loose or in stockpiles

3.11 Leaks and Spillages of Oils and Fuels

There are no oils or fuels stored at the facility.

3.12 Open Burning

The burning of wastes of any kind is prohibited under the EP.

3.13 Reactions due to Incompatibility

As part of the Waste Acceptance Procedure, all incoming wastes are assessed prior to acceptance. Under normal operations, receipt of non-conforming waste or that which would require quarantining is rare as waste is collected from serviced customers, in the applicants own (sealed) containers. As the site operates as a waste transfer facility, should waste arrive that can't be processed, this would be transferred on immediately to a treatment facility.

Should any material be discovered that is likely to cause a reaction with other wastes it would be isolated from any potential combustible materials and immediately removed. As part of their induction, staff are trained to understand and recognise the wastes that can be accepted at the facility.

3.14 Hot Loads

Waste materials are delivered outside, and in UN containers. There is no reason to expect any load to contain hot materials.

4 Detecting, Suppressing and Fighting Fires

4.1 Fire Detection

The fire detection system at the facility currently comprises the following:

- Smoke detectors: 3 across the operational area and 5 across the offices, changing area and kitchen;
- Flashing beacons: 2 within the kitchen/changing area; and
- Call points: 2 within the kitchen/changing area and office/toilet area.

It is confirmed that the system currently used at the site is subject to regular service and maintenance by an NICEIC approved contractor. It is subject to annual servicing, for which records are kept at the site.

The same contractor has been engaged to design and install further fire detection in the additional areas of the facility. This includes a further 15 smoke detectors (8 of which include sounder bases), 4 more flashing beacons, 4 more call points, and 2 fire alarm panels (1 main, 1 repeater). These will be linked to the existing alarm system. Indicative locations for the proposed fire detection system are shown on **Drawing SHSMT-SoT5: "FPP Site Plan"**. Once installed, the FPP Site Plan will be updated to reflect the actual positions.

4.2 Fire Action Plan

- 1) If a fire is discovered, sound the alarm at the nearest alarm call point.
- 2) Note that on-site fire detection may pick up a fire automatically without manually pressing the call point.
- 3) On alarm sounding continuously:
 - Turn machinery/plant off where possible.
 - Do *not* stop to collect personal belongings.
 - Quickly and safely vacate the building through the nearest fire exit.
 - Close all windows and doors (if applicable) behind you to help prevent the spread of fire.
- 4) A responsible (designated person) should collect the relevant documents to enable a roll call.
- 5) The responsible person must check the fire alarm panel to identify the location of the fire (if an automatic alarm) and collect a copy of this FPP (copies will be kept by the 2 fire panels).
- 6) Staff must report to the fire assembly point which is located across the yard, at the corner of the building to the southeast of the main facility entrance. A roll call must be taken. Results of the roll call must be passed onto the emergency services if required.
- 7) Appointed persons check the location of the detected fire by viewing the area from afar/outside the buildings to check if it is a false alarm.
- 8) If it is a *false alarm* employees are permitted to return to work as normal following the check and an appointed person must call the fire brigade to call off site attendance.
- 9) If there is a *fire* then all employees must remain at the assembly point until authorised to return onto the premises.
- 10) Following a check of the area highlighted on the panel, if a fire is discovered only deal with the fire if able and safe to do so:
 - Consider your own safety, do not take risks and maintain your own exit.
 - Consider the type of fire extinguisher suitable for the fire and your own ability/training.
- 11) Otherwise call 999 for the fire brigade:
 - Await further instructions from the emergency services.
 - Make a copy of this FPP available to the Emergency Services, if requested.

- Assist the Emergency Services with site information, plant and materials as requested by the Emergency Services and under their supervision.

12) If firefighting water is likely to enter external drains, follow the spillage procedure under the supervision of the Emergency Services.

4.3 Fire Suppression & Portable Equipment

There is currently no fixed fire suppression system in place at the site. This is not deemed necessary, based on the type of waste accepted, the storage and containment measures, and the size of the facility/throughput/waste turnaround times.

Firefighting equipment suitable for electrical fires (carbon dioxide) will be available at all 8 fire extinguisher points in the operational areas and offices. There will also be a foam extinguisher at each point for other types of fire. There are currently no provisions in the part of the building that will be used for the treatment process; however this will be installed prior to operation.

4.4 Prevention of Fire Spread

In the event of a fire or suspected risk of fire (e.g. presence of smoke), any plant operating will be stopped and waste will be moved away from the potential fire source. At this facility this is made easier due to the fact that all waste is within either 770 litre wheeled skip bins, or within sharps trolleys. Waste can be moved away from the source without compromising the integrity of its containment. As a result, the size of a fire is likely to be small and easily contained.

Persons on site should only ever attempt to extinguish a fire if the risk posed is minimum and they are trained to do so. Any fire on site is considered an emergency and the Fire Brigade will take control of any firefighting actions on site, including the decisions on which methods to be used to deal with the situation, which could include, but not be limited to:

- Reducing the amount of firewater run-off generated by using sprays and fogs rather than jets; and/or
- Applying water to cool unburned material.

4.5 Fire Water Supply

Water supplies for firefighting are not retained at the Site. There is no water storage tank or lagoon.

The location of the nearest fire hydrant, in the yard near the entrance to Unit 10 is shown on **Drawing SHSMT-SoT5: "FPP Site Plan"**. The largest likely fire would be within the compactor unit which can hold 10 -12 tonnes. This is 30 m³. EA guidance recommends that a fire of 300 m³ should be put out within 3 hours. A fire of the size that could potentially occur in the compactor unit is significantly less than this and both the fire and the water supply will be contained within the shredder unit itself so water losses will be insignificant during quenching of the fire and the fire is likely to be put out quickly. It is considered that a fire of 30 m³ could be extinguished in 18 minutes.

The specification (the design flow rate) of the fire hydrant connection in the yard is not known. In the absence of this, it is assumed that the hydrant was installed in accordance with the applicable regulations (the Fire Hydrant Requirements and Dry Riser Regulations in the United Kingdom (amended 2018)). According to the Regulations, even the smallest fire hydrant (designed for an industrial estate up to 1 hectare in size) must supply water at a rate of at least 1,200 litres per minute. As such the existing fire hydrant is deemed more than adequate.

4.6 Training

All staff will receive training in Fire Prevention based on this FPP prior to starting work, and staff are required to re-familiarise themselves with the details on an annual basis. Records are kept of staff signatures confirming they are familiar with the contents of the FPP and have understood it thoroughly.

In order to ensure the facility is prepared for an emergency scenario, and to test how well this plan works, site emergency evacuation drills are carried out on a quarterly basis. As part of these drills different emergency scenarios are tested, such as fires in different areas of the site.

Exercises are carried out to ensure familiarity with the Emergency Procedures, and to confirm that staff understand the requirements of this plan, including:

- Raising the alarm;
- Ceasing work;
- Deactivating or otherwise making safe used machinery;
- Coordinating response teams;
- Blocking off drains with drain covers; and
- Moving waste away from a simulated 'on fire' waste container/equipment.

Records of these drills are held on file and contain as a minimum:

- Date of evacuation;
- Scenario;
- Evacuation time; and
- Any findings or actions resulting from the exercise.

5 Incident Control and Follow Up

5.1 Incident Management

The facility's EMS includes an accident management plan (AMP) which sets out the potential accidents that could result in harm to human health and/or the environment. Accidental fire is one of the accident scenarios that is considered within the plan which sets out a series of control measures that in place at the facility. This is detailed further in Table 2 of the AMP which sets out the procedure to be followed in the event of a fire or explosion.

All incidents are recorded in line with site procedures and investigations are carried out and documented, where appropriate and applicable. This is part of the Accident and Injury Procedure.

5.2 Site Contingency Measures

If there is a need to divert waste away from the facility, as a result of a fire, there is a contingency plan which will be activated. The contingency plan addresses the need to manage the following streams:

- Incoming waste;
- Floc; and

- Liquid effluent.

The contingency plan identifies alternative disposal routes for the incoming waste stream and reflects the intention of the application to always seek to honour its waste collection contracts and will not cease accepting waste from its customers if there is a viable outlet for treatment that would enable continued operation of the facility within the EP storage limits. This is irrespective of the location of the contingency facility and cost of recovery/disposal.

5.3 Local Receptors

Neighbours

In the event of a fire and calling the emergency services, occupants of the nearby commercial properties shall be notified immediately by telephone or in person. The contact details shall be maintained within this Plan.

Sensitive Receptors

Sensitive receptors within 1 km of the Site are identified on **Drawing SHSMT-SoT3: "Site Setting"**.

Local and sensitive receptors will be advised by telephone or in person according to the potential impacts which will in turn be in accordance with the scale of the incident and the prevailing conditions at that time (e.g. weather conditions, wind direction).

Thermal Radiation

Thermal radiation from burning materials can occur and cause nearby combustible materials to ignite. The closer a material is to a radiation source the quicker that material will heat up. Radiated heat from a burning building can, in some circumstances, give rise to fire in a nearby building.

The operator will maintain an inventory of land-use and the presence of combustible materials within 50 m of the site. This inventory will be attached to the FPP and will be provided to the Emergency Services upon request.

Smoke Plumes and Air Quality Impact

Smoke is hazardous to the environment and human health. To manage the impacts of smoke released from a fire, this FPP details the combustible materials potentially involved, and identifies the name and contact details of sensitive receptors in the area.

The site will work with the emergency services to assist in the rapid notification of sensitive receptors including in person, by telephone call, and by local news media and will assist emergency services in the dissemination of advice on recommended actions (e.g. evacuation, closure of windows, etc.).

5.4 Fire Water Run-Off

In the event of a fire or suspected risk of fire (e.g. presence of smoke), any plant operating will be stopped and waste will be moved away from the potential fire source. At this facility this is made easier due to the fact that all waste is within either 770 litre wheeled skip bins, or within sharps trolleys. Waste can be moved away from the source without compromising the integrity of its containment. As a result, the size of a fire is likely to be small and easily contained.

Should the use of fire extinguishers not be sufficient and the fire brigade has to put a fire out, the potential quantity of fire water run-off will still be small and is expected to be restricted to within the building.

The water will be considered to be contaminated due to its contact with the waste and will be retained in the drainage system in the facility (by blocking off the drain before the discharge point).

It will be contained within the building by low bunds across the doorways. The system can be pumped out and the fire water transferred off site for disposal.

Based on the volume of the largest waste 'pile' (a full compactor - described in 4.5 above), and the capacity of the hydrant, it is likely that the 1,200 litre/minute flow rate would sufficiently put out the fire within 18 minutes. This would result in the quantity of fire water generated being 21,600 litres (216 m³). It is considered that this represents a worst case scenario as it does not make any allowance of the likely level of evaporation of the water used to fight the fire (it is the evaporation process which takes the heat away from the fire, hence extinguishing it) however given the size of the building and the drainage measures, it is considered that the site has adequate capacity to manage fire water run-off.

5.5 Solid Waste Residues

In the event of a fire or suspected risk of fire (e.g. presence of smoke), any plant operating will be stopped and waste will be moved away from the potential fire source. At this facility this is made easier due to the fact that all waste is within either 770 litre wheeled skip bins, or within sharps trolleys. Waste can be moved away from the source without compromising the integrity of its containment. As a result, the potential quantity of solid waste residue resulting from a fire is minimal and restricted only to the waste load/mass in which the fire started.

Solid waste resulting from a fire would be transferred off site for appropriate disposal, with agreement of the route from the EA.

5.6 Waste Diversion

If there is a need to divert waste away from the facility, as a result of a fire, there is a contingency plan which will be activated. Details of this are provided in Section 5.2 above.