

ODOUR MANAGEMENT PLAN

Background

The Sterimelt equipment is used to melt polypropylene fabrics into solid blocks of plastic in order that it can be recycled. Infection Prevention and Control requirements mean that these items will only be collected from non-infectious sources and will be free from contamination with body fluids.

The equipment is located at the Sterile Services Department of the Royal Cornwall Hospital, with no nearby residential buildings or hospital sleeping areas.

Materials held on site

Quantity limits: No more than 1 tonne of non-hazardous waste will be stored on site at any one time. Output from the Sterimelt will not exceed 50 tonnes of solid polypropylene blocks per year.

Waste types & quantities: All waste will be classified as EWC code 18 01 04 and will be free from contamination with bodily fluids. Waste types will include sterile instrument wraps and single use face masks.

Source: Waste will be from healthcare services delivered in Cornwall.

Age of waste: Sterile instrument wraps will be delivered to site on the day of collection. Single use face masks will be delivered to site at a variable frequency, depending on how regularly the collection bins require emptying, but this will be a minimum of weekly.

Storage / treatment method and location: Single use face masks will be stored in a UN approved wheeled bin within the permitted area. Sterile instrument wraps will be stored within the Sterile Services Department building (where they are generated) and only brought into the permitted area when the Sterimelt is ready to be loaded.

Storage time limits: The Sterimelt will be operated at least daily. Masks will not remain in storage prior to treatment for more than 5 working days.

Management of materials

Reception: incoming waste types are not contaminated with bodily fluids or other odour causing substances. Any contaminated waste will be diverted to the hospital's standard waste disposal routes. Waste will not be stored on site for more than 5 days. If the 5 days storage has been reached, waste will be diverted to the hospital's relevant waste stream.

Treatment: During operation, the Sterimelt machine continuously extracts vapours from the heating cabinet and draws them through an Electronic Scrubber/Dryer, an activated carbon filter and a HEPA style filter as an odour reduction measure.

Post-treatment: The solid plastic blocks are not odorous after treatment. The treatment process sterilises the plastic and therefore no substances are present to produce odour.

Maintenance: The manufacturer's recommended schedule of maintenance, including filter changes, will be carried out to ensure the filtration system remains effective.

Receptors

The 7 buildings closest to the Sterimelt have been identified as monitoring points for odour. The locations, and distances from the Sterimelt are detailed in the table below and shown on a map in Appendix 1 of this management plan.

Ref	Description	Distance from Sterimelt
1	Main entrance to Sterile Services Department building (staff only).	17m
2	Entrance/loading bay for Kedhlow building (IT and medical records – staff only).	39m
3	Diabetic Education Centre (outpatient department).	74m
4	Ambulance bay for Helipad, sometimes location of mobile CT scanner (outpatients).	48m
5	Entrance to Pharmacy Technical Services building (staff only).	48m
6	Health & Wellbeing Innovation Centre (externally owned business/meeting venue).	95m
7	Clinical Microbiology building and public footpath.	110m

Monitoring

Site operators will carry out ad hoc monitoring of odour from the Sterimelt within the permitted area during operation.

If odour at a level which could potentially cause nuisance is detected, a member of site staff will proceed to each odour monitoring point to confirm whether nuisance odour is detectable outside the permitted area.

If nuisance odour is detected at a monitoring point, no further processing runs will take place until the Sterimelt has been checked to confirm all the relevant filtration systems are operating correctly. Visual checks will be carried out on the waste being processed to ensure it meets acceptance criteria and additional odour monitoring will be carried out by site staff during the processing run following the detection of odour at a monitoring point.

Contingency measures

Receipt of odorous waste on site: The load would be separated from other material and placed into the clinical waste bins available at the Sterile Services Department. These are exchanged daily.

Sterimelt producing significant or unusual odour during operation: Process to be halted and manufacturer to be contacted for site engineer visit. Materials to be diverted to main hospital waste disposal routes whilst work is carried out.

Power supply damage preventing Sterimelt operating: Hospital Estates to be contacted to address power supply issues. Materials to be diverted to main hospital waste disposal routes until Sterimelt is operational.

Hospital: RCH Directorate: Sustainability	Activity: Sterimelt	Ward/Dept: SSD Rcht.sustainable@nhs.net	Assessor: H Walker Title: Sustainability Lead	Assessment Date: 22/6/21 Review Date: 22/6/22
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Item No	Potential accident/incident	Impact	Existing control measure	Risk Ranking	Proposed added control measures	Revised Risk Ranking
1	Odour	Nuisance	No waste streams with potential to cause odour will be stored or processed on site. Waste will be bagged and stored in lidded wheeled bins prior to processing. No nearby residential buildings.	Likelihood: 1 Consequence: 1 Risk: 1		
2	Emission of bioaerosols	Health impact on staff	No waste from infectious patients will be processed. Lab testing carried out on the equipment demonstrates that no risk is posed by the point source emissions due to decontamination heat cycle.	Likelihood: 1 Consequence: 1 Risk: 1		