

HealthBeacon Limited

Waste Licence Application

Application ID: LA006978

Attachment-4-7-1 National BAT Assessment

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1 Introduction

HealthBeacon Limited intend to apply for permissions for the development of a small-scale Healthcare Waste Management Facility at Unit 18, Naas Road Business Park, Muirfield Drive, Naas Road, Dublin 12 (Eircode D12 PF63).

The applicant intends on accepting its own waste bins on-site which they supply to domestic customers for processing and sterilization. A maximum of 20 tonnes of these waste bins will be accepted on-site per annum. Sharps waste (contained in the bins) will be temporarily stored on-site in regulated containers before being dispatched to an appropriate third-party waste treatment facility. The empty bins will be put through a sterilization process on-site. A small Processing Area consisting of wash room and a clean room will be developed at the existing premises for the purposes of carrying out this activity. Cleaned bins will then be reused by the applicant in the course of their business. A small waste storage area will be contained within the wash room.

HealthBeacon Limited are required to obtain a Waste Licence for the proposed waste activities to be undertaken and are required to adhere to the Best Available Techniques for environmental management for the waste sector defined in the EPA BAT Document '*Final Draft BAT Guidance Note on Best Available Techniques for the Waste Sector: Waste Transfer and Materials Recovery.*'

2 Conformance with EPA BAT for the Waste Sector

A small-scale Healthcare Waste Management may have the potential to generate environmental impacts in the following areas:

- Emissions to air
- Emissions to water
- Noise Emissions
- Infection
- Nuisance

The following measures will be employed to ensure the proposed waste activity is carried out in accordance with aforementioned EPA BAT for the Waste Transfer and Materials Recovery sector.

	Mitigation and Control Measure/Technique
General Measures for controlling emissions from the facility	<p>An Environmental Management System will be operated for the facility and will cover the following areas. The Environmental Management System will focus on continual environmental monitoring and improvement.</p> <ul style="list-style-type: none"> • Environmental Policy • Environmental Compliance Obligations • Environmental Objectives and Targets and Environmental Management Programmes • Waste Acceptance Procedures • Operational Control and Mitigation Measures • Waste Record Keeping and Environmental Reporting • Environmental Monitoring • Emergency Response Procedures • Operational and Environmental Staff Training Programme

	Mitigation and Control Measure/Technique
	<ul style="list-style-type: none"> Environmental Register summarizing environmental incidents, complaints, non-conformances and corrective/preventative actions. <p>A Closure Plan will be developed to ensure site closure occurs in an orderly manner and that known environmental liabilities are addressed before site decommissioning.</p>
Measures for controlling emissions to air	<p>There will be no emissions to air of significance associated with the proposed development. Given the nature and scale of sterilization operations It is envisaged that negligible levels of bioaerosols will be emitted during the wash process. It is proposed to carry out swab testing of working areas, the vent and the ceiling initially to verify that the transmission of infectious microorganisms to work surfaces or air is not taking place. This will be for the purposes of ensuring staff safety.</p>
Measures for controlling emissions to water	<p>The proposed activity will not give rise to aqueous emissions to ground, underlying groundwater or any surface water body. The proposed activity will not give rise to aqueous emissions to sewer. Wastewater from the wash process will be collected in a bunded IBC on-site before being collected from the site by an authorized waste collector and sent to an appropriate waste treatment facility.</p> <p>The Wastewater Storage IBC on-site will be double skinned in order to prevent the accidental release of wastewater in the event the interior IBC ruptures. A spill kit and suitably sized spill containment barrier will be provided adjacent to the IBC for containing any accidental releases that make their way onto ground and to prevent the run-off of spilled wastewater outside roller doors and into the drainage system serving the business park. An Emergency Response Procedure comprehensively detailing Spill Response Procedures will be in place. Relevant staff will be trained in these procedures and given training in the use of the spill kit/barrier. Where other chemicals are stored on-site in small quantities (E.g. disinfectant) they will be stored in a cabinet situated in the waste processing area suitable for chemical storage and which offers secondary containment.</p> <p>Wastes arriving on-site will be contained in an enclosed sharps bin. Waste handling and storage activities will take place indoors in the processing rooms. No wastes will be handled or stored areas outside the processing room or outdoors. As such, there will be no possibility of stormwater coming into contact with waste being handled or stored at the facility and then being discharged to the environment.</p>
Measures for controlling noise emissions	<p>A facility of this nature and scale will not give rise to any noise emissions of significance. There will be no plant or equipment situated on-site giving rise to significant levels of noise. All waste handling and storage activities will take place indoors in designated areas. It is not envisaged that vehicle noise associated with the proposed activity will be significant given the type and volume of traffic transporting waste to the site (<1 consignment contained in a commercial van per day). In addition, the existing noise environment is already characterized by heavy traffic, tram noise, and commercial, light industrial and industrial noise. It is therefore envisaged that there will be a negligible impact on the local environment or surrounding receptors in terms of noise.</p>

	Mitigation and Control Measure/Technique
Infection Control Measures	<p>A Standard Operating Procedure (SOP) has been developed to ensure that waste processing reduces risks associated with infectious materials to negligible to very low levels.</p> <p>Sharps waste arriving on-site will be in UN Approved, sealed, rigid 2.3 litre bins. These bins will be clearly marked with the appropriate label indicating the contents are potentially infectious. Waste bins arriving on-site which are ruptured or which are leaking will be deposited in a quarantine container situated in the designated waste storage area before being promptly removed off-site.</p> <p>In line with relevant EPA BAT Guidelines SOP's will be developed covering procedures for dealing with accidents, incidents and spillage, e.g., the appropriate first aid measures for sharps injuries, use of spillage kits and disinfectants. A spill response procedure will be in place and a spill kit will be provided on-site to ensure spilled materials are cleaned up safely and effectively, with waste from spill clean-up being deposited in the aforementioned quarantine container. All relevant staff will be provided training and re-training as necessary in operational and health and safety related procedures.</p> <p>Suitable personal protective clothing and equipment will be used by staff who are involved in the handling of waste on-site or who may otherwise carry out work in waste handling, processing or storage areas e.g., cut resistant gloves, cut resistant sleeves, cut resistant apron, leg protectors, cut resistant footwear, face visors. Suitable washing facilities will be provided in the Wash Room for those handling waste. All workers who handle waste arriving on-site or who may otherwise carry out work in waste handling, processing or storage areas will be obliged to undergo worker immunisation and regular health monitoring, e.g., for Hepatitis B and tetanus.</p> <p>The designated waste storage area on-site will be clearly marked and delineated. All waste storage containers in this area will be UN Approved and sealable. These containers will also be clearly marked with the appropriate label indicating the contents are potentially infectious.</p> <p>Prior to commencement of operations a Health and Safety risk assessment will be carried out on site to assess the risks to workers associated with facility operations and further identify and clarify the appropriate protection and control measures required. The risk assessment will be reviewed on a yearly basis or where there is a significant process change. The company's Safety Statement will be revised as necessary.</p>
Nuisance Control Measures	<p><u>Odour</u></p> <p>The sharps waste being accepted on-site will not be odorous due to nature of the autoinjector waste material. Minimal exposure to biological material means little risk of odour. In addition, waste will be stored in sealed containers and following the transfer process will again be sealed into larger containers. Sharps waste arriving on-site will only be accepted in sealed sharps waste bin containers. Sharps waste bins should only be opened and</p>

	Mitigation and Control Measure/Technique
	<p>sharps waste should only be handled/processed/stored in the designated, enclosed waste processing area. Sharps waste generated in this area will be subsequently transferred to the designated waste storage area and placed in a sealed UN approved container. This sharps waste will be removed from the premises as soon as the larger 770 litre storage bin reaches capacity. It will then be collected by a regulated waste handler and a replaced with a new 770 litre bin.</p> <p>A Standard Operating Procedure (SOP) defining safe procedures for processing will be in place. This SOP will explicitly state the requirements for sharps waste to only be handled in the aforementioned designated areas in a tightly controlled manner. All staff involved in the handling and processing of waste arriving on-site will be provided training in this SOP. Regular inspections will take place to ensure adherence to SOP's and to ensure wastes are not being exposed outside designated areas. Sharps waste receptacles contained in the waste processing area will be sealable in order to prevent the release of any odour from these receptacles. The roller door at the facility will be kept shut normally except during the occasional site delivery in order to minimize the release of any odorous air that might accidentally arise from inside the facility.</p> <p>With the adoption of the above control measures, and considering the small volume of sharps waste that will be present on-site at any one point in time it is considered that there is no likelihood that the proposed facility will give rise to any odours.</p> <p><u>Litter</u> The potential for the generation of litter in or around the site is negligible given the procedures that will be in place for accepting and controlling this waste on-site. All Sharps Waste arriving on-site will be accepted in enclosed, fully sealed bins. These bins will be rigid therefore eliminating the potential for the spill of waste during transportation or on-site handling. Sharps waste will only be handled, processed and stored in designated areas inside the building. Sharps waste arising on-site will be stored in sealable, rigid containers prior to onward transfer.</p> <p>It is highly unlikely any unauthorized wastes which may give rise to litter or unsightliness will arrive on-site given the 2.3 litre bins which form part of the smart sharps container used by company customers are used exclusively for the deposit of sharps waste. Customers have no access to these bins other than when depositing used sharps into them. Notwithstanding this, Waste Acceptance Procedures have been developed to minimize the potential for any unauthorized waste arriving on-site. This ensures the highest level of control possible with regards to waste acceptance and control at the facility. In the highly unlikely event unauthorized waste is deposited into a 2.3 litre sharps bin by a customer and is accepted on-site, this waste will be separated, treated as infectious waste and quarantined in a designated, sealable quarantine container in the processing room inside the building. This waste will ultimately be collected from the premises by an appropriately authorized waste collector for treatment at an appropriate treatment facility.</p>

	Mitigation and Control Measure/Technique
	<p>As such, there is no opportunity throughout the process for any litter to be generated inside or in the vicinity of the proposed facility.</p> <p><u>Vermin</u></p> <p>The potential for the generation of vermin in or around the site is negligible given the procedures that will be in place for accepting and controlling this waste on-site. All Sharps Waste arriving on-site will be accepted in enclosed, fully sealed bins. These bins will be rigid therefore eliminating the potential for the spill of waste during transportation or handling. Sharps waste arriving on-site will only be handled, processed and stored in designated areas inside the building. Sharps waste arising on-site will be stored in sealable containers on-site and collected by an approved 3rd party waste handler.</p>

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3 BAT Associated Emissions Levels and Compliance Monitoring

It is not envisaged that there will be any air or noise emissions of significance associated the proposed waste activity. There will be no aqueous emissions from the proposed facility. As such, there are no relevant BAT associated emission levels which are applicable to the activity. It is not deemed necessary to carry out environmental monitoring at the proposed facility as this is the case.

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