

**HealthBeacon Limited**

**Waste Licence Application**

**Application ID: LA006978**

**Attachment-4-8-1 Operational Report**

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# 1 Overview of the Proposed Waste Activity

HealthBeacon Limited intend to apply for a Waste Licence for the operation 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. The name given to the proposed project by Applicant is the 'ReUse Project.' The processing areas for the proposed project will be known as the 'Green Labs.'

The Proposed Activity constitutes a Waste Activity under the Waste Management Act. Thus, a Waste Licence Application will be required for the proposed activity. An application for a Waste Licence will be made to the EPA in conjunction with the submission of a planning application to the Planning Authority.

Layout Plans showing the design of the proposed facility adjoins this Waste Licence Application

The prospective applicant proposes accepting sharps waste at their premises (EWC Code 18 -01-03\*). A maximum of 20 tonnes of sharps waste will be accepted at the premises per annum for onward transfer. A maximum of 300 kilograms of sharps waste will be stored on-site at any one point in time.

The following Classes of Activity under the Third and Fourth Schedule of the Waste Management Act will be carried out at the proposed facility:

- R12 - Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11).

## 2 Description of Proposed Facility Operations

The proposed waste activity is relatively uncomplex in nature. HealthBeacon Limited intend on developing a Healthcare Waste Management Facility at the site (Under the 'ReUse Project'). They propose accepting their own UN Approved home sharps bins (2.3 litre) which they supply as part of a Home Healthcare Service on-site for processing and sterilization. Used sharps in these bins will be accepted on-site and temporarily stored before being dispatched onwards to an appropriate waste treatment facility for recovery. Sharps containers will be delivered to the facility by an authorized third-party waste collector or containers will be pre-packaged in approved mailback packaging for delivery via a courier service.

Bins will be accepted on-site and brought into the processing room where they will be inspected, scanned (via electronic tag), weighed and recorded. The bins may be stored in this room before further processing or moved to the lid removal tool where the sharps waste inside will be deposited into an approved 60 litre healthcare sharps bin. The empty 2.3 litre bin and bin lid will be transferred to a washing rack for the Cleaning Process. The Bins and their Lids will undergo a validated washing process in a Bosch Series6 washing unit using biodegradable disinfectant.

An "Assessment of antibacterial efficacy of sterilising wash cycle for the disinfection of recyclable plastic sharps containers" was performed by independent laboratory, Lir Analytical to determine efficacy of the washing process. The low temperature washing process with AmphoTec solution inactivated 99.9% for *B. cereus* spores, *E. coli* and *S. aureus* pathogens. The company intends on regular swabbing and testing of cleaned bins and work surfaces. This will be carried out using an industry standard spore stripe weekly and independent testing quarterly to confirm the efficacy of this operation.

Once the wash process is completed, sterilized bins and their lids will be transferred to a roller conveyor which will in turn transfer the bins to a separate Clean Room. Following this, bins will be relabelled and scanned back into inventory stock. The washing process will be validated and microbial analysis will be performed on a regular basis to ensure adequate cleaning is achieved. Records of sharps bins and used sharps arriving on-site and leaving the site will be maintained.

Once the 60 litre UN approved sharps bins contained in the Processing Area are full, their contents will be deposited into a larger 770 litre bin in the storage area. Once the 770 litre bin is full, it will be sealed and then be collected by an authorized waste collector who will transfer the waste to a SRCL Limited's Hazardous Waste Treatment Facility based in 420-430 Beech Road, Western Industrial Estate, Naas Road, Dublin 12, Dublin (Licence Ref: W0055-02). The Sharps Waste will be treated at SRCL Limited's facility under the following Recovery Code: R3 - Recycling/reclamation of organic substances which are not used as solvents (Healthcare Risk Waste is shredded and disinfected using steam).

Sterilized polypropylene bin lids which cannot be reused due to the lid removal process will be sent for recycling. Wastewater generated during the process will be piped to a 1,000 litre bunded IBC container. Wastewater collected in this IBC on-site will be collected by an authorized third-party hazardous waste collector and disposed of at an appropriate waste treatment facility in accordance with regulatory requirements (following HPLC analysis). Only authorized waste collectors will be used to transfer wastes generated on-site to receiving waste treatment facilities.

A detailed Standard Operating Procedure providing information on processing operations and a Process Flow Chart detailing HealthBeacon Limited's ReUse Sharps Container Workflow are shown in Annex 1 below.

### 3 Proposed Operating Hours

The facility will be in operation from 9:00 – 17:00, Monday to Friday. It will not be operational on weekends or on Bank Holidays.

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**Annex 1****SOP Overview - Process for Handling of HealthBeacon Sharps Bins in the Processing Room**

An SOP for the processing operation, covering waste collection/acceptance procedures, waste inspection upon arrival on-site, waste quarantine procedures, wash process procedures, sharps handling and storage procedures and onward dispatch procedures.

**HealthBeacon Sharps Bin handling process**

1. Waste acceptance and inspection process
2. Bin Identification Process
3. Lid Removal & Image capture Process
4. Bin & Lid Cleaning Process
5. Cleaned Bin Inspection & Validation process
6. Certification & Data logging Process

**1. WASTE ACCEPTANCE AND INSPECTION**

- a. Waste is received into unit 18 and brought to inspection area. Sharps boxes are brought into the processing room for further processing or stored in pre-process storage area.

**2. BIN IDENTIFICATION PROCESS**

- a. The operator should wear latex gloves while handling sharps bins.
- b. Move the sharps bin over the RFID reader to identify the tag number.
- c. Place the bin on the weighing scales and record the bin weight in the correct field.
- d. Remove label

**3. LID REMOVAL & IMAGE CAPTURE PROCESS (NOTE: THIS PROCESS MAY CHANGE AS NEW REMOVAL DEVICE IS BEING DEVELOPED)**

- a. The operator MUST wear appropriate needlestick & cut resistant gloves while undertaking this procedure. Latex protective gloves should also be worn during any handling of the sharp'/s container.
- b. Place the bin into the lid removal tool holder, ensure the blue lid handle is facing to outside towards the operator (see picture).
- c. Pull down on the lever slowly to ensure the tool head aligns with the bin lid to be removed.

- d. Increase the pressure by pulling downward on the lever to sever the blue lid corners, quickly raise the lever upwards to aid in the removal of the lid. The upwards motion performed in one quick movement can facilitate this removal more efficiently. Repeat until the front of the lid has visibly moved off the yellow container.
- e. Remove blue lid to appropriate recycling container or place into washing rack.
- f. Ensuring appropriate gloves are being worn the operator should place the "Safety Perspex Lid" over the open sharps container and gently remove the sharps bin from the holder and tip into the Transfer Chute.
- g. Move the empty bin to the washing rack for "Bin and Lid cleaning process"
- h. The sharps contents will move to the Image Capture Tray.
- i. The operator should record and image of the sharps bin contents and ensure it is paired with the correct RFID ID#

#### **4. BIN & LID CLEANING PROCESS**

- j. Wearing appropriate hand protection, the uncleaned sharps bins should be positioned face down into the washer basket.
- k. Once the racks are full the anti-displacement grid should be placed on top.
- l. If lids are to be included in this washing programme then stack next to inverted bins.
- m. The appropriate volume of detergent/disinfectant solution should be added to the washer (see HB washing/cleaning procedure for details).
- n. Turn on the machine and select the appropriate wash cycle as detailed in the HB washing/cleaning procedure.
- o. Close the door to start the programme.
- p. Complete the washing programme log (which identifies RFID# bins washed in that run)

#### **5. CLEANED BIN INSPECTION & VALIDATION PROCESS**

- q. Switch off the machine and unload the washed containers
- r. Move the washed bins to rollers for transport to the clean room.

#### **6. Certification & Data logging Process**

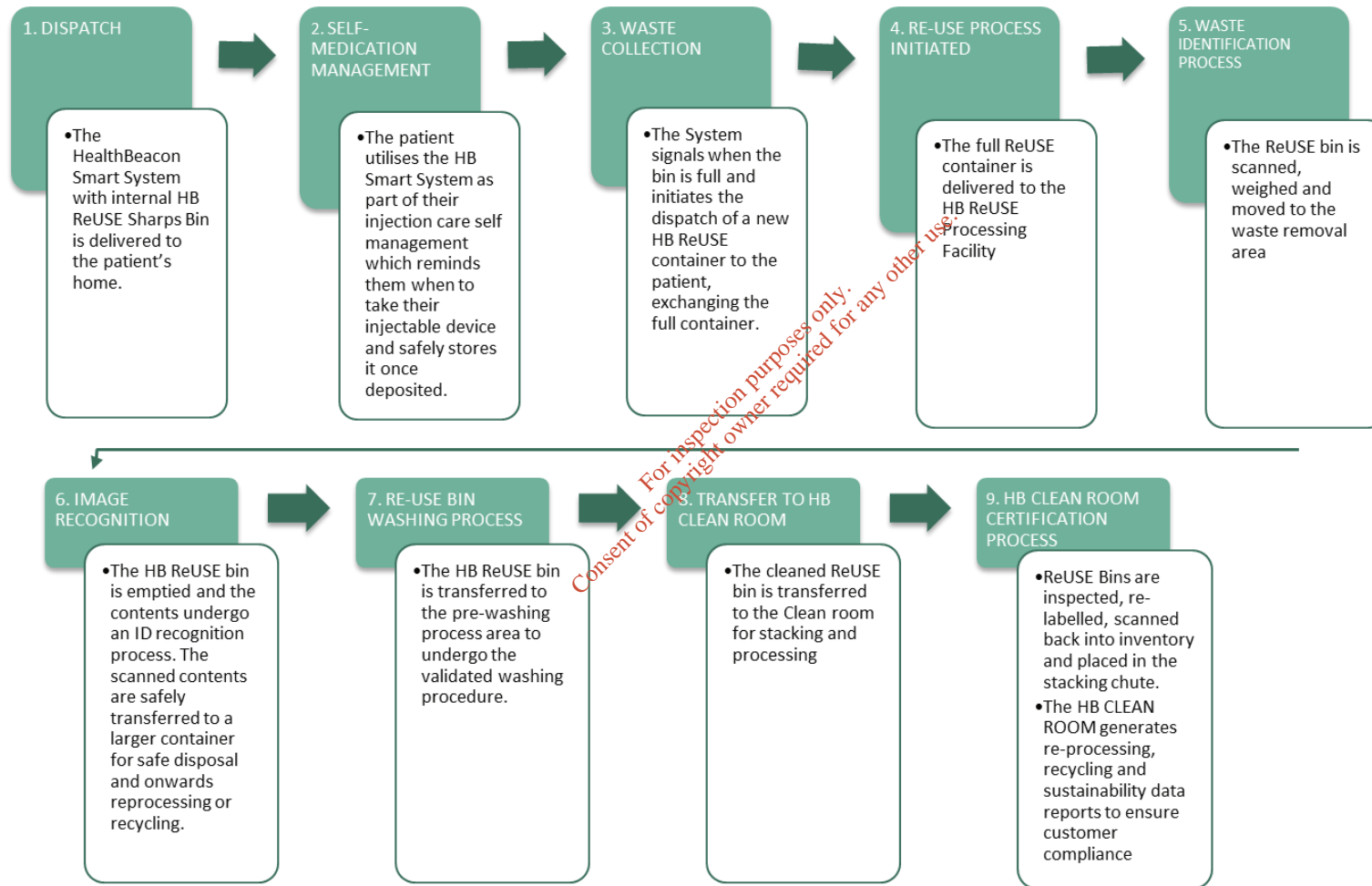
- s. Select a container from the top and bottom rack and perform the necessary swab procedure, for washing validation assay.
- t. Move bins to the wire shelves to complete drying process
- U.** To return bins back into inventory, scan the RFID tag, place a new bin label on the front of the bin and scan the barcode to link to the same RFID tag.

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## HB ReUSE SHARPS CONTAINER WORKFLOW



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