APPLICATION FOR AN ENVIRONMENTAL PERMIT VARIATION UNDER THE ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2016 (AS AMENDED)

ENVIRONMENTAL PERMITTING TECHNICAL REQUIREMENTS DOCUMENT

albus environmental

212 KINGSNORTH INDUSTRIAL ESTATE, HOO, ROCHESTER, KENT

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ACRONYMS/TERMS USED IN THE TEXT

Albus	Albus Environmental Limited
AMP	Accident Management Plan
CCA	Climate Change Agreement
CMS	Chemicals Management System
CO_2	Carbon Dioxide
DAA	Directly Associated Activities
EA	Environment Agency
ECL	Environmental Compliance Limited
EMS	Environmental Management System
EP Regulations	Environmental Permitting (England and Wales) Regulations 2016 as amended
EP	Environmental Permit
EPTR	Environmental Permitting Technical Requirements
ERA	Environmental Risk Assessment
EWC	European Waste Catalogue
FPP	Fire Prevention Plan
GLC	Ground Level Concentrations
HEPA	High-Efficiency Particulate Air
LOW	List of Wastes
MCERTS	Monitoring Certification Scheme
MSDS	Material Safety Data Sheets
OMP	Odour Management Plan
PC	Process Contributions
PPMR	Planned Preventative Maintenance Regime
SCR	Site Condition Report
The Installation	Albus Environmental Limited Clinical Waste Treatment Installation
UKAS	United Kingdom Accreditation Service
VOCs	Volatile Organic Compounds
WAMITAB	Waste Management Industry Training and Advisory Board

1. INTRODUCTION

1.1. Overview

1.1.1. Environmental Compliance Limited ("ECL") have been commissioned by Albus Environmental Limited ("Albus") to prepare an Environmental Permit ("EP") (EPR/JB3604FF) variation application in relation to their waste treatment Installation, hereafter referred to as "the Installation", located at 212 Kingsnorth Industrial Estate, Hoo, Rochester, Kent, ME3 9NZ.

1.1.2. The Permit variation application proposes the following:

- expansion of the Environmental Permit boundary for inclusion of the offensive waste building extension and to incorporate additional yard area. No additional waste storage in the expanded areas is proposed;
- operation of a sharps container treatment plant designed to wash and disinfect sharps containers prior to shredding within a fully enclosed system. Treatment of sharps is not proposed;
- incorporation of an additional point source emission to air associated with the sharps container treatment plant;
- inclusion of additional waste codes for storage and bulking up only – absorbents, wiping cloths and protective clothing (15 02 02*, 15 02 03) and aerosols (16 05 04* and 16 05 05).

1.2. Installation Location

1.2.1. The Installation is located at 212 Kingsnorth Industrial Estate, Hoo, Rochester, Kent, ME3 9NZ.

1.2.2. The Installation covers an area of approximately 0.23 hectares. Albus is proposing to expand the EP boundary to include additional areas of land to include the offensive waste building expansion and northern yard area. The proposed EP boundary is shown on the Site Location Plan (ALBU.01.07-01) contained in Section 3 of this application submission.

1.3. The Applicant

1.3.1. Albus Environmental Limited was incorporated in May 2012 under company number 08070020. Albus are experts in providing a bespoke healthcare waste management service to a variety of businesses including doctor surgeries, veterinary practices and nursing homes.

1.4. Pre-Application Advice

1.4.1. Enhanced pre-application advice was sought from the EA. Furthermore, a heritage and nature conservation screening report was also obtained. This advice has been considered during the preparation of this application. The pre-application advice is contained in Appendix I.

2. LISTED ACTIVITIES

2.1. Current Activities

Installation Activities

2.1.1. The Installation is currently subject to two Schedule 1 Activities under the Environmental Permitting (England and Wales) Regulations 2016 as amended ("EP Regulations"). The scheduled activities as well as the directly associated activities ("DAA") are detailed in Table 1 below.

Table 1: Permitted Schedule 1 Activities and DAAs

Schedule 1 Activity	Description of Specified Activity	Description of specified activity and WFD Annex I and II Operations
AR1	Section 5.3. Part A(1) (a) (ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment	Treatment of infectious waste by continuous thermal treatment in a steam auger (including pre-shredding of waste and post-treatment compaction of treated floc). R3 Recycling/reclamation of organic substances which are not used as solvents. D9 Physico-chemical treatment
AR2	Section 5.3. Part A(1) (a) (iv) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving repackaging.	Repackaging of hazardous waste. R12 Exchange of waste for submission to any of the operations numbered R1 to R11. D14 Repackaging prior to submission to any of the operations numbered D1 to D13.
DAA	**Description of DAA**	**Limits of Specified Activity**
AR33	Steam Supply	Gas oil fired steam raising boiler – net thermal input approx. 0.6 MWth
AR4	Cleaning and disinfection of containers and carts	Automated and contained bin wash system that washes and disinfects waste bins and carts
AR5	Raw material handling and storage	Raw material handling and storage

Waste Operations

2.1.2. Albus also have three waste operations within their Permit; AR6, AR7 and AR8 as detailed in Table 2.

Table 2: Permitted Waste Operations

Activity Reference	Description of Activities for Waste Operations
AR6	Repackaging of non-hazardous waste. R12 Exchange of waste for submission to any of the operations numbered R1 to R11. D14 Repackaging prior to submission to any of the operations numbered D1 to D13.
AR7	Storage of hazardous and non-hazardous waste. R13 Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced) D15 Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced).
AR8	Treatment by shredding of non-hazardous waste. R3 Recycling/reclamation of organic substances which are not used as solvents. D9 Physico-chemical treatment not specified elsewhere which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12.

2.2. Proposed Activities

2.2.1. As the proposed activities shall be operated in a continuous series and in accordance with the enhanced pre-application advice received, Albus propose the addition of one schedule 1 activity for the sharps container washing namely:

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

2.2.2. Together with a DAA for the shredding activity of the sharps containers. The proposed annual throughput shall be 3,650 tonnes.

2.2.3. It is anticipated that the treatment of hazardous waste in the sharps container treatment plant will have its own activity references, namely AR9 (washing) and AR10 (DAA for shredding).

2.2.4. It is also considered that the treatment of the non-hazardous waste in the sharps container treatment plant shall fall under a new activity reference AR11 as a new waste operation (capacity below 50 tonnes per day) related to the washing and shredding of sharps containers for recovery. The proposed annual throughput shall be 3,650 tonnes.

2.2.5. Albus also propose the inclusion of additional waste codes for storage and bulking up only– absorbents, wiping cloths and protective clothing (15 02 02*, 15 02 03) and aerosols (16 05 04* and 16 05 05). It is anticipated that storage can fall under existing references AR7, with an additional activity reference for a new waste operation for the repackaging of hazardous and non-hazardous waste (AR12) for recovery or disposal.

2.2.6. For storage and bulking up of 15 02 02* and 15 02 03, the proposed storage is 100kg for each waste code and the proposed annual throughput is 5 tonnes for each waste code.

2.2.7. For storage and bulking up of 16 05 04* and 16 05 05, the proposed storage is 250kg for each waste code and the proposed annual throughput is 5 tonnes for each waste code.

2.2.8. Albus do not propose the storage of hazardous waste exceeding 50 tonnes, therefore, an additional schedule 1 activity Section 5.6 Part A (1) (a) (i) is not required.

2.3. Proposed Waste Codes

2.3.1. The proposed waste codes to be treated within the sharps container treatment plant are detailed in Table 3.

Table 3: Waste Codes to be Accepted For Sharps Container Treatment

NEW SCHEDULE 1 ACTIVITY – SHARPS CONTAINER TREATMENT PLANT	
Code	**Description**
18	**WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH**
18 01	**wastes from natal care, diagnosis, treatment or prevention of disease in humans**
18 01 01	sharps (except 18 01 03)
18 01 03*	wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 01 08*	cytotoxic and cytostatic medicines
18 01 09*	medicines other than those mentioned in 18 01 08
18 02	**wastes from research, diagnosis, treatment or prevention of disease involving animals**
18 02 01	sharps (except 18 02 02)
18 02 02*	wastes whose collection and disposal is subject to special requirements in order to prevent infection

2.3.2. The proposed waste codes for storage and bulking up only are detailed in Table 4.

Table 4: Waste Codes to be Accepted For Storage and Bulking Up Only

15	**WASTE PACKAGING, ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**
15 02	**absorbents, filter materials, wiping cloths and protective clothing**
15 02 02	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	**WASTES NOT OTHERWISE SPECIFIED IN THE LIST**
16 05	gases in pressure containers and discarded chemicals
16 05 04*	gases in pressure containers (including halons) containing hazardous substances
16 05 05	gases in pressure containers other than those mentioned in 16 05 04

3. MANAGEMENT TECHNIQUES

3.1. Technical Competence

3.1.1. Under the EP Regulations, a Technically Competent Manager is required. Mr Nick Clarke fulfils this role. Copies of the Waste Management Industry Training and Advisory Board ("WAMITAB") Certificates are provided in Section 1 of this application submission.

3.1.2. The Installation is operated at all times by an adequate number of staff with appropriate qualifications and competence. The design and maintenance of the proposed infrastructure plant and equipment is to be carried out by competent people.

3.2. Overview of the Environmental Management System

3.2.1. Albus operate an Environmental Management System ("EMS") which has been developed and is externally certified in accordance with the ISO 14001. The certificate is provided in Appendix II.

3.2.2. The Director of Operations has overall responsibility for environmental matters at the Installation.

3.2.3. Albus has established a documented management system which:

- ensures compliance with the Environmental Permit and other licences and consents;
- identifies, assesses and minimises the risks of pollution arising from the Installation's activities;
- comprises a range of written procedures that cover all aspects of the Installation's activities;
- identifies, sets, monitors, and reviews environmental objectives and key performance indicators; and
- includes a requirement to report annually on environmental performance, objectives, targets and future planned improvements.

3.3. Plan

3.3.1. The planning element of the management system includes:

- identification of environmental impacts and aspects associated with the Installation's activities, and assessing their significance; including an assessment of the potential environmental risks including those posed by the work of contractors;
- identification and evaluation of relevant legal and other relevant requirements including Permit requirements and Consent limits;
- identification of environmental objectives and targets that will be focussed on reducing the impact of the identified significant environmental aspects, in conjunction with financial planning and investment;
- a series of risk assessments to cover a range of issues, including site operations, maintenance, accidents, training and records; and
- details of how Albus ensure that any relevant standards, guidance and codes of

practice are met on an ongoing basis.

3.3.2. The outcomes of the above are:

- a comprehensive understanding of the potential and actual impacts of the permitted activities on the surrounding environment and people's health;
- the correct appropriate measures selected to manage environmental risks and prevent or minimise their effects so as not to cause pollution;
- a series of documented procedures covering all aspects of the Installation's activities; and
- a series of documented environmental objectives and targets, together with an action plan/development programme to ensure that these are met.

3.4. Implementation and Operation (Do)

3.4.1. This element includes:

- ensuring that management system roles and responsibilities are clearly defined and documented, and that site staff are made aware of these;
- ensuring that the Installation is operated by suitably competent staff who have received the necessary training in all aspects of the plant's operation, including where contractors are used, ensuring that they are suitably competent; in this regard:
  - the skills and competencies necessary for key posts are documented; these key posts include contractors, those responsible for liaising with contractors and those purchasing equipment and materials,
  - training requirements are identified by means of a documented training needs analysis,
  - documented training records are kept and updated as required,
  - training specifically addresses environmental awareness and environmental permit requirements, and
  - the requirement for ongoing/refresher training is identified;
- ensuring that there are site layout plans - including drainage plans - and that they are revised as required to reflect any changes at the Installation;
- ensuring that there are documented procedures covering internal and external communications;
- ensuring that there are procedures in place for staff and contractors to have access to the Installation's Permit and management system requirements; with regard to contractors, ensuring that suitable instructions are provided with regard to protecting the environment whilst working on site;
- the establishment of a documented planned preventative maintenance regime ("PPMR") to ensure that all plant and site infrastructure are kept in suitable condition and operating effectively; this PPMR details what maintenance, tests and inspections need to completed and when; this also details the measures required to ensure continuing compliance with the permit conditions during maintenance/shutdown. The PPMR also:
  - identifies known or predictable malfunctions associated with the operations and the procedures, spare parts, tools and expertise required

to deal with them,

- includes a record of spare parts held, or details on where they can be sourced from, together with an assessment of how long they would take to obtain,
- includes a defined procedure for identifying, reviewing and prioritising items of plant for which a preventative regime is appropriate,
- includes all "Critical Equipment List" i.e. equipment or plant whose failure could directly or indirectly lead to an impact on the environment or human health and 'non-productive' items,
- ensure the necessary spare parts, tools, and competent staff are available prior to commencing maintenance;

- ensuring that there are documented procedures covering document control;
- ensuring that there are suitable documented record-keeping arrangements in place;
- ensuring that there are documented operational procedures and work instructions covering all aspects of the Installation's operation;
- ensuring that there are documented procedures covering emissions monitoring undertaken at the Installation; these will specifically include details of the relevant standards/methods used, the equipment used, its maintenance and calibration requirements and the frequency required (i.e. continuous or periodic, and if periodic, the associated schedules);
- ensuring that there are documented procedures that incorporate environmental issues into the control of process/equipment/engineering change, capital approval and purchasing policy;
- ensuring that there are documented procedures to address non-conformities/non-compliances and the associated corrective and preventative action; these will detail the means by which any such non-conformities/non-compliances are reported to management and the means by which they are reported to the EA;
- ensuring that there is a documented procedure for dealing with complaints; this includes requirements to ensure that:
  - an appropriate person deals with the complaint,
  - the complaint is properly recorded,
  - the complaint is properly investigated,
  - any action necessary to deal with the cause of the complaint is recorded,
  - the impact of the activity causing the problem is minimised,
  - steps are taken to ensure that the problem is not repeated,
  - details of any justified complaints are reported to senior management,
  - that the complainant (or the EA, as appropriate) is responded to in writing,
  - if the complaint came via the EA, a suitable documented response is provided to the EA,
  - if the complaint has come from a neighbour or a member of the public, a suitable documented response is provided to the complainant, and, if the complaint is substantiated, a report is provided to the EA, and
  - the management system is amended accordingly to reflect any changes;

- ensuring that there are documented procedures covering emergency preparedness and response; these will cover such incidents as major plant failures, significant spillages of potentially polluting substances, loss of mains electrical power etc.; these are incorporated into an Accident Management Plan ("AMP"); Albus ensure that suitable measures are in place to communicate the AMP to all relevant employees, management and contractors who work at the site; the AMP details:
  - the arrangements for response to an emergency, including defining specific responsibilities,
  - the measures for dealing with the consequences of an incident,
  - communicating with NRW and other relevant regulatory bodies,
  - communicating with the Installation's neighbours and the local community,
  - the measures for investigating incidents (and near-misses), including identifying suitable corrective action and following up implementation of that action,
  - the measures for recording incidents (and near-misses),
  - the measures for reporting incidents (and near misses) to Senior Management, and
  - the measures for reporting incidents to the EA;
- ensuring that there are documented procedures for carrying out internal audits; these describe how to schedule, conduct, report and manage internal audits;
- ensuring that there is a documented contingency plan in place that ensures compliance is maintained with all Permit conditions and operating procedures during maintenance/shutdown at the Installation or elsewhere.

3.4.2. The outcome of the above is evidence that day-to-day activities are taking place in accordance with the requirements of the management system and the Installation's Permit, specifically:

- that control measures and procedures are an integral part of the business operation;
- that the management system is easy for staff to access, understand and use;
- that staff are suitably trained and competent to carry out procedures and control measures; and
- that the requirements of the management system are effectively communicated to management, staff and contractors.

3.5. Check

3.5.1. This element includes:

- ensuring that all regulatory requirements in relation to monitoring and measurement are complied with, specifically:
  - the requirements relating to inspection and testing required under the applicable environmental legislation and the Installation's Environmental Permit and the associated procedures and work instructions,

- the requirements relating to inspection and testing required under the applicable health and safety legislation and the associated procedures and work instructions, and
- the requirements relating to the control of all inspection, measuring and test equipment relating to environmental requirements;

- ongoing evaluation of compliance with environmental legal requirements, policy requirements and objectives and targets; this will include:
  - an annual review of environmental legal register,
  - regular plant inspections, and
  - internal audit procedures (as detailed below);
- ensuring that non-conformities/non-compliances are properly recorded, investigated and that the appropriate corrective action is taken by the due date;
- ensuring that the necessary reporting and record-keeping required under the various Permit and consents are complied with;
- ensuring that internal audits are carried out in accordance with the documented procedures and that any audit actions are followed up; and
- ensuring that the results of all audits (internal and external) are made available to Senior Management on a regular basis.

3.5.2. The outcomes of the above will be:

- that checks are carried out to ensure that the management system is being implemented as intended, i.e. as documented; and
- the necessary preventative and corrective actions are undertaken to minimise non-compliances.

3.6. Review (Act)

3.6.1. This element includes:

- an annual management review of the management system to ensure that it is appropriate, being implemented and kept up to date, e.g. that any supplementary plans have been included into the management system;
- A management review of the management system when:
  - there are changes on site (in activities and/or plant/equipment),
  - if there is an accident, complaint, or breach of permit conditions.
- an annual review of both individual and organisational training needs;
- ensuring that all changes are properly recorded, and, if there are any major changes, EA is informed;
- an assessment of whether the Installation's objectives, and any targets, have been met and reported;
- a review of the Installation's objectives and targets, and, where appropriate, any revisions to these so as to effect continual improvement.

3.6.2. The outcomes of the above will be:

- the management system is kept up to date, and
- the management system is continually improved.

3.7. EMS Amendments Taking Account of the Variation Proposals

3.7.1. The EMS will be reviewed to take account of the variation to ensure that it remains appropriate and effective. The principle anticipated changes are described below:

- update to the EMS documents to take account of any additional Environmental Permit Conditions following the variation;
- the Environmental Risk Assessment ("ERA") (ALBU.01.07/ERA) will be used to inform the new risks and opportunities at the Installation;
- the environmental objectives and targets will take account of the proposed changes to ensure they remain appropriate, achievable but challenging;
- operational procedures will be reviewed to ensure they are aligned with the proposed changes detailed as part of the variation;
- the documented PPMR will be updated to include maintenance and inspection related to the new plant and equipment;
- emergency plans and procedures will be updated to take account of any additional risks;
- employees will be trained in the updated EMS and associated operational procedures. Roles will be assigned and training given with each relevant employee. Records will be held to show training has been completed and understood. Refresher training will be provided annually; and
- all changes to the EMS will be documented and communicated to all employees.

4. OPERATING TECHNIQUES

4.1. Technical Standards

4.1.1. The following EA sector technical standards / guidance has been considered during the preparation of this application:

- Healthcare waste: appropriate measures for permitted facilities (updated December 2021);
- Non-hazardous and inert waste: appropriate measures for permitted facilities (Updated August 2023);
- Guidance for the Recovery and Disposal of Hazardous and Non Hazardous Waste (IPPC S5.06, May 2013); and
- Guidance for the storage and treatment of aerosol canisters and similar packaged wastes (addendum to SGN IPPC S5.06) (Version 1, November 2011).

4.2. Current Activities

4.2.1. Albus is currently permitted for the following activities:

- pre-shredding and steam disinfection of infectious waste, compaction and storage of treatment residues;
- repackaging of hazardous waste;
- steam generation and container washing;
- shredding, compaction and storage of non-hazardous waste;
- temporary storage of hazardous and non-hazardous waste; and
- repackaging of non-hazardous waste.

4.3. Proposed Activities

Plastics Container Washing and Shredding Treatment Plant

4.3.1. The treatment of the clinical waste containers, such as sharps bins and rigid clinical tubs, will be undertaken by removal of the lid, emptying the contents for onward disposal, and then subsequent washing and disinfecting of the containers for reuse. If the containers are at end of life, they will be shredded for onward recycling as clean disinfected plastic. A batch process is proposed, therefore, within one batch only those containers destined for reuse shall be washed and disinfected. In another separate batch to be processed, containers which are at end of life shall be washed and then shredded.

4.3.2. The process flow diagram is provided in Figure 1.

4.3.3. As this is a prototype plant, drawings of the plant and the process flow it will follow are provided as part of this application.

4.3.4. Waste pre-acceptance and acceptance procedures shall be the same for the proposed sharps container waste (18 01 and 18 02 codes) as those already employed at the Installation adhering to 'waste pre-acceptance, acceptance and tracking appropriate measures' of the healthcare waste appropriate measures.

4.3.5. The entire treatment process is fully enclosed and automated. All chambers operate under negative pressure and the air is continuously filtered and the wash water is contained within a sealed system until being discharged to foul sewer.

4.3.6. Prior to treatment the sharps container waste shall be stored on the mezzanine floor of the main building within thirty 770 litre clinical waste carts/bins which are fully enclosed, lockable, rigid and leakproof and weatherproof.

4.3.7. Operators place the sealed clinical containers onto the clamping conveyor and an air lock chamber, under negative pressure and heavy duty rubber curtains, will ensure all air is contained and does not enter the loading area. The cutting chamber is also under negative pressure and is fully enclosed whereby the lid is removed and is disinfected and dropped directly into the shredder hopper. All liquids are captured in the sealed drainage troughs.

4.3.8. The conveyor transports the container into a sealed tipping hopper under negative pressure, the container is then rotated to remove its contents. An internal air pulse dislodges any material. The sharps waste shall fall into a lined, sealed bin for off-site clinical waste treatment and disposal. A camera monitoring system will also be in place to ensure all waste is removed.

4.3.9. The first wash chamber is entirely enclosed and disinfectant is used. All wash water is captured, filtered and reused. The washed container then passes through sealed curtains into a drying chamber to remove moisture. Negative pressure airflow ensures complete containment and no residual disinfectant or moisture is transferred to the shredding area.

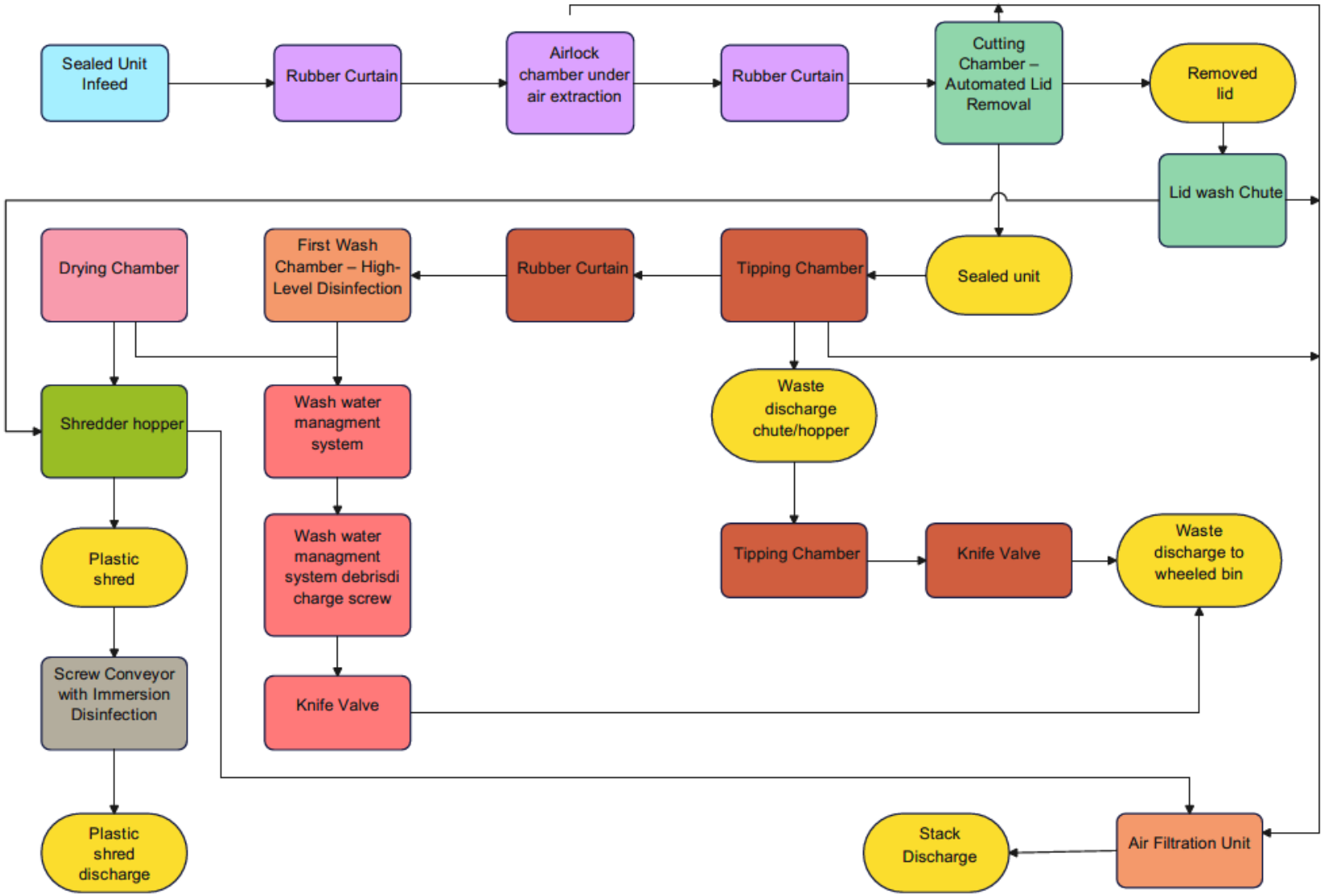
4.3.10. Any solid residues from the washing process, such as labels, will be discharged into a sealed cart/bin for off-site treatment.

4.3.11. Full solution replacement occurs at predetermined intervals. The effluent will be discharged into the same drainage line as the bin wash and held in an underground storage tank and then following analysis, disposed of to an appropriately licensed facility/installation offsite via tanker.

4.3.12. After washing and drying, the containers enter the shredder hopper. Only disinfected containers can enter this stage, and the shredder hopper operates under negative pressure. The shredded plastic is then submerged into disinfectant and drying blowers then remove the moisture. The clean, dry plastic is then deposited into bulk bags for recycling.

4.3.13. During the design phase of the treatment plant, Albus considered the decommissioning phase with the aim to minimise risks during decommissioning.

Figure 1: Sharps Container Treatment Plant – Process Flow Diagram



Acceptance and Storage of Aerosol

4.3.14. Albus propose the acceptance and storage of aerosols prior to transfer offsite. No treatment of aerosols is proposed.

4.3.15. Albus propose the acceptance of 5 tonnes per annum of aerosols at the Installation.

4.3.16. For bulk loads of waste canisters, Albus shall obtain the following information in writing from the customer:

- quantity of waste being delivered;
- the contents of canisters, including named product and propellant;
- whether the canisters are fully discharged, partially discharged or unused;
- hazard properties posed by contents of canisters (i.e. from material safety data sheets ("MSDS")); and °
- construction material of canisters (e.g. steel, aluminium or mixed).

4.3.17. Albus shall instruct the customer on requirements regarding the type and condition of containers and packaging that canisters will be accepted in.

4.3.18. If waste canisters are received in containers that are not secure for on-site storage nor well ventilated, based upon an appropriate risk assessment (e.g. taking into account the nature and quantity of the waste, the design and condition of the containers and available site storage provisions), the canisters shall be prioritised for subsequent acceptance checks and transferred to a secure well ventilated container.

4.3.19. Should the load be found to contain leaking canisters, these wastes shall be immediately removed from the waste reception area, stored in a well ventilated area and away from any sources of ignition. The aerosols shall not be transported unless they are repackaged for transfer using UN approved salvage packaging provided with appropriate measures to prevent the dangerous build up of pressure, or until the leaking has ceased or slowed sufficiently to present no threat of a flammable atmosphere being generated during transport.

4.3.20. Storage of canisters shall take place within the main building in secure well ventilated containers or within caged storage areas in a well vented location which is not subject to extreme temperatures or direct sunlight. The storage area is provided with an impervious surface and sealed drainage system.

4.3.21. Canisters received and held in insecure or flammable containers/packaging shall be stored in cages or transferred to secure ventilated containers to prevent the risk of them spreading fires by 'missiling' or 'ejection'.

4.3.22. During storage, lids on containers holding canisters shall remain securely closed at all times when not being filled, emptied or internally inspected and the doors/hatches of cages remain closed and locked when not being used. Containers shall also not be overfilled.

4.3.23. Cages used for storage shall be robust, fire-resistant and of an appropriate mesh size (based upon the size of the canisters to be stored) to constrain the canisters and prevent any ejection.

4.3.24. The aerosol storage area will have adequate signage to ensure that the hazard properties are clearly shown.

4.3.25. In order to prevent the risk of a thermite spark during storage and handling activities, wherever possible and practical to do so, aluminium canisters shall be stored separately from steel canisters that are rusty or in poor condition and will not be stored in direct contact with unprotected or rusty steel containers.

4.3.26. As detailed in the Fire Prevention Plan (Doc Reference FPP, dated July 2026), the canister reception and storage area is provided with appropriate fire detection and fire extinguisher systems.

4.3.27. The Operator should implement written inspection procedures to assess the condition of all waste containers (e.g. tanks, drums, IBCs and skips), pipework, bunding / kerbing and surfacing, and to carryout prompt remedial action where required or take unsuitable equipment out of use.

4.3.28. Canisters shall be regularly inspected on a frequent basis by visual inspection. Leaking canisters should be immediately removed from the storage area to the open air and away from any sources of ignition so gases can be safely dispersed. The canisters shall be repackaged for transfer using UN approved salvage packaging.

4.3.29. An auditable waste booking and tracking system shall be in place in order to avoid the accumulation and storage of aged stock. Canisters shall be held on site no longer than 3 months, prior to transfer.

Acceptance and Storage of Absorbents, Filter Materials, Wiping Cloths and Protective Clothing

4.3.30. Albus propose the acceptance and storage of absorbents, filter materials, wiping cloths and protective clothing, both contaminated by infectious substances and those not contaminated with infectious substances prior to transfer offsite. No treatment is proposed.

4.3.31. The hazardous and non-hazardous waste types shall not be mixed and will be stored separately in lockable, rigid, leakproof and weather proof 770 litre carts/bins.

4.3.32. Albus propose the acceptance of 5 tonnes per annum of 15 02 02* and 5 tonnes per annum of 15 02 03 at the Installation.

4.3.33. Albus shall implement strict waste pre-acceptance procedures for the proposed waste types so that enough information is known (including its composition) before it arrives at the Installation. This is to assess and confirm that the waste is technically and legally suitable.

4.3.34. If the waste is accepted, records shall be kept to justify the decision.

4.3.35. The pre-acceptance procedures shall follow a risk-based approach, considering:

- the source and nature of the waste;
- potential risks to process safety, occupational safety and the environment (for example from odour and other emissions); and
- knowledge about the previous waste holder(s).

4.3.36. Waste shall not be accepted on an ad hoc basis.

4.3.37. When a customer query is received, and before the waste arrives, Albus shall obtain adequate information from the waste producer to ensure that the waste has been properly assessed and classified as set out in WM3 in writing.

4.3.38. The following information shall be obtained:

- details of the waste producer including their organisation name, address and contact details;
- a description of the waste;
- the waste classification code (also referred to as a List of Waste ("LoW") or European Waste Classification ("EWC") code;
- the source of the waste (the producer's business and the specific process that has created the waste);
- information on the nature and variability of the waste production process;
- information about the history of the producer site if it may be relevant to the classification of the waste;
- the waste's physical form;
- the waste's composition (based on representative samples if necessary);
- a description of the waste's odour and whether it is likely to be odorous;
- an estimate of the quantity you expect to receive in each load and in a year; and
- For mirror entry LoW codes (as defined in WM3), evidence that an assessment has been made to assign the relevant mirror entry code.

4.3.39. If the waste is a mirror entry and has not been properly assessed, Albus shall assume it is the hazardous entry as a precautionary measure. The pre-acceptance information should be verified by contacting or visiting the producer.

4.3.40. Analysis of samples shall be carried out by laboratories who are United Kingdom Accreditation Service ("UKAS") or Monitoring Certification Scheme ("MCERTs") accredited for the prescribed test.

4.3.41. After a waste has been properly assessed and classified, Albus shall technically assess the waste's suitability for storage to meet permit conditions.

4.3.42. Pre-acceptance records shall be kept for at least 3 years, with records held electronically, following receipt of the waste.

4.3.43. Albus shall reassess the information required at pre-acceptance if the:

- waste changes;
- process giving rise to the waste changes; and/or
- waste received does not to conform to the pre-acceptance information.

4.3.44. In all cases, Albus shall reassess the information required at pre-acceptance on an annual basis.

4.3.45. Albus shall decide and record what parameters to check at the acceptance stage. The checks shall be visual, physical, and odour-based (sniff testing).

4.3.46. A criterion for non-conformance or rejection shall be implemented.

4.3.47. Albus shall implement waste acceptance procedures to check that the characteristics of the waste received matches the information provided during waste pre-acceptance. This is to confirm the waste is as expected and that it can be accepted.

4.3.48. If the waste does not conform to the pre-acceptance information, Albus may still be able to accept the waste, if the Permit allows. Otherwise, it shall be rejected.

4.3.49. The procedures shall follow a risk-based approach, considering:

- the source, nature and age of the waste;
- potential risks to process safety, occupational safety and the environment (for example, from odour and other emissions);
- the potential for self-heating; and
- knowledge about the previous waste holder(s).

4.3.50. When deciding whether to accept waste, Albus shall check that the relevant storage areas have the physical capacity needed to handle the waste. Albus shall not accept waste if this capacity is not available.

4.3.51. Albus shall visually check wastes and verify them against pre-acceptance information and transfer documentation before acceptance onto site. Hazardous wastes shall only be received under the supervision of a suitably qualified person.

4.3.52. Albus shall check and validate all transfer documentation and resolve discrepancies before acceptance.

4.3.53. If Albus believe the incoming waste classification or description is incorrect or incomplete, then Albus shall address this with the original waste producer or waste carrier (or both) during waste acceptance and any non-conformances shall be recorded. If Albus have assessed the waste as acceptable for on-site storage, this shall be documented.

4.3.54. Albus shall have clear criteria to identify non-conforming wastes and wastes to be rejected.

4.3.55. Albus shall have written procedures for recording, reporting and tracking non-conforming and rejected wastes including:

- using quarantine storage;
- notifying the relevant customer or waste producer; and
- recording a summary of the justification for accepting non-conforming waste in the waste tracking system.

4.3.56. Albus shall work with the waste producer to ensure measures to prevent the recurrence of non-conforming and rejected wastes are implemented.

4.3.57. Each load of waste on arrival to confirm the quantities against the accompanying paperwork. Albus shall record the weight in their electronic system to enable monitoring of available capacity.

4.3.58. Every container shall be checked to ensure it conforms against the accompanying paperwork. All containers to be accepted shall be clearly labelled and equipped with well-fitting lids, caps and valves secure and in place.

4.3.59. For hazardous waste, the waste tracking system unique reference number shall be applied to the container and each container labelled with the date of arrival on-site and primary hazard code.

4.3.60. Albus shall ensure that personnel undertaking the waste acceptance checks are trained to effectively identify and manage any non-conformances in the loads received. If non-technical sales staff are involved in waste enquiries, then a final technical assessment prior to approval will be undertaken.

4.3.61. Nominated personnel shall watch waste being unloaded, so that it can be quarantined if necessary before it is mixed with other material.

4.3.62. Offloading and reception areas on site are within the main building which benefits from an impermeable surface with self-contained drainage, to prevent any potentially polluting liquid from escaping off site.

4.3.63. Albus have an existing quarantine area which is separate from all areas and clearly marked. The maximum storage time of waste within the quarantine area is 7 days, however, if the waste is odorous, it shall be removed within 24 hours.

4.3.64. Albus has an electronic system to hold up-to-date information about the available capacity of different areas of the Installation. A pre-booking system is used to make sure that there is sufficient capacity for the incoming acceptable waste.

4.3.65. Albus have an electronic system which is readily accessible and holds all the information generated during:

- pre-acceptance;
- acceptance;
- non-conformance or rejection;
- storage; and
- removal off site.

4.3.66. Records are created and updated to reflect deliveries, and despatches. The tracking system also operates as a waste inventory and stock control system, it includes the information as a minimum:

- the date the waste arrived on site;
- the original producer's details (or unique identifier);
- a unique reference number;
- waste pre-acceptance and acceptance information;
- the package type and size;
- the intended treatment or disposal route;
- the nature and quantity of wastes held on site;
- where the waste is physically located on site;
- where the waste is in the designated recovery or disposal process;
- identification of the staff who have taken any decisions about accepting or rejecting waste streams and who have decided on recovery or disposal options;
- details that link waste to relevant transfer notes;
- details of any non-conformances and rejections, including consignment notes for waste rejected because it is hazardous; and
- if hazardous, additional information such as:
  - hazard characteristics and handling precautions;
  - compatibility issues; and
  - information specifying the original waste producer and process.

4.3.67. The electronic (or equivalent) system must be able to report for each of LoW code:

- the total quantity of waste present on site at any one time;
- a breakdown of the waste quantities being stored pending onward transfer;
- where a batch of waste is located based on a site plan;
- the quantity of waste on site compared with the limits in the EMS and Permit;
- the length of time the waste has been on site compared with the limits in the EMS; and
- if hazardous, additional information such as:
  - breakdown of waste quantities by hazard classification.

4.3.68. Back-up copies of records are stored off site. These records are readily accessible in an emergency.

4.3.69. Acceptance records are kept for a minimum of 2 years after the waste has been removed off site.

Storage Locations

4.3.70. Albus shall prepare waste storage and handling procedures to prevent and minimise pollution risks by using appropriate measures.

4.3.71. Waste is stored in the main building minimise the unnecessary handling of waste and in a location away from sensitive receptors.

4.3.72. Albus shall have in place a system to ensure that the correct storage area is used. This includes supervision by site staff and area signage including marking of hazardous properties where relevant.

4.3.73. Albus shall ensure that waste handling is undertaken by competent staff using appropriate equipment.

4.3.74. The maximum storage capacity and its designated storage areas are shown on the Site Layout Plan (ALBU.01.07-02) submitted as part of this application.

4.3.75. As part of site inspections, regularly monitoring of the quantity of stored waste against the allowed maximum capacities shall be undertaken.

4.3.76. All waste storage areas are clearly marked with signs indicating the type of waste stored.

4.3.77. A first in first out principle shall be used prioritising waste based on:

- its type;
- its age on arrival;
- the date of arrival; and
- the duration of storage on site.

4.3.78. Albus thoroughly clean containers on a regular basis to prevent the build-up of aging waste, which will be a source of odour and attract vermin.

4.3.79. All waste containers are fit for purpose including being:

- in sound condition;
- have well-fitting lids;
- suitable for the contents; and
- within the manufacturer's designed lifespan;

4.3.80. As part of site inspections, Albus inspect storage areas, containers and infrastructure daily to ensure there is no loss of containment. Inspections pay particular attention to signs of damage, deterioration and leakage. Records are to be kept detailing action taken. Any issues are dealt with immediately and records kept of inspection and any remedial action required.

4.4. Proposed Drainage & Infrastructure

4.4.1. The entire area of the Installation benefits from impermeable surfacing.

4.4.2. The Installation is located within a secure compound, completely enclosed and a lockable main entrance gate which is locked out of hours.

4.4.3. The proposed wastes shall be stored within the building with a sealed drainage system.

4.4.4. Albus undertake a regime of visual site condition checks undertaken weekly to ensure that the infrastructure is maintained in good condition. The site condition inspection checks/ site audits will cover:

- condition and integrity of the impermeable concrete hardstanding;
- condition and integrity of storage containers;
- condition and integrity of vehicles/equipment;
- condition and integrity of the treatment plant;
- condition and integrity of fire detection and fire-fighting equipment and spill containment provisions; and
- condition and integrity of the site buildings, fences and gates; and
- general housekeeping standards.

4.4.5. The results of these checks and details of any remedial action and maintenance that may be required in order to ensure good condition will be recorded in the site diary.

5. EMISSIONS

5.1. Point Source Emissions to Air – Current Arrangements

5.1.1. There are currently four emission points to air, designated A1-A4 detailed in the Environmental Permit.

5.2. Point Source Emissions to Air – Proposed Arrangements

5.2.1. Albus is proposing to add one new point source emissions to air associated with the sharps container treatment plant.

5.2.2. The new point source emission to air designated A5 is shown on Drawing ALBU.01.07-02 Site Layout Plan which is contained in Section 3 of this application submission.

5.2.3. All treatment plant air is subject to a three-stage filtration process prior to release to A5. This consists of the following:

- Coarse dust filter (5 micron);
  - removes dust and larger particulates; and
  - conforms to BS EN 779 / ISO 16890.
- High-Efficiency Particulate Air ("HEPA") H14 Filter;
  - removes 99.995% of particles ≥0.3µm;
  - captures bacteria, viral aerosols and spores; and
  - conforms to BS EN 1822-1: 2019
- Activated carbon filter;
  - removes volatile organic compounds ("VOCs"), odours and chlorine vapours; and
  - conforms to BS EN 15009 performance criteria.

5.2.4. Procedures will be in place to ensure that HEPA filters are monitored by measuring the pressure drop across the filter and maintained to achieve a minimum particle removal efficiency of 99.97% for particles ≥0.3µm diameter.

5.2.5. Procedures will also be in place to ensure the filters are safely removed and disposed of.

5.2.6. Detailed air quality modelling has been undertaken to predict the impacts associated with the emissions from the proposed point source emission to air.

5.2.7. For the purposes of the assessment, the following pollutants are assumed to be emitted to atmosphere from each of the following appliances:

- A2:
  - total particulate matter ("TPM") (assessed as particulate matter with diameters of 2.5µm or less ("$PM_{2.5}$") and 10µm or less ("PM_{10}"));
  - volatile organic compounds ("VOCs");
  - formaldehyde ("CH_2O");
- A3 and A4:
  - VOCs; and
  - CH_2O;

- A5:
  - TPM; and
  - VOCs (as 100% benzene).

5.2.8. Detailed air quality modelling using the ADMS dispersion model has been undertaken to predict the impacts associated with emissions arising from the Installation.

5.2.9. As a worst-case, emissions have been assumed to emit to atmosphere at the maximum concentrations assumed for the assessment, twenty-four hours a day, 365 days of the year. This represents a highly conservative assessment of the impact as it is considered highly unlikely the emission points assessed will all emit concurrently at the assumed worst-case emission rates, non-stop throughout the year.

5.2.10. At the point of maximum ground level concentration ("GLC"0, the majority of the long-term and short-term pollutants screened out as insignificant and required no further assessment.

5.2.11. Where further screening was required for annual pollutants, further assessment at the maximum off-site GLCs demonstrated that the impacts could be described as 'negligible' (for long-term dust - $PM_{2.5}$, PM_{10} and volatile organic compounds ("VOC") (as benzene)) and 'slight' for VOC (as 1,3-butadiene).

5.2.12. Where further screening was required for the potentially significant GLCs of short-term VOC (as benzene) and VOC (as 1,3-butadiene), the impacts could be described as 'small' and 'large', respectively. Given the highly conservative modelling assumptions this study has made, and the predicted locations of the maximum GLCs, it has been considered that greater emphasis should be placed on the specified potentially sensitive human receptor locations.

5.2.13. The assessment at the specified potentially sensitive human receptor locations demonstrated that, with the exception of long-term and short-term VOC (as 1,3-butadiene) at HR1 (Damhead Creek Power Station), the remaining pollutants and receptor locations screened out as insignificant. Following further assessment of the impact for VOC (as 1,3-butadiene) for HR1, the long-term impact could be categorised as 'negligible' and the short-term impact could be categorised as 'medium'.

5.2.14. In summary, therefore, it can be concluded that the predicted process contributions ("PCs") associated with the operation of Albus' existing emission points (A2, A3 and A4) and proposed emission point A5, will not have a detrimental impact on local air quality or human health.

5.2.15. The Air Dispersion Modelling Study (ALBU.01.07/ADM), which is contained in Section 6 of this application should be read in conjunction with this EPTR.

5.3. Point Source Emissions to Surface Water

5.3.1. No changes are proposed as part of this variation application. There is a sealed manhole for rainwater run off within the yard area now within the expanded boundary, however, this is not considered a point source as Albus shall not discharge into it.

5.4. Point Source Emissions to Foul Sewer

5.4.1. Manholes 3 and 4 as noted in the Permit provide access to an underground storage tank with emissions to private sewer to a treatment works for the industrial estate. There are no changes proposed as part of this variation application.

5.4.2. The effluent from the sharps container washing shall connect to the existing bin wash drainage line within the main hazardous waste reception, treatment and transfer building. This drainage line connects to the underground tank, denotated as manhole 1 in the Permit. The underground tank has a capacity of 1,500 litres and has sufficient capacity to capture both the existing bin wash effluent and the additional proposed sharps container wash effluent. This combined effluent shall be analysed and tankered offsite for appropriate disposal/recovery. The wash water effluent shall not enter the wider foul drainage network. Currently the underground tank is emptied every twelve weeks, however, given the additional effluent to be captured, it is estimated that the tank shall be emptied every four weeks.

5.5. Emissions to Land

5.5.1. There are no emissions to land and no changes are proposed as part of this variation application.

5.5.2. The Installation benefits from impermeable surfacing and waste is stored within the site buildings which is isolated from the drainage network.

5.5.3. As part of the EMS, periodic infrastructure inspections are undertaken and recorded. Any requirement for remedial action is reported promptly and undertaken at the earliest convenience.

5.5.4. The proposed new areas to be covered by the EP boundary expansion will benefit from new impermeable surfacing.

5.6. Fugitive Emissions to Air

5.6.1. All plant and equipment will be operated in accordance with manufacturer manuals and instructions and subject to routine maintenance and inspection to ensure they are operating within set parameters and at optimal performance levels.

5.6.2. The filters shall be inspected and replaced in accordance with the manufacturer recommendations and inspections and maintenance will be included in the PPMR.

5.6.3. The odour control measures are described in the Odour Management Plan (ALBU.01.03/OMP) submitted as part of this application.

5.7. Fugitive Emissions to Surface Water, Sewer and Groundwater

5.7.1. Fugitive releases to the groundwater will be prevented by conducting all operations in areas sealed with an impervious barrier to prevent a pathway for migration to ground and groundwater.

5.7.2. The disinfectant to be used within the washing process shall be stored internally in a bunded cabinet / on a standalone bund which is capable of holding 110% of the contents of the disinfectant storage container.

5.7.3. As discussed, there will be no connection to the foul drainage network within the main building and the effluent from the sharps container washing shall connect to the existing bin wash drainage line and be directed to the underground tank prior to testing and tankered offsite for appropriate disposal/recovery.

5.7.4. Due to the capacity of the underground tank and frequency of emptying, it is also capable of acting as buffer storage taking into account potential abnormal operating scenarios.

5.7.5. Externally, the entire area is paved with impermeable concrete laid to a fall towards a central open drain, which in turn leads to a gully pot and to the interceptor sump.

5.7.6. The entire yard is constructed of impermeable concrete with an inverted camber running central along its entire length and connects to the four gully pots positioned at various points in the yard. From the gully pots water is carried to the interceptor tank (manholes 3 and 4 noted in the Permit) prior to discharge to the private foul sewerage network. No waste storage or treatment externally is proposed as part of this variation.

5.7.7. All plant and equipment will be subject to regular maintenance and servicing as per the maintenance programme contained within the Installation's EMS. This will ensure all plant is in good working order to reduce the likelihood of spill/leakage at the Installation.

5.7.8. Any evidence of spillage/loss of containment, as well as the site infrastructure, including bunding and impermeable concrete surfacing, is inspected weekly. If remedial action is required, this will be reported immediately and the issue rectified as soon as possible.

5.7.9. Any spillages at the Installation will be subject to the robust 'emergency spill response procedure. This will prevent any potentially polluting materials from entering the Installation's drainage network.

5.7.10. All relevant employees are suitably trained in spill response, such as the deployment of absorbent materials and drain covers. Spill kits are strategically located around the Installation with the contents regularly inspected and maintained.

5.8. Microbial Emissions to Air – Washing and Shredding Sharps Containers

5.8.1. Industrial Safety Solutions Limited ("ISS") have been consulted regarding the design of the proposed process and the potential for bioaerosol emissions, as well as for consideration of the testing requirements needed in order to satisfy the EA's appropriate measures.

5.8.2. As part of the proposed process to ensure the washing process is biocidal rather than being limited to surface cleaning/removing solid debris, ISS has advised the following which is to be adopted by Albus:

Wash 1: Use a detergent to remove soiling prior to maceration ideally high temperature 60-85^{o}C .

Wash 2: Use of a biocide that is a broad-spectrum disinfectant used to control bacteria, fungi, spores, and viruses on hard surfaces and enclosures.

Once surface contact has occurred at bottom of auger, ensure the flight time allows for sufficient contact time in line with manufactures specifications. Option for consideration could be a heated auger to dry product and add another element of heat treatment for standard pathogens.

5.8.3. As this is a novel process, an initial monitoring testing protocol has been provided as part of the application which is detailed below. It is anticipated that ISS shall prepare a formal monitoring protocol on behalf of Albus for the EA's approval as part of a pre-operational condition.

5.8.4. The initial monitoring testing protocol is as follows:

There is no need for efficacy testing, as per thermal treatment technologies, however proof of disinfection and bio-aerosol release assessments may be required.

Testing of bin wash process via introduction of target organisms/tracer suspensions as soiling and liquid spills, in marked bins.

Test of bin surfaces after stage 1 wash and test of bin wash reservoir.

Test of final shredded material after wash 2 disinfection at discharge from auger and test of wash solutions.

Bin soiling testing via Artificial Test Soils such as defibrinated blood with addition attenuated biological indicators.

The emission limit for bacillus spores to water or sewer is 300cfu per litre.

Bio-aerosol assessment in line with Healthcare Waste guidance using B.atrophaeus spore suspensions to determine containment of wash line process through to final discharge.

5.8.5. Key test points for active point source sampling:

- *Bin Emptying;*
- *Wash 1;*
- *Shredding;*
- *Wash 2; and*
- *Auger Discharge.*

5.8.6. Point source emission A5 and the final effluent within manhole 1 shall also be incorporated into the bioaerosol assessment.

6. GENERAL REQUIREMENTS

6.1. It should be noted that no complaints such as dust, odour, noise or pest, have been received at the Installation since Permit issue.

6.2. Dust Emissions Management

6.2.1. The proposed waste types to be accepted are not considered to be dusty waste and therefore, taking into consideration the storage of such waste within containers inside a building, it is not anticipated that there will be a significant risk of fugitive dust emissions.

6.2.2. The use and maintenance of dust filters, and the equipment controls and monitoring systems will prevent any fugitive emissions associated with the sharps container treatment plant.

6.2.3. Consequently, the ERA (ALBU.01.07/ERA) has demonstrated that emissions of substances not controlled by emission limits (i.e. fugitive emissions) are not considered to be significant, consequently, an Emissions Management Plan is not required as part of this application.

6.3. Odour Management

6.3.1. The Installation has implemented an EA approved Odour Management Plan ("OMP") (ALBU.01.03/OMP) which forms part of the EMS and has been written in accordance with the EA's online odour guidance.

6.3.2. The OMP has been updated to take account of the proposed activities and is submitted in Section 7 of this variation application. The ERA has demonstrated that with strict adherence to the control measures set out in the OMP, the risk of odour emissions beyond the Installation EP boundary is not considered to be significant.

6.4. Noise Management

6.4.1. It is not considered that the changes proposed as part of this variation will result in noise nuisance being experienced by sensitive receptors in the surrounding area.

6.4.2. The ERA has demonstrated that with strict adherence to the control measures set out in the ERA, risk of noise emissions beyond the Installation EP boundary is not considered to be significant.

6.4.3. Furthermore, completion of the Noise Advisory Tool contained within the ERA stated a Noise Impact Assessment and Noise Management Plan are not required as part of this application.

6.5. Pest Management

6.5.1. It is not considered that the changes proposed as part of this variation will lead to any significant increase in the attraction of pests or the formation of pest habitats based on the new waste types and treatment process proposed.

6.5.2. The ERA demonstrates that with strict adherence to the control measures, the risk of pest nuisance is not considered to be significant.

6.6. Fire Management

6.6.1. As the Installation stores combustible waste, an approved Fire Prevention Plan ("FPP") has been implemented at the Installation. The FPP has been updated accordingly to take account of the proposed activities. This document can be found in Section 6 of this application.

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7. APPLICATION SITE CONDITION REPORT

7.1. An updated Site Condition Report ("SCR") (ALBU.01.07/ASCR) has been prepared to take account of the proposed additional land to be included in the Environmental Permit boundary. The SCR is submitted in Section 9 of this variation application.

8. PROPOSED MONITORING

8.1. Monitoring of Emissions to Air

8.1.1. For new point source emission A5, it is anticipated that the following monitoring will be required:

- particulate matter–
  - an emission limit (including unit) of 5 mg/m^3 is proposed;
  - to be tested once every 6 months;
  - using standard or method is BS EN 13284-1; and
  - results would be reported as the average value of 3 consecutive measurements of at least 30 minutes each.
- total volatile organic compounds (TVOCs) –
  - the emission limit is 30 mg/m^3 is proposed;
  - to be tested at a frequency of once every 6 months;
  - using standard or method is BS EN 12619; and
  - results would be reported as the average value of 3 consecutive measurements of at least 30 minutes each.

8.1.2. A suitable monitoring point shall be installed to enable the required air emissions monitoring to be undertaken.

8.2. Monitoring of Surface Water

8.2.1. There are no point source emissions (i.e. process contributions) to surface water. Therefore, no monitoring of surface water is proposed.

8.3. Monitoring of Foul Water

8.3.1. There are no point source emissions (i.e. process contributions) to foul water. Therefore, no monitoring of foul sewer is proposed.

9. RESOURCE EFFICIENCY AND CLIMATE CHANGE

9.1.1. Albus monitor the annual consumption of water, energy and raw materials, as well as the annual generation of waste and waste water, with a frequency of at least once a year.

9.2. Energy Efficiency Measures

9.2.1. A number of energy efficiency measures will be implemented at the Installation as part of the variation proposals to improve energy efficiency:

- purchase and installation of energy efficient equipment;
- purchase and use of efficient models, variable speed drives, motors and process control systems;
- use of renewable solar energy generated on site;
- all plant and equipment will be regularly inspected and will be covered by service / maintenance contracts;
- a record is kept for each piece of machinery / plant detailing the routine servicing and maintenance required;
- the site operates a policy of switching off systems and machinery when not in use;
- completion of energy audits; and
- energy monitoring and reporting.

9.2.2. As part of the EMS, Albus maintain an Energy Efficiency Plan and Energy Balance Record which is updated annually. The Energy Efficiency Plan shall be updated to take account of the additional energy uses and energy targets shall be adjusted accordingly.

9.3. Energy Consumption

9.3.1. Albus estimate an approximately annual consumption of 100kw per annum. solely attributed to the new treatment plant activity.

9.4. Climate Change Agreement

9.4.1. Albus do not hold a Climate Change Agreement ("CCA"). Section 9.2 demonstrates Albus' commitment to reducing energy consumption and associated carbon dioxide ("CO_2") emissions.

9.5. Raw Material Justification

9.5.1. The primary raw material use proposed as part of the variation shall be mains water and disinfectant.

9.5.2. Albus shall maintain a list of raw materials and their properties.

9.5.3. Estimated consumption quantities of sporicidal disinfectant shall be determined by microbial testing. General dilution factors shall be followed as advised by the manufacturer shall be followed and as such it is assumed that 400ml per 10 litres shall be required. Wash waters will be reused where possible to reduce water and disinfectant consumption whilst not compromising the sterilisation achieved/sporicidal results. The maximum quantity stored at the Installation shall be 1,000 litres. The proposed disinfectant shall be F-10 disinfectant or similar which has equivalent performance.

9.5.4. In order to ensure minimal environmental impact from the use of disinfectant, Albus shall:

- use the optimum quantity that maintains effective treatment;
- use disinfectant which has a lower environmental impact; and
- ensure no potential for components of waste to inhibit or react with the chemical disinfectant.

9.5.5. It is not possible to substitute raw materials with waste as part of the proposals, however, Albus undertake a review of raw material usage and investigate the suitability of raw materials with an improved environmental profile. Following implementation of the variation proposals, raw material consumption monitoring and reporting within the first year will allow Albus to set a baseline against which improvement targets can be set as part of the EMS.

9.5.6. Water use shall be minimised by implementation of the following measures:

- creating a water mass balance and implementing a water saving plan as part of the EMS;
- recirculation of wash waters to reduce wastewater;
- water management including water metering and water audits;
- impermeable surfacing;
- flow control;
- design and maintenance provisions to allow detection and repair of leaks;
- optimised design and construction of equipment and process areas
- cleaning of equipment as soon as possible to prevent build-up; and
- use and optimisation of water nozzles and hoses.

9.5.7. In accordance with the Permit Condition 1.3.1, a raw material and water efficiency audit is undertaken every four years.

9.6. Waste Minimisation

9.6.1. The proposed sharps container treatment plant adheres strongly to the healthcare waste appropriate measures detailed in 'Waste Minimisation, Recovery and Disposal' section and also applies the waste hierarchy reducing the quantity of waste being sent for disposal.

9.6.2. Sharps containers in good condition are to be washed and disinfected ready for reuse and eliminating the need for disposal of the containers.

9.6.3. Once at end of the life, the treatment plant will shred the containers to produce clean, disinfected shredded plastic which can be sent for recycling.

9.6.4. In accordance with the Permit Condition 1.4.2, a waste review is undertaken every four years.

10. COMPLIANCE WITH APPROPRIATE MEASURES

10.1. Healthcare Waste Appropriate Measures

10.1.1. It is considered that the proposed techniques that will be in use at the Installation related to the sharps container treatment plant will adhere to relevant appropriate measures as detailed in the EA's online guidance – *Healthcare waste: appropriate measures for permitted facilities*.[1] The techniques shall be appropriate and proportionate to the scale of the activities at the Installation and the risks that are posed to the environment by the proposed activities.

10.1.2. A demonstration of compliance with applicable appropriate measures solely related to the proposed waste types and activities as part of this variation application is provided in Table 5.

[1] https://www.gov.uk/guidance/healthcare-waste-appropriate-measures-for-permitted-facilities/when-appropriate-measures-apply

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Environmental Management System		
1	You must have an up-to-date, written environmental management system ("EMS").	
2	To improve your overall environmental performance, you must put in place and follow an EMS that incorporates the following features: • management commitment, including from senior managers. • an environmental policy that is defined by senior managers and includes the continuous improvement of the facility's environmental performance. • You plan and establish the procedures, objectives and targets needed for environmental performance alongside your financial planning and investment. • You implement your environmental performance procedures, paying particular attention to: - staff structure and relevant responsibilities - staff recruitment, training, awareness and competence - communication (for example, of performance measures and targets) - employee involvement - documentation - effective process control - maintenance programmes - emergency preparedness and response - making sure you comply with environmental legislation • You check environmental performance and take corrective action, paying particular attention to: - monitoring and measurement - corrective and preventive action - records maintenance - independent (where practicable) internal or external auditing of the EMS to conform it has been properly - implemented and maintained	EPTR – Section 3 and App II.

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Environmental Management System (Cont.)		
2	• Senior managers review the EMS to check it is still suitable, adequate and effective. • You review the development of cleaner technologies and their applicability to site operations. • When designing new plant, you make sure that you assess the environmental impacts from the plant's operating life and eventual decommissioning. • You consider the risks a changing climate poses to your operations. You have appropriate plans in plan to assess and manage future risks. • You compare your site's performance against relevant sector guidance and standards on a regular basis, known as sectoral benchmarking. • You carry out appropriate waste stream management. • You have and maintain the following documentation: - Inventory of emissions to air and water; - a residues management plan - an accident management plan - site infrastructure plan; - site condition report - an odour management plan; if required - a noise and vibration management plan, if required - dust management plan, if required - pest management plan, if required - fire prevention plan, if required - climate change risk assessment, if required.	EPTR – Section 3 and App II.
Staff Competence		
1	Your site must be operated at all times by an adequate number of staff with appropriate qualifications and competence.	EPTR – Section 3.1
2	The design and maintenance of infrastructure, plant and equipment must be carried out by competent people.	
2	You must have appropriately qualified managers for your waste activity who are members of a government approved technical competency scheme.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Accident Management Plan		
1	As part of your up-to-date written management system you must have a plan for dealing with any incidents or accidents that could result in pollution.	EPTR – Section 3 and App II.
2	The accident management plan must identify the hazards to the environment posed by the plant.	
3	Particular areas to consider may include: • waste types • overfilling of vessels • failure of the plant and equipment (for example over-pressure of vessels and pipework, blocked drains) • failure of containment (for example failure of the bund, or overfilling of drainage sumps) • failure to contain firefighting water • making the wrong connections in drains or other systems • preventing incompatible substances coming into contact with each other • unwanted reactions and runaway reactions • adequately checking the composition of an effluent before emission • vandalism and arson • extreme weather conditions for example flooding or very high winds	
4	You must assess the risk of accidents and their possible consequences (risk is the combination of the likelihood that a hazard will occur and the severity of the impact resulting from that hazard). Having identified the hazards, you can assess the risks by addressing the six basic questions provided in the guidance.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Accident Management Plan (Cont.)		
5	In particular, you must identify any fire risks that may be caused, for example by: • arson or vandalism • self-combustion (for example due to chemical oxidation) • plant or equipment failure and other electrical faults • naked lights and discarded smoking materials • hot works (for example welding or cutting), industrial heaters and hot exhausts • reactions between incompatible materials • neighbouring site activities • sparks from loading buckets • hot loads deposited at the site	
6	The depth and type of accident risk assessment you carry out will depend on the characteristics of the plant and its location. The main factors to take into account are the: • scale and nature of the accident hazard presented by the plant and its activities • risks to areas of population and the environment (the receptors) • nature of the plant and complexity of the activities and how difficult it is to decide and justify adequate risk control techniques	EPTR – Section 3 and App II.
7	Through your accident management plan, you must also identify the roles and responsibilities of the staff involved in managing accidents. You must provide them with clear guidance on how to manage each accident scenario, for example, whether to use containment or dispersion to extinguish fires, or let them burn.	
8	You must appoint one facility employee as an emergency coordinator who will take lead responsibility for implementing the plan. It is important that you train your employees so they can perform their duties effectively and safely and know how to respond to an emergency	
9	You must also: • establish how you will communicate with relevant authorities and emergency services both before, during and after an accident • put in place appropriate emergency procedures, including for safe plant shutdown and site evacuation • put in place post-accident procedures that include undertaking an assessment of the harm that may have been caused by an accident and the remediation actions you will take • test the plan by carrying out emergency drills and exercises.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Accident Prevention Measures		
1	You must take the following measures, where appropriate, to prevent events that may lead to an accident.	n/a
Segregating Waste		
2	You must keep apart incompatible or segregated wastes and substances according to their hazardous properties.	
3	You must segregate incompatible waste types into bays or store them in dedicated buildings. The minimum requirement is to use a kerbed perimeter and separate drainage collection. You must also have measures in place to prevent containers falling over into other storage areas.	n/a
Preventing Accidental Emissions		
4	You must make sure that you contain the following (where appropriate) and route to the effluent system (where necessary): • process waters • site drainage waters • emergency firefighting water • chemically contaminated waters • chemical spills.	EPTR – Section 5.3, 5.4 & 5.7
5	You must be able to contain surges and storm water flows. You must provide enough buffer storage capacity to make sure that you can achieve this. You can define this capacity using a risk-based approach, for example, by taking into account the: • nature of the pollutants • effects of downstream waste water treatment • sensitivity of the receiving environment	EPTR – Section 5.3, 5.4 & 5.7
6	You can only discharge waste water from this buffer storage after you have taken appropriate measures, for example, to control, treat or re-use the water.	
7	You must put spill contingency procedures in place to minimise the risk of an accidental emission of raw materials, products and waste materials and to prevent their entry into water.	
8	Your emergency firefighting water collection system must take account of additional firefighting water flows or firefighting foams. You may need emergency storage lagoons to prevent contaminated firefighting water reaching a receiving water body.	FPP (FPP, Dated July 2026)

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Preventing Accidental Emissions (Cont.)		
9	You must consider and, if appropriate, plan for the possibility that you may need to contain or abate accidental emissions from: • vents • safety relief valves • bursting discs If this is not advisable on safety grounds, you must focus attention on reducing the probability of the emission.	n/a
Security Measures		
10	You must have enough security measures in place (including staff) to prevent: • entry by vandals and inadvertent intruders • damage to the equipment • theft • fly-tipping • arson	ERA – ALBU.01.07/ERA & FPP
11	Facilities must use an appropriate combination of the following measures: • security guards • total enclosure (usually with fences) • controlled entry points • adequate lighting • warning signs • 24-hour surveillance, such as CCTV.	
Fire Prevention		
12	There are three fire prevention objectives. You must: • Minimise the likelihood of a fire happening; • Aim for a fire to be extinguished within 4 hours • Minimise the spread of fire within the site and to neighbouring sites.	FPP
13	You must have appropriate systems in place for fire prevention, detection and suppression or extinction.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Fire Prevention		
14	You must have suitable procedures and provisions to store certain types of hazardous waste, for example fire resistant stores, automatic alarms and possibly sprinklers.	FPP
15	Your facility must have enough water supplies to extinguish fires. You must have an alternative type of fire protection system if you store or treat any water-reactive waste, for example dry powder extinguishers.	
16	You must isolate drainage systems from flammable waste storage areas to prevent fire being spread along the drainage system by solvents or other flammable hydrocarbons.	
17	You must regularly inspect and clean your site to prevent build up of loose combustible material (including waste and dust), particularly around treatment plant, equipment and other potential sources of ignition.	
Other Accident Prevention Measures		
18	You must maintain plant control in an emergency using one or a combination of the following measures: • alarms • process trips and interlocks • automatic systems based on microprocessor control and valve control • tank level readings such as ultrasonic gauges, high level warnings, process interlocks and process parameters	ERA – ALBU.01.07/ERA
19	You must: • make sure all the measurement and control devices you would need in an emergency are easy to access and operate in an emergency situation • maintain plant in a good state through a preventive maintenance programme and a control and testing programme • use techniques such as suitable barriers to prevent moving vehicles damaging equipment • have procedures in place to avoid incidents due to poor communication between operating staff during shift changes and following maintenance or other engineering work • where relevant, use equipment and protective systems intended for use in potentially explosive atmospheres	ERA – ALBU.01.07/ERA

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Record Keeping and Procedures		
20	You must: • keep an up to date record of all accidents, incidents, near misses, changes to procedures, abnormal events, and the findings of maintenance inspections • carry out investigations into accidents, incidents, near misses and abnormal events and record the steps taken to prevent their reoccurrence • maintain an inventory of substances, which are present (or likely to be) and which could have environmental consequences if they escape – many apparently innocuous substances can damage the environment if they escape • have procedures for checking raw materials and wastes to make sure they are compatible with other substances they may accidentally come into contact with	EPTR – Section 3 and App II.
Contingency Plan and Procedures		
1	You must have and implement a contingency plan, which makes sure that you: • comply with all your permit conditions and operating procedures during maintenance or shutdown at your site or elsewhere • do not exceed storage limits in your permit and you continue to apply appropriate measures for waste storage and handling • stop accepting waste unless you have a clearly defined method of recovery or disposal and enough permitted storage capacity	EPTR – Section 3 and App II, OMP (ALBU.01.03/OMP) and FPP
2	You must have contingency procedures in place to make sure that, as far as possible, you know in advance about any planned shutdowns at waste management facilities where you send waste	
3	You must make your customers aware of your contingency plan, and of the circumstances in which you would stop accepting waste from them.	
4	You must consider whether the sites or companies you rely on in your contingency plan: • can take the waste at short notice • are authorised to do so in the quantities and types likely to be needed - in addition to carrying out their existing activities	
5	You must not discount alternative disposal options on the basis of additional cost or geographical distance, if doing this may result in exceeding your permitted storage limits or compromising your storage procedures.	
6	You must not include unauthorised capacity in your contingency plan. If your contingency plan includes using temporary storage for additional waste on your site, then you must make sure your site is authorised for this storage and the appropriate infrastructure is in place.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Treatment Sites Only		
7	Your management procedures and contingency plan must: • identify known or predictable malfunctions associated with your technology and the procedures, spare parts, tools and expertise needed to deal with them • include a record of spare parts held - or state where you can get them from and how long it would take • have a defined procedure to identify, review and prioritise items of plant which need a preventative regime • include all equipment or plant whose failure could directly or indirectly lead to an impact on the environment or human health • identify 'non-productive' or redundant items such as tanks, pipework, retaining walls, bunds, reusable waste containers (for example wheeled carts), ducts, filters and security systems • make sure you have the spare parts, tools, and competent staff needed before you start maintenance	EPTR – Section 3 and App II and ERA (ALBU.01.07/ERA)
8	You must carry out appropriate disinfection procedures when maintaining equipment (or parts of equipment) contaminated with untreated clinical waste. Using personal protective equipment (PPE), although essential to protect workers from exposure, should not be your primary control measure	
9	If you produce an end of waste material at your facility, your contingency planning must consider issues with storage capacity for end of waste products and materials that fail the end-of-waste specification.	n/a
10	Your management system must include procedures for auditing your performance against all the contingency measures detailed above and for reporting the audit results to the site manager.	EPTR – Section 3 and App II
Plant Decommissioning		
1	You must consider the decommissioning of the plant at the design stage and make suitable plans to minimise risks during later decommissioning.	EPTR – Section 4
2	For existing plants where potential problems are identified you must put in place a programme of design improvements. These designs improvements need to make sure that you: • avoid using underground tanks and pipework - if it is not economically possible to replace them, you must protect them by secondary containment or a suitable monitoring programme • drain and clean-out vessels and pipework before dismantling • use insulation which you can dismantle easily without dust or hazard • use recyclable materials – taking into account operational or other environmental objectives	n/a

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – General Management (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Plant Decommissioning		
3	You must have and maintain a decommissioning plan to demonstrate that: • plant will be decommissioned without causing pollution • the site will be returned to a satisfactory condition	EPTR – Section 3 and App II
4	Your decommissioning plan should include details on: • whether you will remove or flush out pipelines and vessels (where appropriate) and how you will empty them of any potentially harmful contents • site plans showing the location of all underground pipes and vessels • the method and resources needed to clear any on-site lagoons • the method for closing any on-site landfills • how asbestos or other potentially harmful materials will be removed, unless we have agreed it is reasonable to leave such liabilities to future owners • methods for dismantling buildings and other structures, and for protecting surface water and groundwater at construction and demolition sites • any soil testing needed to check for any pollution caused by the site activities, and information on any remediation needed to return the site to a satisfactory state, as defined by the initial site report • the measures proposed, once activities have definitively stopped, to avoid any pollution risk and to return the site of operation to a satisfactory state (including, where appropriate, measures relating to the design and construction of the plant) • the clearing of deposited residues, waste and any contamination resulting from the waste treatment activities.	
5	You should make sure that equipment taken out of use is decontaminated and removed from the site.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Waste Pre-Acceptance		
1	You must implement waste pre-acceptance procedures so that you know enough about a waste (including its composition) before it arrives at your facility. You need to do this to assess and confirm the waste is technically and legally suitable for your facility. Your procedures must follow a risk-based approach, considering: • the source and nature of the waste • its hazardous properties • potential risks to process safety, occupational safety and the environment (for example from odour and other emissions) • knowledge about previous waste holder(s)	EPTR – Section 4
2	You must make sure that the advice you give to waste producers about segregating and packaging waste follows the Safe Management of Healthcare Waste (HTM 07 01). Where HTM 07 01 does not specify the colour of packaging for a particular type of waste, the waste producer should use the most appropriate waste colour. They should take into account the nature of the waste and the waste disposal or recovery route needed. For example, it should be: • yellow if the waste requires clinical waste incineration • orange if alternative treatment is appropriate • black or black and yellow if municipal incineration is appropriate • or (if possible) an additional non-conflicting colour code	
3	If you receive waste from a country that does not use the same waste segregation process or colour-coded packaging as set out in HTM 07 01, you must get additional information from the producer.	n/a
4	You must get the following information in writing when you receive a customer query: • details of the waste producer (for example, medical practice) including address and contact details • the specific source of the waste – for example, veterinary, primary care, dental, acute care, laboratory • details of the waste streams and types produced, including their quantity, physical form, composition, properties, classification and description (you must carry out more detailed checks as part of your audit of the waste pre acceptance report).	EPTR – Section 4

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Waste Pre-Acceptance (Cont.)		
5	Before waste arrives at your facility you must get a representative audit analysis report from the producer or medical practice. You do not need an audit report for waste produced at: • domestic premises • care homes that do not provide nursing care • healthcare wastes from non-healthcare activities - as classified under Chapter 20 of the LoW	EPTR – Section 4
6	The audit report must include the following general information: • the name, address and contact details of the healthcare waste practice • the type of practice (for example, hospital, veterinary clinical, general practice) • dates for when the audit started and ended • a description of the audit, the procedures employed, the auditors, their affiliation and their compete	
7	It must also include a list (or diagram) of the different wards, departments, or functional areas that exist within the premises. This should detail all the specific processes producing relevant wastes at the practice (for example, pharmacy, primary care, dental acute or laboratory).	
8	The audit report must include a list of the wastes produced at each unit or area within the premises. The waste types the audit should identify include: • cytotoxic and cytostatic contaminated material • other pharmaceuticals or pharmaceutically contaminated material – for example, medicinally contaminated syringes, intravenous (IV) therapy bags, tubing, bottles, vials, ampoules • waste chemicals – for example, laboratory agents, auto-analyser bottles, diagnostic kits, disinfectants • human or animal tissue and associated chemical preservatives • sharps, and whether they are contaminated with medicines (even if fully discharged) • other infectious wastes • dental amalgam • non-hazardous offensive wastes • other non-hazardous wastes, including municipal waste and autoclaved wastes • gypsum wastes other than the limited quantities correctly described as infectious	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Waste Pre-Acceptance (Cont.)		
9	For each of the waste types identified and listed by unit, department or area, the audit report must detail: • the waste's written description, type and classification, including List of Waste (LoW) codes • the type and colour-coding of the container or packaging the waste is placed in • how the packaging is labelled • physical form and composition • hazardous properties It must also identify whether the correct waste type was present in the container or packaging when it was checked during the audit. It must also compare the waste to its proposed waste classification or description.	EPTR – Section 4
10	The audit report must include information about: • the segregation practices for wastes placed in storage areas and bulk containers or carts • specific storage requirements (for example, cold storage or freezing) • the contents of a representative number of each type of bulk container that were checked visually • discussions held with staff that establish the validity of the segregation and storage standards, and the observation and recording of actual practice	
11	The audit report must include a comparison of practice with the requirements of HTM 07-01 Safe Management of Healthcare Waste and of WM3. For example, the medical practice should have an: • acceptable and working definition of cytotoxic and cytostatic waste where applicable • offensive waste stream for healthcare waste (rather than municipal wastes from lavatories)	
12	The report must also include: • the findings made for each waste stream, and where applicable the changes made as a result of this or previous audits • information on waste policies, staff training, internal audit regimes, and environmental management systems • the estimated quantity of each waste expected to be delivered to the operator from the medical practice per year and in a typical load • confirmation that any waste does not contain a radioactive source or, when there is a risk of radioactive contamination, confirmation that the waste is not radioactive unless the permit for your site allows you to accept these materials • safety data sheets for single stream product chemicals, laboratory chemicals or pharmaceuticals (if available)	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Document
Waste Pre-Acceptance (Cont.)		
13	The waste producer is responsible for making sure that a waste pre-acceptance audit is carried out for their premises. The audit report must not be completed wholly over the phone or using online tools. Physical presence at the practice is needed. This may be provided by an appropriately trained and experienced member of site staff or an external auditor.	EPTR – Section 4
14	Where a medical practice produces 5 tonnes or more of healthcare waste per year, the first audit must cover the entire practice. If this is satisfactory, and identifies consistent practice, you can reduce the scope of each subsequent yearly audit to cover at least one third of the units, wards and departments. A three year audit cycle must include all units, wards and departments. If a medical practice produces less than 5 tonnes of healthcare waste per year each audit should include the entire practice. It should be clear in the audit report which units, wards and departments have been inspected.	
15	You must obtain and assess an audit analysis report before you take delivery of the first batch of waste from each medical practice. You must then do this at the following minimum frequencies, every: • 12 months for each medical practice that produces 5 tonnes or more of healthcare waste in any calendar year • 2 years for each veterinary practice, dental practice, and laboratory that produces less than 5 tonnes of clinical waste in any calendar year • 5 years for other healthcare producers of healthcare waste	
16	The audit report will no longer be valid for pre-acceptance purposes: • once the time intervals have been exceeded • if the producer makes significant changes to on-site practices • if the waste changes • if you find that the waste received contains significant non-conformances to the pre-acceptance information (for example, it contains waste type that was not included in the pre-acceptance audit of the producer)	
17	The staff doing the assessment of the waste pre-acceptance audit report must have the professional skills, training and experience needed. They must have a clear understanding of clinical waste, its: • composition • classification • packaging and transport	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Information Document
Waste Pre-Acceptance (Cont.)		
18	These staff must also understand: • the wastes associated with specific healthcare activities • any conditions within the permit that relate to these wastes • the requirement to complete waste consignment and transfer notes	
19	If the audit report is partially incomplete or inadequate, because it does not meet all the requirements set out in appropriate measures 1 to 18, you must request the missing information (or another audit report). You must assess this before you accept the waste.	
20	If the audit report is acceptable (it meets all the requirements set out in appropriate measures 1 to 18, you must technically assess the suitability of the wastes for on-site treatment (or transfer) to make sure you can meet your permit conditions. You must not accept wastes which are not suitable.	
21	You must keep records that relate to pre-acceptance for a minimum of 3 years in a computerised process control system. For example, this includes: • audit reports • assessment of the reports • additional information received • your assessment that the waste is acceptable	EPTR – Section 4
22	If an enquiry from a waste producer does not lead to the receipt of waste, you do not need to keep records.	
23	You must keep separate the roles and responsibilities of sales staff and technical staff. If non-technical sales staff are involved in waste enquiries then you must carry out a final technical assessment before approval. You must use this final technical check to make sure that you: • only accept wastes that are suitable for the site • avoid accumulating waste • have enough storage and treatment capacity	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Document
Waste Pre-Acceptance (Cont.)		
24	The operator of the waste facility is responsible for making sure that they carry out appropriate pre-acceptance checks and subsequent assessments on the waste received from each producer (for example, a medical practice). You can employ a third party to carry out these checks and assessments for you, for example, if you receive the waste via a waste carrier or transfer station. Where this is the case you must meet the following measures as a minimum: • the third party must provide you with details of any audit tools or methodologies and assessment criteria used and these must meet the standards in this guidance • you must periodically review the other party's pre-acceptance checks and assessments (at least annually) to make sure pre-acceptance checks, subsequent assessments, waste classification and descriptions meet the standards in this guidance • if you employ waste carriers or transfer stations to carry out the pre-acceptance checks and assessments for you these must cover all relevant producers from whom waste is collected, including new customers • you must keep records of the third party's pre-acceptance checks and assessments and a summary report that demonstrates they have carried out the correct checks on wastes from relevant producers	
25	The summary report must: • list the producer types , for example, dental practice • detail the waste types and waste streams produced and destined for the permitted facility, including details of their composition, classification and any hazardous properties • describe the containers or packaging used for each waste stream (including colours) • confirm that the relevant appropriate measures for waste pre-acceptance have been completed for all relevant producers - where this is not the case for a particular producer, the report must state what has been done.	EPTR – Section 4
26	The summary report must also: • confirm any issues the third party has identified and what action they have taken with the producers about the wastes affected • be updated if any details about the producers or the wastes change	
27	The information in the summary report must be relevant to the waste types that your facility is permitted to accept. It must be taken from the pre-acceptance audits carried out on the relevant producer premises, which must comply with the requirements of this guidance.	
28	The operator must be able to get (without unreasonable delay) a copy of the pre-acceptance report and assessment about any individual producer. This may be needed for operational reasons or because an Environment Agency officer asks to see it.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Waste Acceptance		
1	You must implement waste acceptance procedures to check that the characteristics of the waste received matches the information you obtained during waste pre-acceptance. This is to confirm the waste is as expected and you can accept it. If it is not, you must confirm you can accept it as a non-conforming waste or you must reject it.	EPTR – Section 4
2	Your procedures should follow a risk-based approach, considering: • the source and nature of the waste • its hazardous properties • potential risks to process safety, occupational safety and the environment (for example odour and other emissions) • knowledge about the previous waste holder(s)	
3	Other than in an emergency (for example, taking waste resulting from an emergency incident clean-up), you must only receive pre-booked wastes onto site that have been adequately pre-accepted and that are consistent with the pre-acceptance information	
4	All relevant storage areas (quarantine, reception and general) and treatment processes in your facility must have the physical capacity needed for the waste you receive. You must not receive wastes if this capacity is not available. The amount of waste you receive must also comply with storage limits in your permit.	
5	You must visually check wastes and verify them against pre-acceptance information and transfer documentation before you accept them on site.	
6	You must weigh each consignment of waste on arrival to confirm the quantities against the accompanying paperwork, unless alternative reliable systems are available (for example, based upon volume).You must record the weight in the computerised waste tracking system.	
7	You must check and validate all transfer documentation and resolve discrepancies before you accept the waste. If you believe the incoming waste classification and description is incorrect or incomplete, then you must address this with the original waste producer during waste acceptance. You must record any non-conformances. If you have assessed the waste as acceptable for on site storage or treatment you must document this.	
8	After you have carried out the initial visual inspection and confirmatory checks, you must offload waste containers into a dedicated reception or storage area. You must not unload wastes if you do not have enough space.	
9	Once offloaded, and as soon possible and practicable to do so, you must assess the waste and verify it for acceptance	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Document
Waste Acceptance (Cont.)		
10	You must carry out a thorough visual check of all loads of waste received (for example, in carts or similar bulk containers, or on pallets) to identify any non-conforming items. If a specific customer has no non-conformances for a period of either 3 months or 6 collections (whichever is the longer period) you can reduce the visual inspection of their waste to a spot check of one cart, bulk container or pallet in ten.	EPTR – Section 4
11	If you later identify a non-conforming waste during a spot check, you must take measures to prevent a recurrence (including contacting the customer). You must reinstate thorough visual checks on all loads from that customer until there are no non-conformances for the period stated in appropriate measure 10 in this section.	
12	The person carrying out waste acceptance checks (the visual inspection of the waste) must be trained to identify and manage any non-conformances in the loads received, complying with this guidance and the conditions of your permit.	
13	You do not need to open healthcare waste bags, sharps boxes, rigid bins or similar packages during the thorough visual check for nonconforming items. The waste pre-acceptance checks determine their contents, and you can verify this by referring to the appropriate colour-coded waste packaging. The objective of the thorough visual check is to identify non-conforming items that may be: • unknown • undocumented • unexpected packaging types or colours • a waste type that the facility is not permitted for. For example, this could be a cytotoxic or cytostatic sharps box, or rigid yellow bin of unknown content, buried at the bottom of a cart or bulk container under orange clinical waste bags received.	
14	Typically, waste is visually checked during cart-to-cart transfers or unloading operations. It is either directly inspected by the trained operative or via a surveillance camera and screen.	
15	You must minimise the manual handling of waste. You should use mechanical unloading or screening technologies where it is possible and practicable to do so.	
16	On arrival, bagged waste must either be in carts or other rigid, leak-proof bulk containers or you must unload it from the delivery vehicle directly into carts or other rigid leak-proof bulk containers for storage and handling around the site. You must securely close the lid of the cart or other bulk container when you are not loading waste into or out of it.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Waste Acceptance (Cont.)		
17	On arrival, rigid containers (bins or boxes) must be either in, or unloaded onto, enclosed bulk containers (for example, carts) or pallets. You must keep rigid containers (bins or boxes) in an upright position as far as it is possible to do so during storage and handling around the site. To prevent spillages, you must store and handle rigid containers and packaging that contain waste (for example, bins or boxes) in an upright, stable and controlled manner, as far as it is practicable to do so.	EPTR – Section 4
18	Where pallets are used, containers must be stable, stacked upright no more than 2.2m high and secured with shrink wrap. The containers must not extend beyond or overhang the sides of the pallet. The shrink wrap must be clear or transparent so that you can identify waste types, damaged containers, leaks or spillages and incorrectly stacked containers.	
19	Waste packages must be in sound condition. All containers (boxes and bins) must have well-fitting lids or other secure closing mechanism. You must deal immediately with any non-conforming packages or place them into a bulk container. You must put non-conforming packages into quarantine to be dealt with appropriately. You must record all non-conformances	
20	You must have clear and unambiguous criteria that you use to reject non-conforming wastes. You must also have a written procedure for recording, reporting and tracking non-confirming wastes, including notifying the relevant customer or waste producer to prevent reoccurrence.	
21	You must mark or label all waste packages received with a unique identifier. The unique identifier must allow you to track the waste (see appropriate measures for waste tracking) and easily identify the producer of the waste, its type and hazardous properties and its receipt date	
22	If you receive or store waste packages in a bulk container (for example, a wheeled cart), provided they are from the same producer and contain a single waste stream, you can mark or label the unique identifier on the bulk container for as long as the waste remains in there. Similarly, if you receive waste packages on a pallet, provided they are from the same producer and contain a single waste stream, you can mark or label the pallet with the unique identifier for as long as the waste remains on site. If you split a bulk or palletised load, you must mark or label each container with the unique identifier so that you can track them.	
23	You must hold all records relating to waste received on a computerised waste tracking system. This must be able to cross-reference all the available waste stream information for a receipt using the unique identifier. You must update the tracking system whenever you move/treat a waste on site, or send it off site. You must follow your written procedures when you move wastes between different locations (or off site).	
24	If there is an established risk of radioactive contamination, you must check the waste to determine that it does not include radioactive material, unless the permit for your site allows you to accept these materials.	n/a

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Waste Acceptance (Cont.)		
25	Your facility must have a dedicated waste quarantine area located within a building	Permit drawing (ALBU.01.07-02)
26	Quarantine storage must be for a maximum of five working days. You must have written procedures in place for dealing with wastes held in quarantine, together with a maximum storage volume. For some limited and specific cases (for example detection of radioactivity), you can extend quarantine storage time if the EA agrees. The maximum storage time must take account of the potential for odour generation, insect infestation and storage conditions such as refrigeration. Quarantine storage must be separate from all other storage and clearly marked as a quarantine area.	EPTR – Section 4
32	The waste offloading, reception and quarantine areas must have an impermeable surface with self-contained drainage to prevent any spillage entering the storage systems or escaping off site. All surfaces must be of a type and quality that will allow effective disinfection.	
Waste Tracking		
1	You must use a computerised tracking system to update information about the available capacity of the waste quarantine, reception, general and bulk storage areas of your facility. You must use a pre-booking system to make sure that you have enough waste storage and process capacity for the incoming acceptable waste.	
2	Your waste tracking system must hold all the information generated during: • pre-acceptance • acceptance • storage • treatment • incineration • removal off-site This information must be readily available.	EPTR – Section 4

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Waste Tracking (Cont.)		
3	You must create records and update them regularly to reflect deliveries, on-site treatment and despatches. Your tracking system will operate as a waste inventory and stock control system. It must include this information as a minimum: • the date the waste arrived on-site • the original producer's details (or unique identifier) • all previous holders • a unique reference number • the pre-acceptance and acceptance analysis results the package type and size	EPTR – Section 4
3	• the intended treatment or disposal route • accurate records of the nature and quantity of wastes held on site, including all hazards - identifying the primary hazards • where the waste is physically located on site • where the waste is in the designated disposal route • the names of staff who have taken any decisions about accepting or rejecting waste streams and who have decided on recovery or disposal options • details that link each healthcare waste container accepted to its consignment or transfer note • details of any non-conformances and rejections	
4	The tracking system must be able to report: • the total quantity of waste present on site at any one time • a breakdown by type of the waste quantities you are storing pending treatment, incineration or transfer • an indication of where a batch or consignment of waste is located based on a site plan • the quantity of waste on site on site compared with the limits authorised by your permit • the length of time the waste has been on site • the quantity of end of waste product materials on site at any one time, where applicable	
5	If you receive loose, packaged items (for example, bags or boxes of waste not in labelled bulk containers) collected from multiple premises (for example, collections from smaller producers such as doctors surgeries, dental practices or tattoo parlours) your system and procedures must allow you to: • track the waste back to the original load received at the facility; and • see associated waste acceptance information and records.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Pre-Acceptance, Acceptance and Tracking (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Waste Tracking (Cont.)		
6	If you add individual packages of waste (for example, bags or boxes) to a bulk container or pallet at your facility, your waste labelling and tracking system (including barcode systems) must be able to record this along with the date of the earliest package received. For example, by marking or labelling the container or pallet with the unique identifiers of the packages it holds and the earliest receipt date.	
7	You must store back-up copies of computer records off-site.	
8	You must hold acceptance records for a minimum of 2 years after the waste has been treated or removed off site. You may have to keep some records for longer if they are required for other purposes, for example, hazardous waste consignment notes.	
Waste Storage, Segregation and Handling Appropriate Measures		
1	You must not store individual bags and containers (for example, bins and boxes) of waste loose.	EPTR – Section 4
2	You must store and handle bagged waste on site in fully enclosed, lockable, rigid, leak-proof and weather proof bulk containers (for example, carts).	
3	Rigid waste containers (bins and boxes) must be sealed and in good condition. You should store and handle them in an upright position (as far as possible) to prevent or, where that is not practicable, to minimise the risk of spillages. They must be stored either: • in enclosed bulk containers (for example, carts) • on pallets, stacked no more 2.2m high (including the height of the pallet)	
4	You must make sure that containers stored or handled on pallets are stable and secured with shrink wrap. The containers must not extend beyond (overhang) the sides of the pallet. The shrink wrap must be clear or transparent so you can identify waste types, damaged containers, leaks or spillages and incorrectly stacked containers. If you know waste contains free liquid (for example, chemical wastes such as fixer and developer solutions) you must store the pallets in a dedicated area of the facility that has self-contained drainage.	
5	Bulk containers must have a lid and you must securely close the lid whenever they contain any waste, except when waste is being loaded into or unloaded from them.	
6	You must clearly establish the maximum storage capacity of the site and designated storage areas and you must not exceed these maximum capacities. You must define capacity in terms of numbers of carts or pallets, as well as by tonnage. You must regularly monitor the quantity of stored waste on the site and designated areas to check against the allowed maximum capacity.	Permit drawing (ALBU.01.07-02)
7	Where possible, you should locate storage areas away from watercourses and sensitive perimeters, for example, those close to public rights of way, housing or schools. You must store all waste within the security protected area of your facility to prevent unauthorised access and vandalism.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Storage, Segregation and Handling (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Information Documents
Waste Storage, Segregation and Handling Appropriate Measures (Cont.)		
8	Where wastes are known to be sensitive to heat, light, air or water you must ensure that they are protected from such ambient conditions	n/a
9	You must store and handle all pharmaceutical, chemical, anatomical and palletised wastes securely within designated areas of a secure building. A building is a covered structure enclosed on all vertical sides that provides sheltered cover and contains emissions of, for example, noise, particulate matter, odour and litter.	Permit drawing (ALBU.01.07-02)
10	You must store anatomical waste and animal carcasses in designated refrigerated units (operating below 5°C) unless you are storing them on site for less than 24 hours (72 hours if over a weekend).	n/a
11	You must store and handle infectious wastes that are not pharmaceutical, chemical, anatomical or palletised wastes in a secure building. You may however store these infectious wastes outside at facilities that were operating before we published this guidance, but only if you meet all of these conditions: • it is not technically or economically feasible to store them in a building • alternative storage arrangements provide an equivalent level of environmental protection to storage in a building • you carry out an appropriate site-specific environmental risk assessment which includes (but is not limited to) an assessment of fugitive emissions to land and water (including odour), pests and flood risk • the waste is in bulk containers that remain closed and locked at all times, except when waste is being loaded or unloaded from them • you hold the bulk containers in a secure area of the site that has impermeable surfacing and sealed drainage	Permit drawing (ALBU.01.07-02)
12	You must store and handle offensive wastes in a secure building or in secure, fully enclosed, rigid, waterproof and leak-proof bulk containers. If you store waste externally in bulk containers, the containers must remain closed at all times, except when waste is being loaded or unloaded from them.	n/a
13	You must not store or hold wastes on site in vehicles or vehicle trailers, unless they are being received or prepared for imminent transfer (that is, they will be removed from site within 24 hours, or 72 hours if over a weekend).	Permit drawing (ALBU.01.07-02)
14	You must store floc produced by alternative treatment plant in fully enclosed, waterproof and leak-proof containers. You must store the wastes produced by incineration plant following technical guidance for the waste incineration sector.	n/a

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Storage, Segregation and Handling (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Information Documents
Waste Storage, Segregation and Handling Appropriate Measures (Cont.)		
15	You must maintain the integrity of waste packaging at all times. You should design and operate your facility in a way that minimises waste handling. You must never throw, walk on or handle healthcare wastes in a way that might damage the packaging.	EPTR – Section 4
16	You must store waste in a way that protects its integrity and prevents or, where that is not possible, minimises the risk of packaging failing. You must pay particular attention to items at or near the bottom of bulk containers and avoid, for example, overloading, compressing or puncturing waste.	EPTR – Section 4
17	You must store different healthcare wastes according to waste type and destination. You must store the following wastes types in separate storage areas or containers. This is to prevent physical contact or a leak from one contaminating another waste type or its packaging.	Permit drawing (ALBU.01.07-02)
18	You must store all bulk waste containers in a way that allows safe and easy access for inspection at all times and minimises the need to remove others that may be blocking access. You must maintain safe access (inspection aisles) to at least one side of palletised wastes. You must handle and store containers so that labels and markings are easy to see and continue to be legible.	Permit drawing (ALBU.01.07-02)
19	You must not stack bulk containers, carts and pallets that contain waste whilst they are being stored on site, unless they are held in purpose-built racking systems.	
20	• You must clearly establish the maximum storage times of wastes held on site. Wastes should be treated on, or removed from, the site as soon as possible. You must not store relevant wastes on site for longer than these maximum storage times. • You can store the following waste types for up to 7 days if outside, or for up to 14 days if stored in a building: - infectious clinical waste - offensive waste - treated waste from alternative treatment plant (for example, autoclave floc) • You can store refrigerated anatomical waste for up to 14 days. • You can store unrefrigerated anatomical waste for up to 24 hours, or up to 72 hours if over a weekend. • You can store the following waste types for up to 6 months: - cytotoxic and cytostatic drugs - other medicines or drugs - dental amalgam - other chemicals or other wastes	EPTR – Section 4

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Storage, Segregation and Handling (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Information Documents
Waste Storage, Segregation and Handling Appropriate Measures (Cont.)		
21	You must prioritise the treatment or off-site transfer of waste based on: • its type • age on arrival (if known) • date of arrival • duration of storage on site You should follow the first-in, first-out principle and also identify and prioritise wastes with a higher risk of causing odour, litter or pest problems.	EPTR – Section 4
22	You must not open and repackage (bulk) individual waste packages and containers (for example bags, bins, boxes and blister packs), unless the packaging is designed to be reused. If you receive waste in damaged packaging you must record this as a non-conformance. You must transfer the contents to a new, clearly labelled container or package of the appropriate type and condition.	
23	If you repackage waste received in containers designed for reuse, the repackaging must be specifically authorised by the environmental permit (for example, as a D14 or R12 waste operation). You must repackage waste inside a building and make sure you protect the safety of staff and prevent potential emissions. For example, you could use an automated process in a contained environment with air extraction and abatement. You must carefully record the transfer of waste from individual packages or containers to bulk containers and must update the waste inventory accordingly.	
24	Unless specifically authorised by your environmental permit, you must not mix hazardous waste with other categories of hazardous waste, or with other wastes or materials.	
25	The type and quality of storage area surfaces must be suitable for effective disinfection with a broad spectrum agent. Your procedures must make sure that surfaces are regularly cleaned and disinfected.	
26	Once emptied, you must check all bulk containers to make sure you have removed all of the waste and then clean them inside and out. You must disinfect containers that have held infectious waste.	
27	You must inspect bulk containers (for example, carts) used to transport waste before each reuse to make sure that: • they have been cleaned and disinfected • they are physically sound • the locking mechanism works • they meet the relevant requirements of the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Storage, Segregation and Handling (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Waste Storage, Segregation and Handling Appropriate Measures (Cont.)		
28	The methods you use for cleaning and disinfecting surfaces and containers must: • physically remove contamination • be capable of achieving disinfection across the broad spectrum of micro-organisms with the parameters used (time, concentration, temperature, quantity) not produce emissions of pathogenic bioaerosols or chemical agents, or must make sure these emissions are contained and managed appropriately	
29	You must: • contain wash waters within an impermeable area and either discharge them to foul sewer or dispose of them appropriately offsite • prevent run-off into external areas or to surface water drains • prevent healthcare waste items from being discharged to water (including to sewer)	EPTR – Section 5.3, 5.4 & 5.7.
30	The way you store and handle waste must prevent pests and vermin. You must have specific measures and procedures in place to identify and manage any wastes that are causing pests or vermin at your site.	EPTR – Section 6.4. & ERA – ALBU.01.07/ERA
31	You must inspect storage areas, containers and infrastructure daily. You must deal with any issues immediately. You must keep written records of the inspections. You must rectify and log any spillages of waste.	
32	Your site must have suitable procedures, equipment and broad spectrum disinfectants to deal with the chemical and biological spillages that may arise from waste types accepted at your facility. All staff must be aware of their location and trained in their use.	
33	You must only move wastes between different locations (or load for removal off site) following written procedures. You must then amend your waste tracking system to record these changes.	EPTR – Section 4
34	When you load vehicles you must prevent leakage or contamination of one waste type (or its packaging) by another waste type. You must have written procedures to check outgoing vehicles and loads to confirm you have met these requirements.	
35	Your site inventory must be able to track and link all incoming consignments of waste to specific outgoing waste loads and their documentation.	
36	If you transfer waste, you must be able to demonstrate that the description and classification for the outgoing waste is the same as that for the incoming waste – unless the incoming waste description and classification was incorrect or incomplete.	
Compaction of Waste – n/a		

Table5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Treatment

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
General Waste Treatment		
1	You must fully understand, monitor and optimise the waste treatment process to make sure that you treat waste effectively and efficiently. The treated output material must meet your expectations and be suitable for its intended disposal or recovery route. You must identify and characterise emissions from the process, and take appropriate measures to control them at source	
2	You must provide adequate process descriptions of your treatment activities, and the abatement and control equipment you are using. This should include information about the characteristics of the waste to be treated and the waste treatment processes, including: • simplified process flowsheets that show the origin of any emissions • details of emission control and abatement techniques for emissions to air and water, including details of their performance • diagrams of the main plant items where they have environmental relevance – for example, storage, tanks, treatment and abatement plant design • details of physical treatment processes, for example shredding, separation, compaction, filtration, heating, cooling or washing • details of any chemical treatment processes • details of any biological treatment processes • details of any effluent treatment, including a description of any flocculants or coagulants used • an equipment inventory, detailing plant type and design parameters – for example, time, temperature, pressure • waste types to be subjected to the process • the control system philosophy and how the control system incorporates environmental monitoring information • process flow diagrams (schematics) • venting and emergency relief provisions • a summary of operating and maintenance procedures • process instrumentation diagrams	EPTR – Section 4 & 5
3	You must have up to date written details of the measures you will take during abnormal operating conditions to make sure you continue to comply with permit conditions. Abnormal operating conditions include: • unexpected releases • start-up • momentary stoppages • shutdown	ERA – ALBU.01.07/ERA

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Treatment (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
General Waste Treatment (Cont.)		
4	You must demonstrate that your treatment process will make sure that clinical waste is 'rendered safe', as defined in Health Technical Memorandum 07-01 – Safe Management of Healthcare Waste.	n/a sharps waste itself is not being treated – only the containers.
5	In order for a relevant waste to be considered rendered safe, your treatment process must: • reduce the number of infectious organisms present in any infectious waste to a level that no additional precautions are needed to protect workers or the public against infection by the waste • destroy any anatomical waste (human or animal tissue) so that it is no longer recognisable • make any clinical waste (including any medical equipment and items) unusable and unrecognisable • destroy the component chemicals of any chemical, or medicinal and medicinally-contaminated waste • make any patient information within the waste unrecognisable	
6	You must have tested and validated each treatment device you use as part of a site commissioning validation programme. This must meet the requirements in the section Plant commissioning and validating treatment efficacy.	
7	You must carry out appropriate efficacy testing to measure and demonstrate that your process can effectively treat clinical waste on an ongoing basis. This testing must meet the requirements in the section Routine plant efficacy testing.	EPTR – Section 5.8
8	Your treatment process must, as a minimum, meet the Level 3 criteria provided by the International Society of Analytical Assessment of Treatment Technologies (iSTAATT) if you treat infectious waste.	
9	Your treatment process must not shred or macerate untreated infectious wastes before the disinfection step unless the plant used is specifically designed and built to provide full bioaerosol containment. This would be provided by operating the plant under negative pressure, with air drawn away from the feed hopper entrance and passed through High Efficiency Particulate Air (HEPA) filters. Feed hoppers must have doors on the opening to contain bioaerosols and other potential emissions. The doors must be closed whilst the shredder or macerator plant is operating with process interlocks or equivalent measures in place to prevent the plant operating when the doors are open. Shredded or macerated waste must remain within the bioaerosol containment system until it has been disinfected	
10	Human anatomical waste must be made unrecognisable and this means that it is generally treated by incineration.	n/a
11	You must exclude the following wastes from alternative treatment activities: • waste medicines and chemicals • wastes contaminated with or containing residual medicines or other chemicals, including syringes that are fully discharged, partially discharged or undischarged (for example 18 01 03* infectious waste contaminated with 18 01 09 medicines)	n/a

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Treatment Appropriate Measures (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
General Waste Treatment (Cont.)		
11	• non-infectious wastes (for example 18 01 04 offensive hygiene wastes) • anatomical waste • dental amalgam Justification for the alternative treatment of these wastes must assess any impact on emissions to air and water from the facility and demonstrate that the treatment: • is effective (including validation of worst case scenario wastes and conditions) • is an efficient use of energy and raw materials • enhances the recovery or recycling of the waste where possible • does not impede the treatment of any other wastes	n/a
12	You must exclude biohazard waste from alternative treatment activities. This is: • any waste known or likely to contain ACDP Hazard Group 4 biological agents • any waste from a containment level 3 laboratory • all microbiological cultures from any source • any potentially infected waste from pathology departments and other clinical or research laboratories (unless autoclaved before leaving the site of production)	
13	The following wastes should be treated (inactivated) at the site of production: • class 2, 3 and 4 genetically modified microorganism cultures or contaminated material • HG 2, 3 and 4 pathogen cultures or positive specimens	
14	You must correctly describe, classify and code waste from alternative treatment using the appropriate LoW codes to make sure that it reflects the residual characteristics and properties.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Treatment Appropriate Measures (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Plant Commissioning and Validating the Efficacy of Treatment		
1	As part of the plant commissioning process, you must carry out performance validation tests to demonstrate that the treatment plant will render safe each of the waste types that your facility is permitted to treat. You must submit written proposals detailing the plant commissioning process and validation tests that you will carry out to the Environment Agency for prior approval.	EPTR – Section 5.8
2	Validation tests must be supervised by a suitably qualified, experienced and independent person and analysis must be carried out by an appropriately accredited laboratory. For the treatment of infectious wastes, tests must be supervised by an appropriately qualified microbiologist and analysis undertaken at an accredited microbiological laboratory.	
3	To comply with the pre-operational conditions in your facility's environmental permit, you must submit the results of plant validation tests in a written report to the Environment Agency for approval. We must approve this before you can start the commercial operation of the treatment plant at your facility.	
4	The validation report must detail the operating conditions and parameters of the plant under which you carried out the validation tests. You must include the type and composition of waste stream(s) treated, batch quantity or throughput rate. Approval of the validation report will be based on these validated plant operating conditions and parameters. The subsequent operation of the plant will be limited to those operating conditions and parameters.	
5	For mobile plant, you must carry out site commissioning and validation tests before you start operations on the first deployment.	n/a
6	Waste produced by an alternative treatment plant that has not passed a validation test, or has not received approval from the Environment Agency, must be considered untreated until rendered safe by a validated and approved plant.	EPTR – Section 5.8
7	You must repeat plant validation and send a validation report to the Environment Agency at these points: • periodically throughout the operational life of the plant and at intervals of 4 years or less • if any process parameters (for example, treatment duration, temperature, pressure, mass or type of waste) differ from those assessed during site commissioning • if you make any changes to the design or engineering of the treatment plant • before restarting treatment operations after a routine monitoring failure • if changes to the healthcare waste stream mean that the worst case scenario challenge load considered during the original site commissioning validation is no longer the worst case scenario	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Treatment Appropriate Measures (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Validation Tests for Treating Infectious Wastes		
1	You must use an appropriate certified test organism in the tests.	EPTR – Section 5.8
2	You can use spore strips to validate thermal treatment plant if you can guarantee their integrity. That is, if you can insert them into the waste after the pre-shredding or maceration process and before the disinfection step. Or, if there is no pre-shredding or maceration, you can insert them into the waste before the disinfection step. You should use spore suspensions to validate chemical treatment plant or thermal treatment plant if you cannot guarantee the integrity of spore strips.	
3	You must use Bacillus atrophaeus (BA) or Geobacillus stearothermophilus (GS) for iSTAATT tests. You should use BA to test chemical treatment processes and those involving dry heat technologies.	
4	When using spore strips or suspensions: • you must use spore strips or suspensions from the same batch number in the tests • if you use spore strips, they must be certified as containing ≥1 x 10^6 spores • if you use spore suspensions, you must add sufficient suspension to each load to make sure that ≥1 x 10^6 spores are present per gram mass of the total load	
5	For thermal treatment plant, the spores used must have a minimum certified D-value ≥1.8 minutes at either: • • 121°C wet heat for GS • 160°C dry heat for BA The D-value is the time at temperature required to achieve a log (or 90%) reduction in relevant micro-organisms. For chemical treatment plant, where the D-value for the chemical disinfectant is not available, you must determine the D-value and demonstrate it is comparable to the values reported in the literature.	
6	For thermal processes, the spores must be supported by the parallel use of either: • thermal indicator strips which indicate time and temperature of exposure 32 of 55 • multi-point thermal data loggers co-located in the waste load	
7	The time and temperature combination of the indicator strips must be indicative of the plant operating parameters needed to achieve microbial inactivation.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Treatment Appropriate Measures (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Validation Tests for Treating Infectious Wastes (Cont.)		
8	You must base the validation of plant performance for disinfection on: • the treatment of a worst case challenge load - in terms of spore strip containment or insulation and presence of interfering or inhibiting substances or items • the maximum quantity of waste that will be treated - that is the maximum batch size or throughput of the plant	EPTR – Section 5.8
9	The worst case challenge load used must reflect the type and design of the treatment plant, specifically: • whether the treatment process provides thermal or chemical disinfection • whether or not the waste is pre-shredded/macerated prior to disinfection	
10	The worst case challenge load used must be detailed and justified in the validation report.	
Validation Test Format for Infectious Wastes		
11	You must use an appropriate validation test format, which will depend upon whether you are using spore strips or suspensions, as set out in the guidance.	EPTR – Section 5.8
12	Spore strips - You must test each plant over 3 separate treatment cycles, retrieving the treated test packages before starting the next cycle. In total, you must hold a minimum of 6 untreated spore strips outside of the device to use as controls that you will compare with the treated strips.	
13	Spore Strips - You must analyse the entire test sample except for the control samples which will require serial dilution. You must preserve samples appropriately and send to an accredited laboratory for analysis in a timely manner.	
14	Spore Strips - Analysis must be quantitative and based upon the number of spores per spore strip. You must achieve the required log reduction (the number of spores recovered from control strips compared with those recovered from the test strips) with 95% confidence. All thermal indicator strips must also show that the required time and temperature parameters were achieved.	
15	Spore Suspensions - You must test each plant over 3 separate treatment cycles, taking representative samples from the treated material before starting the next cycle. The test must include a control run, where waste (treated clinical waste or a suitable surrogate waste material) is passed through the plant without activating the treatment process. You should add the same total quantity of spore suspension to each control and test run. If the mass of the waste differs between each control and test run, you will need to correct the test data for each run (spores present per kg of sample) to account for this difference.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Waste Treatment Appropriate Measures (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Validation Test Format for Infectious Wastes (Cont.)		
16	Each sample should be at least 0.1% of the waste load, with a minimum sample of 50g for smaller units. You must preserve samples appropriately and send them to an accredited laboratory for analysis in a timely manner. The entire test sample must be analysed, except the control samples. You must achieve the required log reduction (the number of spores recovered from control samples compared with those recovered from the test samples) with 95% confidence. Samples must be preserved appropriately until received by the laboratory for testing.	EPTR – Section 5.8
Assessment Methodology for Infectious Waste		
17	You must follow an appropriate assessment methodology, which will depend on whether you are using spore strips or suspensions.	EPTR – Section 5.8
Validation Tests for Treating Wastes Contaminated With or Containing Medicines		
1	*Validation tests must demonstrate that the plant is capable of destroying the range of pharmaceuticals and active ingredients that may be present in the waste stream.*	EPTR – Section 5.8
2	*Validation tests must assess and demonstrate the efficacy of each plant. These must involve: a control run, a minimum of 3 test runs and considering at least 3 worst-case substances*	
3	*You should introduce chemical tracer dyes resistant to the treatment process with the pharmaceuticals to demonstrate the treated waste is homogenous and material sampling is appropriate.*	
4	*You must consider and assess any effect on plant emissions that may result from the treatment of the pharmaceuticals.*	
Validation Tests for Treating Wastes Contaminated With or Containing Chemicals		
1	*Validation tests must demonstrate that the plant is capable of fully treating the range of chemical contaminants that may be present in the waste stream. You must clearly define the objectives of the treatment process, along with any reaction chemistry.*	EPTR – Section 5.8
2	*You must provide an assessment of the efficacy of the treatment, demonstrating the fate of the substances in question. Simple physical dilution or absorption, without any concurrent chemical change, is not an acceptable treatment process in itself.*	
3	*Validation tests must assess and demonstrate the efficacy of each plant. These must involve a control run and a minimum of 3 test runs. You must take representative samples from the treated material resulting from each test run.*	
4	*You must consider and assess any effect on plant emissions that may result from the treatment of the chemical contaminants.*	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emission Control

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
	You must identify, characterise and control emissions from your activities that may cause pollution.	EPTR – Section 5
Point Source Emissions to Air		
1	You must contain waste treatment plant (including shredders) to make sure you collect, extract and direct all process emissions to an appropriate abatement system for treatment before release.	EPTR – Section 5.2 & Section 8.1.
2	You must identify the main chemical constituents of the site's point source emissions as part of the site's inventory of emissions to air. You must include the speciation of volatile organic compounds ("VOC") if you have identified them in the emissions inventory and it is practicable to do so.	
3	You must make an assessment of the fate and impact of the substances emitted to air, following the Environment Agency's air emissions risk assessment methodology.	
4	A wide range of pharmaceuticals and chemicals are used in healthcare. If processed these can result in emissions of volatile chemicals to air or, via condensers, to foul sewer. Your waste acceptance procedures should prevent waste containing chemicals or pharmaceuticals entering the treatment process unless your plant is permitted and validated to treat this type of waste. You should then provide abatement to treat and remove any residual emissions.	
5	To reduce point source emissions to air (for example, dust and volatile organic compounds) from the treatment of waste, you must use an appropriate combination of abatement techniques, including one or more of the following systems: • adsorption (for example, activated carbon) • biofiltration • wet scrubbing • fabric filters • high efficiency particulate filtration (HEPA) • condensation • cyclonic separation • electrostatic precipitation	
6	You must assess and design vent and stack locations and heights to ensure sure dispersion capability is adequate. Where monitoring is required, including for odour, you must install a suitable monitoring point.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emission Control (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Point Source Emissions to Air (Cont.)		
7	Your procedures must make sure you correctly install, operate, monitor and maintain abatement equipment. For example, this includes monitoring and maintaining: • appropriate flow and chemical concentration of wet scrubber liquor • the handling and disposal or regeneration of spent scrubber or filter medium	EPTR – Section 5.2
8	You must have operating procedures to identify, prevent and control potential emissions of pathogens.	
9	You must use HEPA filters to prevent bioaerosol emissions from relevant point sources.	
10	Your procedures must make sure that HEPA filters are: • monitored (for example, by measuring the pressure drop across the filter) and maintained to achieve a minimum particle removal efficiency of 99.97% for particles ≥0.3µm diameter • safely removed and disposed of.	
11	You should design and operate abatement systems to minimise water vapour plumes.	
Fugitive Emissions to Air		
1	You must use appropriate measures to prevent emissions of dust, mud, litter and odour.	EPTR – Section 4 & 5.6
2	You must design, operate and maintain treatment plant in a way that prevents and minimises fugitive emissions to air including dust, organic compounds and odour. Or where that is not possible, you must minimise these emissions. Storage and treatment plant includes associated equipment and infrastructure such as: • shredders • conveyors • skips or containers • building fabric, including doors and windows • pipework and ducting	
3	You make sure fugitive emissions are collected and directed to appropriate abatement, your treatment plant must use high integrity components (for example, seals or gaskets). Your treatment plant must be fully enclosed, with air extraction systems located close to emission sources where possible.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emission Control (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Fugitive Emissions to Air (Cont.)		
4	You must use your waste pre-acceptance, waste acceptance and site inspection checks and procedures to identify and manage wastes that could cause, or are causing, fugitive emissions to air. When you identify any of these wastes you must: • take appropriate, risk assessed measures to prevent and control emissions • prioritise their treatment or transfer	EPTR – Section 4 & 5.6
5	Where necessary, to prevent fugitive emissions to air from the storage and handling of such wastes, you should use a combination of the following measures: • store and handle the waste within an enclosed building • use fully enclosed material transfer and storage systems and equipment, for example, conveyors, hoppers, containers, tanks and skips • keep building doors and windows shut to provide containment, other than when access is required for loading or unloading • keep enclosed buildings and equipment under adequate negative pressure with an appropriate abated air circulation or extraction system, where possible, locating air extraction points close to potential emissions sources • use fast-acting or 'airlock' doors that default closed	
6	You must set up a leak detection and repair programme and use it to promptly identify and mitigate any fugitive emissions from treatment plant and associated infrastructure (for example, pipework, conveyors or tanks).	
7	You must regularly inspect and clean all waste storage and treatment areas, equipment (including conveyor belts) and containers or carts.	
8	Your maintenance and cleaning schedules must make sure tanks and plant are regularly cleaned to avoid large scale decontamination activities.	
9	You must take measures to prevent the corrosion of plant and equipment (for example, conveyors or pipes). This includes selecting and using appropriate construction materials, lining or coating equipment with corrosion inhibitors and regularly inspecting and maintaining plant.	
10	You must have an appropriate regular maintenance programme covering all plant and equipment. This must also include protective equipment such as air ventilation and extraction systems, curtains and fast-action doors used to prevent and contain fugitive releases.	
11	If you carry out container washing activities, you must design and operate the bin washing process and associated equipment in a way that prevents emissions to air. For example, carrying out this activity in a contained or enclosed system.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emission Control (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Fugitive Emissions to Air (Cont.)		
12	You must fully enclose and contain pre and post-treatment shredder plant in order to prevent emissions. You must design and operate the shredder plant using appropriate process interlocks so that it cannot operate unless it is enclosed and contained. For example, only when the loading door on the hopper has been closed or sealed. Dust and microbial emissions from the shredder plant must be contained and extracted to an appropriate abatement system (for example, HEPA air filtration.	EPTR – Section 4 & 5.6
13	Where a dust management plan is required, you must develop and implement it following our guidance.	EPTR – Section 6.1
14	You must have procedures to minimise the amount of time odorous wastes spend in your storage and handling systems (for example, pipes, conveyors, hoppers, tanks). In particular, you must have provisions to manage waste during periods of peak volume.	EPTR – Section 6.2
15	You must have measures to contain, collect and treat odorous emissions, including using contained buildings and plant or equipment with appropriate air extraction and abatement. We do not consider masking agents to be appropriate measures for the treatment of odorous emissions.	
16	You must monitor odour abatement systems to ensure optimum performance. For example, by making sure that scrubber liquors are maintained at the correct pH and replenished or replaced at an appropriate frequency.	
17	Contaminated waters have potential for odours and you must store them in covered or enclosed tanks or containers.	
18	Where odour pollution at sensitive receptors is expected, or has been substantiated, you must periodically monitor odour emissions using European (EN) standards, for example either: • dynamic olfactometry according to EN 13725 to determine the odour concentration • EN 16841-1 or -2 to determine the odour exposure	
19	Where odour pollution at sensitive receptors is expected, or has been substantiated, you must also set up, implement and regularly review an odour management plan. It must be part of your management system and include all of the following elements: • actions and timelines to address any issues identified • a procedure for conducting odour monitoring • a procedure for responding to identified odour incidents, for example, complaints • an odour prevention and reduction programme designed to identify the source(s), to characterise the contributions of the sources and to implement prevention and reduction measures	
20	Where an odour management plan is required, you must develop and implement it following our guidance.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emission Control (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Fugitive Emissions to Air (Cont.)		
21	If you operate a microwave facility, you must be aware that failures in containment might result in non-ionising radiation leaks. Your operational procedures must include checking for these leaks at regular intervals.	n/a
Emissions of Noise and Vibration		
1	You should design the layout of the facility to locate potential sources of noise (including building exits and entrances) away from sensitive receptors and boundaries. You should locate buildings, walls, and embankments so they act as noise screens.	EPTR – Section 6.3 & ERA (ALBU.01.07/ERA)
2	You must employ appropriate measures to control noise, for example, including: • adequately maintaining plant or equipment parts which may become more noisy as they deteriorate – for example, bearings, air handling plant, building fabric and specific noise attenuation kit associated with plant or machinery • closing doors and windows of enclosed areas and buildings • avoiding noisy activities at night or early in the morning • minimising drop heights and the movement of waste and containers • using white noise reversing alarms and enforcing the on-site speed limit • using low-noise equipment, for example, drive motors, fans, compressors and pumps • adequately training and supervising staff • where possible, providing additional noise and vibration control equipment for specific noise sources – for example, noise reducers or attenuators, insulation, or sound-proof enclosures	
3	Where noise or vibration pollution at sensitive receptors is expected, or has been substantiated, you must create, use and regularly review a noise and vibration management plan. This must be part of the environmental management system, and must include: • actions and timelines to address any issues identified • a procedure for conducting noise and vibration monitoring • a procedure for responding to identified noise and vibration events, for example, complaints The noise and vibration management plan should also include a noise and vibration reduction programme designed to: • identify the source(s) of noise and vibration • measure or estimate noise and vibration exposure • characterise the contributions of the sources	
4	Where a noise management plan is required, you must develop and implement it following our guidance.	n/a

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emission Control (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Point Source Emissions to Water and Sewer		
1	You must identify the main chemical constituents of the site's point source emissions to water and sewer as part of the site's inventory of emissions.	EPTR – Section 5.3 & 5.4
2	You must assess the fate and impact of the substances emitted to water and sewer following the Environment Agency's risk assessment guidance.	
3	Discharges to water or sewer must comply with the conditions of an environmental permit or trade effluent consent.	n/a
4	To reduce emissions to water and sewer, if you need to treat waste water before discharge or disposal, you must use an appropriate combination of treatment techniques, including one or more of the following: • preliminary or primary treatment – for example, equalisation, neutralisation or physical separation • physico-chemical treatment – for example, adsorption, distillation or rectification, precipitation, chemical oxidation or reduction, evaporation, ion exchange, or stripping • biological treatment – for example, activated sludge process or membrane bioreactor • nitrogen removal – for example, nitrification and denitrification • solids removal – for example, coagulation and flocculation, sedimentation, filtration or flotation	n/a – treatment not needed
5	You must direct waste compactor runoff to foul sewer or a sealed drainage system for on-site reuse or off-site disposal. Discharges to surface water or storm drains are not acceptable.	n/a
6	You must not discharge sharps or medicines (for example, resulting from the washing of reusable sharps bins) to surface water, storm drainage or foul sewer.	EPTR – Section 4
7	You must direct wash waters from cleaning healthcare waste carts or containers to foul sewer or a sealed drainage system for off-site disposal. You may need to pre-treat the waters to meet any limits on the effluent discharge consent.	EPTR – Section 5.3 & 5.4
8	The contents of healthcare waste containers (bags, bins and boxes) must not enter foul, surface or storm drainage systems. You must clean up spilt or leaked material (including fluids) and dispose of them at a suitably authorised waste management facility rather than disposing of them to sewer.	EPTR – Section 4
9	For chemical treatment processes, you must consider whether you need to neutralise effluent (disinfectant) before discharging to water or sewer.	EPTR – Section 5.3 & 5.4

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emission Control (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Fugitive Emissions to Land and Water		
1	You must use appropriate measures to control potential fugitive emissions and make sure that they do not cause pollution. See the guidance on emissions to water and leaks from containers.	EPTR – Section 4 & 5.4
2	Unless the risk is negligible, you must have these in all operational areas of the facility: • an impermeable surface • spill containment kerbs • sealed construction joints • a sealed drainage system	
3	You must have measures in place to prevent overflows and failures from tanks and vessels, including where relevant: • overflow detectors and alarms • directing over-flow pipes to a contained drainage system • locating tanks and packaged liquids in suitable secondary containment (bunds) • providing isolation mechanisms (for example, closing valves) for tanks, vessels and secondary containment	
4	You must collect and treat separately each water stream generated at the facility, for example, surface runoff water or process water. Separation must be based on pollutant content and treatment required. In particular you must make sure that you segregate uncontaminated water streams from those that require treatment.	
5	You must use suitable drainage infrastructure to collect surface drainage from areas of the facility where you store, handle and treat waste. You must also collect washing water and occasional spillages. Depending on the pollutant content, you must either recirculate what you have collected or send it for further treatment.	
6	You must have design and maintenance provisions in place to detect and repair leaks. These must include regularly monitoring, inspecting and repairing equipment and minimising underground equipment and infrastructure.	
7	You must provide appropriate buffer storage capacity at your facility to store waste waters, taking into account: • potential abnormal operating scenarios and incidents • the nature of any polluting substances and their impact on the downstream waste water treatment plant and receiving environment	
8	You must have appropriate measures in place to monitor, treat and reuse the water held in the buffer storage before discharging.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emission Control Appropriate Measures (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Fugitive Emissions to Land and Water (Cont.)		
9	You must take measures to prevent emissions from washing and cleaning activities, including: • directing liquid effluent and wash-waters to foul sewer or collecting them in a sealed system for off-site disposal – you must not discharge them to surface or storm drains • where possible, using biodegradable and non-corrosive washing and cleaning products • storing all detergents, emulsifiers and other cleaning agents in suitable bunded or containment facilities, within a locked storage area, or in a building away from any surface water drains • preparing cleaning or disinfection solutions in contained areas of the site and never in areas that drain to the surface water system	
10	Where relevant, you must have measures to prevent pollution from the on-site storage, handling and use of oils and fuels.	
11	You must produce and implement a spillage response plan and train staff to follow it and test it.	EPTR – Section 4 & 5.4 & ERA (ALBU.01.07/ERA)
12	Your procedures and associated training must make sure you deal with spillages immediately. These should follow the manufacturer's health and safety advice for any products or substances involved.	
13	You must keep spill kits at locations close to areas where a spillage could occur and make sure relevant staff know how to use them. Make sure kits are replenished after use.	
14	You must stop spillages from entering drains, channels, gullies, watercourses and unmade ground. You must make available proprietary sorbent materials, sand or drain mats for use when required.	
15	You must make sure your spillage response plan includes information about how to recover, handle and correctly dispose of waste produced from a spillage.	
16	Bin or cart washing equipment must be purpose-built, contained and located in a designated area of the facility provided with self-contained drainage. The cart or bin wash must be designed to collect and contain all wash waters, including any spray. Trained staff must operate, inspect and maintain it regularly.	
17	For subsurface structures, you must follow points listed in the guidance.	n/a
18	For surfacing, you must design appropriate surfacing and containment or drainage facilities for all operational areas, taking into account: • collection capacities • surface thicknesses • strength and reinforcement	EPTR – Section 5.5

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emission Control Appropriate Measures (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Fugitive Emissions to Land and Water (Cont.)		
18 (Cont.)	• falls • materials of construction • permeability • resistance to chemical attack inspection and maintenance procedures	EPTR – Section 5.5
19	You must have an inspection and maintenance programme for impervious surfaces and containment facilities	
20	You must bund all above-ground tanks containing liquids whose spillage could be harmful to the environment. Bunds must: • be impermeable and resistant to the stored materials • have no outlet (that is, no drains or taps) and drain to a blind collection point • have pipework routed within bunded areas with no penetration of contained surfaces • be designed to catch leaks from tanks or fittings • have a capacity greater than 110% of the largest tank or 25% of the total tankage, whichever is the larger • have regular visual inspections – any contents must be pumped out or otherwise removed under manual control after checking for contamination • be fitted with a high-level probe and an alarm (as appropriate) if not frequently inspected • have tanker connection points within the bund (where possible), otherwise provide adequate containment • have programmed engineering inspections – normally visual, but extending to water testing if structural integrity is in doubt • be emptied of rainwater regularly to maintain their containment capacity	n/a

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emissions Monitoring and Limits

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Emissions Monitoring and Limits Appropriate Measures		
1	Where you are required to monitor emissions to comply with the requirements of your environmental permit you must do so in accordance with our monitoring guidance.	EPTR – Section 8
2	You must create and maintain an inventory (emissions inventory) of point source emissions to air and water (including emissions to sewer) for your facility.	
Emissions to Air		
1	Your facility's emissions inventory must include information about the relevant characteristics of waste gas streams	EPTR – Section 8
Chemical Emissions to Air – n/a		
2	You may not need to carry out chemical emissions monitoring if both of these conditions apply: • you have carried out waste pre-acceptance and acceptance checks by following the guidance on Waste pre-acceptance, acceptance and tracking appropriate measures • you are not treating wastes containing or contaminated with chemicals or medicines You will need to confirm this through your site specific emissions inventory and environmental risk assessment.	EPTR – Section 8
3	If your treatment plant treats pharmaceutically or chemically contaminated wastes, for example, medicinally contaminated sharps (even if fully discharged), you must propose and agree with the Environment Agency emission limits and monitoring requirements for relevant substances.	
Chemical Emission Limits and Monitoring Requirements		
4	You should apply the following emission limits and monitoring requirements for point source emissions to air where they are relevant, based on your facility's emissions inventory and environmental risk assessment. You must comply with any other emission limits or monitoring requirements in your environmental permit.	EPTR – Section 8
Microbial Emission to Air		
5	You must demonstrate that emissions from the plant are controlled during both site commissioning and routine operation.	EPTR – Section 8

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emissions Monitoring and Limits (Cont.)

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Microbial Emission to Air (Cont.)		
6	You must monitor and assess microbial emissions using tracer spore suspensions. You can use alternative indicators if you can demonstrate that microbial emissions only come from the waste on site (not from other environmental sources) and are present in enough numbers to provide the same level of test sensitivity.	EPTR – Section 8
7	You must comply with the following guidance when monitoring microbial emissions from alternative treatment plant.	n/a
Microbial Emissions Monitoring Frequency		
8	You must test all devices during commissioning validation and then periodically. For process bioaerosol emissions monitoring, when you have used a suspension of bacillus spores, you must test as follows: • devices which shred or macerate untreated waste – test them during site commissioning and then annually if proven and agreed • other devices – test them during site commissioning and then every 4 years	EPTR – Section 8
Microbial Emissions Monitoring Methodology		
9	You must not use spore strips for bioaerosol emissions monitoring.	EPTR – Section 8
10	The quantity of spores must be a minimum of 1×10^6 spores per gram of total waste load.	
11	Waste loads processed by the plant during the emissions monitoring tests must be representative of the waste types and waste streams that will be accepted for treatment.	
12	You must follow an appropriate assessment methodology, which will depend on whether the waste is shredded or macerated before treatment.	
13	The monitoring must consist of both air monitoring and surface monitoring.	
14	You must design your monitoring programme so you take enough samples to quantitatively relate the results to the input dose. The number of samples and location of sampling points will depend on the nature of the process and size of the device.	
15	You must take samples: • before processing the seeded waste (controls) • at intervals during processing the seeded waste – the intervals must relate to the process stages and the timing of potential emissions • then periodically for at least 2 hours after the cycle is complete Through the monitoring programme, you should aim to produce a quantitative 'estimate' of the total number of tracer organisms emitted from the device, relative to the input dose by each route.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emissions Monitoring and Limits (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Monitoring Microbial Emissions to Air		
16	You must carry out air monitoring from all of these points: • identified emission points from the process • the site boundaries • at any other relevant locations within the site – for example, near open vehicle access doors to the building housing the plant	
17	You must use active (centrifugal or vacuum) impaction onto agar using Anderson or slit samplers (or equivalent) to sample for bioaerosols. Your data submissions must contain information indicating the recovery efficiency of the method used.	
18	You must conduct air monitoring throughout the emissions monitoring exercise. Individual sample times must coincide with the steps in the treatment process where emissions may occur, for example, during the: • passage of seeded waste through a shredder • unloading of treated material	
19	Monitoring must consider all the main sources of emissions that are present at a site, including point source emissions and fugitive emissions. The main point source emission to air is from venting exhaust gases. You must always treat exhaust gases, for example, by filtering through a high efficiency particulate air (HEPA) filter. Monitoring is needed to demonstrate that treating the gases has been effective. You must monitor at each emission point. Common sources of fugitive emissions include the following: • macerating untreated clinical waste - This is potentially the most significant source of pathogenic bioaerosols. Your monitoring must demonstrate that the containment measures in place are effective • macerating treated clinical waste - This treatment reduces the number of microorganisms but does not eliminate them. Your monitoring must demonstrate if additional containment measures are needed. • Maintenance or access points - You must carry out monitoring to make sure that these do not compromise the integrity of the plant and are effectively sealed during operation so emissions are not released. Failed seals and joints may also result in emissions. • Bin washing – cleaning mobile containers may generate pathogenic bioaerosols. Chemical agents used for disinfection may also become aerosolised. Your monitoring must demonstrate if additional containment measures are needed by contaminating these containers with a liquid 'spill' of not less than 100ml and equivalent to 1 x 10^6 spores per gram of waste typically present in the cart.	EPTR – Section 8

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emissions Monitoring and Limits (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Monitoring Fugitive Microbial Emissions to Surfaces		
20	To support the air monitoring, you must use enough settle plates to form a grid-like pattern around the device or site.	EPTR – Section 8.
21	The exposure time for each plate, and replacement frequency during testing, should consider contaminants and total microbial load.	
22	You must use a regular exposure time and a series of plates at each sampling point. You must also use a grid placement to calculate the total number of organisms that have settled per hour during the monitoring period for: • each grid square • the whole site You should compare this to the input dose to provide a quantitative release estimate for the process.	
Microbial Emission Limits		
23	You must compare and assess the results of microbial emissions monitoring against the emission limits provided in the guidance to demonstrate that the containment and treatment of microbial emissions is effective.	EPTR – Section 8
Emissions to Water or Sewer		
1	Your facility's emissions inventory must include information about the relevant characteristics of the waste water streams, such as: • average values and variability of flow, pH, temperature, and conductivity • average concentration and load values of relevant substances and their variability - for example, COD and TOC, nitrogen species, phosphorus, metals, priority substances/micropollutants • data on bioeliminability - for example, BOD, BOD to COD ratio, Zahn-Wellens test, biological inhibition potential (for example, inhibition of activated sludge)	EPTR – Section 8
2	For relevant emissions to water identified by the inventory of waste water streams, you must carry out monitoring of key process parameters (for example, waste water flow, pH, temperature, conductivity, or BOD) at key locations. For example, these could either be at the: • inlet or outlet (or both) of the pre-treatment • inlet to the final treatment • point where the emission leaves the facility boundary	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Emissions Monitoring and Limits (Cont).

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Documents
Chemical Emissions to Water or Sewer		
3	• 3. You may not need to carry out chemical or pharmaceutical emissions monitoring if both of these apply: • you have carried out waste pre-acceptance and acceptance checks following the guidance in the section Waste pre-acceptance, acceptance and tracking appropriate measures • you are not treating the wastes containing or contaminated with chemicals or medicines	
4	4. If your treatment plant is authorised to process medicinally or chemically contaminated waste, for example, medicinally contaminated sharps (even if fully discharged), you must propose and agree with the Environment Agency emission limits and monitoring requirements for relevant substances. You will need to assess the range of chemicals and pharmaceuticals in use and their: • occurrence and concentration within the waste • properties and behaviour when subjected to the treatment process • predicted environmental impact	EPTR – Section 8.
5	Where the treatment process produces a wastewater you must also monitor this at intervals during the microbial emissions tests. You must follow the method and frequency of the test set out in the section on microbial emissions to air.	
6	You must representatively sample wastewater for microbial emissions before it enters the drainage system and as near to the point of origin (the treatment plant) as possible.	EPTR – Section 5.8
7	You must compare and assess the results of microbial emissions monitoring against the following emission limit to demonstrate that the treatment of microbial emissions is effective.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Process Efficiency

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Information Document
Process Efficiency Appropriate Measures		
1	For your facility, you must monitor and review the annual quantity of: • water, energy and raw materials used • residues and waste water produced You must do this at least once every year.	EPTR – Section 9
Energy Efficiency		
1	You must create and implement an energy efficiency plan at your facility.	EPTR – Section 9.2 & 9.3
2	You must regularly review and update your energy efficiency plan as part of your facility's management system.	
3	You must have and maintain an energy balance record for your facility. This must provide a breakdown of your energy consumption and generation (including any energy or heat exported) by the type of source (electricity, gas, conventional liquid fuels, conventional solid fuels and waste). You should provide Sankey diagrams or energy balances to show how energy is used in your waste treatment processes.	
4	You must regularly review and update your energy balance record as part of your facility's management system, alongside the energy efficiency plan.	
5	You must have operating, maintenance and housekeeping measures in place in relevant areas.	
6	You must have measures in place to avoid gross energy inefficiencies.	
7	For alternative treatment plant that thermally disinfect waste, we do not consider treating non-infectious waste appropriate unless you provide detailed justification. This should take into account the purpose and benefit of the treatment process and its energy consumption.	*n/a*
8	You should implement additional energy efficiency measures at the facility as appropriate, following our guidance.	EPTR – Section 9.2 & 9.3
Raw Materials		
1	You must maintain a list of the raw materials used at your facility and their properties. This includes auxiliary materials and other substances that could have an environmental impact.	EPTR – Section 9.5
2	You must regularly review the availability of alternative raw materials and use any suitable ones that are less hazardous or polluting. This should include, where possible, substituting raw materials with waste or waste-derived products.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Process Efficiency

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Information Document
Raw Materials		
3	You must justify the continued use of any substance for which there is a less hazardous alternative.	
4	You must have quality assurance procedures in place to control the content of raw materials.	
5	For facilities that treat waste using chemical disinfection, you must consider the following when you select and use raw materials: • using the optimum amount of disinfectant that maintains effective treatment • disinfectants that might have a lower environmental impact (for example hazardous properties, bioaccumulation, degradability, emissions) • minimising or reducing the quantity of, or neutralising, the residual active disinfectant in the outputs from the treatment process • the potential for components of the waste, for example organic matter, to inhibit or react with the chemical disinfectant	EPTR – Section 9.5
6	Processing waste that is not infectious with disinfectant is not consistent with minimising the use of raw materials. If you want to disinfect non-infectious waste you need to support your application to treat such waste. You must provide a detailed justification demonstrating that you meet the requirement to minimise raw material use.	n/a
Water Use		
1	You must take measures to make sure you optimise water consumption to reduce the volume of waste water generated and prevent or, where that is not practicable, reduce emissions to soil and water	EPTR – Section 9.5
2	Measures you must take include: • implementing a water saving plan (involving establishing water efficiency objectives, flow diagrams and water mass balances) • optimising the use of washing water (for example, dry cleaning instead of hosing down, using trigger control on all washing equipment) • recirculating and reusing water streams within the plant or facility, if necessary after treatment • reducing the use of water for vacuum generation (for example, using liquid ring pumps with high boiling point liquids), where relevant	
3	You must carry out a regular review of water use (a water efficiency audit) at least every 4 years.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Process Efficiency

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Information Document
Water Use (Cont.)		
4	You must also: • produce flow diagrams and water mass balances for your activities • establish water efficiency objectives and identify constraints on reducing water use beyond a certain level (usually this will be site specific) • identify the opportunities for maximising reuse and minimising use of water • have a timetabled improvement plan for implementing additional water reduction measures	EPTR – Section 9.5
5	To reduce water use and associated emissions to water, you should apply these general principles in sequence: • use water efficient techniques at source where possible • reuse water within the process, by treating it first if necessary – if not practicable, use it in another part of the process or facility that has a lower water quality requirement • if you cannot use uncontaminated roof and surface water in the process, you should keep it separate from other discharge streams – at least until after you have treated the contaminated streams in an effluent treatment system and have carried out final monitoring	
6	You should establish the water quality requirements associated with each activity and identify whether you can substitute water from recycled sources. Where you can, include it in your improvement plan.	
7	Where there is scope for reuse (possibly after some form of treatment) you should keep less contaminated water streams, such as cooling waters, separate from more contaminated streams.	
8	You must minimise the volume of water you use for cleaning and washing down by: • vacuuming, scraping or mopping in preference to hosing down • reusing wash-water (or recycled water) where practicable • using trigger controls on all hoses, hand lances and washing equipment	
9	You must directly measure fresh water consumption and record it regularly at every significant usage point, ideally on a daily basis.	

Table 5: Appropriate Measures for Permitted Facilities that take Healthcare Waste – Process Efficiency

Appropriate Measure Ref No.	BAT Requirement	Section of Supporting Information Document
Waste Minimisation, Recovery and Disposal		
1	You must create and implement a residues management plan that: • minimises the generation of residues arising from waste treatment • optimises the reuse, regeneration, recycling or energy recovery of residues, including packaging • ensures the proper disposal of residues where recovery is technically or economically impractical	EPTR - Section 9.6
2	Where you must dispose of waste, you must carry out a detailed assessment identifying the best environmental options for waste disposal.	
3	You must review options for recovering and disposing of waste produced at the facility on a regular basis. You must do this as part of your management system to make sure you are still using the best environmental options and promoting the recovery of waste where technically and economically viable.	
4	If you provide or advise producers on healthcare waste packaging, consider: • reducing the quantity of packaging accompanying the waste, for example making sure that containers are being used efficiently • using packaging that is either reusable or suitable for recycling	

10.2. Appropriate BAT Conclusions

10.2.1. Specifically related to the acceptance of aerosols which poses different risks to the waste types currently permitted to be accepted at the Installation, the additional guidance detailed in the EA's Addendum to SGN IPPC S5.06 'Guidance for the storage and treatment of aerosol canisters and similar packaged wastes' (Version 1.0, November 11) has also been considered.

10.2.2. A demonstration of compliance with applicable BAT is provided in Tables 6.

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes

Ref No.	BAT Requirement	Section of EPTR Document
Section 3 – Waste Pre-acceptance and acceptance		
3.1.1.	Written procedures should be in place for ensuring that adequate information (including samples where necessary) is obtained from waste producers to allow the Operator to determine the suitability of a waste for onsite storage and treatment before arrangements are made for its acceptance.	EPTR - Section 4.3
3.1.2.	The technical capability of a facility should be pre-determined in terms of the nature and quantities of canisters that can be handled and the condition in which they must arrive.	
3.1.3	A system should be in place to inform customers and site operatives of the type of canister(s) that the facility is permitted to accept for storage and/or treatment, specifically considering the chemical content, compatibility and quantity of residual materials.	
3.1.4.	For bulk loads of waste canisters received from canister manufacturers and retailers, the Operator should obtain the following information in writing from the customer: ○ quantity of waste being delivered ○ the contents of canisters, including named product and propellant ° ○ whether the canisters are fully discharged, partially discharged or unused ° ○ hazard properties posed by contents of canisters (i.e. from MSDS) ° ○ construction material of canisters (e.g. steel, aluminium or mixed)	
3.1.5.	For mixed loads of canisters, the Operator should obtain the following information in writing from the customer as a minimum: ° ○ quantity of waste being delivered ° ○ construction material of canisters (e.g. steel, aluminium or mixed) If not obtained from the customer, the condition, content and hazard properties posed by the contents of the canister should be determined and acceptability for on-site storage for treatment or transfer confirmed by the Operator as a priority once the load has arrived onsite	
3.1.6.	Using the information received from the customer (as detailed in 3.1.4), a technical assessment must be made of the waste's suitability for storage and treatment to ensure that Permit conditions are met.	

Table 6 IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
Section 3 – Waste Pre-acceptance and acceptance		
3.1. Appropriate Measures for Waste Pre acceptance		
3.1.7.	The Operator should instruct the customer on requirements regarding the type and condition of containers and packaging that canisters will be accepted in. Requirements for the on-site storage of canisters are detailed in Section 4 of this guidance. Requirements for the transport of canisters are detailed in the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations (CDG) and The European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR).	EPTR - Section 4.3
3.1.8.	Wastes should not be accepted at the facility without a clear method of treatment (if treated on site) or a defined disposal route (if stored on site pending transfer) being determined in advance and costed.	
3.1.9.	There must be a clear distinction between sales and technical staff roles and responsibilities. If non-technical sales staff are involved in waste disposal enquiries, then a final technical assessment prior to approval should be made to confirm that the waste is suitable for storage and treatment on site and to avoid build-up of accumulations of wastes.	
3.1.10.	All records relating to pre-acceptance should be maintained at the facility for cross-reference and verification at the waste acceptance stage. These records should be kept for a minimum of 3 years.	
3.2 Appropriate Measures for Waste Acceptance		
3.2.1.	The Operator should have clear and unambiguous criteria for the acceptance and rejection of waste, along with written procedures for the reception, inspection, acceptance, non-conformance, and rejection of waste received at the facility. Procedures for the non-conformance and rejection of waste canisters should be in accordance with indicative BAT requirement 34 of Section 2.1.2 of SGN 5.06 and should take into account the requirements of CDR for the carriage of waste dangerous goods.	EPTR - Section 4.3
3.2.2.	Upon arrival at the facility, the quantity of waste canisters received should be confirmed (based upon weight and/or number as appropriate) and accompanying documentation checked to ensure that the load is as expected and that the site has sufficient storage capacity to take it.	
3.2.3.	Following completion of the initial checks, the waste should be directed to a designated waste reception area where it can be unloaded for visual inspection. The reception area should be well ventilated and covered, and have an impervious surface and a sealed drainage system	
3.2.4.	The waste should not be directed to the reception area and offloaded without further assessment if, upon arrival, the accompanying documents are found to be inconsistent with the waste expected or, based upon the documents, there are concerns regarding the nature or quantity of the waste.	
3.2.5.	Wastes should not be directed to the reception area if it does not have adequate space for its safe and secure storage.	

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
3.2.6.	If waste canisters are received in containers that are not secure for on-site storage and well ventilated, based upon an appropriate risk assessment (e.g. taking into account the nature and quantity of the waste, the design and condition of the containers and available site storage provisions), the canisters should either be prioritised for subsequent acceptance checks and transferred to a secure well ventilated container or held in a secure caged storage area as soon as they are accepted on to the site, or rejected in accordance with the facility's waste rejection procedures.	EPTR - Section 4.3
3.2.7.	Once offloaded in the waste reception area, the waste should be subject to the following detailed visual checks: ° ○ Check the waste to ensure that it is as expected, complies with the site's waste acceptance criteria and is consistent with accompanying paper work and the site's Permit. ° ○ Check the condition of the containers in which the canisters have been packaged, in order to identify any that are damaged or unsuitable for handling and storage. ○ Inspect the load to identify leaking canisters and potentially explosive accumulations of gas, for example by visual inspection and/or using a suitable portable flammable gas detector. ° ○ Check the labelling of the containers in which the canisters have been packaged to ensure that it accurately identifies and describes the waste, removing any labels that do not relate to the waste. ○ The Operator should label each container that holds waste canisters with a unique reference number from the site's waste tracking system, the date of arrival and relevant hazard classification(s).	
3.2.8.	Unidentified wastes received at the facility (i.e. canisters without legible labels and with unknown content) should not be accepted unless information is obtained confirming that the waste canisters can be safely stored and, where relevant, treated on-site (i.e. based upon the content of the canisters and the hazard properties posed).	
3.2.9.	Following visual inspection, should the load fail the acceptance criteria, for example if it contains waste that the facility is not permitted to accept, these wastes should be immediately moved to a dedicated quarantine area and dealt with in an appropriate and timely manner. Unless the facility is permitted for the storage and subsequent transfer of the waste, the maximum storage time for waste that has failed the acceptance criteria should be no greater than 5 working days.	
3.2.10.	Should the load be found to contain leaking canisters, these wastes should be immediately removed from the waste reception area, stored in a well ventilated area (e.g. to the open air or an area provided with adequate local exhaust ventilation) and away from any sources of ignition so gases can be safely dispersed and prioritised for treatment if suitable equipment is available on site. Where suitable equipment is not available, the aerosols should not be transported unless they are repackaged for transfer using UN approved salvage packaging provided with appropriate measures to prevent the dangerous build up of pressure, or until the leaking has ceased or slowed sufficiently to present no threat of a flammable atmosphere being generated during transport.	

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
3.2.11	Once a load has passed the acceptance checks detailed above it should be moved promptly to a designated storage area. Requirements for the on-site storage of canisters are detailed in Section 4.	EPTR - Section 4.3
3.2.12.	Records of all the information generated during waste pre-acceptance, acceptance, storage, treatment and/or removal off-site should be made and held in accordance with indicative BAT requirements 35 to 38 (inclusive) of Section 2.1.2 of SGN 5.06.	
Section 4 – Appropriate measures for waste storage and handling		
Section 4.1. Appropriate measures for storage		
4.1.1.	Storage of canisters must take place under cover in secure well ventilated containers or within caged storage areas (see 3.2.6 for definition of a secure and well ventilated container), in a well vented location which is not subject to extreme temperatures or direct sunlight.	EPTR - Section 4.3
4.1.2.	Canisters received and held in insecure or flammable containers/packaging (e.g. in cardboard boxes, shrink-wrapped on pallets) must be stored in cages or transferred to secure ventilated containers to prevent the risk of them spreading fires by 'missiling' or 'ejection'	
4.1.3.	Canisters held in containers that are not able to collect and hold liquids released from the canisters should be provided with suitable containment measures (e.g. drip trays) or transferred to secure containers that are able to retain free liquid.	
4.1.4.	During storage, lids on containers holding canisters should remain securely closed at all times when not being filled, emptied or internally inspected and the doors/hatches of cages should remain closed and locked when not being used – n/a.	
4.1.5.	Containers used to store canisters should not be over-filled. Over filling can result in canisters being actuated and discharging their contents, either under the weight of the canisters above them, when the container lid is closed or when containers are stacked.	
4.1.6.	Cages used for storage should be robust, fire-resistant and of an appropriate mesh size (based upon the size of the canisters to be stored) to constrain the canisters and prevent any ejection. Where the cage is not constructed with a mesh roof, the mesh wall panels should extend into the roof space of the storage area to ensure that the structure is completely enclosed	
4.1.7.	Containers and tanks holding materials collected from the treatment process should be compatible with the materials held, fully earthed, UN tested and integrally sound, and designed and constructed to prevent the release of fugitive emissions to air (including odour) and ground, whilst allowing for emergency venting where necessary. Containers that can not be enclosed (e.g. skips containing recovered metal which are open to allow for ventilation and drying), should be stored in well ventilated covered storage areas to prevent the collection (and potential contamination) of rainwater and the corrosion/deterioration of the materials held	
4.1.8.	Flammable liquids should not be collected or held in plastic drums or nonconductive plastic IBCs. Containers used to collect and hold flammable liquids from the treatment process should preferably be constructed from steel, or at least anti-static plastic, and designed so that they can be sealed for handling/storage purposes. Anti-static plastic containers and IBCs should only be used to collect and hold flammable liquids if they are held within a self-contained bund and segregated from other dangerous substances (e.g. other flammable materials, oxidisers or corrosive materials).	

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
4.1.9.	Segregated storage and the use of appropriate separation distances and/or suitable engineering measures between containers holding incompatible substances is necessary to prevent incidents and as a means of preventing escalation should an incident occur (see HSG 51 for guidance on separation of flammable materials).	EPTR - Section 4.3
4.1.10.	Canisters should always be segregated from other flammable wastes and potential sources of ignition, preferably in a separate building, or by the use of a fire-resistant enclosure or fire wall.	
4.1.11.	No combustible material should be held within the storage area, other than the canister's packaging, containers and wooden pallets on which they stand.	
4.1.12.	Storage areas should be provided with signs, which clearly display the hazard properties of the wastes that can be stored in them.	
4.1.13	Where safe to do so (i.e. taking into account the potential risk of flammable atmosphere formation), storage areas should be provided with a bunded/kerbed impervious surface and sealed drainage systems.	
4.1.14	Packaging (cardboard etc) removed from the waste should be removed and stored under cover to avoid degradation and enhance its re-use/recovery.	
4.1.15.	Areas of the site where explosive atmospheres could occur (e.g. aerosol storage, sorting and processing areas) should be assessed and, where appropriate, classified into hazardous zones, in accordance with the requirements of DSEAR. Zoned areas of the site should be provided with warning signs, which identify the zone classification and prohibited activities (e.g. smoking, the use of naked flames or other heat sources and hot work (e.g. shrink wrapping guns, gas and oil heaters), and the use of electrical equipment (e.g. mobile phones, cameras, battery charging) and only equipment suitable for operation in the identified hazardous zones should be used. For further guidance on hazardous area classification see the DSEAR Approved Code of Practice (ACoP) and Guidance Series Documents and HSG71.	
4.1.16.	Canisters often contain gases that are denser than air, such as propane and butane, which can accumulate in low lying areas and form a potentially explosive atmosphere. In order to prevent the potential accumulation of these flammable gases, canisters should not be stored in or adjacent to basements, sumps or similar sunken areas. The design of the site drainage system and other containment measures (e.g. site bunding and kerbing) should also take account of this risk (e.g. where possible, avoid locating open drains or drainage channels in close proximity to stored canisters).	
4.1.17.	Appropriate precautions should be taken in the storage and handling of canisters to prevent accidental damage due to crushing, falling or impact.	
4.1.18.	Powered vehicles must not be used to move damaged stock (i.e. canisters that are leaking or suspected of leaking), unless they are specially adapted for use in flammable atmospheres.	
4.1.19	The route to the open air from the storage area should be as short and direct as possible, avoiding areas where gas may collect and sources of ignition.	

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
4.1.20.	In order to prevent the risk of a thermite spark during storage and handling activities, wherever possible and practical to do so, aluminium canisters should be stored separately from steel canisters that are rusty or in poor condition and should not be stored in direct contact with unprotected or rusty steel containers.	EPTR - Section 4.3
4.1.21	The canister reception and storage areas should be provided with appropriate fire detection and fire extinguisher systems. Fire fighting precautions should be chosen based upon the quantity and nature of the content of the canisters stored on site and agreed in consultation with the Fire Service or the Health and Safety Executive.	
4.1.22	The Operator should implement written inspection procedures to assess the condition of all waste containers (e.g. tanks, drums, IBCs and skips), pipework, bunding / kerbing and surfacing, and to carryout prompt remedial action where required or take unsuitable equipment out of use.	
4.1.23	Canisters should be regularly inspected on a frequent basis, for example by visual inspection and/or using a suitable flammable gas detector. Leaking canisters should be immediately removed from the storage area to the open air or an area provided with adequate local exhaust ventilation and away from any sources of ignition so gases can be safely dispersed. The canisters should be prioritised for treatment (if suitable equipment is available on site) or, if necessary, repackaged for transfer using UN approved salvage packaging.	
4.1.24	Canisters affected by rusting or damage from impact should be identified and prioritised for treatment.	
4.1.25	An auditable waste booking and tracking system should be in place in order to avoid the accumulation and storage of aged stock. Canisters should not be held on site for a period longer than 3 months, prior to treatment or transfer.	
Section 5 – Design and Operation of Waste Treatment Processes		
Section 5.2. – Appropriate Measures for the Design and Operation of the Treatment Process		
5.2.1.	The treatment process should be fit for purpose and specifically designed for the treatment of canisters and the recovery of their materials and residues whilst managing potentially flammable substances and preventing explosive atmospheres.	n/a
5.2.2.	The treatment process should be designed and operated (e.g. in terms of waste feed rate, duration of treatment cycle and gas/liquid extraction) to ensure that the residual contents of the canisters are fully discharged and removed in a safe and efficient manner.	
5.2.3.	The treatment plant should be located in a designated covered area or ventilated building, provided with impervious surfaces and sealed drainage systems, and located with suitable separation from stored combustible materials, other sources of ignition and sensitive receptors. The treatment area should be designed in order to avoid the potential accumulation of flammable gases that are heavier than air, for example in sumps or similar sunken areas	

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
5.2.4.	The treatment process should be carried out in an enclosed and sealed system provided with means to contain or control an explosion. The plant should be strong enough to contain an explosion (typically up to 10 bar overpressure) or should have explosion relief directed to a safe space or explosion suppression fitted	n/a
5.2.5.	The Operator should ensure that all canisters have been checked and sorted (having regards to relevant COSHH implications11) before being fed into the treatment process to ensure untreatable wastes (e.g. foams) are excluded.	
5.2.7.	In order to maintain the operating efficiency of the treatment system and prevent the accumulation of waste in the treatment area (i.e. of waste that requires sorting, is ready for treatment or has been removed from the treatment stream) the Operator should keep the waste sorting process distinct and separate from the treatment process itself.	
5.2.8.	To prevent damage to canisters and spillage/fugitive release of recovered residues and materials, the facility should be designed to minimise double handling for treatment and subsequent storage.	
5.2.9.	For safety considerations and to prevent the accumulation of wastes on site, the Operator should ensure that reliable recovery or disposal routes are identified and available, and where necessary contracts are in place, for taking the residues/materials recovered from the treatment process and any canisters that have been accepted but can not be treated on site.	
5.2.10	The Operator should ensure that as a minimum all LPG piping systems comply with UKLPG Code of Practice 2212 and are securely sealed, tested and have a procedure in place for their regular inspection.	
5.2.11	Before being stored and sent for recycling, residues remaining on the recovered metals should be collected or allowed to dry.	
5.2.12	The Operator should consider the need for noise and vibration control measures	n/a
5.2.13	Systems should be in place to ensure that the following are available at all times and remain effective and up-to-date: • process diagrams and plans, with DSEAR hazardous zone areas clearly marked out, • environmental risk assessment, • design specification, • treatable wastes and exclusions, • control system philosophy, • venting and emergency relief systems, • operating and maintenance procedures, • protection during abnormal operations, • COSHH risk assessments.	n/a

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
Accident Prevention		
5.2.14.	Site specific risk assessments should be undertaken for the treatment area and associated treatment activities. This will include carrying out a full DSEAR risk assessment to identify and assess areas of the site where flammable gases and liquids are present, activities involving those substances, how they may give rise to risk of fire or explosion, implement measures to eliminate, control or mitigate potential risks to the safety of workers and, if necessary, classify potentially harmful areas of the site into hazardous zones (see DSEAR ACoP and guidance series documents referred to in Section 9). The risk assessments should also cover the potential for adverse chemical reactions occurring between different aerosol contents, the potential for thermite reactions (sparks) between metals (i.e. aluminium canisters and rusty steel) and build-up of static electricity.	n/a
5.2.17	The treatment plant should be shielded in order to prevent the loss of any canisters without compromising the areas emergency escape routes or ventilation. Where possible, the operation of the treatment process (e.g. waste loading, piercing and unloading activities) should be automated, rather than manual, so that operators do not need to be in close proximity to the machine during operation.	
5.2.18	The Operator should ensure that the compatibility of collected liquids is assessed and confirmed before treating canisters that contain different products or mixing liquids that were collected from different batches of canisters.	
5.2.19.	Containers used to hold liquids or metal collected from the processed canisters should be checked and cleaned periodically to prevent build-up of flammable residues.	
5.2.20	The Operator must ensure that the treatment plant and associated equipment is cleaned/purged of residual materials between batches or loads of waste where it is assessed that cross-contamination of the collected residues and treated waste materials could impede their subsequent recovery or disposal or pose potential chemical incompatibilities or other health and safety risks.	
5.2.21	The design and construction of the system used to collect liquids released from the canisters during the treatment process should be appropriate to their hazardous properties to ensure that they can be safely collected, contained and transferred.	
5.2.22	Volatile gases are likely to be released from the liquid residues collected from the treated canisters. The treatment process should be designed and operated in a way that maximises the collection and recovery of these gases or, where this is not possible, minimises their release as a fugitive emission to air without giving rise to the creation of potentially flammable atmospheres.	
5.2.23	Electrostatic charges may develop on containers holding non-aqueous liquids and the liquid component collected from treated canisters may be flammable and give off flammable vapours. To prevent the risk of fire, the Operator should ensure that only earthed metal (i.e. steel) or anti-static containers are used for holding flammable liquids. Non-conductive plastic and composite metal-clad IBCs should not be used for this purpose. Pipework used to transfer flammable liquids should also be earthed or made from an anti-static material. All equipment that has the potential to develop an electro-static charge should be earthed and effectively grounded and the effectiveness of systems to safely dissipate electrostatic charge should be maintained and inspected on a regular basis (at least annually or after any event that may negate its effectiveness).	

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
Accident Prevention		
5.2.24	The treatment process and treatment area / building should be provided with an appropriate automatic smoke and fire detection, alarm and extinguishing system; linked to automatic plant shutdown where possible.	n/a
Management		
5.2.25	A written operating procedure/code of good practice should be drawn up, and all site operatives trained to follow it. A good standard of supervision should be maintained throughout.	n/a
5.2.26	Adequate and suitable training should be provided for all persons working the treatment process to ensure they are familiar with, and understand, the precautions that must be taken and the emergency procedures to be followed in case of a fire or other incident.	
5.2.27	A high standard of housekeeping should be maintained to prevent the accumulation of combustible material beneath or around the treatment equipment.	
Monitoring		
5.2.30	The Operator should have a procedure in place for the regular inspection and maintenance of the treatment plant and associated containers, tanks, pipework and connections, underground structures (sumps), kerbing/bunding and hardstanding.	n/a

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
Section 6 – Appropriate measures for emissions control		
Section 6.2 Fugitive emissions to air and odour		
6.3.1.	A procedure should be in place for carrying out a regular programme of inspection and maintenance for all containers, drums, tanks, above-ground pipework and connections, and the treatment plant/equipment itself, including seals, pipework, integral tanks, compartments and monitoring devices, with the aim of preventing (detecting and mitigating) fugitive emissions and the potential build-up of flammable atmospheres.	EPTR – Section 4.3
6.3.2.	Where safe and practical to do so, the Operator should use closed/sealed systems for transporting and handling the residues collected from the treated canisters (e.g. covered chutes, conveyors and containers and sealed connections between pipework and containers).	n/a
Section 6.4. Fugitive emissions to water, sewer, groundwater		
6.4.1.	The Operator should ensure that all subsurface structures (e.g. sumps, drains and pipework), surfacing and above-ground tanks are designed, constructed, inspected and maintained in line with the requirements of Section 2.2.5 of SGN 5.06.	EPTR - Section 4.3 & 5.7
6.4.2.	The storage (of canisters and collected materials and residues) and treatment of canisters should take place in areas of the site that are: • Covered, whilst ensuring adequate ventilation, and • Contained, i.e. provided with impermeable hardstanding and contained drainage, and bunded/kerbed where safe to do so (in terms of preventing the build-up of flammable atmospheres).	
6.4.3.	Drain covers at the site should be colour-coded, i.e. different colours used to demarcate drains that discharge to surface water, foul sewer and contained drainage	
6.4.4.	The Operator's Environmental Management System should include a preventative maintenance program, competence and training systems and accident plans and procedures that satisfy the requirements detailed in Section 2.3 (specifically Indicative BAT Requirements 1 to 11) of SGN 5.06 in order to prevent and mitigate accidents that could result in fugitive emissions to ground	

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
Section 7 – Appropriate measures for process efficiency		
7.1.1.	The Operator should ensure that the facility is designed and operated in accordance with the energy efficiency requirements detailed in Section 2.7 of SGN 5.06 and shall have regard to the energy efficiency measures detailed in Horizontal Guidance Note H2, Energy Efficiency15, specifically Appendix 2.	n/a
7.1.4.	The Operator should ensure that the general requirements detailed in Section 2.4 of SGN 5.06 are met during the design and operation of the facility.	
Section 8 – Appropriate measures for accident management		
8.1.1.	The Operator should develop and implement an accident management plan for the facility, which satisfies the requirements detailed in Section 2.8 of SGN 5.06. The accident management plan should specifically consider foreseeable impacts of fire on aerosol cans stored at the facility, along with any other waste held on site, to receptors both on and off site. This should include foreseeable impacts resulting from the rocketing of aerosol cans and failure of containers (e.g. IBCs and drums) in the event of a fire. Measures should be adopted on site to prevent such impacts and minimise their consequences.	EPTR – Section 3
8.1.2.	The Operator should produce emergency plans for the potential accidents identified and assessed by the facility's accident management plan. Emergency plans should provide information on the layout of premises, type, quantity and hazards of materials onsite, location and type of firefighting equipment, the name of contacts in case of emergency and, where possible, be drawn up in consultation with the local fire service.	
8.1.3.	Procedures and training should be in place to manage identified risks and ensure the rapid initiation of the emergency plan should an accident occur.	
8.1.4.	Where possible, the Operator should involve the emergency services in relevant emergency training activities	
8.1.5.	The accident management plan, and associated emergency plans and risk assessments, should be regularly reviewed and kept up to date, to reflect any changes on site, in terms of waste received, equipment installed/removed, changes in personnel, changes in regulations, and incidents/near-misses.	
8.1.6.	Physical protection measures should be used at the facility, e.g. bollards and barriers, to protect storage areas and above ground pipework from vehicle and people movements.	
8.1.7.	The site should have security (e.g. fencing, a single manned entrance) that is adequate to guard against intruders on to the site to prevent the threat of malicious activity. Fencing should be constructed in order to prevent missiles being thrown on site. Waste should not be stored close to the perimeter of the site or visible and in the open without shelter/protection.	

Table 6: IPPC S5.06 Addendum- Storage and Treatment of Aerosol Canisters and Similar Packaged Wastes (Cont.)

Ref No.	BAT Requirement	Section of EPTR Document
8.1.8.	Procedures should be developed and implemented, and training provided, for regular site inspections that include, but are not limited to, the following areas: ○ Condition and operation of treatment plant ○ Condition of site vehicles/forklift trucks ○ Fire detectors, alarms, and fire-fighting equipment. ○ Standards of general housekeeping ○ Condition of pallets, racking and shelving ○ Integrity and condition of canisters, drums, containers, tanks, packages, pipework, hoses, seals, and couplings. ○ Fire exits, signs and emergency lights ○ Spill containment provisions ○ Condition and adequacy of PPE ○ Condition of nitrogen plant / cylinders and associated pipework. ○ Waste identification/labelling, containment, segregation and separation. ○ Condition and content of bunds and drains ○ Adequacy of earthing/grounding ○ Building ventilation ○ Condition and accuracy of monitoring/sampling equipment	EPTR – Section 3 & Section 4.3. & ERA – ALBU.01.07.01.01/ERA

APPENDIX I

EA PRE APPLICATION ADVICE

Albus Environmental Limited

Oakwood Yard Unit 2, Watling Street

Bean, Dartford

Kent

DA2 8AH

Our reference: EPR/JB3604FF

Date: 19/03/2025

Dear Steve Clarke,

Pre application advice – Enhanced service

Site: Albus Environmental Ltd, 212 Kingnorth Industrial Estate, Hoo, Rochester, Kent, ME3 9NZ

Thank you for your pre application enquiry on 05th November 2024.

I am pleased to provide you with your pre-application advice. This advice is based on the information provided on your pre application advice form and conversations/emails recorded on the following dates:

- Enhanced Pre Application form 05/11/2024
- Email on 19/02/2025
- Telephone conversation on 05/03/2025

What this enhanced pre application advice covers

Further information on the enhanced pre-application service is detailed on section 2 of the Environmental permits: when and how you are charged - GOV.UK

Section 1 – Would the activity be allowed

Albus Environmental have asked if the Environment Agency is minded to allow the proposed activity. The activity involves recycling of sharp containers by opening, removing the contents, washing and then shredding.

We consider that the washing of the sharp containers is similar to already permitted activities that recycle sharp containers for reuse. There is a different end use in that the plastic containers will be shredded but the washing principles remain the same. On this basis we consider that the process is feasible.

The general principles of BS ISO 23907-2 Sharps injury protection —Requirements and test methods — Part 2: Reusable sharps containers should be considered.

Section 2 – What testing would be involved

It is important to note that the Environment Agency are not saying that you need to apply to BS ISO 23907-2 as this is not enforceable by law and we not an ISO certification body.

However, there are general principles of that ISO that we would expect to see in the process and assessment of cleaning and decontamination. These are listed as below :

The cleaning and decontamination process shall be as follows:
a) designed to render the containers clean, i.e. aesthetic and visually free of soil, debris and organic matter, and decontaminated to a level that renders them safe for handling and reuse;
NOTE Effective decontamination can commonly be achieved with the use of physical, chemical or thermal means either singularly or in combination.

b) automated with, no manual opening, emptying, or cleaning of containers until the decontamination process is completed;
c) capable of processing all types and sizes of each model of reusable container supplied by the manufacturer;
d) microbiologically validated prior to commissioning, by a competent third party to confirm no organisms are recovered from areas where a 104/ml challenge-suspension of representative pathogens in whole blood has been applied and dried. See example protocol in Annex A;
e) parametrically and continuously monitored to confirm that each container has been subjected to the decontamination parameters stipulated by the validation process;
f) designed such that the operator is alerted (e.g. alarm, machine stop, etc.) if the process does not meet the parameters validated prior to commissioning of the machine (see 4.5.2);
g) designed to protect operators and handlers against injury from sharps and exposure to hazardous wastes;
h) accompanied by a post-wash quality assurance program to ensure each container:
1) is fully functional as per the manufacturer's original specifications,
2) is aesthetically acceptable, i.e. visually clean and free from overt scuffs and scratches and offensive odours, and
3) has intact and legible labels including the label/mechanism for determining the number of container uses.

Section 3 – we would be putting in an extraction system to keep negative air around the area of repackaging. Would it be acceptable to run into the existing filter system for the steam sterilisation plant.

If there is a change to the existing emission to air you will be required to follow the Air emissions risk assessment for your environmental permit - GOV.UK. You can use the H1 risk assessment tool to complete and submit any assessment of risks for your specific activity H1 Tool | ADMLC. As the existing emission already has an AEL in place on the current permit you were need to ensure that the changes do not result in exceedance of that AEL.

Section 4 – What activity needs to be added to the permit

As you already have an installation activity on your current permit (Section 5.3 Part A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico chemical treatment), the aggregation principle applies to the whole permit (See Regulatory Guidance Note No. 2 Understanding the meaning of regulated facility - Appendices 1 and 2 P4 and P56. This means that any new activities involving hazardous waste will be added to the existing throughput of hazardous waste. Consequently, the proposed activity will require an installation activity. If the activities are operated in a continuous series this would be one installation activity for the washing (Section 5.3 Part A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico - chemical treatment) and a DAA (Directly Associated Activity) for the shredding.

However, if there is a break in the process between washing and shredding such as stockpiling it will require 2 installation activities adding.

Washing

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

Shredding

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

If you are storing hazardous waste with a total capacity exceeding 50 tonnes you will also require a 5.6 Part A(1)(a)(i). It does not include the storage of hazardous waste generated from on-site activities.

As part of this service we have provided you with the following information:

Application reference	**EPR/ JB3604FF**
Application charge required	This is dependent upon whether it is deemed a continuous series. A DAA does not involve a fee. The fee for one new activity at the time of writing is £16,001 for a Section 5.3 (a) (ii) – hazardous waste installation – physico-chemical treatment. The assessment of other management fees if required such a noise and vibration management plan or an odour management plan for example will also

	need to be added. See The Environment Agency (Environmental Permitting and Abstraction Licensing) (England) Charging Scheme 2022: version 1.4
Forms required to be submitted	Part A Application for an environmental permit: part A about you - GOV.UK C2, Application for an environmental permit: part C2 varying a bespoke permit - GOV.UK C3, Application for an environmental permit: part C3 vary a bespoke installation permit - GOV.UK F1, Application for an environmental permit (charges and declarations): part F1 - GOV.UK C6 Application for an environmental permit: part C6 vary a water discharge activity, groundwater activity, or point source emission to water from an installation - GOV.UK if there is discharge to water or sewer
Additional documents/ information required	summary of, or updated, Environmental Management System (EMS) plans, diagrams and descriptions to support the application for example drainage, containment ,emission points, site boundary, geographical features roads rivers etc , infrastructure Site Condition Report Non-technical summary Process flow diagrams BAT and appropriate measures assessment Storage arrangements including handling and segregation Monitoring frequencies Energy usage/efficiency Raw materials Risk assessment - emissions to air (H1)and other management plans Odour, Noise ,

	dust particularly if shredding, Pests, Fire etc screening for ecological receptors and heritage sites and whether these are impacted by the variation. Evidence of Technical Competence EWC codes list

A complete application must contain the following information below:

Declaration: Please ensure the declaration section is completed by each relevant person. For a limited company, this must be a director/company secretary as listed on Companies House

Site Plan: Site plan must be clearly marked with full site boundary

Payment: Please note your application will not be processed until we receive the full payment

You must ensure you provide dates of birth for all appropriate people as per Appendix 1 in form Part A. Failure to do so will delay your application being put into our systems. Please note that these details will not be made available on the Public Register.

Exemptions

A waste exemption is a waste operation that is exempt from needing an environmental permit. Each exemption has limits and conditions that you must meet.

To find out if there is an exemption for your waste operation, and check that you meet the conditions, read the Waste Exemptions guidance.

Future reforms to waste exemptions will mean exemptions cannot be registered at or adjacent to (where there is a direct link) permitted waste operations or installations. Waste exemptions cannot currently be used on a permitted installation. For further details including transition periods, please read Waste Exemptions – Getting Ready for Change. We do not expect changes to the Environmental Permitting Regulations (EPR) before 2025. The exact date depends on parliament and its legislative programme.

After you apply

The information that you need to submit with your application is explained in the application form and its guidance. The Environment Agency will check that you have submitted this information and the correct application charges. This is to ensure we have enough information to start to determine your permit application

We will contact you if information is missing and can feasibly be provided within 10 working days. If we consider information cannot be provided within this time frame we will return your application with a list of what is missing.

We'll retain 20% of the correct application charge to cover our costs in reviewing your application and requesting information. This maximum amount we'll retain is capped at £1,500. This is explained in the environmental permitting charges guidance.

We will not charge this if we return an application after having done very little work – for example, because it contained obvious errors or omissions.

Once we have duly made an application we will start to determine it. This is when we do our technical checks. We may need to ask you for further information or additional documents at this stage.

Once an application is validated and duly made, it is ready to be allocated for determination.

The time it takes us to allocate an application depends on a number of factors, including the complexity of the specific application and the availability of a member of our team with the right skills to assess it.

The amount of time taken to determine your application will vary. It will be impacted by factors such as:

- The quality of the application
- The complexity of the application
- Whether an application is of high public interest
- Whether the application includes novel technologies or techniques
- Whether the determination requires input from others, both internal and external to the Environment Agency
- Whether modelling and/or monitoring and assessment is required, for example Air Quality modelling and assessment or water discharge or groundwater activity specific substances assessment.

The Permitting Officer determining your application will be able to keep you updated with the progress of your application.

What happens next?

If you submit an environmental permit application then please quote this pre-application reference number:

If the advice above details using the online digital application form, your application can be submitted using this method. If not, please send your completed application documents via email to:

psc@environment-agency.gov.uk

Please email applications where possible. If email is not possible you can submit by post to:

Environment Agency, Permitting Support Centre, Quadrant 2, 99 Parkway Avenue, Sheffield, S9 4WF

Scope of this advice

We have only provided the specific advice you requested based on the information provided. We cannot provide advice on all aspects of your application, so it is important you read all available online guidance and the application forms to ensure anything not covered within this advice is considered as part of your application.

It is important to remember:

- this is advice, we are not agreeing anything at this stage
- we have provided this advice based on the limited information we have about your proposals at this time
- we have only provided the advice you specifically requested
- we may need to request additional information when we have a full application

Disclaimer

The advice given is based on the information you have provided, and does not constitute a formal response or decision of the Environment Agency with regard to future permit applications. Any views or opinions expressed are without prejudice to the Environment Agency's formal consideration of any application. Please note that any application is subject to duly making and then full technical checks during determination, and additional information may be required based on your detailed submission and site specific requirements and the advice given is to address the specific pre-application request.

This advice covers installations only.

Other permissions from the Environment Agency and/or other bodies may be required for associated or other activities.

Enhanced pre application cost estimate

At this stage the pre-application advice is expected to cost up to £600 plus VAT. An invoice will be sent separately.

This pre-application request is now closed.

We consider this pre application request is now closed however if you have any questions regarding this letter please contact PreApplicationService@environment-agency.gov.uk.

If you require additional enhanced pre-application advice please complete our online form.

Yours sincerely

Craig Harris

Senior Permitting Officer

Nature and Heritage Conservation

Screening Report: Bespoke installation

Reference	**EPR/JB3604FF/P002**
NGR	**TQ 80890 72907**
Buffer (m)	**10**
Date report produced	**22/04/26**
Number of maps enclosed	**1**

This nature and heritage conservation report

The nature and heritage conservation sites, protected species and habitats, and other features identified in the table below **must be considered in your application**.

In the further information column, there are links which give more information about the site or feature type and indicate where you are able to self-serve to get the most accurate site boundaries or feature locations.

Most designated site boundaries are available on Magic map. Using Magic map allows you to zoom in and see the site boundary or feature location in detail, Magic map also allows you to measure the distance from these sites and features to your proposed boundary. Help videos are available on Magic map to guide you through.

Where information is not publicly available, or is only available to those with GIS access, we have provided a map at the end of this report.

Sites and Features within screening distance	Screening distance (km)	Further Information
Special Areas of Conservation (cSAC or SAC)	10	Joint Nature Conservation Committee and Magic map
Queendown Warren		
Special Protection Area (pSPA or SPA)	10	Joint Nature Conservation Committee and Magic map
Medway Estuary & Marshes **Benfleet and Southend Marshes**		

Marine Conservation Zone (MCZ) **Medway Estuary - Zone 1** **Medway Estuary - Zone 2**	2	Joint Nature Conservation Committee and Magic map
Ramsar **Medway Estuary & Marshes** **Benfleet and Southend Marshes**	10	Joint Nature Conservation Committee and Magic map
Sites of Special Scientific Interest (SSSI) **Medway Estuary & Marshes**	2	Natural England and Magic map

Protected Species within screening distance	Screening distance (km)	Further Information
Allis Shad migratory route **Smelt migratory route** **European Water Vole**	up to 2	Natural England Appropriate Local Record Centre (LRC) Environment Agency. Dial 03708 506 506 to get an email address for your local Fisheries and Biodiversity team

Protected Habitats within screening distance	Screening distance (km)	Further Information
Coastal and Floodplain Grazing Marsh (see map below)	up to 2	Natural England

Where protected species are present, a licence may be required from Natural England to handle the species or undertake the proposed works.

The following nature and heritage conservation sites, protected species and habitats, and other features have been checked for, where they are relevant for the permit type requested, but have not been found within screening distance of your site unless included in the list above.

Special Areas of Conservation (cSAC or SAC), Special Protection Area (pSPA or SPA), Marine Conservation Zone (MCZ), Ramsar, Sites of Special Scientific Interest (SSSI), National Nature Reserve (NNR), Local Nature Reserve (LNR), Local Wildlife Sites (LWS), Ancient Woodland, relevant species and habitats.

Please note we have screened this application for features for which we have information. It is however your responsibility to comply with all environmental and planning legislation, this information does not imply that no other checks or permissions will be required.

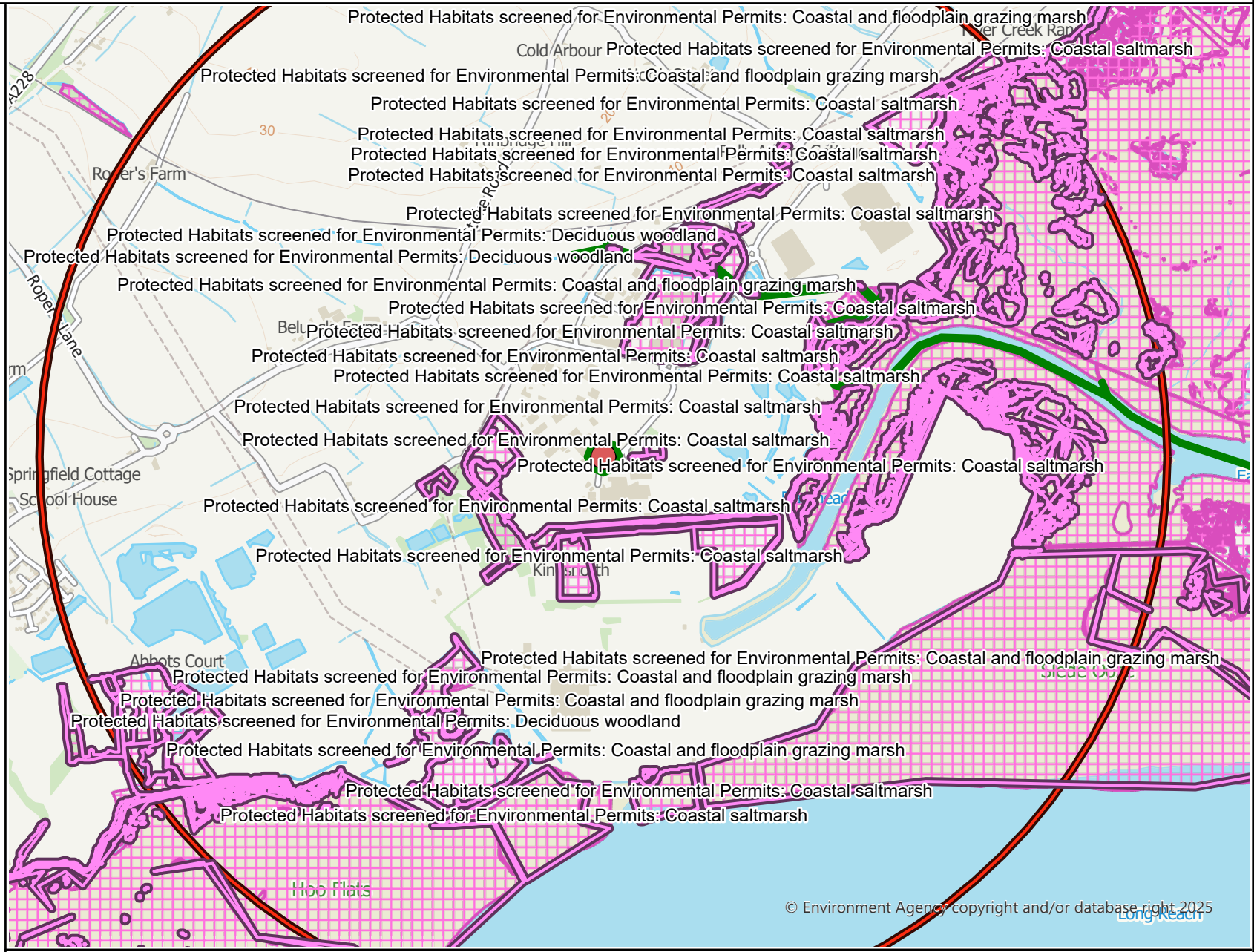
The nature and heritage screening we have conducted as part of this report is subject to change as it is based on data we hold at the time it is generated. We cannot guarantee there will be no changes to our screening data between the date of this report and the submission of the permit application, which could result in the return of an application or requesting further information

Protected Habitats

Environment Agency

Protected Habitats screened for Environmental Permits

Protected Habitats screened for Environmental Permits



Scale: 1:20,000

0 0.15 0.3 0.45 0.6 0.75 km

N

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APPENDIX II

EMS 14001 CERTIFICATE

bsi.

By Royal Charter

Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

Albus Environmental
Oakwood Yard Unit
2 Watling Street
Bean
Dartford
DA2 8AH
United Kingdom

Holds Certificate Number: EMS 638205

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

The provision of collection, treatment and transfer of clinical, asbestos and offensive waste.

For and on behalf of BSI:

Matt Page, Senior Vice President, EMEA Assurance

Original Registration Date: 2016-03-08
Latest Revision Date: 2025-01-28

Effective Date: 2025-03-08
Expiry Date: 2028-03-07

...making excellence a habit.™

This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.
An electronic certificate can be authenticated online.
Printed copies can be validated at www.bsigroup.com/ClientDirectory

Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 345 080 9000
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