Permitting Decisions- Variation

We have decided to grant the variation for Crossgate Drive Clinical Waste Treatment Facility operated by CLINIWASTE HEALTH SOUTH LIMITED.

The variation number is EPR/UP3909SG/V004.

The permit was issued on 18/11/2025.

The variation is for the introduction of a second waste shredder serving activity AR1 (Shredder A3b in Table S3.1). The new shredder will undertake shredding of both offensive wastes as currently permitted and clinical hazardous waste.

This variation adds additional waste codes authorising the treatment of infectious wastes containing chemicals or pharmaceuticals through shredding and thermal treatment. This is a new waste stream that has not been that has not been previously treated at the facility.

As the facility will treat infectious waste streams containing medicines/chemicals and infectious wastes that do not, the shredding and autoclave activities (AR1 and AR2) will operate under the following two modes. This is to ensure that waste streams are treated in batches, preventing cross contamination of wastes containing chemicals and those that do not.

- Mode 1**:** Shredding of infectious sharps bags and boxes not contaminated with chemicals or medicines pending onward thermal treatment undertaken in AR2 and;

- Mode 2**:** Shredding of infectious sharps waste contaminated with pharmaceuticals only pending onward thermal treatment undertaken in activity AR2.

The permit requires the operator to complete pre-operational conditions for future development, to allow for the treatment of sharps waste containing non-hazardous medicines/chemicals. These conditions are present in Table S1.4 under conditions PO2 and PO3 and must be completed prior to operations taking place. The pre-operational conditions may be found in Table S1.4 of the permit.

The addition of a second shredder means that the daily treatment capacity for hazardous shredding is increased from 39 to no more than 50 tonnes per day. The maximum storage capacity of hazardous waste on site is limited to 50 tonnes in aggregate at any given time. The maximum storage of treated and compacted material is increased from 36 to 44 tonnes.

The plant is decontaminated between the batches (modes 1 & 2) and shredding of offensive waste to prevent and minimise the risk of cross-contamination between treatment batches. The operator is required to provide the decontamination process procedures as part of the pre-operational conditions in the permit.

Additional EWC waste codes for the treatment of wastes containing non-hazardous medicines have been added Table S2.2. Additional waste codes for hazardous repackaging only under activity (AR3) have been added to Table S2.3 of the permit. Repackaging of waste does not

The shredding and compaction of non-infectious sharps, not contaminated with chemicals or medicines from human healthcare 18 01 01 and animal healthcare 18 02 01 have been added to the offensive waste Table S2.4. These wastes are compacted following shredding, sealed in enclosed containers and transferred off-site for recovery at an appropriate facility.

In addition to the above changes to the environmental permit, the variation also includes the following changes;

Directly associated activities (DAAs):

AR7 – Air abatement system

The existing shredder and autoclave is served by a local exhaust ventilation system connected to HEPA and carbon filters. The system is designed to abate bacterial and volatile organic compounds prior to release. The existing system will now serve the new shredder (A2b), the emission limits for both shredding plant and autoclave may be found in Table S3.1 (A2 and A3) of the permit.

AR8 – Storage of medicinally contaminated effluent

Medicinally contaminated effluent arises from the treatment of sharps containing chemicals. Effluent generated from the treatment process is stored in a 20m^3 capacity tank prior to transfer offsite for disposal at a designated incineration facility.

Additional monitoring requirements

This variation introduces additional monitoring to be carried out during the treatment of chemically / medicinally contaminated wastes. The additional monthly monitoring is for speciated volatile organic compounds which may be variable based on the waste input stream.

Improvement and pre-operational conditions have also been included in this variation. See key issues section for further explanation.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision-making process. It

- highlights key issues in the determination
- summarises the decision making process in the decision considerations section to show how the main relevant factors have been taken into account
- shows how we have considered the consultation responses

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Key issues of the decision

Abatement plant

The variation sees the inclusion of a second shredder (A3b) and forms part of Section 5.3 Part A(1)(a)(ii) activity (AR1) of the permit. The existing abatement plant consisting of a HEPA and carbon filter configuration are considered best available techniques for the activity and waste types being treated by this variation. However, this variation will see the introduction of wastes that may be contaminated with non-hazardous chemicals and medicines due to the clinical settings they arise from. These wastes are known to emit volatile organic compounds (VOCs). This means that the abatement plant emissions will need to be monitored for speciated (VOCs) to ensure it is effectively treating those emissions. The monitoring will be undertaken monthly when treatment of infectious waste containing chemicals takes place.

To ensure that the facility can verify that the treatment and abatement techniques are suitable prior to operations authorised by this variation, we have included a pre-operational conditions PO2 and PO3 in Table S1.4 of the permit. A pre-operational condition must be completed prior to the operations specified commencing and requires the operator to submit for an approval a report that considers;

- sampling and testing programmes characterising emissions to air from the abatement plant arising from the two shredders and autoclave.
- Considers emissions resulting from emissions when treating both non-hazardous medicinally contaminated waste, and waste not contaminated with medicines.
- Provide measures to demonstrate effective clean down between treatment of contaminated wastes and any other waste.
- Provide measures including a sampling and testing regime demonstrating that pharmaceutically contaminated effluent (arising from the autoclave and or shredding process) are not discharged to sewer and are captured and disposed of through incineration.

On completion of PO3 the operator must compete an improvement condition IC3. The improvement condition aims to verify that the emissions profile expected by the applicant (with regards to treatment of medicinally contaminated waste) is achieved. Where improvements may be needed, IC3 requires that additional measures in accordance with the healthcare waste appropriate measures are proposed at this time and the effectiveness of the abatement is established.

Increase in treatment capacity, throughput and storage

There will be an increase in throughput as a result of this variation increasing from 39 to 50 tonnes per day across activities AR1 and AR2 and waste operation AR11 which involves the shredding of offensive wastes. The increased treatment capacity means the annual treatment capacity also increases from 14,235 to 18,287 tonnes per year. The increase in treatment capacity and throughput requires additional storage capacity. The total storage capacity will increase from 39 to 44 tonnes. There are no changes to the storage arrangements of the facility, the existing infrastructure will remain as currently permitted. The total aggregated storage capacity of all hazardous waste on site is 50 tonnes and must not exceed this volume.

Storage of medicinally contaminated effluent

Medicinally contaminated effluent arises from the treatment of sharps containing chemicals. Effluent generated from the treatment process is stored in a $20m^3$ capacity tank prior to transfer offsite for disposal at a designated incineration facility. The discharge of this effluent must not be made the water and or sewer. The aqueous emissions from the autoclave when treating medicinally

contaminated waste are isolated in the tank. A three way valve prevents the release of effluent to sewer.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidance on confidentiality.

Identifying confidential information

We have not identified information provided as part of the application that we consider to be confidential.

The decision was taken in accordance with our guidance on confidentiality.

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

- Local Authority – Environmental Protection Department – Nottingham
- Director of Public Health – Nottingham
- United Kingdom – Health Security Agency (UKHSA)
- Health and Safety Executive (HSE)
- Food Standards Agency (FSA)

The comments and our responses are summarised in the consultation responses section.

The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 ‘Understanding the meaning of regulated facility’, Appendix 2 of RGN2 ‘Defining the scope of the installation’ and Appendix 1 of RGN 2 ‘Interpretation of Schedule 1’,

The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

The site

The operator has provided a plan which we consider to be satisfactory.

The plan is included in the permit.

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is not within our screening distances for these designations.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility.

The operator’s risk assessment is satisfactory.

General operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

Odour management

We have reviewed the odour management plan in accordance with our guidance on odour management.

We consider that the odour management plan is satisfactory and we approve this plan.

We have approved the odour management plan as we consider it to be appropriate measures based on information available to us at the current time. The applicant should not take our approval of this plan to mean that the measures in the plan are considered to cover every circumstance throughout the life of the permit.

The applicant should keep the plans under constant review and revise them annually or if necessary sooner if there have been complaints arising from operations on site or if circumstances change. This is in accordance with our guidance ‘Control and monitor emissions for your environmental permit’.

The plan has been incorporated into the operating techniques S1.2.

Waste types

We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.

We are satisfied that the operator can accept these wastes for the following reasons:

- they are suitable for the proposed activities
- the proposed infrastructure is appropriate; and
- the environmental risk assessment is acceptable.

The additional waste types for the treatment of wastes containing non-hazardous medicines have been added Table S2.2 of the permit. Additional waste codes for hazardous repackaging only (AR3) have also been added to Table S2.3 of the permit.

We have restricted the following wastes for the following reasons

- 18 01 03* and 18 01 09 infectious waste, medicinally contaminated wastes must not contain cytotoxic or cytostatic medicines or materials.

Waste entries that are dual-coded under 18 01 03* and 18 01 09 are limited to wastes received in yellow lidded, rigid yellow containers that are contaminated with non-hazardous medicines only and do not include other pharmaceutical or pharmaceutically contaminated wastes.

- 18 02 02* and 18 02 08 infectious and medicinally contaminated sharps must not contain cytotoxic or cytostatic medicines or materials.

Waste entries that are dual-coded under 18 02 02* and 18 02 08 are limited to wastes received in yellow sharps bins that are contaminated with non-hazardous medicines only and do not include other pharmaceutical or pharmaceutically contaminated wastes.

Pre-operational conditions

Based on the information in the application, we consider that we need to include pre-operational conditions.

Pre-operational condition PO2 is included in the permit for the operator to validate the treatment efficacy of the new waste streams containing chemicals;

(i) the treatment efficacy of the waste facility for the additional waste types (infectious waste contaminated with non-hazardous medicines (18 01 03* with 18 01 09)), in accordance with the Waste treatment appropriate measures of technical guidance Healthcare waste: appropriate measures for permitted facilities, dated 13 July 2020;

(ii) the proposals for routine monitoring of treatment efficacy comply with the Waste treatment appropriate measures of technical guidance Healthcare waste: appropriate measures for permitted facilities, dated 13 July 2020;

(iii) the installation's emissions, in accordance with the Emissions monitoring and limits appropriate measures of technical guidance Healthcare waste: appropriate measures for permitted facilities, dated 13 July 2020; and

(iv) the proposals for routine monitoring of emissions comply with the Emissions monitoring and limits appropriate measures of technical guidance Healthcare waste: appropriate measures for permitted facilities, dated 13 July 2020.

The treatment efficacy tests must take into account the range of permitted waste types that the plant may treat at the same time as the additional waste in question (18 01 03* with 18 01 09 infectious waste with non-hazardous medicines).

Pre-operational condition PO3 is included in the permit to;

(i) proposes a sampling and testing programme for characterising and assessing emissions to air from the abatement systems of the shredder and autoclaves for total and speciated VOCs and dust;

(ii) considers emissions resulting from both the treatment of waste contaminated with non-hazardous medicines (18 01 03* with 18 01 09) and waste not contaminated with non-hazardous medicines (18 01 03*);

(iii) proposes measures to demonstrate that effective clean down occurs between processing of medicinally contaminated sharps and other waste;

(iv) proposes measures and a sampling and testing regime for demonstrating that pharmaceutically contaminated autoclave liquors or condensate is not discharged to sewer as a result of the treatment of medicinally contaminated waste (i.e. all pharmaceutically contaminated liquids from the treatment of medicinally contaminated sharps are captured for off-site disposal by incineration).

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme.

Improvement condition IC3:

- We have included improvement condition IC3 in the permit to ensure that monitoring be undertaken when treatment of waste contaminated with non-hazardous medicines commences on completion of pre-operational condition PO2 and PO3

Improvement condition IC4:

- We have included improvement condition IC4 in the permit requiring the operator to provide further information for the current extraction and abatement system in place for the for the autoclave. The operator will verify the measures are in line with the requirements set out in the healthcare waste appropriate measures. If improvements are required, the operator is required to implement improvements in a specified timeframe.

Improvement condition IC5:

- Improvement condition IC5 has been included in the permit requiring the operator to establish a site-specific leak detection and repair (LDAR) programme to detect and mitigate the release of volatile organic compounds.

Emission limits

Emission Limit Values (ELVs) and equivalent parameters or technical measures have been added for the following substances:

For emissions to air (A2 and A3 as specified in Table S3.1 of the permit)

- **Speciated volatile organic compounds** - have been added to the permit with no limit set. However, the permit limit for TVOC remains unchanged at 30mg/m3. The additional requirement for monitoring total and speciated VOCs is to be undertaken monthly during the treatment of medicinally contaminated waste (18 01 03* with 18 01 09). The requirement to monitor VOCs during the treatment of medicinally contaminated waste shall apply once the treatment of this waste has been approved under pre-operational condition PO2. The ongoing frequency of this monitoring may be reduced subject to completion of improvement condition IC3 and the agreement of the Environment Agency.

Monitoring

We have decided that monitoring should be added for the following parameters, using the methods detailed and to the frequencies specified:

Monitoring for total and speciated VOCs is to be undertaken monthly during the treatment of medicinally contaminated waste (18 01 03* with 18 01 09). The monitoring reference period is an average value of 3 consecutive measurements of at least 30 minutes each. The monitoring method/standard is BS CEN/TS 13649.

These monitoring requirements have been included in order to ensure that speciated volatile organic compounds are monitored for in the waste gas stream and abatement system.

Reporting

We have amended reporting in the permit for the following parameters:

- Reporting of air emissions is amended to report (quarterly) ongoing monitoring of speciated volatile organic compounds when treatment of medicinally contaminated waste is undertaken.

These requirements are necessary to ensure that the reporting the monitoring data is submitted on a quarterly basis.

Management system

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

Technical competence

Technical competence is required for activities permitted.

The operator is a member of the WAMITAB scheme**.**

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the

guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

Consultation Responses

The following summarises the responses to consultation with other organisations and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from United Kingdom Health Security Agency (UKHSA).

Brief summary of issues raised: UKHSA notes the main emissions of concern from combustion, waste handling, waste storage and operation of the autoclave. These being emissions of nitrogen dioxide, bioaerosols, volatile organic compounds and odours.

Summary of actions taken: The emissions from combustion sources are unchanged as a result of this variation. The addition of waste containing medicines is a new waste stream that may generate additional volatile organic compounds. We have therefore added the requirement to monitor and verify that the abatement measures in place at the facility adequately control the emissions from the new waste streams. Pre-operational and improvement conditions have also been included to ensure that the necessary monitoring is in place prior to commencement of treating the new wastes.