Fire Prevention Plan

NTH Solutions LLP

NORTH TEES AND HARTLEPOOL

NHS FOUNDATION TRUST

UNIVERSITY HOSPITAL OF NORTH TEES

Osmotherley House

Hardwick Road

Stockton-on-Tees

TS19 8PE

NHS
North Tees and Hartlepool
NHS Foundation Trust

Olive Compliance Ltd
Planet House, Northumbrian Way, Newcastle-upon-Tyne, NE12 6EH
Company No: 12861220

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Revision	Date	Originator	Company Approver	Description of Changes
V. 001	April 2025	Olive Compliance Limited	Stephen Bell	Produced for EA Approval (New Permit)

Site Contacts and Emergency Information

Name	Contact
Fire Service Emergency	**999**
Fire & Rescue Service (Local – Stockton) **Cleveland Fire Brigade**	**01642 366 180** **01429 872 311**
Police Emergency	**999**
Police (Local)	**01642 301 234**
Northumbrian Water	**0800 328 7648**
Environment Agency	**0800 80 70 60**
Stockton-on-Tees Borough Council	**01709 336 009 (08:30-17:30)** **01709 382 121 (Out of Hours)**
Health and Safety Executive	**0300 003 1747**
Operator	**01642 624 713** **steven.bell5@nhs.net**

1.0 Introduction

NTH Solutions LLP has instructed Olive Compliance Limited (OCL) to prepare an application for a Bespoke Environmental Permit Application for their site located at Osmotherley House, Hardwick Road, Stockton-on-Tees, Cleveland, TS19 8PE (University Hospital of North Tees –North Tees and Hartlepool NHS Foundation Trust).

This plan is designed specifically around site activities, which will primarily be the acceptance, storage and treatment of clinical waste. Although the Guidance Fire Prevention Plans: Environmental Permits (11 January 2021) does not apply to the storage and treatment of healthcare waste covered by Sector Guidance Note 5.06 or Healthcare waste: appropriate measures for permitted facilities, the waste (floc) produced following the sterilisation and shredding treatment process, is a combustible waste in the form of RDF (Refuse Derived Fuel), hence the requirement for the Fire Prevention Plan (FPP).

The site operates under a bespoke permit to allow the treatment of both non-hazardous and hazardous clinical waste arising from the University Hospital of North Tees and Hartlepool and third parties, by microwave sterilisation.

This document is primarily to specify the onsite control measures in place to reduce the risk of fire occurring and manage the risk of fire should it occur and any resulting environmental impacts.

2.0 Fire Prevention Plan

This FPP has been prepared in order to mirror the contents of the EA guidance for FPP to allow for ease of assessment and for users of this document to readily locate the specific information and on-site provisions relating to each particular topic.

2.1 Fire Prevention Objectives

This FPP identifies measures to be employed to reduce the likelihood of fires at the site. In addition, the plan identifies measures to be employed in the event of a fire in order to limit the damage caused to the environment or human health.

As such, and in accordance with EA guidance, the objectives of this FPP are to:

- 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

3.0 Exclusions

The EA guidance for FPP states that the guidance does not apply to:

- hazardous wastes
- dangerous substances (i.e. those under Control of Major Accident Hazard Regulations)

- combustible liquids
- healthcare wastes

4.0 Types of Combustible Wastes

Within the site management system, the healthcare waste types are received on the site.

Proposed waste types and quantities	
Maximum quantity	**The total quantity of waste accepted at the site shall be less than 5000 tonnes per year.**
Waste code	**Description**
18	**wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)**
1801	Wastes from natal care, diagnosis, treatment or prevention of disease in humans.
18 01 03*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection.
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers).
18 02 02*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 02 03	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection

The above waste types are **excluded** from the EA guidance for FPP.

However, following the treatment of these waste types, a sterilised combustible floc in the form of RDF (Refuse Derived Fuel) is produced with a classification of EWC 19 12 10 - combustible waste (refuse derived fuel) AN.

Section 9 of this document details the associated storage arrangements.

Details of other combustible, non-waste materials on site are detailed within Section 7.10 and their locations are added to the site plan (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan).

5.0 Use of this Document

This FPP forms part of the environmental management system for the site. It is prepared for use as a standalone document, such that all staff can easily refer to any information or operational requirements that relate to the prevention of fire or the procedures that are in place in the event of a fire.

The existence and location of the FPP is notified to all staff and will be readily accessible, in both hard and electronic copies, at all times, including during an incident. The FPP, associated emergency contacts and the site plan are stored in the site office as an Emergency Pack.

All visitors and contractors to site will be given a Site Induction and a copy of the Site Rules which they will sign to confirm their understanding. The Site Induction will ensure that visitors and contractors know what they must do to prevent a fire occurring and what to do during a fire if one breaks out.

5.1 Training

All staff will be trained on the contents and requirements of the EMS, and FPP (suitable to their role) and site inductions will include a summary of the FPP and notices of its location. A record of any training including any refresher or Toolbox Talk will be recorded and signed off by all staff.

All staff are provided with information and training on fire prevention, protection requirements and action to be taken in the event of fire. New members of staff are given information or training on:

Procedures and their personal responsibilities to prevent and protect against outbreaks of fire.

- What action to take if they discover a fire
- How to raise the alarm, the location of manual call points, and the procedure for contacting the Fire and Rescue Service and the EA
- What action to take immediately on hearing the fire alarm
- The location and safe use of portable or other fire extinguishing equipment
- The location of escape routes from their place of work including those routes not used regularly for normal access and egress
- Their responsibility to direct or escort visitors and contractors in their charge to escape routes (and in the case of disabled persons to the nearest useable escape route or refuge)
- The importance of keeping closed all fire doors to limit the spread of fire, heat or smoke
- How to safely isolate or shutdown plant or equipment, where appropriate
- The importance of good housekeeping in preventing the outbreak of fire and limiting its effects
- Fire safety and emergency information for visitors and contractors will be provided at reception where they are required to sign-in

5.2 Document Testing and Review

Quarterly exercises will be carried out to test how well the fire prevention plan works.

Exercises will be planned to test specific aspects of the fire prevention plan throughout the year to ensure effectiveness.

Such tests may take the form of physical drills or desk-based assessments as relevant to the element of this FPP that is under test. The nature of each test, the results and appropriate actions (including where no action is required) will be maintained for inspection by the EA, on request.

This fire prevention plan will be kept under regular review with monthly external audits conducted on fire prevention measures on site and review of compliance with this document.

Staff and temporary staff employed also receive appropriate of all Environmental Management Procedures to enable them to carry out day to day operations, also to allow the site to be operated within the current legislation and guidelines and also to ensure company procedures and policies are followed.

Records of training will be kept and updated accordingly.

Operations at the site will be under the overall control of a technically competent person who holds the relevant Certificate of Technical Competence (COTC) under the Waste Management Industry Training and Advisory Board (WAMITAB) scheme.

This document will be revised if where necessary for example if:

- There is reason to suspect it no longer meets the objectives of the guidance
- The site has had a fire or identify a near miss of a fire
- Changes in site activities
- The environment the site operates in changes, for example if a school or residential development is built nearby
- The EA ask the company to revise it due to some concern over the risk posed by site operations

Any revised document will be sent to the EA for approval.

6.0 The Site

6.1 Site Activities

Waste management activities at the site are authorised by the Bespoke Environmental Permit. The site operates a physico-chemical treatment of waste facility, accepting, storing and treating wastes produced on site within the University Hospital of North Tees and Hartlepool. Once all four Sterilwave treatment machines are running to a capacity of 8 hours per day (Monday-Friday) there will be the potential of waste being brought onto site from other producers/sites for treatment. The waste material known as floc (RDF) is produced from the clinical waste treatment process, which will be classified under EWC 19 12 10. A third-party contractor will transfer the floc (RDF) to an energy from waste plant. The floc is compacted for efficient storage, awaiting collection and transfer off site. The compactor is located externally to the processing building.

The permit allows the site to carry out the below activities (as defined under Annex II of the Waste Framework Directive can be summarised below).

- D9: Physico-chemical treatment not specified elsewhere in Annex IIA which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D8 and D10 to D12

- D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced)

The annual permitted tonnage will be 5000 tonnes.

6.2 Site Plans

6.2.1 Site Layout

The site layout, in respect of fire prevention, is shown on Drawings 003 (NTH SOLUTIONS Drawing-003 Site Layout and Process Plan). This layout highlights the following:

- the layout of the building
- all permanent ignition sources on site and show they are a minimum of 6m away from combustible and flammable waste
- any areas where the operator is treating or storing combustible waste or combustible non-waste material
- all separation distances
- access points around the site perimeter to assist firefighting
- hydrants and water supplies
- areas of natural and unmade ground
- Internal and external waste container storage areas, including container dimensions
- the location of fixed plant and mobile plant when not in use
- the location of spill kits
- the quarantine areas

6.3 Operational Hours

The site operates according to the hours stated below:

- Monday to Friday 07:00 – 17:00 hrs
- Saturday Closed
- Sunday/Bank/Public Holiday Closed

6.4 Site Location and Receptors

The site is positioned within the University Hospital of North Tees and Hartlepool, located in Stockton-on-Tees, TS19 8PE.

FPP guidance states that consideration must be given to sensitive receptors such as:

- schools, hospitals, nursing and care homes, residential areas, workplaces
- protected habitats, watercourses, groundwater, boreholes, wells and springs supplying water for human consumption.
- roads, railways, bus stations, pylons (on or immediately adjacent to the site only), utilities, airport

6.4.1 Site Location

The site is located within the grounds of the Hospital at Osmotherley House, Hardwick Road, Stockton-on-Tees, Cleveland, TS19 8PE.

The site is accessed from Piper Knowle Road via Hardwick Road which is surrounded by Hospital buildings as well as staff and public carparks. Entrance/exit to the site is via Piper Knowle Road, through the hospital grounds to the service yard.

Surrounding roads include:

- Piper Knowle Road
- Ketton Road
- Cowpen Crescent
- Hardwick Road
- Jenner Drive
- Middlefield Road

The site is surrounded by Hospital buildings which is principally bounded by a residential and commercial area. (See below Images 1-4 and Table 1).

Table 1 – Site Setting

Boundary	Description
North	**Residential/Commercial**
West	**Residential/Commercial**
South	**Residential/Commercial**
East	**Residential/Commercial**

Images 1 shows the location of the site and the surrounding area.

Image 1 – Site Setting

Image 2 shows a birds eye view of the site within the hospital grounds.

Image 2 – Birdseye view of Site

Image 3 shows the site location and layout of the hospital grounds.

Image 3 – Site location within the hospital grounds

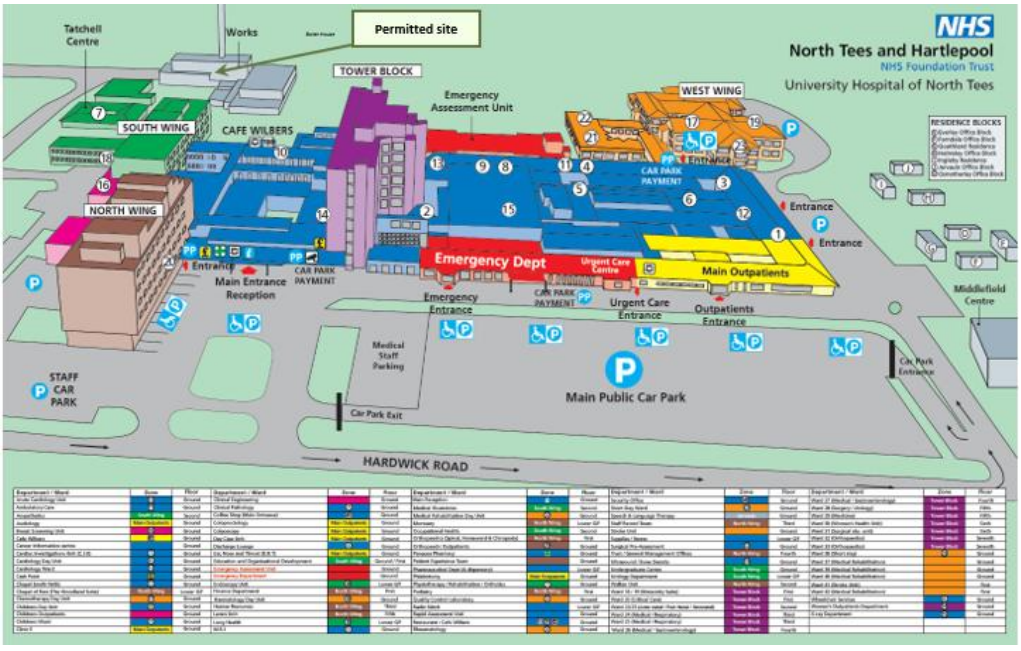
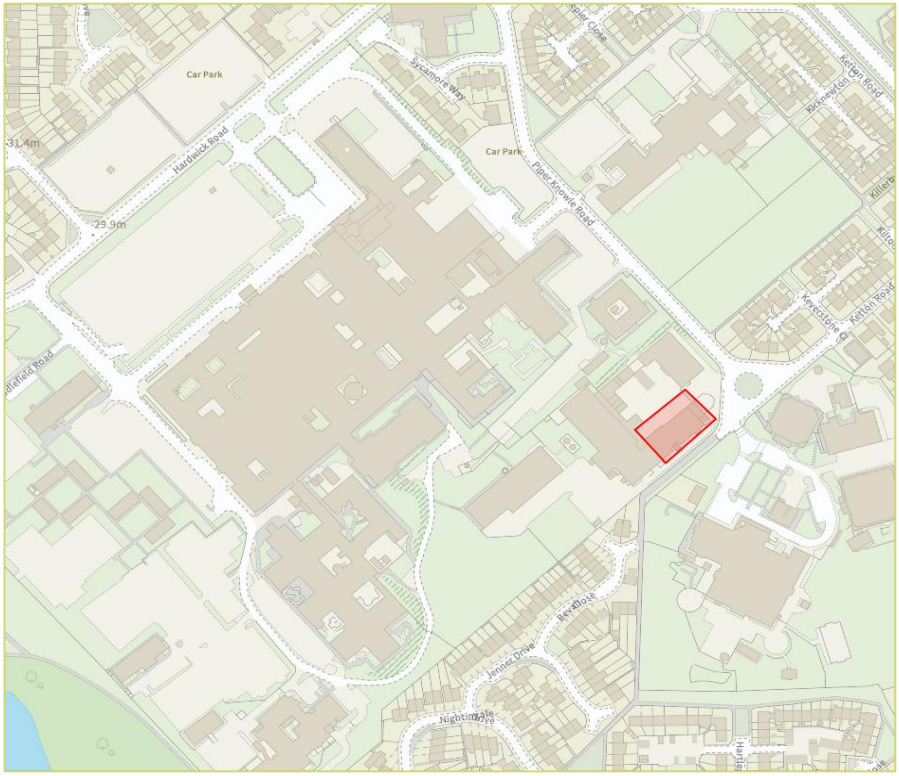


Image 4 displays the permitted site boundary in relation to the surrounding area and local receptors.

Image 4 – Permitted Site Boundary



6.4.2 Site Receptors

The closest sensitive receptor is residential housing at Piper Knowle Road and Kenton Road is located approximately 52m to the south of the site. Sensitive receptors identified within this document are shown on Drawing 004.

Table 2 below details the sensitive receptors, distance from the site and contact details.

Table 2 – Local Sensitive Receptors

Receptor	Distance (m)	Contact Telephone Number
Residential Properties	50m	N/A
Abbey Hill Academy and Technology College	70m	01642 677113
Harrow Gate Primary Academy	97m	01642 673984
MP Decorators	152m	07919 651403
Butterwick Hospice Care	325m	01642 607742
Salters Lane Community Centre	353m	01642 617985

Bowling Green	380m	01642 554025
Hardwick Dene Woodland, Pond and Nature Reserve	401m	01287 636382
Care Home Management – Nursing Home	442m	01642 611437
St Gregory's Roman Catholic School	442m	01642 672262
Sports Centre (The Reform Lab) & Playing Field	443m	07359 493806
Heron Foods	508m	0345 6037300
Starbucks (Milehouse Pub)	513m	01642 670697
Hardwick Community Centre	529m	01642 800133
The Fry Guys - Takeaway	533m	01642 672536
Mister Twister Balloon Parties	550m	07974 101554
Fairfield Plasterers	572m	07973 509108
Roseworth Lodge Care Home	590m	01642 606497
The Hope Centre – Elim Pentecostal Church	609m	07879 466062
Pharmacy World	720m	01642 677999
The Vale Good Companion Puppy & Dog Training School	741m	01642 891984
Elm Tree Woodland & Walkway - Nature Reserve (The Hub – Travel)	780m	01642 617672
Hardwick Green Primary School	818m	01642 677968
Newham Grange Park	837m	01642 526871
Roseworth Wild Meadow	846m	01642 733906
Hardwick Baptist Church	847m	01642 612785
Whitehouse Primary School	903m	01642 678212
Elm Tree Community Centre	950m	01642 611333
Bishopsgarth Park & Play Area (Stockton-on-Tees Borough Council)	980m	01642 391959
Redbrook Play Area	987m	01642 391959

(Stockton-on-Tees Borough Council)		
Durham Road Cemetery (Stockton-on-Tees Borough Council)	996m	01642 527341

6.4.3 European/International Sites

Searches on the Multi Agency Geographical Information for the Countryside (MAGIC)[1] website confirm there are no Sites of Special Scientific Interest (SSSI), no Special Area of Conservation (SAC), no Special Protected Areas (SPA) and no Marine Conservation Zone within 1km of the site.

A local nature reserve is located within 200m of the site.

A Priority Habitat Inventory - Deciduous woodland (England) is located approximately 401m from the site.

6.4.4 Other receptors

No other receptors have been identified within 1km of the permit boundary.

6.4.5 Major Roads and Transport Links

The site is accessed from Piper Knowle Road via Hardwick Road which is surrounded by Hospital buildings as well as staff and public carparks. Access to the site is via Piper Knowle Road, through the hospital grounds to the service yard.

Surrounding roads include:

- Piper Knowle Road
- Ketton Road
- Cowpen Crescent
- Hardwick Road
- Jenner Drive
- Middlefield Road

There are no motorways within 1km of the site boundary. The A19 lies approximately 2.8km running east of the site.

The site location is more than 2km from Stockton Railway Station and 1.4km from the Network Rail Northern Railway Line

[1] www.magic.gov.uk accessed November 2024

6.4.6 Flood Risk

Checks made on the Environment Agency (EA) Long Term Flood Risk Assessment website [2] shows that the Site is not at risk of flooding from surface waters, groundwater, reservoirs, rivers or sea without defences. The Site location lies within Flood Zone 1, which has a low probability of flooding. The yearly chance of flooding from surface waters, groundwater, reservoirs, rivers or the sea without defences is Very Low which means there is less than 0.1% chance of a flood each year.

The area around the University of Tees and Hartlepool Hospital, Osmotherley House, Stockton-on-Tees, TS19 8PE has a:

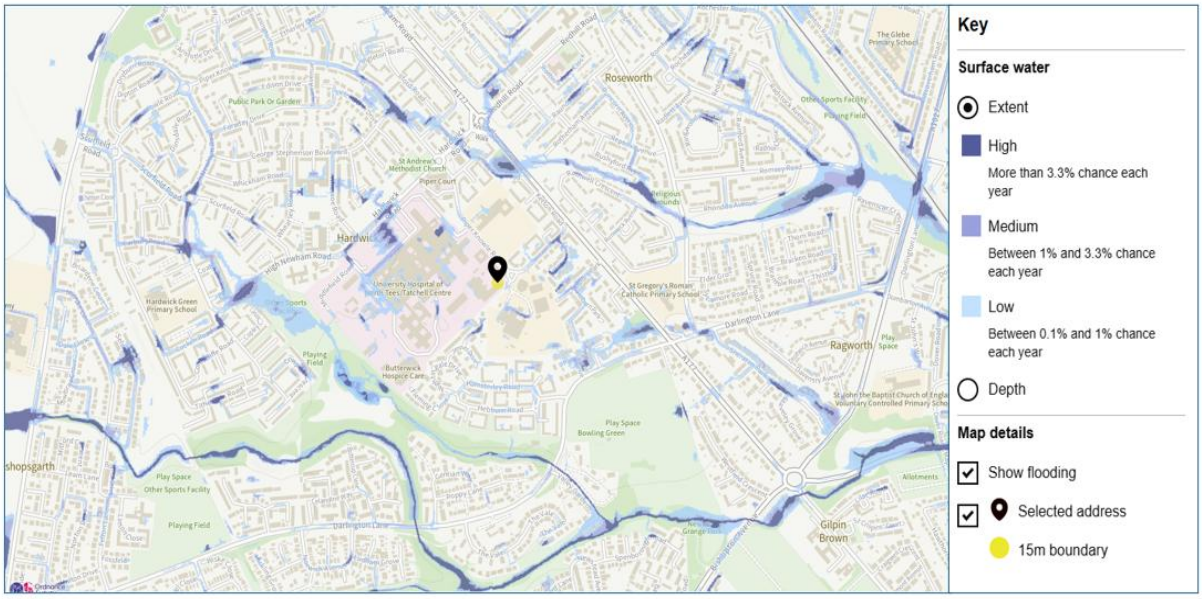
- very low risk of surface water flooding (Less than 0.1% chance each year of flooding)
- very low risk of flooding from rivers and the sea
- Flooding from Groundwater is unlikely in this area
- Flooding from Reservoirs is unlikely in this area

Land within flood zone 1 has a low probability of flooding from rivers and the sea.

This is supported by the Flood Screening Report (Envirocheck) [3] included as Appendix 2 of this document.

Limited potential for groundwater flooding to occur.

Image 5 – EA Surface water map – Long Term Flood Risk



[2] Your long term flood risk assessment - GOV.UK (check-long-term-flood-risk.service.gov.uk) accessed February 2024

[3] Envirocheck Flood Screening Report – NORTH001

6.4.7 Water courses

The nearest surface water feature is the Hardwick Pond and Bishopsgarth Beck, which runs from west to southeast and is located approximately 505 metres away.

The River Tees is located approximately 3.1km south east of the site.

A list of local water courses can be found in Table 3 below.

Table 3
Local Water Courses

Watercourse Name	Type	Distance (m) from site
Bishopsgarth Beck	Freshwater stream/river	505m
Elm Tree Beck	Freshwater stream/river	700m
Blue Hall Beck	Freshwater Stream/river	750m
Hardwick Beck	Freshwater Stream/River	550m
Lustrum Beck Tributary of Tees	Freshwater Stream/River	920m
Billingham Beck from Brierley Beck to River Tees	Surface Water	990m

Wind data demonstrates that the prevailing winds are largely from the west. Predominately WSW and thus odours would be expected to be transported over residential properties in the majority of cases.

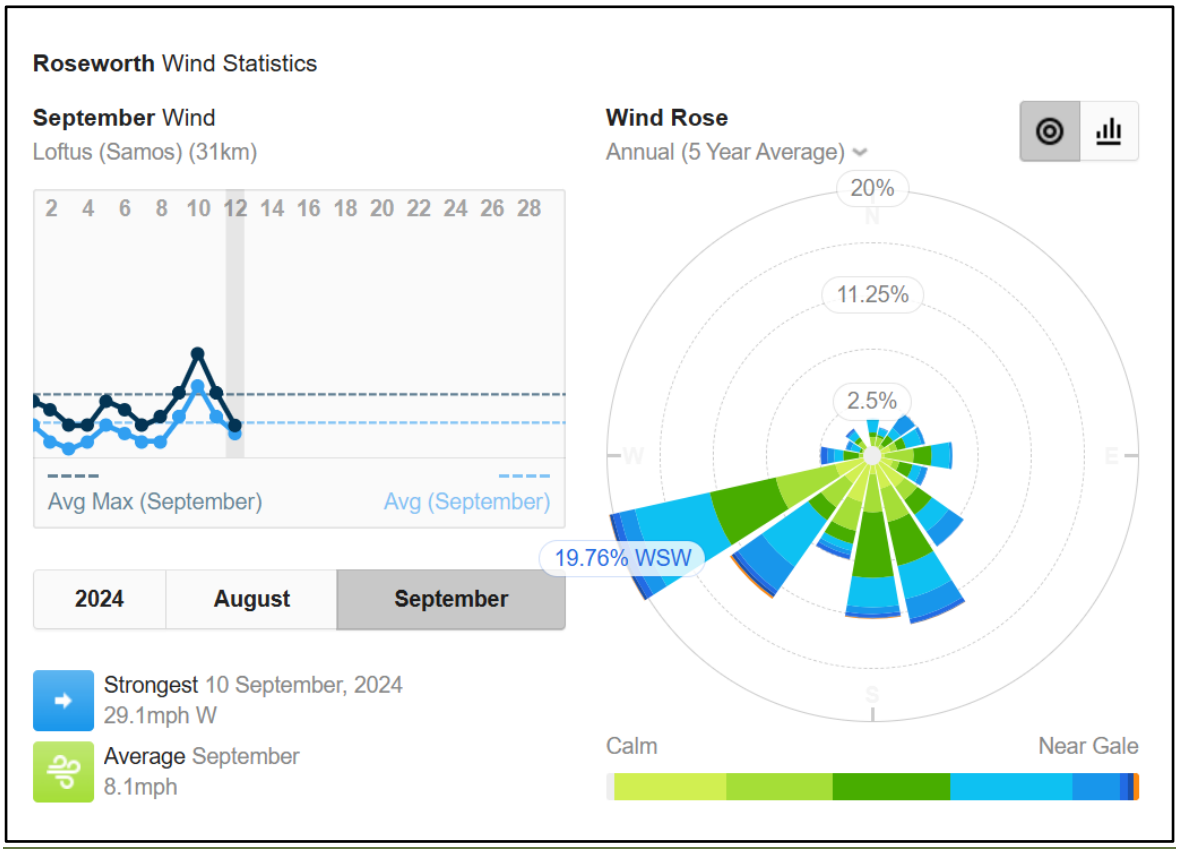
Low volumes of waste is stored on site and treated inside the processing building, known as the Boiler House, within a short time period. Therefore, significantly reducing risk to both residential and commercial receptors. However, while risks are significantly reduced, they are not eliminated, and data demonstrates that risk maybe higher in the early winter period.

Wind data does however demonstrate that localised odours may cause temporary nuisance in the nature reserve and beach area frequented primarily for leisure purposes.

The below diagram below shows the prevailing wind direction taken from windfinder[4].

[4] Windfinder Apps for iOS and Android - Windfinder accessed June 2023

Figure 1 – Roseworth (TS19 8PE) Wind Statistics



Live data can be accessed at any time using the Windfinder App (https://www.windfinder.com) using the postcode of the site and nearest weather station, to make an assessment of current weather conditions, wind direction and speed. This can assist in the event of a fire on site in order to assess impact on local receptors and to make contact with authorities and appropriate persons.

Weather monitoring is assessed throughout the day and formally recorded daily, as part of the daily site checks.

7.0 Managing Common Causes of Fire

7.1 Arson/Security

The site has a number of security measures in place to limit the likelihood of arson or vandalism listed below.

- Located within the Hospital grounds (surrounded by Hospital buildings and carparks)
- Lockable site palisade entrance/exit gates (2.4m)
- CCTV cameras
- Inspection and maintenance procedures
- Visitor sign in system; and
- Remote out of hours monitoring.

Access to the site is via one entrance/exit using Piper Knowle Road.

Image 6
Site Entrance/Exit gates

Visitors to the site must sign in and out via the visitors register located in the site office.

The site security system CCTV cameras cover all external and internal operational areas on site. CCTV cameras cover all operational waste storage areas.

During operating hours there is a member of senior management or staff on site at all times.

Perimeter inspection is undertaken on a daily basis and any repairs temporarily made good by the end of the working day. Arrangements are made to have permanent repairs, if required, completed within one week. Any defects and repairs are recorded. (Ref. NTEES Env 209 SOP (WTP) – Security).

Half an hour prior to site closure, a fire watch is conducted on all waste storage areas and plant by the Operator or nominated member of staff. (Ref. NTEES Env 125 Form (WTP) – End of Day Building Checklist).

7.1.1 Out of Hours

The site security system is remotely monitored by an external security company, an alert goes to the directly to the nominated staff mobile phone. The company director, site and yard managers are put on an out of hours on call rota to ensure there is a competent member of staff to implement Emergency Action Plan (see annex 1). They would arrange access to the site in the event of a fire or emergency out of hours.

The CCTV cameras trigger an alert to the Operator and nominated personnel when movement identified. Security staff can assess on site activity to either identify any false alarms or carry out further investigation.

Site management have remote access to the CCTV system out of hours for monitoring purposes.

Nominated staff can respond by either:

- Inform Fire Service the event of visual smoke detection or fire
- Inform Police in the event of unauthorised access

Out of hours access can be gained via the steel gates. Only the Operator and nominated Key Holders have keys to allow entry to site. The Hospital has an inhouse Fire Officer to provide support.

Key holders can attend site within 10 minutes, outside of operational hours.

7.2 Plant and Equipment

Plant and equipment are maintained in accordance with the manufacturer's recommendations and recorded on daily check sheets.

Plant and equipment are operated in accordance with the manufacturer's instruction manuals.

Induction training and refresher training is provided, to all persons engaged at the site, in the safe operation of plant and equipment relevant to their role.

Inspection of plant and equipment is undertaken on a daily basis to check for faults and ensure appropriate safeguards are in place. Designated forms for the checking and defect records for all vehicles and plant are completed and forwarded to the Operator for checking and review.

Regular cleaning is conducted on all operational plant. This is recorded when completed on plant inspection forms (NTEES Env 132 Form (WTP) – Plant & Equipment Inspection)

At the end of the working day, plant and equipment are stored 6m away from potential combustible materials (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan).

In the event of a failure or suspected fault with an item of plant or piece of equipment, the relevant persons ensure that the equipment is shut-off in a safe manner and not used until the equipment can be repaired or replaced. Defects are reported to senior site management for appropriate action to be taken.

7.3 Electrical Faults

The electrics on-site are certified by a suitably qualified electrician.

Regular safety checks and daily site inspections are recorded in the site diary. Periodic inspections will be undertaken by a suitably qualified electrician on an annual basis.

Any potential ignition sources from suspected electrical faults should be isolated and an electrician should be contacted immediately.

The inspection frequency will be based on recommendations from the electrician or where a potential risk is identified via the daily site inspections.

PAT testing of portable equipment will be checked on a yearly basis.

7.4 Discarded Smoking Materials

Smoking is not permitted on site. There is a designated area outside of the entrance/exit of site for site operatives to smoke. This area is over 6m from any waste storage or treatment activities.

7.5 Hot Works

The company operates a permit to work system. No hot works are not generally undertaken.

In the event hot works are required, they are only undertaken by staff who are trained, or by contractors who have the relevant permit to work.

Works must be completed within 2 hours of the working day.

A fire watch is provided continuously during the works, including breaks, and one hour after completion. Once works are complete, they will be signed off by the Operator or Nominated person.

7.6 Industrial Heaters

Industrial heaters will not be used on site.

7.7 Hot Exhausts

Vehicles are turned off when not in use.

Flammable/combustible materials are stored in designated areas away from frequent vehicle movements (as far as is reasonably practicable).

A fire watch of all on-site plant and equipment (including, if appropriate, transport vehicles) will be undertaken for at least 30 minutes following use and at the end of every working day.

7.8 Ignition Sources

Ignition sources will be kept at least 6m from any potentially combustible waste or other potential on-site fire hazards (e.g. oils or chemicals).

Ignition sources such as hot works, smoking, electrical equipment, plant and equipment, heaters and exhausts are detailed within the above sections.

Ignition sources may only be located less than 6m from a potential fire hazard where suitable fire walls/breaks are in place between the ignition source and the potentially combustible material. The 6m buffer zones that will apply, in this respect, across the site are shown in Drawing 003 (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan).

7.9 Leaks and Spillages of Oils and Fuels

Spillages and leakages of fuels and oils (from on-site vehicles/plant) are prevented through maintenance in accordance with the manufacturer's recommendations as recorded in the Environment Management System.

COSHH assessments are carried out by the Operator to inform site staff of the risks of materials on site and control measures required when handling. These are kept in the site office.

Where a delivery vehicle is found to be leaking, that vehicle will be refused entry to site.

Storage areas for fuels and liquids are not located within the permitted area. All refuelling and any repair work will be carried out in a dedicated workshop off site with maintenance products stored securely in this area outside of the permitted site.

There are no hazardous materials stored on the permitted area or with 6m of any waste storage areas.

Any spillage/leak of hazardous materials (including oils/fuels) at the site shall be treated as an emergency and immediate action taken to absorb or contain it using spill kits provided (See NTH SOLUTIONS Drawing-003 Site Layout and Process Plan). The absorbent will be cleaned up as soon as possible and disposed of, as hazardous waste, by a suitably licensed contractor.

Spillage procedure within the site EMS supports the management, staff training and treatment of spillages. A non- conformance report is completed with the appropriate actions taken recorded.

7.10 Build-up of Loose Combustible Waste, Dust and Fluff

Staff are to remain vigilant for loose material, dust or fluff and should clean up such material on identification, placing such material in the correctly designated storage container. Daily site inspections and general housekeeping of the site is also undertaken in order to minimise the potential for the build-up of such materials.

Plant and equipment are checked and cleaned daily to reduce the risk of trapped debris which reduces the risk fire.

Good housekeeping is practiced on site, keeping site equipment and surfaces clean and clear access free for plant and staff movement on site.

7.11 Reactions between Wastes

All wastes arriving onsite will be checked in accordance with the waste pre-acceptance and waste acceptance criteria to ensure no materials of unknown composition are accepted at the site.

Waste oils and fluids collected from vehicles/plant only through repairs or general maintenance are to be stored separately within the designated tanks/vessels.

Unpermitted wastes will be quarantined within the defined container/area and if necessary stored over 6 metres away from any waste bins/containers.

7.12 Deposited Hot Loads

All wastes are assessed both at the time of the receipt of an enquiry and as the material arrives at site.

On arrival, checks are made to ensure that no hot loads or smouldering materials are accepted by the site.

The quarantine area (fire prevention) will be used in the event that any hot load is received, in error, by the site.

Appropriate action will be taken, either the Fire Service contacted, or the waste will be allowed to cool, or a fire extinguisher used to dose a small fire or smouldering if safe to do so.

7.13 Neighbouring Activities

Checks made on the Public Register show that there is one permitted waste facility and seven waste exempt facilities within 1km of the site, regulated by the EA.

One business holding a waste permit, is located approximately 739 metres from the site.

- JEWSON Limited (Builders Merchants) Household, Commercial and Industrial Waste Transfer Station.

It is not felt that neighbouring businesses and any of the above activities pose a risk to the site based on their location and infrastructure. poses any risk from site activities.

8.0 Prevent Self-Combustion

8.1 Manage storage time

Robust stock pre-acceptance, acceptance, tracking and management systems are in place such that no delivery is accepted at the site that would result in an exceedance of the permitted storage and/or processing capacity. All deliveries to the site are scheduled in advance of arrival on site. As deliveries

are scheduled, it enables the site to ensure that there is sufficient storage capacity available and to comply with stockpile capacities.

8.1.1 Site Activities

The company is applying for a bespoke permit to allow the acceptance of clinical/healthcare wastes by operating as a waste treatment facility.

The site aims to operate as such combustible waste materials received, are processed, subject to mechanical and microwave treatment.

No infectious clinical waste or offensive wastes will be stored on-site for longer than 14 days, unless prior arrangements with the Environment Agency has been agreed. The combustible RDF floc produced from the treatment process is stored in the external compactor until collection by a third-party waste management contractor.

To achieve good stock rotation and ensure the implementation of the "first in-first out" (FIFO) principle, clinical wastes will be accepted onto site and stored in the designated external area prior to being transferred within the treatment building (Boiler House) awaiting the treatment process.

Bins/containers are tagged (numbered and marked) with the date waste has been received to track storage time. Bins/containers containing wastes are visually inspected daily with arrangements made to remove wastes before they exceed the storage capacity. Once the full bins/containers are transferred to the treatment processing area, the storage area is inspected and swept clean of any waste to remove the risk of historic waste building up, minimising potential overheating, while also reducing the risk of pests and odour on site.

FPP guidance states that maximum pile sizes do not apply to sites storing waste in containers that can be moved. Containers must be accessible from at least one side so a fire can be extinguished. In the event of a fire, these containers must be moved as soon as is reasonably practicable to prevent the fire spreading.

The location of containers storing healthcare wastes and the compactor containing the floc (RDF) are displayed on NTH SOLUTIONS Drawing-003 Site Layout and Process Plan. This will allow for effective waste inspection upon receipt and identification of any hot loads or signs of fire/smoke.

The site will 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

In line with EA Guidance[5] each incoming container is electronically recorded (Barcoded) with the date, time and contents of the container, it is then stored in the external storage area in the relevant row.

[5] Healthcare waste: appropriate measures for permitted facilities - Waste storage, segregation and handling appropriate measures - Guidance - GOV.UK (www.gov.uk)

By electronically recording each container and its relevant waste type, the site can demonstrate the first-in, first-out principle and also identify and prioritise wastes with differing storage times scales daily through the digital tracker system.

There are different maximum storage times for containers storing different types of healthcare waste.

Containers storing the below wastes will be stored pre-treatment for no more than 14 days.

- infectious clinical waste
- offensive waste

All movements of waste incoming and outgoing the site will be recorded and available for inspection by the Environment Agency upon request.

Storage times differ for the combustible non-hazardous floc/RDF waste materials. The floc/RDF waste stored within the external compactor will be stored no longer than 3 months, prior to removal from site.

8.1.2 Storage capacity

Although hazardous and non-hazardous clinical wastes accepted on site are exempt from the Environment Agency's FPP Guidance, NTH Solutions have given consideration on how all wastes are segregated and stored on site.

The site stores clinical wastes in accordance with the below storage capacities.

A 770-litre (medium capacity) 4 wheeled clinical waste bin size is approximately 1.37m x 1.37m x 0.87m

External storage area: to store a maximum of up to 100 x 770L bins = 119m^2 with an approximate 150m^2 storage area required and the maximum volume = 77m^3 (27 tonnes).

Internal storage area: to store a maximum of 25 x 770L bins = 29.8 m^2 with approximately 32m^2 storage area required with the maximum volume = 19.25m^3 (6.8 tonnes).

The site stores non-hazardous waste in accordance with the below storage capacity.

Once the treatment process cycle is complete the RDF/floc produced is automatically decanted into a bagged container within the Sterilwave unit. The container is removed where the bagged RDF/floc is immediately transferred to the external compactor.

The site stores the bagged non-hazardous combustible RDF/floc within a sealed compactor container externally, prior to removal from site.

External compactor: storing a maximum of up to 15 tonnes at any one time with an approximate cover area of 18m^3.

8.1.3 External storage

Incoming healthcare waste is stored in bins/containers in the external yard in the designated storage area, as detailed in Section 8.1.2. The compactor containing the waste RDF/floc produced from the waste treatment process is stored externally.

The FPP Guidance states the maximum stockpile size for RDF or SRF is 450 cubic metres (approximately 159 tonnes). No wastes will be stored in bays or stockpiles. The RDF/floc will be stored within a compactor, which will hold a maximum of 15 tonnes at any one time. The RDF/floc will be stored with a regular collection in place or to a maximum storage timescale of 3 months.

8.1.4 Moving containers in a fire

Access to all bins/containers storing clinical wastes on-site will be maintained at all times to allow for the extinguishing of any fire within the bin/container or for its removal to the quarantine area (fire prevention) as soon as is reasonably practicable.

The external compactor holding the RDF/floc waste is isolated away from the incoming clinical waste storage area and the operational treatment area. The compactor is easily accessible for inspections at all times.

All waste bins/containers are stored 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. Safe access via inspection aisles are in place from each side of the stored bins/containers holding wastes, with each bin/container labelled clearly to ensure they are identifiable and legible.

In the event of a fire the use of onsite water suppression or fire extinguisher can be directed into any container and pulled away using site plant to isolate it into the appropriate quarantine area. During working hours this should take 5 minutes. (Ref. NTEES Env 186 SOP (WTP) – Fire Prevention, Fire Detection, and Fire Fighting).

8.1.5 Pre-Acceptance

NTHS have implemented waste pre-acceptance procedures to ensure a full description and composition of the waste is known before it arrives at the site and that the waste is technically and legally suitable for treatment on site. The procedures 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 e.g. odour
- knowledge about the previous waste holder(s) (in most cases the waste received will be produced by the Hospital)

NTHS will provide advice to the Hospital and external waste producers about segregating and packaging waste as referenced in the HTM 07 01[6]. Consideration should be given to the waste type and the waste disposal or recovery route required.

If a customer query is received, the following information will be requested in writing:

- details including the address and contact information of the waste producer e.g. the Hospital department/ward, medical practice, healthcare centre etc.
- the specific source of the waste e.g. primary care, acute care, laboratory etc.
- details of the waste streams and types produced, including quantity, physical form, composition, properties, classification and description.

Before the waste arrives at the site, NTHS will request a representative waste pre-acceptance audit report from the waste producer.

The audit report must include the following general information:

- the name, address and contact details of the healthcare waste practice
- the type of practice, e.g. hospital, general practice
- dates for when the audit started and ended
- a description of the audit, the procedures employed, the auditors, their affiliation and their competence

The audit report must also:

- identify whether the correct waste type was present in the container or packaging when it was checked during the audit.
- a list (or diagram) of the different wards, departments, or functional areas that exist within the premises.
- a list which waste types are produced by each ward, department or area within the premises. waste types identified during the audit
- 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
- the segregation practices for wastes placed in storage areas and bulk containers or bins
- specific storage requirements, e.g. 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

[6] NHS England » Health Technical Memorandum 07-01: Safe and sustainable management of healthcare waste

- 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 waste does not contain a radioactive source or, when there is a risk of radioactive contamination, confirmation that the waste is not radioactive

NTH Solutions will stringently follow the Pre-acceptance Procedure (NTEES Env 220 SOP (WTP) – Waste Pre-Acceptance) along with the EA guidance, Healthcare Waste: Appropriate Measures for Permitted Facilities Guidance (13/07/2020) and the Clinical waste: additional guidance - How to comply with your Environmental Permit (January 2011) to ensure compliance with pre-acceptance of waste measures are achieved.

8.1.6 Waste Acceptance

NTHS have implemented waste acceptance procedures to check that the characteristics of the waste received matches the information obtained during the waste pre-acceptance stage. Following these procedures will confirm that the waste is as expected and it can be accepted on site. If it is not, it must be either accepted as a non-conforming waste and quarantined, or it must be rejected.

The procedures follow a risk-based approach, considering:

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

Waste must be offloaded, manoeuvred and stored correctly in line with the procedures and suitable risk assessments in place.
Regardless of the type of delivery any evidence of leakage must be reported as an incident in accordance with the Incident Reporting Procedure (Ref. NTEES Env 189 SOP (WTP) – Incident Reporting).

The following details must be recorded on the incident report:

- Carrier name and vehicle registration details
- The nature of the leak and the measures taken to control the leak.

All vehicles arriving on site will be booked in and waste loads agreed prior to arrival, where the load will be visually inspected upon collection, if possible, in order to confirm its description and composition against the Duty of Care transfer note/hazardous waste consignment note and other accompanying documentation.

Wastes will only be accepted at the site if the description in the accompanying documentation is in accordance with the permit and that onsite inspection confirms waste is consistent with the description provided.

All wastes will be characterised during the pre-acceptance stage of the waste acceptance process, which will include the customer providing information such as WM3 analysis, to ensure that the waste has been correctly classified and permitted for acceptance and treatment.

Before accepting the waste, the site waste operative shall confirm that there is sufficient capacity on the site to accept the waste by either:

- For waste delivered loose, ensuring that there are sufficient empty bins available for the waste and that there is sufficient space within the designated storage area to store the bins once full.

- For waste delivered in bins, ensuring that there is sufficient space within the designated storage area to store the bins.

- For waste delivered in articulated trailers that there is space available within the facility yard to park the trailer and that the total number of trailers parked on the site is less than the number permitted where defined.

- If there is insufficient capacity to accept the waste onto site the driver is to be asked to wait and the Operational Manager/TCM should be notified. The waste must only be offloaded once there is sufficient capacity available.

- If there is sufficient capacity available to accept the waste then the NTHS waste operative shall review the waste Duty of Care/Hazardous Waste Consignment note(s)) to ensure they have been completed in accordance with the regulations.

The container labelling/barcode will be checked to confirm that the information relating to the waste producer, waste description, chemical identity, associated hazards and other carriage notion is correct.

Once received on site each waste bin/container will be individually and clearly identified with the following information:

- Date of arrival
- Relevant hazardous property code(s)
- The chemical identity /composition
- The unique reference number that allows identification through stock control and reference back to the Pre-acceptance and Acceptance records

The incoming verification sheet will show the location of each individual waste bin as it is tracked through the system from acceptance to storage to treatment.

8.1.7 Non-Conforming Waste

Should wastes be found not to conform during the initial visual inspection of the waste or the waste transfer note/consignment note, the Operational Manager/Technically Competent Manager shall take the decision to reject the waste and follow the Waste Rejection Procedure, which includes the following details:

- The quarantined containers shall be marked for rejection removed to a designated quarantine area as appropriate
- If the hazard labelling is incorrect, correct hazard labelling shall be affixed to the containers (and the threshold values for the site re-assessed for hazardous waste storage)
- The producer shall be advised of the reasons for rejection, including the non-conformance report and any supplementary documents e.g. photographs
- The waste producer shall be informed of the time frame in which materials are to be removed from our site

Records of non-compliant waste received at the site will include details on:

- the quantity
- characteristics
- origin
- delivery date and time and
- the identity of the producer and carrier

The NTEES Env 138 Form (WTP) – Waste Rejection Record will be completed and a record will be kept in a log of all rejected wastes, which shall be available for Environment Agency inspection.

The Environment Agency will be notified of significant non- conformance.

NTHS's EMS details the waste acceptance, validation, and rejection procedures. The procedures below cover the waste acceptance and rejection process.

- Waste Acceptance Procedure
- Waste Rejection Procedure
- Waste Rejection Record

Wastes will not be accepted unless the site is adequately resourced to receive the waste.

8.1.8 Stock Rotation

In order to achieve good stock rotation and ensure the implementation of the "first in-first out" (FIFO) principle, clinical wastes stored in bins/containers are stored in the designated areas and the floc/RDF is stored within the external compactor; all within the permitted area as shown in Drawing 003. (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan).

8.2 Monitor and control temperature

EA guidance on FPP states that where on-site storage is proposed for longer than three months, additional measures will be required in respect of stockpile monitoring and control. On site waste storage times do not exceed the given timescales proposed by the EA.

8.2.1 Routine Daily Monitoring

During the day waste bins/containers and the compactor are visually monitored as part of the daily checks by site staff. Bin/container and compactor management is listed within the Daily Check sheet with all storage bins/containers and the compactor checked to ensure compliance with the permit and FPP detailed within this document. The Sterilwave units are linked to the SCADA alarm system where the treatment process of each unit can be monitored. (Ref. NTEES Env 208 SOP (WTP) – SCADA Alarm System Alarm Response).

Site staff are trained to detect signs of fire and hotspots, with the management of any signs of fire or hotspots carried out under the direction of the Operator. (Ref. NTEES Env 211 SOP (WTP) – Staff Training and Competence).

Staff are to be vigilant for any signs of visual smoke or smouldering of wastes during the working day and should notify the Operator should they detect signs of fire. (Ref. NTEES Env 186 SOP (WTP) – Fire Prevention, Fire Detection, and Fire Fighting; NTEES Env 187 SOP (WTP) – Fire Response) and recorded on the NTEES Env 126 Form (WTP) – Fire Safety Checklist.

Daily weather conditions and temperatures are recorded by the Operator or Nominated Person daily. This is recorded on the Daily Check Sheet. In the event there is a prolonged period of warm weather, additional weather inspections will increase in frequency, every two hours, to ensure the constant monitoring of all stockpiles.

8.2.2 End of Day Monitoring

At the end of each working day a fire watch is conducted on the stockpiles, waste stored in containers and site plant and equipment. This is carried out 30 minutes prior to the end of the working day. Nominated staff will look for any evidence of smoke, heat or smouldering. (Ref. NTEES Env 125 Form (WTP) – End of Day Building Checklist).

Should this be detected, the stockpile or container will be assessed by the Operator whether to maintain visual monitoring or if the waste requires active fire measures such as water suppression. The use of fire extinguishers or water suppression would be implemented, or wastes can be placed into the designated fire quarantine area and separated to allow cooling. These checks are recorded and filed in the site office.

In the event of a fire, if safe to do so, the waste can be broken into, segregated to reduce the fuel source. Unburnt material can be placed in the quarantine areas for the purpose of separation.

These end of day checks are recorded. These checks cover a site walk around and site closure measures including waste storage area checks, plant and equipment storage, security measures and the shut off electrical equipment.

8.2.3 Bank Holidays/Site Closure

During periods where the site will be closed over bank holiday/holiday periods the site will still be monitored on a daily basis to ensure that the site is secure and to carry out monitoring and fire watch checks on existing waste stored in the bins and compactor.

This will be recorded on the daily check sheet and supporting monitoring forms.

8.2.4 Reduce the exposed metal content and proportion of 'fines'

No fines are produced on site.

8.2.5 Dealing with hot weather, heating from sunlight and monitoring temperature

During periods of warm weather, care will be taken to ensure that wastes do not increase in temperature resulting in combustion.

Monitoring is conducted by the Operator or a nominated trained member of staff. Any findings or responses to fire/smouldering are recorded in the NTEES Env 126 Form (WTP) – Fire Safety Checklist and log which are available to view in the site office.

8.3 Contingency

In the event of any delay to the removal of material from the site, the Operator will contact the relevant 'waste receiver' to determine the anticipated length of the delay. If deliveries to the site are scheduled, for before the delay to exports is resolved, that would result in an exceedance of the storage capacity, or if such a delay could cause a breach of the limits to the waste storage time on-site, the Operator will contact the EA immediately.

In addition, in the event of a contract failure with, or closure of, a waste receiver (and its operations) that could result in the storage of material on-site for a long period, the Operator will contact the EA immediately.

In the event there is a major breakdown that effects site processing plant or equipment, the Operator take proactive action, consider ceasing waste acceptance and determine the anticipated length of the delay.

The EA will be notified, discussions between the site and the EA regarding actions and timescales in relation to the recommencing of site operation.

9.0 Management of Waste Piles

9.1 Bin Sizes

FPP guidance states that sites storing waste in containers that can hold more than 1,100 litres, must be accessible so any fire inside it can be put out. In the event of a fire, these containers must be moved as soon as is reasonably practicable to prevent the fire spreading.

9.2 Storing waste materials in their largest form

Clinical waste is stored in their largest form in bins/containers within designated areas.

Bagged non-hazardous floc/RDF produced from the treatment process is stored within a compactor.

10.0 Where Maximum Pile Sizes Do Not Apply

The details below are where within FPP guidance maximum pile sizes do not apply for these types of waste.

10.1 Bins and Containers

FPP guidance states that sites storing waste in containers that can hold more than 1,100 litres, must be accessible so any fire inside it can be put out. In the event of a fire, these containers must be moved as soon as is reasonably practicable to prevent the fire spreading.

Drawing 003 (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan) shows where the compactor skip is located for the storage of the non-hazardous waste floc (RDF) This demonstrates the accessibility of all floc waste containers.

10.1.1 External Storage

The area marked on Drawing 003 (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan) allows for the tempory storage of bins/containers containing clinical waste, awaiting treatment. Although these waste types are currently excluded from the EA guidance for FPP they have been assessed and classed as one ‘stockpile’, a maximum of up to 100 x 770L bins given a maximum stockpile at any one time of 77m^3 .

The compactor will hold a maximum of up to 15 tonnes with an approximate cover area of 18m^3 and storage times of no longer than 3 months.

10.1.2 Types of containers in use

FPP guidance states that sites storing combustible waste in containers that can hold more than 1,100 litres, must be accessible so any fire inside can be put out. In the event of a fire, these containers must be moved as soon as is reasonably practicable to prevent the fire spreading.

The bins/containers stored within the building contain clinical wastes which are exempt from the within the building can be moved into other areas of the building or removed from the building if safe to do so, in the event of a fire. This applies to both operational and out of hours arrangements.

The clinical waste is sterilised using dynamic force [heat] within the drum during the shredding phase to reach the required sterilisation parameters, then microwaving is 'auto introduced' to ensure compliant residence time and temperatures of 110ºC are achieved. The end waste product is classified as EWC 19 12 10, a sterile Refuse Derived Fuel (RDF) with a CV of approximately 16MJ/KG, also known as floc. Once the treatment cycle has been completed the RDF/floc is transferred from each unit to a 15-tonne compactor situated in the external yard (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan). before being transported off site by a third-party waste management contractor.

Image 7
Typical Clinical Waste Bin

Image 8
Typical Waste Compactor

10.1.3 Internal storage

A maximum of 20 bins/containers containing clinical waste are stored in the building awaiting treatment as depicted in Drawing 003 (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan).

All bins/containers are stored on an impermeable concrete surface.

10.2 Accessibility of containers

Access to all containers storing wastes on-site will be maintained at all times to allow for the extinguishing of any fire within a container or for its removal to the quarantine area (fire prevention) as soon as it is reasonably practicable.

Each container is accessible with operatives' being able access from both sides and the front to inspect and check each container.

10.3 Moving containers in a fire

Access to all bins/containers storing clinical wastes on-site will be maintained at all times to allow for the extinguishing of any fire within a bin/container or for its removal to the quarantine area (fire prevention) as soon as is reasonably practicable.

Each container is accessible with operatives able to inspect and check each container.

In the event of a fire the use of onsite water suppression or fire extinguisher can be directed into any bin pulled away using site plant to isolate it into the appropriate quarantine area. During working hours this should take 5 minutes.

Out of hours it is estimated that this would take 10-20 minutes to allow travel time for site management and access to site.

11.0 Prevention of the Spread of Fire

11.1 Separation Distances

All potentially combustible wastes (floc/RDF) stored in a 15-tonne compactor are stored with a 6m separation distance from the clinical waste storage bins/containers, the site boundary and a minimum 6m from potential sources of ignition (i.e. on-site treatment/processing operations, oils, fuels).

11.2 Fire Walls, Bays, Buildings and Stockpiles

The process treatment building is the former boiler house is located on the southern side of the hospital site and is composed of two distinct sections: a single-storey area built with a concrete frame and a cast-in-situ concrete roof, with a two-storey structure by means of a steel frame. The lower walls of the two-storey section are masonry up to around 3 meters, while the upper sections and roof are clad in metal.

Clinical waste is received in 770L bins/containers and treated separately in Sterilwave units. All waste is shreddded inside the unit and hazardous loads are disinfected by using microwaves. The floc/RDF produced from the treatment process is bagged, transferred and stored within a 15-tonne compactor, located external to the building.

The facility also houses a purpose designed hot water wash to clean the bins before their return to the hospital or relevant providers.

11.3 Management of wastes stored in the compactor & bins/containers

Clinical waste streams, stored in bins/containers and floc/RDF waste stored in the compactor are monitored frequently, with daily inspections carried out to ensure:

- The effective storage capacity of the container
- To ensure the waste volumes do not exceed those specified in the permit
- To ensure waste is not kept on site for longer than allowed by the permit
- To check for signs of combustion or hot spots

If any signs of combustion or hotspots are found, these will be immediately quenched with water and reported to the management team. Stock rotation will be conducted as necessary. Records will be retained in the site office.

Waste will follow the first in/first out principle (FIFO), where waste will be rotated in date order to ensure that the waste is treated and removed in date order.

12.0 Quarantine Area

12.1 Quarantine Area Location and size

The quarantine area is somewhere burning wastes can be moved to extinguish them. It can also be used for the storage of unburnt wastes into the quarantine area to isolate and prevent them catching fire if necessary.

The quarantine area (fire prevention) is located 6m from the site boundary to prevent the risk of heat/fire spreading across the site boundary.

Drawing 003 (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan) clearly defines the quarantine area, indicating the required minimum 6m separation buffer that will be maintained during a fire event.

The quarantine area (fire prevention) will during normal site operations will be kept clear.

The quarantine area is measured at 5m(l) x 5m(w) x 5m(h) = 125m^3. This area is measured and marked to ensure the area is kept clear at all times, in the event a fire occurs.

The quarantine area (fire prevention) is large enough to hold 50% of the largest 'stockpile' measured at 18m^3 of waste.

12.2 How to use the quarantine area if there is a fire

The quarantine area is located within the permitted area and depicted on Drawing 003.

12.2.1 Procedure to remove material stored temporarily if there is a fire

If safe to do so nominate trained staff can separate any burning waste from the compactor or bins/containers into this area for active firefighting using the forklift.

If safe to do so staff can also move fire damaged waste after a fire into this area to quarantine it from viable waste.

Access to all on-site containers storing wastes will be maintained at all times to allow for the extinguishing of any fire within a container or for its removal to the quarantine area (fire prevention) as soon as is reasonably practicable.

12.2.2 Waste Quarantine Area

A designated skip will be used and located next to the welfare cabin for the storage of unpermitted or contaminated waste prior to removal.

13.0 Detecting Fires

13.1 Detection systems in use

Identifying fires as quickly as possible makes the suppression of the fire easier and results in lesser damage to the environment and human health.

The below detection systems are in place on site.

13.2 CCTV

Onsite CCTV cameras provide visual monitoring during operational hours and out of hours.

The site security system is remotely monitored by the operator and nominated site personal out of hours.

A motion sensor CCTV system which has night vision its set up to alert the security company Aggressive Perimeter, the Operator and nominated personnel of any unusual activity on site this constantly runs day and night. This can be monitored at any time throughout the day and night via a mobile phone.

The PIR cameras, office alarm system and fire alarm will trigger an alert to the Operator and nominated personnel upon activation.

Site management can assess on site activity to either identify any false alarms or carry out further investigation.

Site monitoring as detailed in Section 7.1 and above can detect a fire in its early stages to reduce its impact.

Senior management also have remote access to CCTV cameras for active monitoring both during and out of hours.

13.3 Fire Alarms

Fire alarms are installed in the site office and main treatment building. The alarm will detect smoke/fire within these locations and would audibly alert staff on site.

The smoke detector alarms will trigger an alert to the Operator and nominated personnel upon activation during operating hours or out of hours.

As previously detailed in Section 7.1, the fire alarms are also monitored by the operator and nominated key holders.

The Operator and key holders will alert the fire service out of hours in the event the fire alarm is activated.

13.4 Smoke Detection

Within the site office and main building there are CCTV cameras in situ for visual fire and smoke detectors fitted with intruder detection sensors fitted.

The smoke detector alarms will trigger an alert to the Operator and nominated personnel upon activation during operating hours or out of hours.

Drawing 003 (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan) details the locations and layout of the detection/extinguisher equipment on the plant.

13.5 Fire Alarm Tests and Drills

Tests and drills are an important mechanism to ensure that the site is prepared for a fire. As such:

- Weekly fire alarm tests are carried out in the site offices.
- Fire drills take place six monthly to identify any weakness in the evacuation strategy on site; and
- Fire alarms and detection systems are to be tested regularly in accordance with the manufacturer's recommendation.

14.0 Suppressing Fires

EA guidance states "If you store waste in a building, you must install a fire suppression system. This system should be proportionate to the nature and scale of waste management activities you carry out and the associated risks".

No buildings are used to store combustible wastes other than clinical waste storage. Therefore, a fire suppression is not proportional to be installed.

The site as the below equipment to suppress small fires or smouldering wastes on site:

- **Fire extinguishers**

Fire extinguishers are situated around the site within the in key locations inside the operational building and storage areas.

Instruction signs on the use of extinguishers and suitability of each type of extinguisher are clearly marked on the equipment. These are checked on a weekly basis and recorded.

All mobile plant is fitted with 2kg dry powder fire extinguishers for fighting vehicle/equipment fires.

Fire extinguishers on site plant are also checked and recorded.

- **Fire Hoses and water supply**

On site fire hoses can be connected at allocated points around the site via mains water, to apply direct water supply to all waste bins/containers and the compactor.

15.0 Firefighting techniques

The site must always have the resources available to fight a fire. These include:

- Plant to move waste around the site such as a forklift
- Nominated staff (on-call for out of hours events)
- Available water supply
- Fire Extinguishers; and
- Finances for the removal of fire damaged waste or water and any remediation costs.

In the event of a fire at the site, the class of fire will determine the action to be taken by the fire authorities.

15.1 Site information

To assist the authorities is managing a fire outbreak at the site, a copy of this FPP should be provided to the authorities as possible including the site layout plan and quantities and types of stored materials.

A copy of this document is to be located outside of the office for the Emergency Services and site staff to access in an emergency.

15.2 Emergency Service Response

The local Fire and Rescue Service will assume full control for the approach to suppression/extinguishing of any fire once it is in attendance at the site.

The nearest fire station is located 1.6 miles from the site (Stockton Fire Station, 11 South Road, Stockton-on-Tees, TS20 2SU, 01642 366180 http://www.clevelandfire.gov.uk/).

The approximate response time is approximately 5 minutes.

16.0 Firefighting techniques

The site must always have the resources available to fight a fire. These include:

- Plant to move waste around the site such as the forklift
- Nominated staff (on-call for out of hours events)
- Available water supply
- Fire Extinguishers; and
- Finances for the removal of fire damaged waste or water and any remediation costs.

In the event of a fire at the site, the class of fire will determine the action to be taken by the fire authorities.

16.1 Site information

To assist the authorities is managing a fire outbreak at the site, a copy of this FPP should be provided to the authorities as possible including the site layout plan and quantities and types of stored materials.

This document will be provided to the Emergency Services and site staff to access in an emergency. A copy of this document and drawings are located inside the office reception area.

16.2 Emergency Service Response

The local Fire and Rescue Service will assume full control for the approach to suppression/extinguishing of any fire once it is in attendance at the site.

16.3 Onsite firefighting equipment

Fire extinguishers are situated around the site in key locations, they are also located at the entrance of the treatment building for easy access.

16.3.1 Plant and Equipment Fires

All mobile plant is fitted with 2kg dry powder fire extinguishers for fighting vehicle, fixed and mobile equipment fires, so that trained staff can use to extinguish a small fire if safe to do so.

16.3.2 Separation and Segregation of Waste

Out of hours, site plant is stored externally. This is for security purposes and allows for safe access of equipment in the event of a fire.

If safe to do so, trained staff can separate unburned material from the fire using heavy plant using the fork lift, or at the direction of the Fire & Rescue Service, if used as an active firefighting measure.

16.3.3 Water

Mains Water Supply

The site is equipped with a mains water supply and a mains water connection is provided.

The site is equipped with a standard 32mm mains water pipe supplying the site with mains water. A dedicated firefighting hose (50m) will be provided and maintained, allowing for water to be available and within reach of all waste storage locations in the event of a fire.

16.3.4 Quarantine Area

In addition, as discussed in Section 12 the quarantine area (fire prevention) will also be maintained and kept free of obstruction, to be used as either:

- An area for extinguishing burning materials
- An area for the segregating of unburnt materials away from a fire

16.3.5 Staff resources and training

All staff are fully trained in the use of the above firefighting equipment with regular toolbox talks and practical drill training. However, the company priorities the health and safety of all site staff, this equipment will not be used should a risk be posed to site staff.

Regular training as detailed in Section 5.1 ensures that staff are prepared and can respond safely when a fire occurs on site.

The site has trained nominated staff on a rota basis who are able to attend site within 10-20 minutes in the event of an out of hours call.

16.3.6 Fire Fighting Techniques

Managing waste storage is a key factor, not only in preventing fires, but in mitigating the impact, should a fire break out.

The site must always have the resources available to fight a fire. These include:

- Plant to move waste around the site such as the forklift
- Nominated staff (on-call for out of hours events)
- Available water supply
- Fire Extinguishers; and
- Finances for the removal of fire damaged waste or water and any remediation costs.

In the event of a fire at the site, the class of fire will determine the action to be taken by the fire authorities.

Providing access to the site in the event of a fire is a key consideration in containing a fire. Contact details in the event of an emergency are clearly displayed on site.

To assist the authorities in managing a fire outbreak at the site, a copy of this FPP should be provided to the authorities as soon as possible including the site layout plan, quantities and types of stored materials.

A copy of this document will be provided to the Security Company, Aggressive Perimeter and a copy will be located outside of the office for the Emergency Services and site staff to access in an emergency.

The emergency access routes to waste storage and quarantine area in the event of a fire are shown in Drawing 003 (Ref. NTH SOLUTIONS Drawing-003 Site Layout and Process Plan).

The firefighting procedure detailed below must be adhered to if a fire should break out on site.

16.3.7 Fire Fighting Procedure

The following procedure must be adhered to if a fire should break out on the site.

All fires on site must be treated as serious and must be reported to the site manager as soon as possible.

1. In the event of an outbreak of fire will be regarded as an emergency and immediate action will be taken to extinguish the fire. No one should attempt to fight a fire unless they have received training in the use of fire extinguishers and then only if this can be done without risk.

2. If it is safe to do so, attempts should be made to extinguish a fire. This can be done by using site machinery to move any non-burnt material away from the smoulder or source of fire or using water, working from the edge of the fire inwards. Plant and machinery must never be driven into the centre of any fire; this will place both the driver and the machine in danger. If possible, extinguish the fire with a portable extinguisher or water.

3. Should the fire be successfully extinguished by this action, a check should be kept of the area to ensure that the fire does not re-ignite. The area should be vacated until it is obvious that there is no further danger of the fire restarting.

4. If the above action fails to extinguish the fire, prohibit all entry to the area, then summon emergency services immediately. Close the site to all members of the public. Any persons already on the site should leave. The Fire Service will be contacted to deal with major fire incidents. Site staff will not be deployed to deal with major fires.

5. Telephone the Fire and Rescue Service – Dial 999. Give the exact details including the site address and telephone number.

6. Before the Fire and Rescue Service arrives, staff will:

7. Ensure operators of appropriate machinery are standing by in a safe location to help create fire breaks, under the direction of the FRS when they arrive

8. Appoint a clearly identified person to liaise with the emergency services on site.

   They should:

   - Identify themselves to the FRS as soon as they arrive
   - Ensure access routes are clear
   - Use pollution control equipment to block drains and/or divert fire water to a containment area and/or operate any pollution control facilities, such as drain closure valves/or penstocks where safe to do so.

9. On arrival the FRS should be met by the identified responsible person who must provide them with a copy of the FPP and update them with relevant information that will assist them in dealing with a fire more effectively.

17.0 Water Supplies

17.1 On Site Supply

Mains supply is available on site, with a 25m hose located next to the main building.

The hose can reach all combustible storage areas with the focus being the externally located RDF compactor for active firefighting.

17.2 External Supply

The EA guidance for the FPP requires that, for a 300m^3 stockpile, a total of 360,000 litres (360m^3) of water would be required in order to extinguish the fire.

Cleveland Fire & Rescue Service have provided the location of fire hydrants and water access which is displayed in Image 8. There are four local fire hydrants with the closest available to the site is approximately 90m from outside of the site.

Cleveland FRS, with the help of the fire officer based at the hospital last tested all 3 hydrants on 22/5/2024 which were all found to be in good working order at the time of the test, we do not test the flow or pressure. The tests are due again 18 months from that date.

The hydrants are situated:

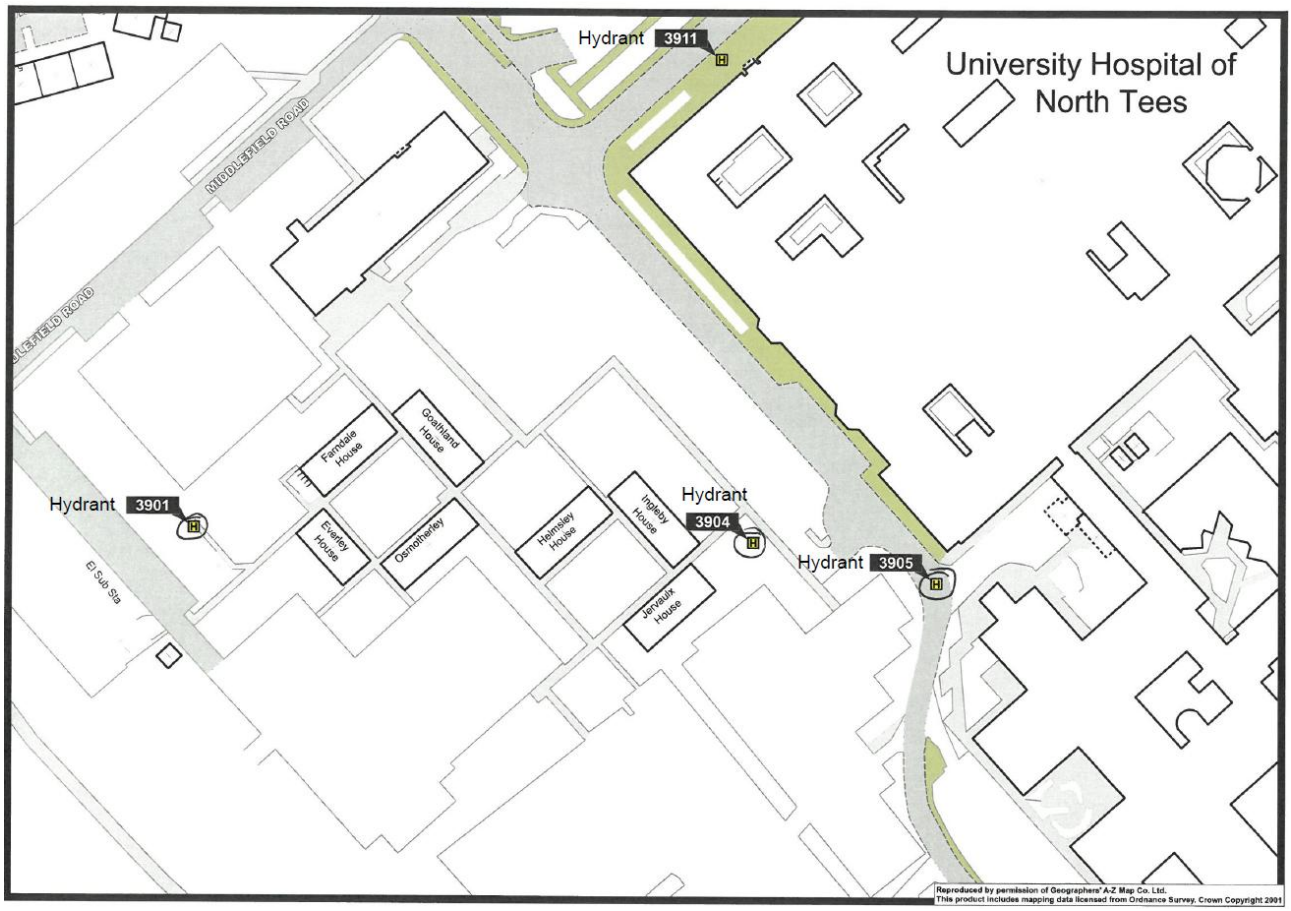
Hydrant: 3901 – Back of Electricity Sub Station

Hydrant: 3904 – side of Jervaulx House

Hydrant: 3905 – Entrance to Dialysis Car Park

All hydrants were installed by Northumbrian Water and at BS750 standard.

Image 8 - Location of nearest fire hydrants to Osmotherley House



17.3 Water supply required

Table 4 below details the largest stockpile on site and water supply required for a minimum of 3 hours.

Table 4 – Required water supplies

Maximum pile volume in cubic metres	Water supply needed in litres per minute	Overall water supply needed over 3 hours in litres	Total water available on site in litres
Compactor combustible floc/RDF External: 18m^3	120.06lts	21,611lts	360,000lts (hydrant supply - with 3 x hydrants available if required)
Clinical waste bins/containers External: 77m^3	513.59lts	92,44lts	360,000lts (hydrant supply - with 3 x hydrants available if required)

Clinical waste bins/containers Internal: 19m^3	126.73lts	22,811lts	360,000lts (hydrant supply - with 3 x hydrants available if required)

British Standards for fire hydrants are such that the flow rate of any hydrant must be capable of delivering at least 2000 litres (2m3) per minute at 1.7bar.

Northumbrian Water Limited has advised that the typical working pressure of fire hydrants is between 55m and 62m (head, equivalent to 5.4bar to 6.1bar). At 30litres/second (1.8m3/minute), the operating pressure of the main would be 30m (head, 2.9bar).

The active hydrant would provide 360,000ltrs water supply which is sufficient currently to supply enough water for active firefighting of the largest storage area of combustible floc/RDF waste being 18m^3.

18.0 Managing Fire Water

All areas of the site are made up of concrete surfacing providing an impermeable surface. The site drainage plan (Ref. NTH Solutions LLP 005 Drainage Plan) displays the internal and external drainage system where discharges flow via an interceptor and silt traps, which connects to the main drainage system externally. Stop valves have been installed to each Sterilwave unit discharge pipe and at the combined discharge point.

All handling and processing of waste is carried out inside the processing building, and therefore, run-off from the building roof and yard area will be clean water.

Roof water will be collected by gutters, rainwater pipes and a conventional drainage system, Run-off from the external area will be collected by gullies or drainage channels which connect to a conventional combined drainage system. Water from this system discharges via an interceptor and silt traps. Discharges from each Sterilwave unit can be isolated by individual stop valves, as well as drain closure valves/ penstock valve located prior to the final discharge via the interceptor.

Rollover bunds within the building access points (doorways) will ensure that any internal spillages do not escape the building, and that external runoff does not enter the building.

The site has a gradual fall towards the site entrance. To retain fire water within the site, sandbags will be located at the site entrance to bund and contain fire water.

This should take approximately 5 minutes by one member of staff to implement two levels of sandbags over a 5m distance (0.20m bund).

In the event of a fire, as a preventative measure the drain cover onsite and the drain cover located outside of the site will be covered with a dammit mats to protect the industrial estate drainage system from any contaminated water run-off.

A waste water contractor will provide support for the drainage system and can provide an emergency response in the event contaminated water is to be removed off site to a suitably permitted facility.

Regular maintenance of site surfaces and external walls will be carried out to ensure integrity is retained.

All fire water control equipment including sandbags and Dammit mats will be checked monthly as part of the FPP checklist.

19.0 During and after an incident

The site has an Emergency Action Plan in place (See Annex 3).

On the discovery or suspicion of a fire:

- Activate the nearest fire alarm
- Initiate evacuation of staff and visitors on site to the muster point and instruct delegated person(s) to conduct a rollcall to ensure all site users are accounted for
- If trained and safe to do so, attempt to tackle the fire using one of the site's fire extinguishers or segregate smouldering/burning waste
- Where attendance of the local Fire and Rescue Service is required, dial 999 to call the Fire Brigade
- A nominated staff member will implement the fire water containment bund across the entrance and the Emergency Clay Drainage Dammit mat to the external drain to prevent the release of any potential fire water
- The Operator (or other responsible person) will make an assessment of the prevailing wind direction, contacting the critical receptors shown on Drawing 004 dependant on the receptors that may be affected
- Operator contacts the EA on 0800 80 70 60.

19.1 Active fire fighting

If safe to do so staff may try to suppress a small fire using fire extinguishers, mains water or by using site plant to segregate and separate burning waste.

Fire extinguishers are located and maintained at the fire action points around the site and within the cabs of site plant/vehicles.

Instruction signs on the use of extinguishers and suitability of each type of extinguisher are kept adjacent to the extinguishers.

19.2 Visitors/Staff

On hearing the fire alarm:

- Leave the site quickly and calmly via the site's or office main entrance, closing all doors behind you
- Report to the Operator/Fire Warden at the assembly point located outside of the main entrance
- Do not take risks
- Do not stop to collect personal belongings; and
- Do not re-enter the site for any reason unless authorised to do so.

Fire action notices are located and maintained at various points around the site to remind staff of the actions to be taken in the event of discovering a fire or hearing the fire alarm.

19.3 Receptors

Local receptors must be notified via telephone or verbally if staff are able to attend local businesses or properties as described in Section 6.4.2.

19.4 Deliveries to site

Contact will be made with the hospital waste management team and with external customers to stop any incoming and outgoing collections for the next 24hrs or until the Operator and EA have cleared the site as operational.

19.5 Making the site operational after a fire

After a fire event, the following procedure will be implemented depending on the severity of the fire.

19.5.1 After a small fire

A fire dealt with in-house using suitably trained staff and firefighting equipment located on site is classed as a small fire.

The fire will be recorded in the site diary and an Incident Record produced which will include the causes of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented on-site will be incorporated within updates to this FPP, as required.

The incident and the results of the above assessment will be forwarded to the EA, with any updates to the FPP and the site's EMS made if required.

19.5.2 After a large fire

A fire that requires the presence of the Fire and Rescue Service is classed as a large fire.

If the site has been told to evacuate or cease operations by the EA and/or Fire and Rescue Service, site management and staff will wait until instructed that it is safe to re-enter the site and resume operations. The fire will be recorded in the site daily check sheet and an Incident Record Form with details of the cause of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented on-site will be incorporated within updates to the FPP and the site's EMS as required.

Should damage be sufficient to prevent permitted operations at the site, the site will cease accepting waste and will divert deliveries to a suitably licensed facility, in accordance with the contingency planning provisions.

The Operator will liaise with the EA to determine a plan-of-action to recommence permitted operations at the site, and the timescales involved to achieve this.

19.6 Contaminated Fire Water

A waste water contractor will provide support in an emergency. In the event contaminated water is to be removed offsite the company can provide an emergency response and remove any contaminated water to a suitably permitted disposal site.

19.7 Fire Damaged Waste

A visual assessment will be carried out by the Operator to determine whether the waste can continue to be stored on-site. Wherever possible, unburnt wastes will be separated from fire damaged waste. Fire damaged waste will be removed from the site for disposal.

Any fire damaged waste will be removed from the site within 24 - 48 hours to a suitably permitted facility.

Any quarantined waste, waiting for removal from site, is stored in the quarantine area to prevent the contamination of unburnt wastes on-site

20.0 Conclusion

This Fire Prevention Plan is considered to be a ‘working’ document that will be reviewed every 6months to ensure effectiveness, and updated as required should any of the following occur:

- A fire on site
- The results of any testing of this FPP indicate that changes are required
- A change or review of legislation; or
- If the site is instructed to do so by the EA.

It will be the responsibility of the Operator or nominated person to maintain this Fire Prevention Plan and to ensure it is adhered to both to limit the risk of a fire occurring on-site and in the event of a fire on- site.

Any updates to this FPP, either as a result of specific incidents or identified during its testing/review, will be submitted to the EA for its approval prior to implementation of the proposed changes at the site.

DRAWINGS

Drawing 001 Site Location

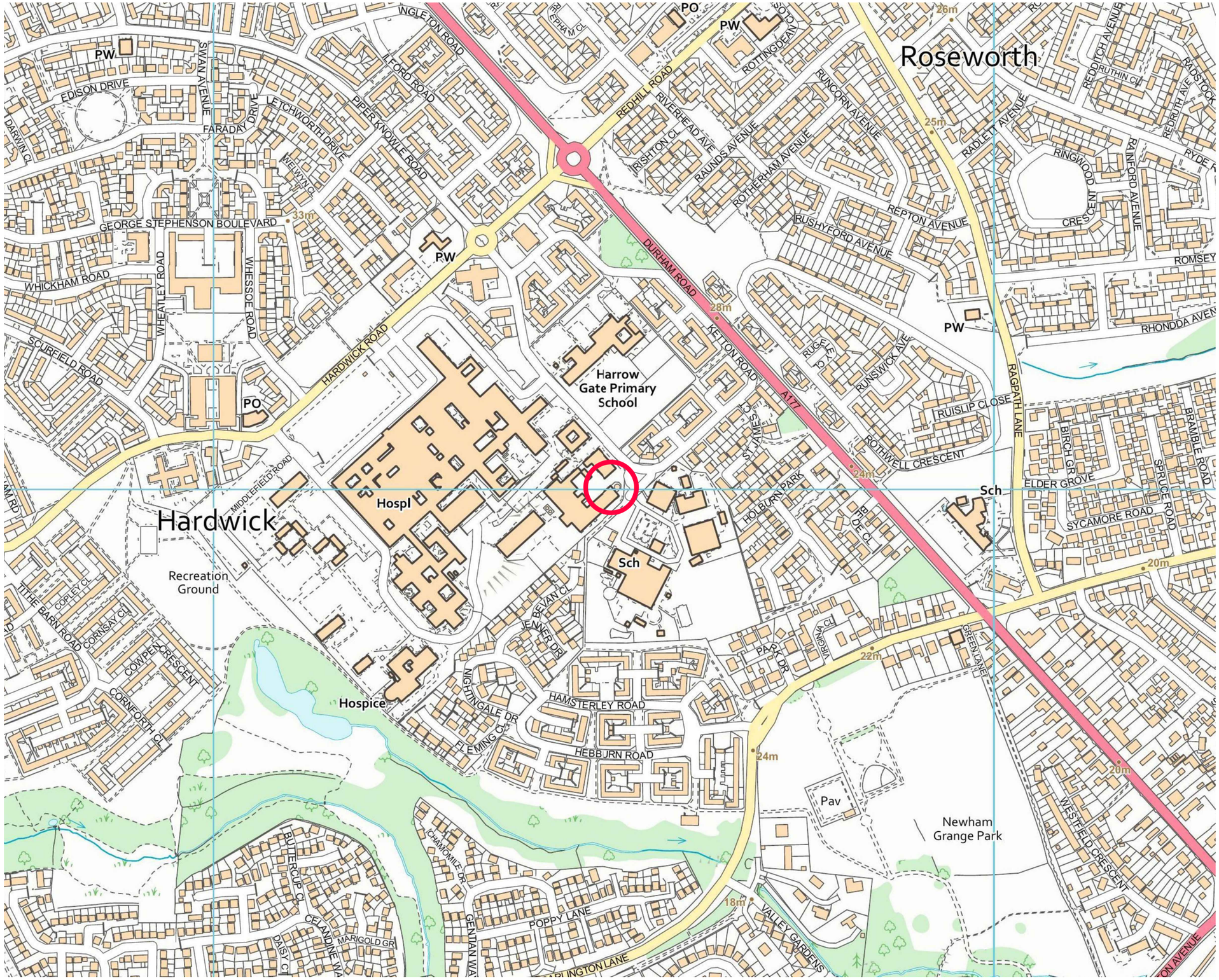
Drawing 003 Site Layout

Drawing 004 Site Receptors

Drawing 005 Site Drainage

Hydrant Location

APPENDICES



NOTES

DRAWING IS A SITE SCHEMATIC

ANY ANOMALIES ON THIS DRAWING SHOULD BE BROUGHT TO THE ATTENTION OF OLIVE COMPLIANCE

LEGEND

THE SITE

SITE
NTH SOLUTIONS LLP, UNIVERSITY HOSPITAL OF NORTH TEES
NORTH TEES AND HARTLEPOOL NHS FOUNDATION TRUST
OSMOTHERLEY HOUSE, HARDWICK ROAD, STOCKTON-ON-TEES
CLEVELAND, TS19 8PE

PROJECT
EA PERMIT APPLICATION

DRAWING TITLE
LOCATION PLAN

DRAWING NUMBER	REVISION
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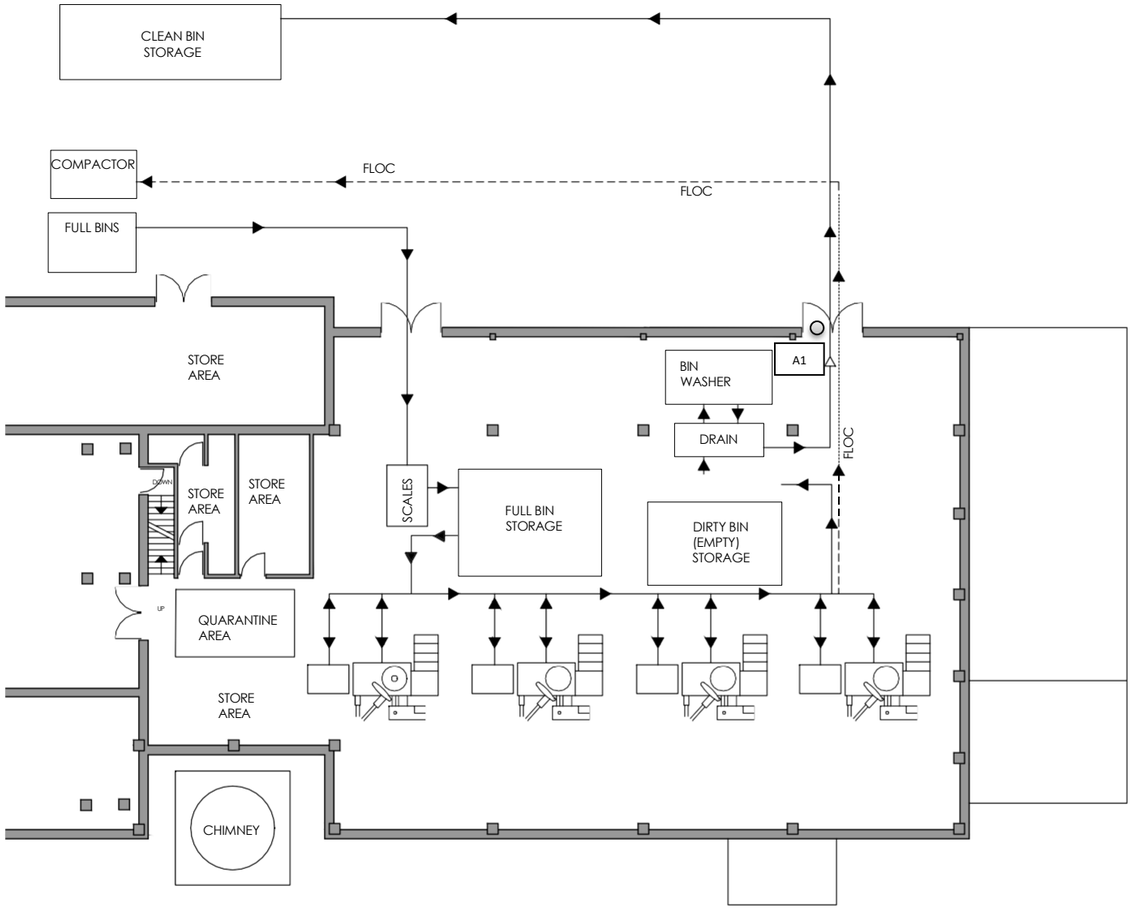
SCALE	DATE
1:5000 @ A3	**14.03.25**

OLIVE Compliance



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NOTES

DRAWING IS A SITE SCHEMATIC

ANY ANOMALIES ON THIS DRAWING SHOULD BE BROUGHT TO THE ATTENTION OF OLIVE COMPLIANCE

LEGEND

DIRECTION FLOW

W N S E

SITE
NTH SOLUTIONS LLP, UNIVERSITY HOSPITAL OF NORTH TEES
NORTH TEES AND HARTLEPOOL NHS FOUNDATION TRUST
OSMOTHERLEY HOUSE, HARDWICK ROAD, STOCKTON-ON-TEES
CLEVELAND, TS19 8PE

PROJECT
EA PERMIT APPLICATION

DRAWING TITLE
SITE LAYOUT AND PROCESS PLAN

DRAWING NUMBER	REVISION
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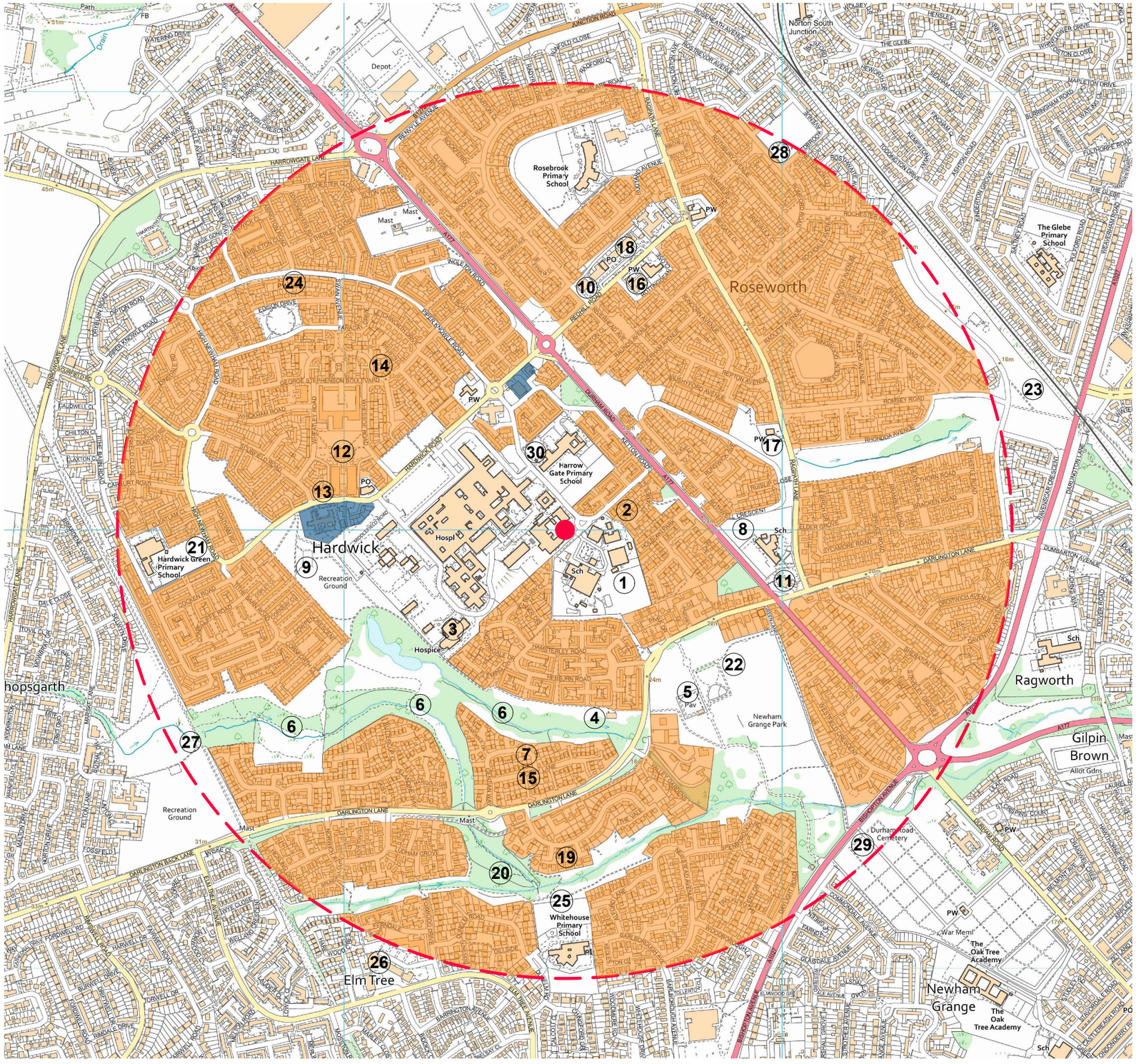
SCALE **1:200 @ A3**	DATE **14.03.25**

OLIVE Compliance



NOTES

LEGEND

- **SITE / SITE BOUNDARY**
- **1KM OFF SET BOUNDARY**
- **RESIDENTIAL AREAS**
- **LIGHT INDUSTRIAL / BUSINESS / RETAIL**

1. ABBEY HILL ACADEMY AND TECHNOLOGY COLLEGE HARROW GATE PRIMARY ACADEMY
2. MP DECORATORS
3. BUTTERWICK HOSPICE CARE
4. SALTERS LANE COMMUNITY CENTRE
5. BOWLING GREEN
6. HARDWICK DENE WOODLAND, POND AND NATURE RESERVE
7. CARE HOME MANAGEMENT - NURSING HOME
8. ST GREGORY'S ROMAN CATHOLIC SCHOOL
9. SPORTS CENTRE (THE REFORM LAB) & PLAYING FIELD
10. HERON FOODS
11. STARBUCKS (MILEHOUSE PUB)
12. HARDWICK COMMUNITY CENTRE
13. THE FRY GUYS - TAKEAWAY
14. MISTER TWISTER BALLOON PARTIES
15. FAIRFIELD PLASTERERS
16. ROSEWORTH LODGE CARE HOME
17. THE HOPE CENTRE - ELIM PENTECOSTAL CHURCH
18. PHARMACY WORLD
19. THE VALE GOOD COMPANION PUPPY & DOG TRAINING SCHOOL
20. ELM TREE WOODLAND & WALKWAY - NATURE RESERVE (THE HUB - TRAVEL)
21. HARDWICK GREEN PRIMARY SCHOOL
22. NEWHAM GRANGE PARK
23. ROSEWORTH WILD MEADOW
24. HARDWICK BAPTIST CHURCH
25. WHITEHOUSE PRIMARY SCHOOL
26. ELM TREE COMMUNITY CENTRE
27. BISHOPSGARTH PARK & PLAY AREA (STOCKTON-ON-TEES BOROUGH COUNCIL)
28. REDBROOK PLAY AREA (STOCKTON-ON-TEES BOROUGH COUNCIL)
29. DURHAM ROAD CEMETERY (STOCKTON-ON-TEES BOROUGH COUNCIL)
30. HARROW GATE PRIMARY SCHOOL

N W E S

SITE
NTH SOLUTIONS LLP, UNIVERSITY HOSPITAL OF NORTH TEES NORTH TEES AND HARTLEPOOL NHS FOUNDATION TRUST OSMOTHERLEY HOUSE, HARDWICK ROAD, STOCKTON-ON-TEES CLEVELAND, TS19 8PE

PROJECT
EA PERMIT APPLICATION

DRAWING TITLE
PERMITTED AREA PLAN

DRAWING NUMBER	REVISION
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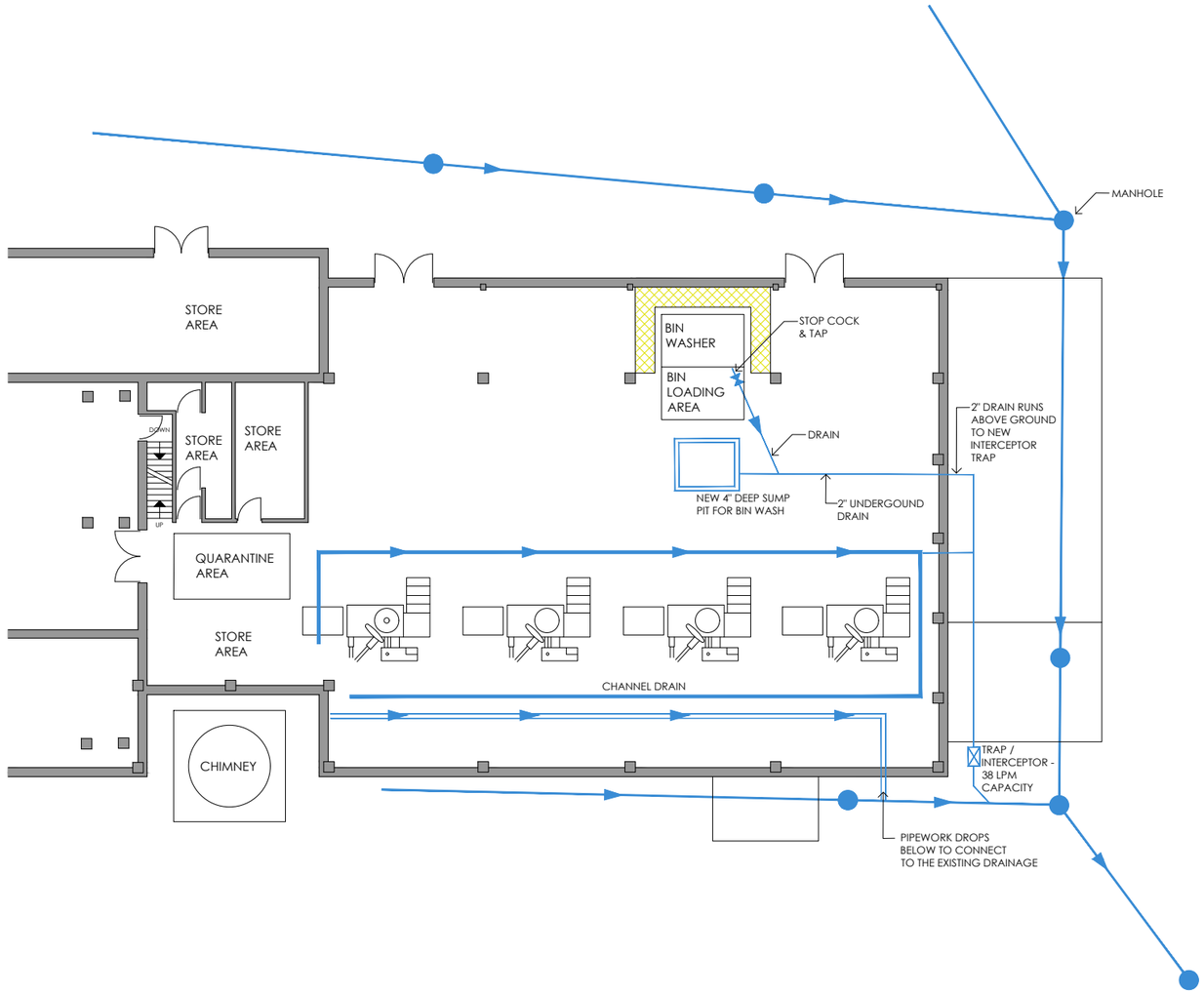
SCALE **1:10000 @ A3**	DATE **14.03.25**

OLIVE Compliance



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NOTES

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LEGEND

DIRECTION FLOW

W N S E

SITE
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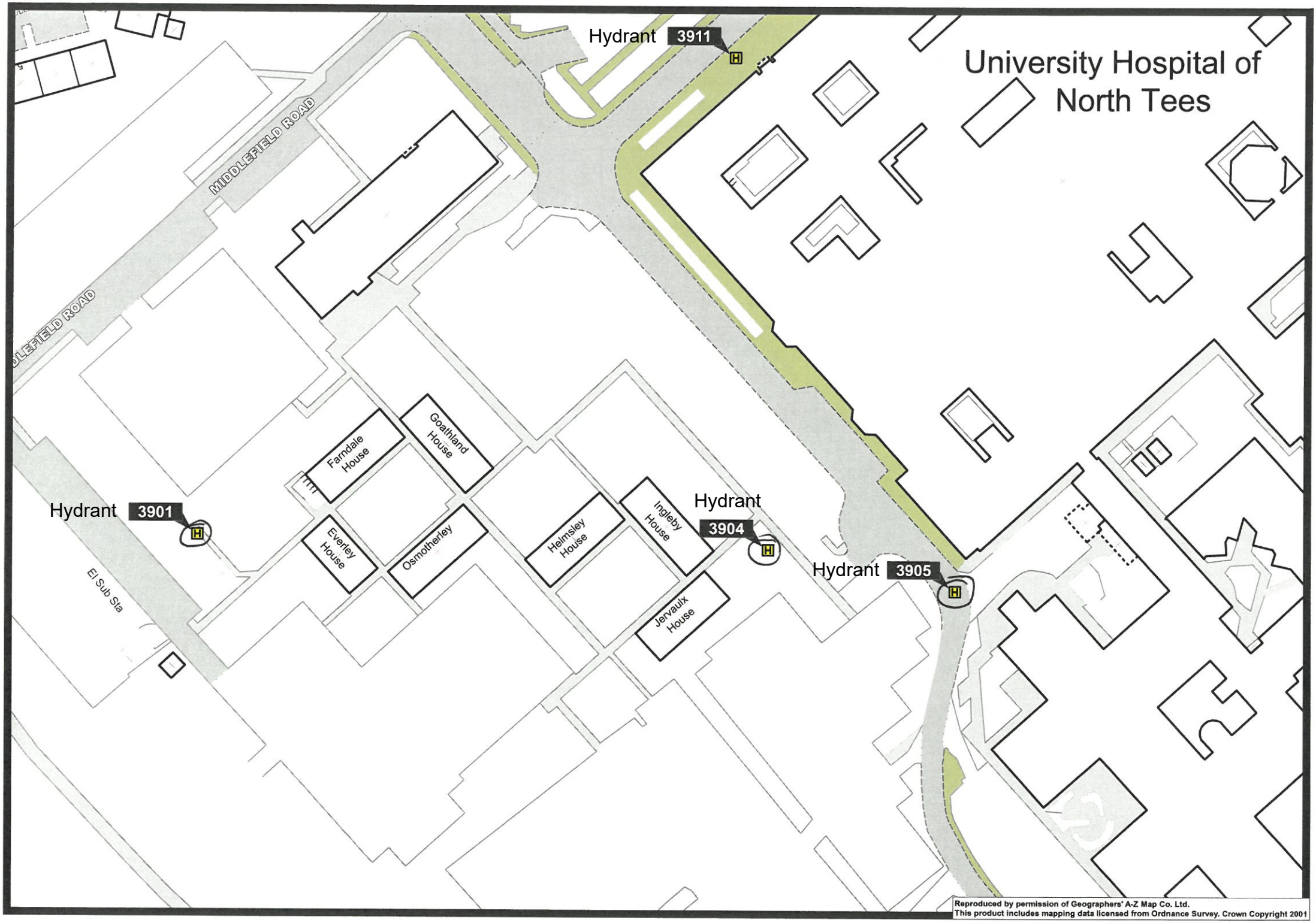
NORTH TEES AND HARTLEPOOL NHS FOUNDATION TRUST
OSMOTHERLEY HOUSE, HARDWICK ROAD, STOCKTON-ON-TEES
CLEVELAND, TS19 8PE

PROJECT
EA PERMIT APPLICATION

DRAWING TITLE
DRAINAGE PLAN

DRAWING NUMBER	REVISION
005	**0**
SCALE **1:200 @ A3**	DATE **14.03.25**

OLIVE Compliance


Hydrant 3911
University Hospital of North Tees
MIDDLEFIELD ROAD
Farndale House
Goathland House
Hydrant 3901
Everley House
Osmotherley
El Sub Sta
Helmsley House
Ingleby House
Hydrant 3904
Hydrant 3905
Jervaulx House
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