acorn analytical services

The route to asbestos compliance

Asbestos Removal Project Completion Pack



Project No.: **B-49309**

Client: Manchester Foundation Trust

Site: North Manchester General Hospital

Area of Works: Block 32 Antenatal Basement

Removal Contractor: LAR ltd

Date works undertaken: 19/08/2024 – 23/10/2024

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Summary of Works

Specification

Acorn RAMS

ASB5 and Method Statement

4 stage Clearance Paperwork

Analytical Paperwork

Removed Asbestos

Remaining Asbestos



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Summary of Works

Acorn Analytical Services were appointed to undertake Air Monitoring and 4SC during removal of all brackets and fixings and full clean of the undercroft.

LAR carried out these works from **19/08/24 – 23/10/24** Works were undertaken in line with the specification issued by MFT.

Register information has been updated following completion of works.



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Specification



NHS
Manchester University
NHS Foundation Trust

Asbestos Abatement Scope of Works

Site Name & Address:	North Manchester General Hospital Block 32 Antenatal



Project Reference:	Block 32 Antenatal	Consultancy:	MFT
Client Contact:	James Maxwell	Author:	James Maxwell – Site Asbestos Manager
Issue No:	01	Issue Date:	20/06/2024

NHS
Manchester University
NHS Foundation Trust

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1.0 GENERAL INFORMATION & PROJECT INTRODUCTION

1.1 PREAMBLE

The Specification although an 'Asbestos Technical Specification for Removal Works' shall be referenced herein as the 'Asbestos Abatement Scope of Works' so as to comply with the MFT definition of a specification. This document shall be followed in conjunction with all Health & Safety Guidance, Approved Codes of Practice and in Line with the Control of Asbestos Regulations and all other Associated Regulations and Guidance documentation.

This is a technical document and sets out a minimum set of requirements which are required to be adopted as part of the asbestos removal works. The design of how the asbestos removal will take place is the responsibility of the contractor.

This document must be read in full. A copy shall be kept on site and the LARC's supervisor should have a full understanding of this document, accompanying risk assessments and plan of work prepared by the LARC. The LARC is to ensure procedures are in place for all safe working on ACMs at the site, in order to meet all relevant statutory obligations, best industry practice and the requirements of this document. Similarly, operatives on site must be fully aware of the project scope and their roles and responsibilities whilst on site.

This document shall apply to all materials mentioned in the Health and Safety Commission Approved Code of Practice 'Work with materials containing asbestos (First Edition)' L143 2006.

All references to ACMs as identified in the reports are to be taken as a guide as to the location or description of the ACMs. The description and estimated quantities of those items stated in the report and in section 3 are not to be regarded as a Bill of Quantities. It is the responsibility of the LARC to make their own measure of materials identified to them and any quantities stated in this document or any other document, unless confirmed in writing, should be used as approximations.

It is anticipated that should any additional ACMs become exposed during the removal phase of work they will be removed as part of the project inclusive of all costs.

The LARC is to comply with all details within the MFT Asbestos Removal & Abatement – General Technical Specification (separately issued document). The document sets out The University of Manchester NHS Foundation Trusts requirements for undertaking asbestos removal and abatement work on all buildings managed by MFT.

1.2 SITE ADDRESS

North Manchester General Hospital (NMGH)

Delaunays Road, Crumpsall

Manchester M8 5RB

1.3 AREA OF WORKS

Block 32 – Antenatal

1.4 CONTACT DETAILS

Name	Organisation / Company & Role	email
Nigel Woods	P&ED/Dreso	nigel.woods.ext@dreso.com
James Maxwell	MFT – Site Asbestos Manager	James.maxwell@mft.nhs.uk

1.5 OVERVIEW OF PROPOSED WORKS

The proposed works are to be undertaken to enable demolition of the former Antenatal building. The building has been vacated with all services isolated services isolated.

The building comprises of a circa 1960's brick and concrete built building complete with basement and undercroft with a two-story prefabricated office area attached. The building is located adjacent to the cook and chill kitchen, VIE plant and main entrance 1. Access to these areas must not be obstructed at any time to ensure they remain operational throughout the works. The building is to be secured throughout the works.

Plans below are taken from the demolition survey undertaken by Acorn Analytical services ref B-45425 issued on 22/03/2024. Items present in table 1 form the basis for the scope of the removal works.

The LARC is to provide a cost for acting as the Principal Contractor throughout the abatement works and taking on the responsibilities of this role.

In order for the LARC to assist and coordinate the works a suitably trained and competent site manager in addition to the site supervisor will be required to be based on site for the duration. Evidence of competency is required as part of this return.

1.6 EXISTING INFORMATION

Block 32

Associated Surveys	Asbestos Demolition Survey issued on 22/03/2024
Asbestos Consultancy:	Acorn Analytical Services
Survey Report Reference (s)	B-45425

2.0 TENDER PROCESS

2.1 ASBESTOS CONTRACTOR REQUIREMENTS

- The LARC (Licensed Asbestos Removal Contractor) must hold a valid 3-year licence for work with asbestos insulation, asbestos coatings and asbestos insulating board, issued under The Control of Asbestos Regulations 2012.
- The LARC must be listed on the Shared Business Service SBS Framework
- The LARC must be able to provide suitable references, where required, for work of a similar size and nature, and possess sufficient resources for a contract of this size and nature.
- The LARC must be able to provide any details of client complaints and how they were dealt with within the last12 months
- The LARC must be able to provide Details of any near misses, accidents, incidents and RIDDOR
- The LARC must hold Employers' Liability Insurance to a minimum of £10,000,000 and Public Liability Insurance to a minimum of £5,000,000.
- The LARC must submit details of all asbestos operatives in full time employment with the company and their medical, respiratory face-fit and training certificates.
- The LARC must be able to provide copies of their health and safety policy, COSHH, risk assessments and safe systems of work.
- The LARC must be a member of a relevant Industry Association (i.e. ARCA/ACAD) and that associations' quality audit scheme and be able to provide Copies of the last 5 ARCA or ACAD audits plus any in-house audits
- The LARC must use licensed sub-contractors for all ancillary work where applicable (i.e., scaffolding etc).

2.2 CONTENTS OF TENDER RETURN

The following **must** be submitted with the tender return;

- A detailed itemised breakdown of costs which are to be included within the Bill of Quantities. The breakdown of each item will include Labour and Materials. These must be presented in accordance with items listed but must take into consideration all aspects of this document i.e enabling / investigation works, access equipment
- An agreement that the works prescribed within section 3 are reasonable and achievable
- If the LARC requires more information to complete the task
- Details of special Health & Safety requirements required, e.g., confined space working, working at height etc.
- Comments against each item and to provide the proposed outline methodology to be employed to complete the work including anticipated airborne fibre levels, control measures, special equipment etc.
- A proposed programme of the abatement works on a day by day basis, as far as practicable including a realistic proposed programme for analytical works, including 4 stage clearance.
- Contractor resource allocation (this may be reviewed on a daily basis during the works and will be consulted should any programme delays occur).
- Case study of similar projects completed, preferably in a healthcare setting.

- In order for the LARC to assist and coordinate the works a suitably trained and competent site manager in addition to the site supervisor will be required to be based on site for the duration. Evidence of competency is required as part of this return

3.0 SCOPE OF WORKS

3.1 SITE VISIT

The LARC is to visit the site to familiarise themself with the extent of the works, quantities of materials, local conditions, access, suitability and proximity of services, etc.

Following the site visit the LARC is to review this document and ensure they are comfortable with the scope and content. This document is to be referenced with the tender return accepting the scope and detail of works. No claim will be allowable for additional items or lack of knowledge of the work involved.

3.2 SCOPE OF WORK

The types of material requiring removal are as follows;

- Thermal Insulation
- Bitumen
- Woven Textile
- Floor tiles
- Mastic

Items included in the proposed works area are detailed in table 1.

The quantities and sizes in the report are only approximations and the LARC is to ensure that they are satisfied of the extent of each of the items in the Scope of Work and obtain accurate measurements.

Table 1 – Items for removal

Item	Location	Location Description	Item	Material	Extent	UoM	Identification
1	32/-1/002	Basement void chambers	Floor tile debris to concrete floor	Floor tile	150	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris on top of edge of wall	Thermal Insulation	2	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris on top of edge of wall	Thermal Insulation	2	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	Linear m	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile

Item	Location	Location Description	Item	Material	Extent	UoM	Identification
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris within cobwebs	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation to pipework	Thermal Insulation	30	Lin M	Chrysotile
	32/-1/002	Basement void chambers	Insulation to pipework	Thermal Insulation	30	Lin M	Chrysotile
	32/-1/002	Basement void chambers	Insulation to pipework	Thermal Insulation	30	Lin M	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
	32/-1/002	Basement void chambers	Insulation debris to concrete floor	Thermal Insulation	250	m2	Chrysotile
2	32/00/003	Waiting Room	Floor tiles and adhesives beneath modern vinyl and screed outside Accessible WC 056	Floor tiles and Bitumen	2	m2	Chrysotile (Bitumen Only)

Item	Location	Location Description	Item	Material	Extent	UoM	Identification
	32/00/003	Waiting Room	Bitumen adhesive beneath modern vinyl and screed, presumed throughout	Bitumen	70	m2	Chrysotile
	32/00/008	Vending Area	Mastic seal to former window	Mastic	1	No.	Chrysotile
	32/00/008	Vending Area	Mastic seal to door	Mastic	1	No.	Chrysotile
	32/00/009	Circulation	Bitumen adhesive beneath modern vinyl and screed	Bitumen	100	m2	Chrysotile
	32/00/009	Circulation	Woven packers to ducting / hangers visible within the ceiling void, must be presumed to be throughout	Woven Textile	5	No.	Chrysotile
	32/00/010	Reception Office	Bitumen adhesive beneath modern vinyl and screed	Bitumen	12	m2	Chrysotile
	32/00/011	Office	Bitumen adhesive beneath modern vinyl and screed	Bitumen	8	m2	Chrysotile
	32/00/012	Staff Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	12	m2	Chrysotile
	32/00/019	Consulting Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	18	m2	Chrysotile
	32/00/020	Consulting Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	18	m2	Chrysotile
	32/00/021	Consulting Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	17	m2	Chrysotile
	32/00/022	Store Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	5	m2	Chrysotile

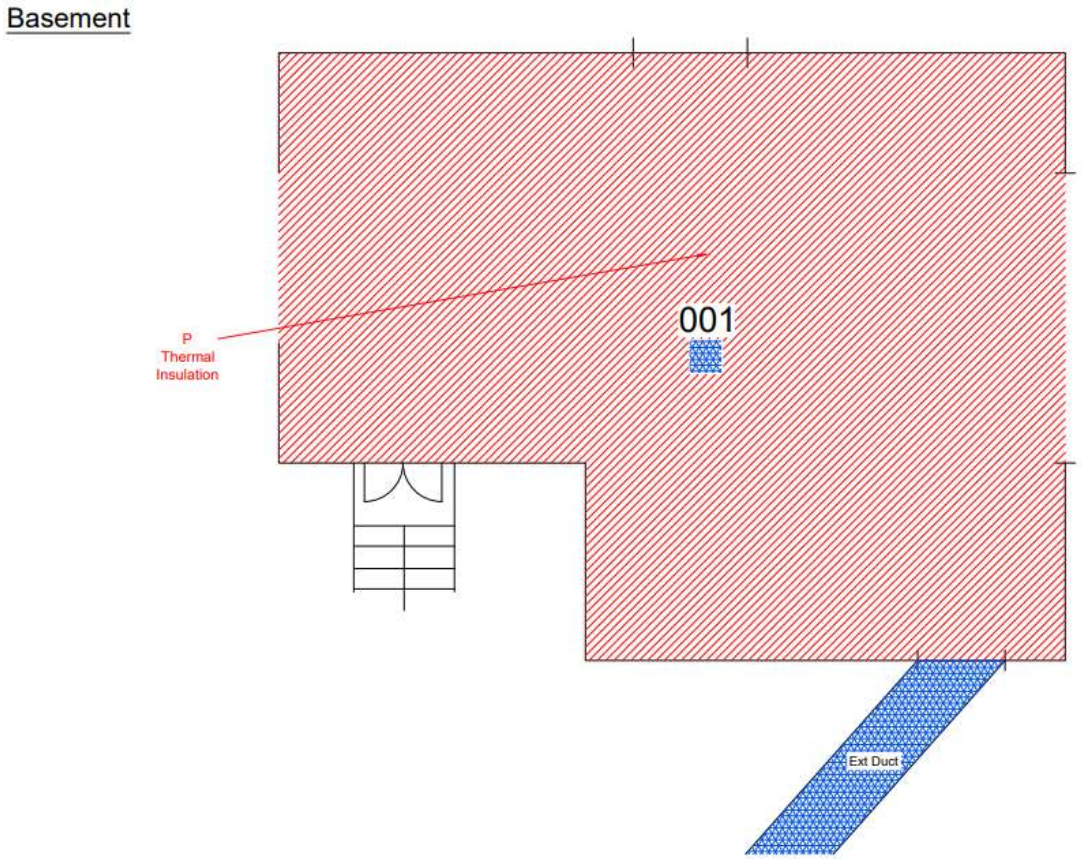
Item	Location	Location Description	Item	Material	Extent	UoM	Identification
	32/00/023	Consulting Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	17	m2	Chrysotile
	32/00/024	Consulting Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	17	m2	Chrysotile
	32/00/025	Consulting Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	17	m2	Chrysotile
	32/00/026	Staff Room	Sink pad to underside of sink unit.	Bitumen	1	No.	Chrysotile
	32/00/028	Treatment Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	8	m2	Chrysotile
	32/00/033	Corridor	Bitumen adhesive beneath modern vinyl and screed	Bitumen	35	m2	Chrysotile
	32/00/034	Office	Bitumen adhesive beneath modern vinyl and screed	Bitumen	12	m2	Chrysotile
	32/00/035	Store	Floor tiles and adhesive	Floor tile	7	m2	Chrysotile
	32/00/039	Comms Room	Bitumen adhesive beneath modern vinyl and screed	Bitumen	5	m2	Chrysotile
	32/00/040	Office	Bitumen adhesive beneath modern vinyl and screed	Bitumen	10	m2	Chrysotile
	32/00/041	Store	Floor tiles and adhesive	Floor tile	4	m2	Chrysotile
	32/00/043	Corridor	Bitumen adhesive beneath modern vinyl and screed	Bitumen	70	m2	Chrysotile
	32/00/044	Community Midwives	Bitumen adhesive beneath modern vinyl and screed	Bitumen	35	m2	Chrysotile

Item	Location	Location Description	Item	Material	Extent	UoM	Identification
	32/00/045	Store	Floor tiles and adhesive	Floor tile	3	m2	Chrysotile
	32/00/046	Office	Bitumen adhesive beneath modern vinyl and screed	Bitumen	12	m2	Chrysotile
	32/00/047	Office	Bitumen adhesive beneath carpet and screed	Bitumen	12	m2	Chrysotile
	32/00/048	WRVS Café	Bitumen adhesive to concrete floor, presumed beneath remaining modern floor vinyl	Bitumen	10	m2	Chrysotile
	32/00/049	Office	Floor tiles and adhesive	Floor tile	12	m2	Chrysotile
	32/00/050	Treatment Room	Bitumen underneath floor	Bitumen	10	m2	Chrysotile
	32/00/065	Antenatal Link Corridor	Floor tiles and adhesive in corridor from Anti Natal to F Block	Floor tile	6	m2	Chrysotile
3	External	External windows and doors	Mastic seals to former windows and doors presumed to all	Mastic	50	No.	Chrysotile

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Plan 1

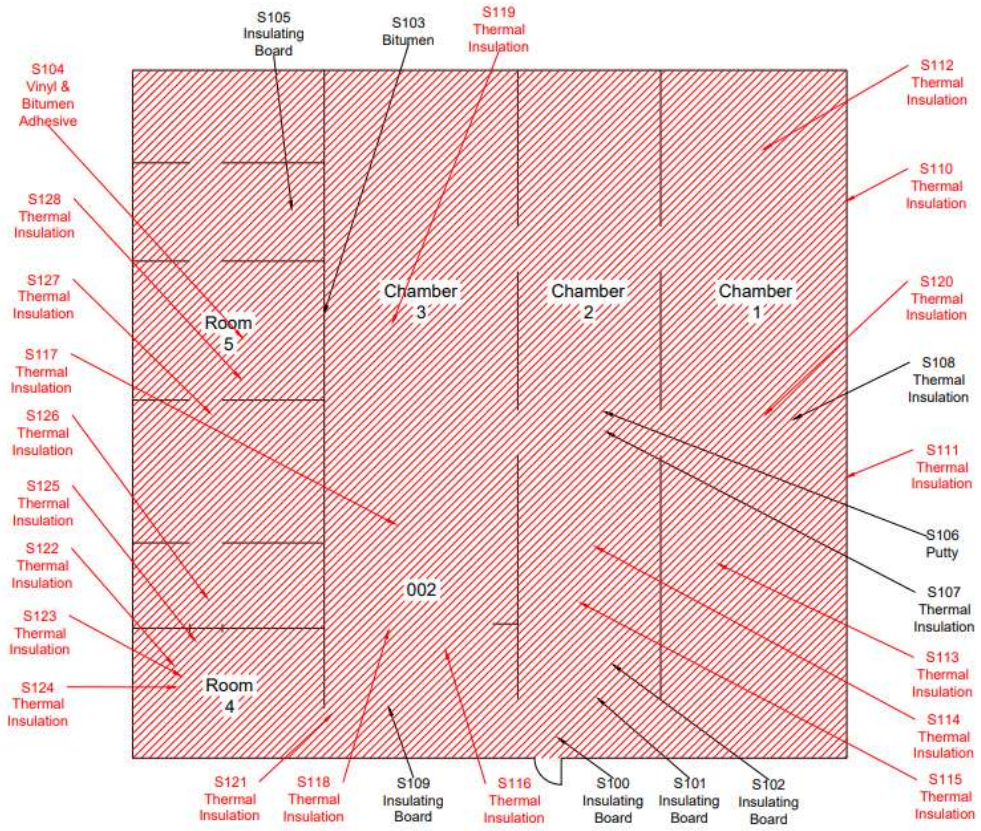
Block 32 Basement – Exert from demolition survey report



Plan 2

Block 32 Undercroft – Exert from demolition survey report

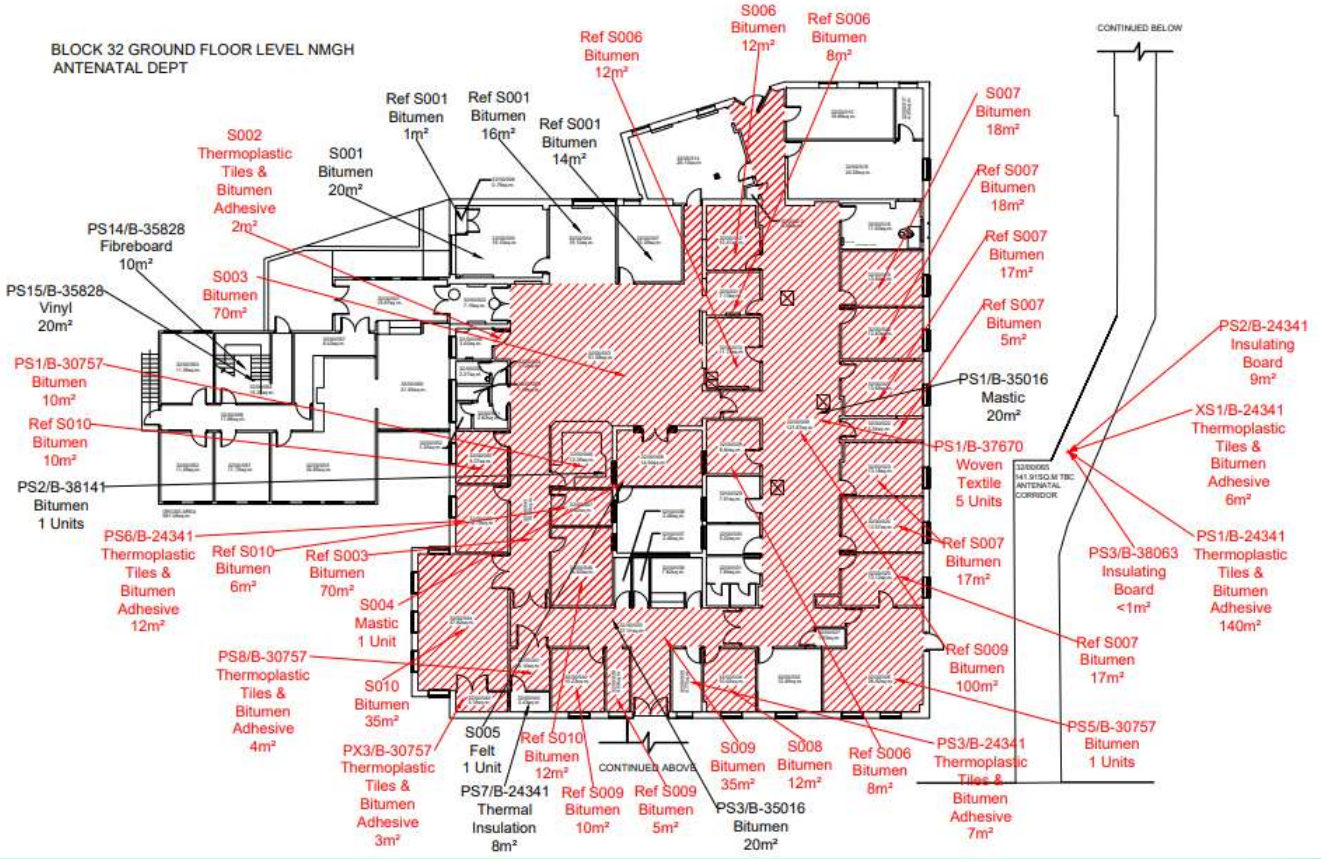
Undercroft



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Plan

Block 32 Ground floor – Exert from demolition survey report



Item Number:	Item 1		
Locations:	Block 32		
Asbestos Material & Quantity (LM or m^2)	See table 1 above for full extents and locations		
Full / Local Control	Fully controlled	**NLW / NNLW / ASB5**	ASB5
Detailed Information:			

Brief Overview

The items are located within the basement undercroft. The undercroft area is accessed via two entrances, one is through a small timber door to the external of the building and the other via the main plant room. The undercroft is designated as a confined space due to size constraints within.

It is anticipated that the removal works will be undertaken under fully controlled conditions. All identified items are to be removed.

The adjacent land surrounding the building is assumed to be suitable to site the works compound with space for a DCU and medium sized skip. The contractor is to allow for the provision of power, welfare and other associated preliminaries.

Isolation requirements / permits

It is anticipated that the following services where present will be isolated with the relevant certification provided by the project manager to enable the safe removal as part of the works. Where possible all services will be removed as part of the works.

- Electrical
- Ventilation
- Heating
- Water

Work set-up and abatement

The LARC is to construct any enclosure(s) in accordance with current guidance to enable the full removal of all items identified within the scope of works. Consideration needs to given as to the design and construction of the proposed enclosure(s) to ensure that suitable access/egress points are available.

- All redundant equipment, brackets, fixings and pipework will be cut out and removed as part of the works
- Any loose/stored items will be deemed contaminated and must be removed as asbestos waste.

The LARC is to arrange for all required power and water to complete the works.

A full fine clean of ALL surfaces within the enclosed work area is required without exception paying special attention to hard to reach areas.

An exceptional standard of fine cleaning will be required prior to inviting the analytical consultant to carry out the 4-stage clearance.

Permits

The following permits will be applicable for the works;

- Asbestos

Refer to section 3 for additional requirements

Photo 1 & 2 – Indicitive photos of area and items





Photo 3 & 4 – Indicitive photos of area and items





Photo 5 & 6 – Indicitive photos of area and items



Photo 7 & 8 – Indicitive photos of area and items



Photo 9 & 10 – Indicitive photos of area and items



Item Number:	Items 2 & 3		
Locations:	Block 32		
Asbestos Material & Quantity (LM or m^2)	See table 1 above for full extents and locations		
Full / Local Control	Locally Controlled	**NLW / NNLW / ASB5**	ASB5
Detailed Information:			

Brief Overview

The items are located within the main building to the ground floor and external areas.

It is anticipated that the removal works will be undertaken under locally controlled conditions. All identified items are to be removed.

It has been noted that the ACMs to the flooring run below the partition walls throughout the building, the flooring must be removed as far practicable whilst leaving the walls in situ for removal during a later phase of works.

Isolation requirements / permits

It is anticipated that the following services where present will be isolated with the relevant certification provided by the project manager.

- Electrical
- Ventilation
- Heating
- Water

Fire detection and evacuation route

The area does not form part of any fire evacuation route.

Work set-up and abatement

The LARC is to undertake the works in accordance with current guidance to enable the full removal of all items identified within the scope of works.

The LARC is to arrange for all required power and water to complete the works.

Permits

The following permits will be applicable for the works;

- Asbestos

Refer to section 3 for additional requirements

Photo 1 & 2 – Indicitive photos of bitumen under modern flooring




Photo 3 & 4 – Indicitive photos of floor tiles




Photo 5 & 6 – Indicitive photos of flooring passing under partition walls




Photo 7 – Indicitive photo of woven materials to ceiling void



Photo 8 – Indicitive photo of mastic to windows



3.3 BILL OF QUANTITIES

Site specific Preliminaries & Site Establishment			**(£)**
This is to include any welfare facilities / WC / specialist access / additional power / water requirements / generators			
Item Number	**Description**	**Cost Breakdown**	**(£)**
		Site Manager	
		Labour	
		Plant	
		Materials	
Total			

A full detailed cost submission will be submitted separately to the above.

3.4 ELECTRICAL SUPPLY

Upon appointment the LARC must arrange for a further site visit to discuss the requirements for power with the Principal Contractor/Project Manager/Project Manager. The procedure for additional power requirements and shutdown permits will be different for each site.

3.5 MAINS WATER

Upon appointment the LARC must arrange for a further site visit to discuss the requirements for a mains water supply with the Principal Contractor/Project Manager. The LARC is to provide connections at his expense, including cables, hoses, pipes, etc. and all such work must be undertaken by qualified, competent persons. It is possible that water pressure may be insufficient for the proper operation of showers, etc. in hygiene facilities. The LARC is therefore to allow for the costs of booster pumps, a self-contained decontamination unit and any other necessary equipment. The LARC will be responsible for any damage caused including damage to the electrical installation and water damage due to bursts and leaks. In the instance that sufficient power is not available the LARC must include a separate cost/s for the provision of power required by their work in the price return, this must include details of what is required.

3.6 PIPEWORK, PLANT AND EQUIPMENT

Pipework, cabling, plant etc which cannot be removed must remain undamaged and in a safe and secure manner, any such items must be operational following completion of the works. All redundant services are to be removed and disposed of as far as reasonably practicable, it is the responsibility of the LARC to liaise with the Project Manager to carry out investigation work to ascertain which pipework / equipment / plant etc is redundant and can be removed and what is to remain in situ. Any services identified as redundant must be drained down prior to removal. Any stands or associated supports to any redundant pipework / plant must be removed in full. It is in the interest of all parties concerned to remove as much redundant equipment, services, plant etc as possible to ensure the best possible standard of clean, without unnecessary caveats being inserted into the re-occupation certification / completion pack by the appointed analyst.

To ensure that the existing services / plant etc within the work area are left in an operational and serviceable condition on completion of the work, MFT or the Principal Contractor/Project Manager may appoint their own engineers prior to the start of the project to assess and document their condition. The LARC will be required to sign and acknowledge this assessment prior to the start of work if conducted. If this assessment is not undertaken prior to the work it is strongly advised that the LARC completes their own assessment and photographic record of services, prior to the start of the work. This is in the interest of the LARC as this would provide proof, should expensive repairs etc be necessary following the abatement works, which otherwise may not be justifiable.

3.7 ISOLATIONS

The procedure for isolations will vary depending on the site were work is required. The appointed LARC is to liaise with the Principal Contractor/Project Manager and identify all isolations required prior to the start of the HSE Notification period and arrival on site were practical.

The LARC is to liaise with MFT Maintenance staff / Principal Contractor/Project Manager to identify plant which can be turned off and isolated during the work, were required, all of which should be fully re-commissioned on completion of the work. This must be allowed for in the price return. The LARC must ensure that all services are supported both during and following abatement works, with guidance

from suitably competent persons. Any damage deemed as excessive due to negligence will be rectified at the cost of the LARC.

3.8 PROTECTION OF EXISTING INSTALLATIONS

Care is to be taken to protect and leave in an undisturbed and sound condition, the existing installation apart from the works specifically described. Any disturbance to existing installations caused by the LARC's work which results in damage to the installation shall be rectified at their expense. Any part of the installation found to be defective and in an apparently dangerous condition, through no fault of the LARC and not covered by this document, is to be drawn to the attention of the Principle Contractor and / or MFT and rectified as directed.

Particular care is to be taken to ensure that dust, waste materials, water etc. arising from the LARC's work does not enter electrical equipment, gas and oil burners, pumps, furniture or materials stored or used in the area, etc. causing damage and subsequent hazards. If the LARC considers it will be necessary to temporarily remove any items to facilitate a clear working area, he should inform the Principal Contractor/Project Manager / Client by covering letter with his price return and include for the cost of thorough cleaning before removal from the area, temporary protection and return of items.

All possible precautions must be taken to ensure that asbestos fibres do not escape from the working area and the LARC will be required to undertake all additional works necessary as a result of such escape at his own expense.

The LARC shall take all necessary precautions to prevent personal injury, death and damage from fire. A suitable and sufficient risk assessment should be available. The LARC shall provide a minimum of one fire extinguisher outside and one fire extinguisher inside each enclosure, suitable for use on electrical fires.

All external works should be protected from the elements and remain secure. No additional costs will be accepted by the client should damage to enclosures occur due to adverse weather conditions.

3.9 DATA EQUIPMENT

This may be present in or adjacent enclosure / work areas in the form of cabling, server equipment etc. It is the responsibility of the LARC to ensure that any such equipment is identified during the planning stage and incorporated in the method statement, the method statement must also specify what steps will be taken to ensure that the site operatives are fully aware of the equipment and how this will be protected to ensure that no damage is caused and that no cabling is cut out. Access may be required to any such items during removal works as such a plan should be in place to facilitate should situations arise that could affect the operation of the estate. Any damage to Data Equipment caused as a result of negligence or lack of understanding will be rectified at the expense of the asbestos contractor.

3.10 GAS PIPES

These provide a significant danger and must be identified and marked up in the LARC method statement drawings, to ensure that live gas pipes are not cut out or damaged during abatement works. The LARC must ensure that procedures to avoid any such disturbance are documented in the method statement including procedures as to how this will be relayed to site operatives. Any redundant gas pipes must be confirmed as being redundant by a competent person in writing, this must include detailed drawings which highlight the specific pipe runs. This exercise must be conducted at the expense of the LARC as per the requirement for electrical / mechanical investigation works above.

3.11 CABLING / CONDUITS / CABLES TRAYS

Where risk assessment allows, any retaining clips / cable ties are to be removed and conduits / cable trays partly or fully removed from surfaces in order to facilitate adequate cleaning of individual cable runs / cable trays / conduits and the cleaning / encapsulation of surfaces behind, where applicable. Any older cable trays / conduits etc which house significant general dirt / debris are to be removed and disposed of as asbestos waste wherever risk assessment permits, cabling must however be supported during this exercise to ensure that damage does not occur. Where it is unsafe to work on any specific item and isolations cannot be made, this specific item / group of items will be highlighted within the clearance paperwork and residual risks documented. Each item will need to be fully justified why it cannot be cleaned. In this instance a safe working methodology must be included by the LARC which allows for such items to be cleaned as far as possible.
There may be instances where cables have been recently installed within the asbestos work zones which are not heavily contaminated via a risk assessment i.e. data cables, which are tightly compacted in large bundles and may be housed in new cable trays. Where the cables and tray are of recent installation it will be a requirement to use tack cloths / H-type vacuum etc to wipe / clean the outer cabling without the need to remove all cable ties, it will however as a precautionary measure be expected that the cabling be temporarily lifted out of the trays in order to wipe clean beneath, in this instance these cables and trays will require protection prior to any general asbestos removal / cleaning works via wrapping in 1000 gauge polythene and sealing with duct tape. These are then to be uncovered during the final stage of fine cleaning works, any failure to follow this procedure may result in the analyst instructing the removal of all cable ties, cleaning of individual cable runs and removal of cables from the trays in order to conduct full cleaning works. This may be requested as it would then be difficult for the analyst to confirm that fine asbestos dust and fragments of debris have not settled / fallen into or onto these surfaces. Older cable trays which house new bunched cabling and significant dust / debris and residues which proves difficult to clean, may require removal and reinstatement and removal of some / all cable ties, all associated cost to complete must however be included within the price return.
The LARC must include for the reinstatement (supply and fitting where services are live) of cable ties, retaining clips, brackets, conduits, cable trays etc which require removal as part of the abatement works, this will be conducted following satisfactory visual inspection / clearance testing. In some instances an extra over cost may be requested by MFT or the Principal Contractor/Project Manager to upgrade containment as part of the works. The LARC must advise of any specific difficult to clean / damaged containment prior to the price return and include a separate cost to rectify via supply and installation of new.

Applicable (Y/N)	Y	**Item Numbers Applicable to:**	1
Additional Comments:	All containment and cables to be removed from the works area		

3.12 PIPEWORK / PLANT / WALLS

Due to the nature of the removal work, the LARC must ensure specific attention is given to the cleaning of areas such as pipe flange etc for the clearance phase. Where it can be clearly demonstrated no residue is present behind paint, an assessment can be made on site with the appointed analyst. Where further residual asbestos appears to be present behind any remaining minor paint, it may be necessary to remove all paint. The LARC may need to allow for solvents etc to remove thick paint to pipes / plant, this must be included within the method statement / plan of work and risk assessment. Remaining thick paint to pipes / flanges will not be accepted during the visual inspection, unless full cleaning is not a client requirement, as significant residual asbestos may reside behind. In this instance this will be documented within, any visible residues will however require removal and the LARC must allow in the price return for re-painting where applicable with an industry approved specialist heat resistant paint. Due to the intensive cleaning required, leaks may occur to pipework / flange areas etc. As per current

legislation the work area must be dry upon visual inspection and it will therefore be necessary for any such leaks to be rectified accordingly.
Any such works must be completed by an operative whom is competent to both enter enclosure environments and to complete the required task; all associated costs to complete must be included within the price return. Training must be specific to the task undertaken and cover all associated aspects of the asbestos and repair works.

Applicable (Y/N)	N	**Item Numbers Applicable to:**	N/A
Additional Comments:			

3.13 BRACKETS

Redundant brackets and brackets associated with the services to be cut out are to be removed in their entirety and disposed of as asbestos waste. Any non-redundant pipe hangers / brackets which prove an issue regarding trapped contamination or the potential for trapped contamination should be removed and disposed of as asbestos waste, these must be supplied and replaced with new like for like / industry approved and suitable brackets, all costs for which must be included within the price return. Prior to removal the LARC must fine clean an adjacent surface where the new bracket / hanger is to be installed and then remove the old hanger to ensure the pipes are continually supported and confirmation can be documented that all surfaces have been fully cleaned. It is anticipated that larger heavy duty brackets / hangers which support live pipework / plant will remain in situ, where this is the case, fine cleaning will be required to an exceptional standard and a caveat will be included within the analyst's report / completion pack / residual risks document, where applicable. Any associated smaller clips / brackets must be loosened from services in order to fully clean the bracket and the exposed surface beneath. The use of solvents etc maybe required to achieve the desired standard where fine cleaning is required, any such methods must be included within the method statement / plan of work and risk assessed accordingly.

Applicable (Y/N)	Y	**Item Numbers Applicable to:**	1
Additional Comments:			

3.14 ELECTRICAL BOXES / UNITS

Electrical boxes / units must be removed from wall surfaces in order to clean behind where contamination / dust migration may reside behind, investigation must be made to ensure that this is adhered to as far as reasonably practicable. Any such boxes / units which cannot be removed from the surface to which they are fixed or isolated must be fully justified, with valid reasoning in writing. It is extremely important that any such boxes / units are removed
wherever possible as this avoids extensive caveats in the re-occupation certification / residual risks section of the completion pack (where applicable), for which the MFT will then be required to manage in the future. Safe working methods must be submitted by the LARC to ensure that these cleaning works are completed as far as reasonably practicable, but in a safe
manner. This must also include cleaning within such boxes / units where contamination may also reside. Where boxes / units cannot be removed the outer casings must be fine cleaned as far as practicable and all gaps sealed prior to any removal works to prevent dust / bulk contamination ingress.

Applicable (Y/N)	Y	**Item Numbers Applicable to:**	1

Additional Comments:	

3.15 ENCAPSULATION REQUIREMENTS

All encapsulation is to be undertaken using ET-150 or Decadex paint unless stated otherwise.
Where surfaces to service areas i.e. plant rooms, boiler rooms, ducts and risers are to be encapsulated; this is to be undertaken in a grey colour. If the encapsulation of materials falls outside of this scope (i.e. Hospital corridors, walkways etc.) then they are to be encapsulated in White ET150. All encapsulation is to be applied in an extremely neat and professional manner via masking off adjacent surfaces / services which are not to be encapsulated. Any over spray of paint to surfaces (Cable tray, electrical boxes, pipework) not included in the scope of works will require removal prior to re-occupation sign off.
The analyst will instruct any encapsulation paint applied by the asbestos contractor prior to the stage 2 visual inspection to be removed in its entirety before re-commencing the clearance procedure. The cost and schedule for the encapsulation is to be included in the tender document and method of work. Allowances should be made for any encapsulation requested by the appointed analyst but will be relayed to the site Asbestos Manager for approval.

Applicable (Y/N)	N	**Item Numbers Applicable to:**	N/A
Additional Comments:			

3.16 USE OF BLASTING METHODS

Works requiring blasting should be undertaken in line with guidance from the TWG Minutes of the 19th meeting of the ALG Technical Working Group, 17 October 2017 ‘Abrasive Blasting Removal Systems’
The use of any abrasive blasting system must be fully justified and all the associated risks addressed. Other health and safety risks include manual handling, noise, vibration and “work at height”. It is the licensed contractor who should determine the appropriate method of asbestos removal. The client can be involved in the decision but it is the licensed contractor who must justify the use.
Inappropriate or unjustified use of abrasive blasting methods must be avoided. The licensed contractor will need to provide supporting evidence to justify use and also clearly specify where the method will be used. There needs to be a robust system in place to guard against misuse. Operatives will need to be fully trained and competent to use the equipment.
The LARC should ensure adequate provision is made in NPU calculations for the effect of the blast exercise on NPU filter efficiency. With this in mind NPU calculations will be expected to exceed the minimum calculations.
All blast media is to be removed in full from all surfaces impacted by the blast exercise.
No pipework should be subject to the blast exercise at any time; all such services must be manually cleaned.
Where fixtures or services are to be removed from the wall to allow cleaning behind, this should be carried out prior to any blasting exercise to ensure full access is gained to obscured surfaces.

Applicable (Y/N)	N	**Item Numbers Applicable to:**	N/A
Additional Comments:			

4.0 PROJECT ARRANGEMENTS

4.1 PROJECT TIMESCALES

The project timescales will be as follows. The LARC is to ensure that the timescales are met for each stage of the project

Cost Submission:	12/07/2024
Contractor Appointment:	July 2024
Notification to HSE (where applicable):	August 2024
Project commencement:	August 2024
Project completion:	October 2024

The project completion date must be adhered to, the LARC must document prior to submission of prices if the allocated time scales are not achievable as alternative programmes will need to be considered, any such proposed programmes are to be submitted to the Design Team / MFT PM.

It should be noted that the final agreed project completion date refers to the date at which all waste, scaffold, welfare, stored items etc are removed from site and the final 4th stage is issued by the appointed analyst.

Should the LARC have any comments on the timescales then these should submitted as part of the tender response

4.2 PROJECT EXTENSIONS

The appointed LARC should be aware that they are responsible for any costs or professional fees incurred by the Client as a result of unauthorised extensions or delays to the project. The normal working day for the client and the analyst is 8hrs, Monday to Friday, typically starting at 0800hrs. For example;

- Hire costs for equipment
- Client resources in resolving issues and associated project management costs.
- Timescale increases will not be entertained unless accompanied by a written request on email to the Project Manager.
- Analyst fees and costs to be recharged for extensions due to visual inspections failing or four-stage clearance tests cancelled with less than four-hours' notice,
- Costs associated with repeat clearance air tests of enclosure
- Costs of not adhering to agreed program
- Costs associated with LARCs equipment failure

4.3 WRITTEN ASSESSMENT AND OTHER DOCUMENTATION

The LARC must prepare and keep available on site the following documents as a minimum requirement:

- Assessments of likely exposure as required by regulation 6 of The Control of Asbestos Regulations 2012, including controls to be applied to reduce exposure of employees to asbestos.
- A POW as required by regulation 7 of The Control of Asbestos Regulations 2012, including details of any modifications that have been made and notified to the enforcing authority.
- Current medical certificates for all operatives exposed to asbestos.
- Consignment Notes for the Carriage and Disposal of Hazardous Waste, which must be forwarded to the client at the earliest opportunity.
- Current asbestos license, ASB5 notification and waiver (where granted).
- Other RAs (including assessments under the Control of Substances Hazardous to Health Regulations 2005 (COSHH) and assessments made under the Management of Health and Safety at Work Regulations 1999).
- Employer's liability compulsory insurance certificate.
- A copy of the company's current standard procedures (SOP's).
- Site log / daily records check on enclosure, DCU and air extraction etc.
- Test certificates for NPUs, any other plant in use and DCU(s).
- RPE face-fit records for all personnel working with asbestos. Where several pieces of RPE are in use, face-fit records should be on site for all types.
- Training records for all personnel working with asbestos.

4.4 METHOD STATEMENT AND REQUIRED INFORMATION

A Plan of Work/Method Statement for the works shall be produced by the LARC for review by the Principal Contractor/Project Manager and MFT.

The LARC shall provide prior to the Pre start meeting;

- The LARC's proposed master programme or a summary thereof showing the sequence and timing of the principal parts of the Works, including the overall completion date;
- Sub-Contractors or Suppliers: The details of the principal specialists that the LARC expects to use on the project and sub-contractors, if any.
- Site Establishment: Details, numbers and job descriptions of site and other personnel to be employed in the running of the contract and details of preferred location of site accommodation.
- A licence to Work with Asbestos Insulation and Asbestos Coating.
- A Health and Safety Policy document related specifically to the contract Works.
- A copy of the LARC's COSHH Assessments in accordance with the Control of Substances Hazardous to Health Regulations 2002.

An outline Plan of Work Method Statement for the works, which should include but not be limited to the following:

- Details of the size, number and exact positions of enclosures to be provided in order to carry out the work and intended method of construction.
- Details on the design of any scaffold and/or access equipment to be used
- Details of the rating, numbers and positioning of negative pressure units to be used on each enclosure.
- The LARC must also supply a calculation of the number of air changes per enclosure supplied by the negative pressure equipment, which will be expected to exceed the minimum calculations.
- The removal methods for all ACMs being removed from site;
- Detailed site plan incorporating, respirator zones, welfare facilities ,hygiene facilities and skip locations;

- Details of the make, design, size and proposed location of the decontamination unit(s) to be used;
- Details of the where the 3 stage airlock systems will be located;
- Waste / Operative transfer routes and details of the proposed waste disposal facility;
- Locations of drainage points, electrical and water supplies;
- Management flow chart to include sub-contractors supervision;
- Risk Assessments
- Details of compliance with any other relevant Health & Safety requirements;

The LARC shall record progress on a copy of the programme kept on site. The LARC shall update or redraft without delay if any circumstances arise, which affect the progress of the Works and submit copies of all revisions to the Client.

4.5 SITE MEETINGS

The LARC shall include for attending regular site meetings anticipated to be bimonthly and held within the site compound.

4.6 ACCESS/EGRESS ARRANGEMENTS

The working days and hours for the project will be Monday – Friday, 08:00 – 16:00. The access and egress arrangements for the project are as follows;

- The main access to the area will be via the compound which will be controlled by the Principal Contractor.
- Contractor parking is available on site with a contractor parking ticket/pass available from the office inside the entrance to estates Block G6.
- Permits are required for all working on site. Asbestos permit will be issued for the duration of the works. All permit access requests will be required alongside RAMS and are to be sent to the asbestos manager and estates department for issuing.
- Smoke detectors will require isolating to the areas that fall within the works area. A fire alarm isolation permit request will be required. This is to be arranged via the Principal Contractor/Project Manager/Asbestos Manager and Estates Electrical Engineers. Typically, the isolations will be in place from 08.00 – 15.30 to permit works. No works can be undertaken without the isolation of smoke detection.

Careful consideration must be given to the access arrangements when working adjacent operational areas.

4.7 LOCAL AUTHORITY REQUIREMENTS

The LARC shall include for all costs incurred in ascertaining and complying with all Local Authority, Fire Officer and Police Authority requirements in connection with ingress to or egress from the site, the standing of any vehicles, plant or materials on any road, path or verge, the removal of each or other materials from the surface of the roads, paths or verges and any other matter over which such authorities have jurisdiction. Any damage caused to roads, paths and verges shall be made good at the LARC's expense.

4.8 INSPECTION ACCESS

Every facility is to be afforded to the appointed analyst / consultant, client representative and/or the HSE Inspectorate to examine the work before, during and on completion of the work.

4.9 DAMAGE

The LARC will be responsible for the costs of all damage including damage to the electrical installation and water damage resulting from his negligence or due to a lack of reasonable care.

4.10 TRANSIT/WASTE ROUTES

Positions must be confirmed with the Client / Principal Contractor/Project Manager / Site asbestos Managers during the pre-start meetings. The LARC must consider the most appropriate times to complete transit of waste to ensure minimal public / MFT Staff / Visitor contact and disruption.
The LARC shall satisfy that he has a safe procedure to transit between airlocks and the decontamination unit, which does not endanger the health, safety and welfare of:

- His own personnel, site staff other contractors and the client
- Others in the building or on the adjacent site.

Clear distinction must be possible between protective clothing used for the purpose of asbestos removal and transiting and the following colour coding should be adopted:-

- Work zone - Red overalls
- Transit zone - Blue overalls
- Other areas - White overalls

In addition to the contractor’s own inspections, tests, both visual and analytical will be carried out on the transit route by the appointed analyst to ensure it has not become contaminated with asbestos fibres. If this is found to be the case then the LARC shall clean this area to the satisfaction of the analyst at the LARC’s own expense.

4.11 REMOVAL OF ASBESTOS

Asbestos materials shall be removed by methods reducing airborne fibre concentration to the lowest levels deemed reasonably practicable. The LARC shall include for the provision and use of approved fibre suppressants.

All asbestos shall be removed by controlled methods by trained persons deemed competent (over the age of eighteen years) who have been instructed in correct working procedures, who are wearing the correct respirators and protective clothing and who are maintaining all safeguards necessary for the safe removal of the asbestos.

Asbestos waste shall be immediately bagged or contained in suitable containers. Where bags are used these should be red 500 gauge polythene sacks, sealed at the neck using 50mm tape and placed into a second clear 500 gauge polythene sack. Other containers must be clearly labelled with suitable asbestos warning signage and sealed.

Asbestos waste shall not be left or temporarily stored in the working areas. The working area shall be clear of all asbestos waste at the end of each shift.

4.12 CONTROL / DISPOSAL / CARRIAGE OF ASBESTOS WASTE

All materials covered (unless otherwise specified) by this document shall be disposed of as asbestos waste.

The LARC is to be regarded as the 'producer' of the waste for the purposes of The Environmental Protection Act; Duty of Care Code of Practice. He will therefore be responsible for all relevant documentation including raising of Hazardous Waste Consignment Notes.

Asbestos waste must be removed from the work area at regular intervals in accordance with HSG247, this will avoid an accumulation of waste which would in turn lead to a number of unnecessary risks / hazards. All waste must be disposed of in UN approved bags or wrapped in 1000 gauge polythene with appropriate asbestos waste signage visible in all instances. Waste shall not be taken through the main hygiene facilities. If the hygiene facilities are attached to the enclosure, separate openings for the removal of waste should be provided

All waste shall be transferred to a suitable waste skip which shall be kept locked at all times when not attended, appropriate warning signage must also be visible. Where vehicles are to be used to transfer waste this must be clearly documented within the site specific method statement, the vehicle must house a clear and sealed separation for the waste from tools etc. The LARC will be responsible for ensuring that the Carrier's Collection Certificate is completed and for ensuring the completion of the Disposer's Certificate. Any necessary amendment to the Producer's Certification and description of the waste should be made by the LARC.

The LARC is to allow for all disposal costs including Environment Agency fees, skip hire, transport, tipping and Landfill Taxes.

All asbestos is to be disposed of at a licensed approved tip/landfill site in accordance with the Environmental Protection Act 1990 and the LARC must include for all disposal, transport and tipping charges.

Any accidental spillage must be rectified immediately using appropriate methods / techniques i.e. secure the area, H type vacuum, analytical attendance / sign off etc in accordance with the UoM Asbestos Management Plan and HSG247, general methods for which must be available on site in the LARC SOPs.

Under no circumstances must asbestos waste be brought in from any other location and deposited at the site as this will be a direct infringement of The Environmental Protection Act 1990 and associated regulations.

4.13 CARRIAGE OF WASTE

Waste shall be carefully transferred off site by vehicles provided by the LARC or nominated Sub-Contractor for transport to an authorised waste-tipping site. The transfer of asbestos waste from site

to tip should be in accordance with the Consignment Note procedure laid down in the Control of Pollution Act 1974 and the Hazardous Waste Regulations 2005.

The LARC shall provide a copy of the "Waste" carrier's registration certificate prior to any waste being removed from site.

4.14 DISPOSAL OF ASBESTOS

Disposal of all asbestos waste shall be in accordance with the Control of Pollution Act 1974 and the Hazardous Waste Regulations 2005 and any subsequent statutory amendments.

All asbestos shall be disposed of at a landfill site or waste transfer station licensed to receive asbestos waste. All consignment notes must be forwarded to the Principal Contractor/Project Manager for collation prior to issue to the Client.

The LARC shall provide a copy of a valid certificate of Registration for the carrier of waste and the landfill site waste disposal licence prior to any waste being removed from site.

A fully completed Producers copy (A to E inclusive) shall be given to the Client for his retention by the LARC. The LARC shall be responsible for ensuring that the Carriers Collection Certificate is completed.

4.15 WASTE SKIP / DECONTAMINATION UNIT LOCATIONS

The LARC will confirm positions with the Client / MFT / Principal Contractor/Project Manager / Site Asbestos Managers once appointed and prior to submission of RAMs and HSE Notification.

4.16 HYGIENE FACILITY

The LARC shall provide on-site, a hygiene facility for the use of all persons who must enter the work or transit zone and/or are engaged in asbestos disturbance Works.

The hygiene facilities shall be of a design in accordance with HSG 247 "The Licensed Contractors Guide" and meet with the satisfaction of the local enforcement department.

The hygiene facilities shall be maintained on-site throughout the whole Works and be of the appropriate size to provide the necessary showers, washing and storage facilities to meet the requirements of the Works.

The location of the hygiene facility shall be dependent on design by the appointed contractor.

All suitable services shall be ascertained, provided and connected by the LARC at his own expense.

The hygiene facility shall have hot and cold running water supplies and filtered waste water outlets connected to a suitable point of drainage.

The hygiene facility shall be locked at all times when not in use.

The hygiene waste filter shall be replaced as necessary and the used filter disposed of as asbestos waste.

4.17 ACCESS EQUIPMENT

The LARC is to provide safe and suitable access equipment during the work for both their own staff and the site analyst(s). The access equipment supplied must provide standing access to all areas of the enclosure / work area. Ladders do not fulfil the requirement for standing access as a work platform, the LARC is therefore to provide a written procedure for access arrangements to enable full access to all areas. Where access equipment is deemed unsuitable or unsafe buy the analyst or where this does not allow free access to inspect all surfaces in close proximity then the visual inspection will fail until suitable access can be provided. Any associated programme delays / additional costs as a result of this will be borne by the LARC. All access equipment that will be required during the works is to be included in the price return.

4.18 WELFARE FACILITIES

The LARC may be required to provide their own welfare facilities for the duration of the works. Temporary welfare where required on site must be of sufficient size etc to accommodate all operatives on site, including the appointed analyst(s), all associated costs to supply must be included within the price return, as a separate cost option. This cost option must include provision to supply necessary connections. Where it is necessary to use temporary welfare and the units are to be sited against or directly adjacent to buildings it may be necessary to use fire resistant cabins for insurance purposes. Any such cabins must not restrict access or fire escape routes. Locations will be agreed with the project team.

4.19 LICENCES, MEDICAL CERTIFICATES & TRAINING RECORDS

Copies of current licences, medical certificates and training records for all employees shall be submitted prior to the commencement of any Works by the LARC to the Client and the relevant Enforcing Authority.

4.20 ENCLOSE THE WORKS

All removable items within the intended layout of the working enclosure shall be presumed contaminated unless confirmed otherwise.

Scaffold tubes from external areas which enter the enclosure demise are to be capped and tagged as potentially contaminated within, these are to be under controlled conditions and inspected prior to removal from site.

Under no circumstances can any materials used during the construction of the working enclosure obscure or cover any of the asbestos materials wherever practicable. Furthermore these same materials will not obscure or cover any aperture or recess that will be affected by the overall asbestos cleaning/decontamination. Every care must be taken during the construction of the enclosure not to disturb the asbestos materials. Any areas which require sealing, and which are suspected of being contaminated with asbestos fibre, shall be pre-cleaned using H-Type vacuum cleaners, before sealing with a suitable material or taping is carried out.

Every effort must be made to seal the area, it is advisable that expanding foam is only used to areas not affected by asbestos and associated debris and authorised by the appointed analyst. Any areas where an air tight seal cannot be achieved, owing to inaccessible apertures/recesses then such points must be segregated and monitored.

Disturbance of asbestos materials is unavoidable during enclosure construction therefore operatives are to wear suitable Respiratory protective equipment and disposable coveralls. Disturbance in such cases must be kept to a minimum as far as is reasonably practicable. Monitoring must be undertaken to validate working methods and exposure in accordance with industry guidance and best practice.

Existing walls/ceilings being utilised to form part of the enclosure should have a smooth impervious surface to enable cleaning and decontamination. Any rough or non-cleanable surfaces should be pre-cleaned and sealed.

Where the fabric of the building does not form the whole of the enclosure, enclosures and screens must be constructed of 50mm x 50mm timber studwork to ensure a secure structure and provide adequate support for the sheeting. The timber stud must be used as to be outside of the enclosure to prevent the contamination of studwork during works. Should timber have to be inside the enclosure then it must be removed as hazardous waste upon works completion.

All sheeting must be of minimum 1000 gauge polythene internally fixed to the timber stud using 10mm staples; all joints between the polythene and timber shall be sealed using 75mm cloth tape.

Clear Perspex vision panels are to be incorporated into windows of the enclosure construction to allow supervisors not working within the enclosure to monitor works. Where a full view of works cannot be achieved, the use of a CCTV system shall be utilised.

4.21 CCTV / VIEWING PANELS

Where vision panels do not allow the removal area to be viewed in its entirety full colour CCTV will be required showing all parts of the enclosures at all times accompanied by a suitable quality of screen(s). The resolution of CCTV must be such that it allows individuals to be identified on screen. This is not only important for the removal supervisor but for the appointed analyst as this will generally confirm progress, cleanliness and work methods adopted without the need for enclosure entry.

4.22 NEGATIVE PRESSURE CALCULATIONS, POSITIONS AND UNITS

Careful consideration must be made as to the size and design of enclosures to ensure that suitable air management can be achieved. Following installation of NPUs and sealing of the areas they must be smoke tested. This must be witnessed by the analyst and documented. NPU's must not be exhausted into a contaminated space and should be vented externally.

Adequate negative pressure and position of units / roving heads etc is to be provided in all instances, this is the full responsibility of the LARC and must be in accordance with HSG247: The licensed contractors' guide. Full details on the positions, calculations, units to be used etc are all to be documented in the LARC's method statement / plan of work.
The LARC must ensure that NPU calculations for the effect of the blast exercise on NPU filter efficiency are taken into consideration. NPU calculations in this instance will be expected to exceed the minimum calculations to ensure that requirements as per HSG247 are achieved.

4.23 TEST ENCLOSURE INTEGRITY

The LARC is to ensure via the means of smoke testing and visual inspections, that the integrity of the enclosure is adequate prior to the commencement of any work with asbestos. Records must be maintained that the enclosure has subsequently been thoroughly visually examined and approved for continued work before the commencement of each shift.

4.24 CONTROL ACCESS AND EGRESS

Ensure that the only access to and egress from the enclosure is via a minimum three chamber air lock system constructed of rigid supports and heavy gauge polythene sheeting.

Access and egress to enclosures must be via a three-stage airlock system consisting of three separate chambers. The Clean end, Middle section and a Dirty end. Each chamber shall be a minimum of 1 square metre and suitable for the necessary overall changing, vacuuming etc. due to the nature and size of the works it may be prudent to allow for larger air locks

The airlocks must be constructed using 1000 gauge polythene fixed to pre-fabricated metal frames where doorways etc. allow. Where the metal frames cannot be utilised other frames such as a timber stud or plastic 'speed' frames can be used. The airlocks must be constructed specifically with access openings between each compartment; the airlocks must be airtight with any apertures sealed using 75mm cloth or foil tape. Each access between compartments is to have a weighted flap on the internal side to prevent outwards air movement.

An additional flap is to be sited to the front of the airlocks (clean end) to be used in an emergency (if NPU fails) to seal the enclosure or when NPU has to be switched off. This flap has a further warning sign posted for such cases.

Incorporated within the three stage airlocks must be:

- Dirty End: Red asbestos labelled waste sack and small H Type vacuum.
- Middle: Bucket of water with sponge/hand held water spray.
- Clean End: Clear asbestos labelled sack.

The enclosure shall incorporate a three stage bag lock (where size constraints permit) on the Ground floor constructed in a similar fashion to the airlocks but larger. The bag lock will be for the removal of asbestos waste from the enclosure only and not used prior to transit to hygiene facilities, the bag lock must be purpose constructed and of sufficient size to accommodate the waste removal.

Appropriate asbestos warning signs will be affixed to the enclosure, airlocks and any access points

4.25 ARRANGEMENTS TO DEAL WITH ACCIDENTS, INCIDENTS AND EMERGENCIES

The following procedures should be followed in the event that an accident, incident or emergency occurs, relating to the removal or repair of asbestos containing materials at the aforementioned workplace. A relevant safety drill should also be implemented and tested periodically.

Workplace, process and other hazards should be identified (e.g. confined spaces, asbestos containing materials, biological and chemical agents etc.) and made available for inspection to anyone involved directly or indirectly in the work. Also, the details must be available to any relevant accident and emergency services attending the specific area of site to which the procedures relate. It is therefore appropriate to display the procedures and supporting information in the workplace.

It is the responsibility of LARC to provide suitable and sufficient emergency procedures if engaged to carry out the aforementioned work. This should be communicated to all persons directly and indirectly involved in the activity and recorded within the plan of work (method statement) which must be kept on site for the duration of the contract.

A detailed and site specific emergency procedure in accordance with regulation 15 of the Control of Asbestos Regulations 2012 should cover as a minimum the following:

- Fire
- Medical emergency or serious accident within an active stripping enclosure
- Damage or spillage of waste during transfer along the waste route
- Loss of containment in an active stripping enclosure

Such procedures should include the means to raising the alarm, and procedures for evacuation.

Spare sets of disposable overalls and suitable and sufficient respiratory protective equipment must be kept on site to facilitate emergency access to the asbestos area.

The contaminated areas should be restricted to the LARC and other competent persons. The analyst shall continue monitoring in order that the extent of contamination can be verified and a decontamination plan drawn up.

The contaminated area will be thoroughly cleaned of visible dust and debris by the LARC. A careful visual inspection will also be made by the analyst to confirm the remedial measures have been effective.

Reassurance monitoring will be undertaken to confirm that the “clean-up” operations have resulted in fibre concentrations <0.010 f/cm3 prior to the area being regarded as suitable for normal occupation. Communication systems to be used in accidents, incidents and emergencies shall be detailed within the LARC plan of work /method statement.

It is essential that competent advice is available at the time of an accident, incident or emergency to provide information on specific hazards likely to arise. Therefore a nominated representative of the LARC should attend the workplace

4.26 LIGHTING

Correct lighting is of vital importance, the LARC must ensure ALL surfaces within all enclosures are fully lit at all times ensuring the position of lighting allows operatives and analysts to work / inspect without shadows obscuring the view. Insufficient lighting will generally result in a poor standard of cleaning and in turn failed visual inspections and time delays on the works, it is therefore in the interest of the LARC to provide accordingly.
In addition to background lighting, all operatives engaged in cleaning activities must each have a high powered LED head torch / hand torch working at all times during their work. Analysts will use high powered LED torches during visual inspections, LARC operatives therefore need to be able to assess the area in the same way as the analysts in order to attain a suitable standard of clean.

4.27 SITE SECURITY

The LARC is to adequately protect all parts of the works as set out in the document. Wherever work is of an especially vulnerable nature or is exposed to abnormal risks provide special protection to ensure that damage does not occur.

The LARC shall adequately safeguard the site, products, materials, plant, the Works and any existing buildings affected by the Works from damage and theft. Take all reasonable precautions to prevent unauthorised access to the site, the Works and adjoining property.

4.28 HOUSEKEEPING AND NUISANCES

The LARC is to take all necessary precautions to prevent nuisance from smoke, dust, rubbish and other causes in accordance with the Asbestos Abatement Scope of Works. Properties adjacent to the works may be occupied during the abatement works and disruption and inconvenience to the occupiers must be minimised during the proposed works. The LARC shall remove general rubbish and debris at regular intervals and keep the site and works clean and tidy in accordance with the Asbestos Abatement Scope of Works. Transit routes must be clear at all times.

4.29 EXISTING SERVICES

The appointed LARC shall:

- Observe local and / or service authority's recommendations for work on / adjacent to existing services
- Adequately protect, uphold, maintain and prevent damage to all retained services. Do not interfere with their operation without consent of the service authorities or private owners, or the Client as appropriate
- If any damage to services results from the execution of the Works, notify Principal Contractor/Project Manager/MFT and appropriate service authority. Make arrangements for the work to be made good without delay to the satisfaction of the service authority or private owner as appropriate
- Replace any markers, tags or protective covers disturbed during site operations to the service authority's recommendations
- The LARC should ensure that all relevant services are isolated prior to the works commencing by liaison with the Client. Appropriate certification will be required and held on site to ensure that the relevant services have been isolated.

4.30 SITE WASTE MANAGEMENT PLAN

The LARC is to ensure that they have considered the requirement for a Site Waste Management Plan, and that the cost for organising such as plan, in the appropriate category in included in the Tender cost.

4.31 SITE ENVIRONMENTAL MANAGEMENT PLAN

The LARC is to ensure that they will comply with the Environmental management plan for site to cover such issue as stored fuel and surfactants used during the removal works.

5.0 ANALYTICAL STANDARDS

5.1 ANALYTICAL TESTING AND CERTIFICATION

Manchester University NHS Foundation Trust utilises the companies listed on the SBS framework to undertake independent analytical attendance. This work will be undertaken by a UKAS Accredited Laboratory who have been appointed in accordance with the SBS framework.

The analytical consultants will not be acting in a supervisory role but will be acting in a management type role on behalf of MFT in terms of analytical testing / inspection, site audits and site diaries.

A consistent approach in the allocation of staff for clearance testing will be adopted wherever possible, there will however be instances where this is not possible and in particular out of hours / weekend working. It may be prudent for the LARC to consider times / dates for clearance testing to ensure consistency as far as practicable i.e. weekday during normal working hours, wherever possible. Analytical attendance will always be accommodated wherever possible, however where requests are made at short notice due to a lack of planning, any such attendance cannot be guaranteed. The analytical consultancy will accept no liability for project delays / additional costs etc where any such lack of planning / late requests occur.
Upon completion of removal and fine cleaning works and as per HSG247 the LARC must undertake a full detailed visual inspection of all surfaces within the enclosure prior to requesting clearance testing, they must also ensure during this process that the scope of works has been completed as per the Asbestos Abatement Scope of Works.

Photographs of any problem areas during a failed visual inspection should be taken by the analyst, saved and generally included within the completion pack (where applicable) as this provides evidence beyond doubt should the reasons be challenged and will monitor performance of the LARC on behalf of The Trust.

5.2 ANALYTICAL CERTIFICATION AUDIT

The Manchester Foundation NHS Trust may appoint a separate additional analytical consultancy to audit the standard of clearance / reoccupation certification after stage 3 and/or stage 4. This will also be undertaken in house by the on-site Asbestos Managers / Group Asbestos Manager. This audit will take into consideration the LARC and appointed analyst for the project to ensure that exceptional standards are maintained. This audit falls outside of UKAS Accredited Inspections / Testing and will not form a complete stage 2 / 4 inspection of the areas; this will however mainly focus on difficult to clean areas and general spot checks of surfaces. The auditing analytical consultancy will enter the area following stage 3 clearance air tests, but prior to commencement of the 4th stage and de-sheeting of enclosed work areas. A further inspection may also be required upon completion of the 4th stage re-occupation certification. The LARC must allow enough time in the programme for this inspection and adequate time to deal with any associated findings.

5.3 FINE CLEAN EXPECTATIONS

The definition of 'cleaned' as it pertains to the specified works means all dust, debris and any porous or friable material adhering to easily accessible surfaces is removed. The standard of cleanliness should achieve a satisfactory Four Stage Clearance as defined by Health and Safety Executive (HSE) Approved Code of Practice (ACOP) L143 "Working with materials containing asbestos: Control of Asbestos Regulations 2012".

No surface is exempt from this work regardless of its complexity and all surfaces will be thoroughly inspected from all angles during the visual inspection. The LARC is to remain mindful of this when assessing resource for the work. Difficult to reach areas must be cleaned as far as practicable and in order to do this specialist tools may be required. The appointed analyst must be satisfied that reasonable effort has been made to clean such areas. Any standing water within the area must be addressed by the contractor. It must be treated as contaminated and disposed of accordingly unless otherwise stated. It is the intention following the removals to leave as few caveats as possible on completion of the work and therefore any and all difficulties which arise should be dealt with as part of this work.

The analytical consultancy will expect exceptional standards of fine cleaning to all surfaces within the enclosed work area. All visible residual asbestos, asbestos debris, general dirt / dust, cobwebs etc are to be removed from all underlying surfaces. Fixings to the building structure such as cables, cable conduits, electrical units, alarms, light fittings etc are to be released from the surface to allow adequate cleaning behind. Conduits are expected to be fully opened, fine cleaned within including all contents and left open for the analysts visual inspection (see pages above relating to services etc for further details). It is expected that difficult to reach areas are cleaned as far as reasonably practicable. Difficult areas may include behind fixtures close to walls which cannot be removed, within wall cavities etc.
The appointed analyst must be completely satisfied that reasonable effort has been made by the LARC to release fixings etc and clean these areas. Where blasting methods have been used, all associated blast media is to be removed along with all paint / residue to ensure that only the bare surface / structure remains. A selection of tools, crevice tools etc must be used to clean all areas of the enclosure as far as reasonably practicable.
Where insulation debris is present adhered to neighbouring surfaces it will be very difficult to prove no asbestos present behind paintwork and as such the assumption should be made that all surfaces need to be cleaned.

On completion of the removal phase of work the contractor should undertake a full visual inspection of the enclosure prior to requesting the clearance process to commence. In undertaking this work, the site supervisor must visually inspect every surface using appropriate lighting and tools (HSG247 Asbestos: The licensed contractor's guide; 7.118). This activity must be undertaken as it provides a clear separation between the removal work and the clearance work. It is vitally important for the supervisor to carry out this work thoroughly as failure to do so will result in the visual process being aborted and delays incurred. As per HSE guidance it is a requirement that on formal handover via a supervisor to the analyst that a signed inspection report is completed and recorded within the site documentation

The clearance testing will be in accordance with Guidance Note HSG 248 'Asbestos: The analysts' guide for sampling, analysis and clearance procedures' and the CAR 2012. Measurement of airborne fibre concentrations will be in accordance with HSG 248. All of these documents are published by the Health and Safety Executive.

5.4 4TH STAGE VISUAL INSPECTION

As part of the 4th stage of the clearance procedure the appointed analyst will expect the former work areas and immediate surrounding areas including transit / waste routes to be free from visible asbestos debris, waste and asbestos bags. The analyst will also ensure that all ACM's within the scope of the works have been removed and any known ACM's remaining are left intact. All components of the work enclosure are to be fully removed from the site including staples, tape, sheeting, plant, tools etc. All spray tack / tape residues are to be removed using suitable solvents where required. Any fixtures / fittings which were released from the building structure during fine cleaning are to be re-fitted unless requested not to by the MFT project team / Principal Contractor/Project Manager.
A reassurance air test will be performed on removal of all enclosure construction materials prior to reoccupation of the area by external parties. Details are to be documented in the certificate of reoccupation

6.0 LEGISLATION, APPROVED CODES OF PRACTICE & OFFICIAL GUIDANCE

6.1 RELEVANT LEGISLATION AND GUIDANCE

All work must be undertaken strictly in compliance with the following Statutes, Statutory Instruments, Approved Codes of Practice and Guidance (this list is not exhaustive and further regulations / guidance etc must be adhered to in all instances):-

- *Health and Safety at Work etc Act 1974 (c.37) The Stationery Office 1974 ISBN 978 0 10 543774 1*
- *Control of Asbestos Regulations 2012 SI 2012/632 The Stationery Office 2012 ISBN 978-0-11-152108-3*
- *Managing and working with asbestos. Control of Asbestos Regulations 2012. Approved Code of Practice and guidance L143 (second edition) HSE Books 2013 ISBN 978 0 7176 6618 8*
- *Management of health & safety at work. Management of Health & Safety at Work Regulations 1999. Approved Code of Practice and guidance L21 (Second Edition) HSE Books 2000 ISBN 978 0 7176 2488 1*
- *Control of substances hazardous to health (Fifth edition). The Control of Substances Hazardous to Health Regulations 2002 (as amended). Approved Code of Practice and guidance L5 (Fifth Edition) HSE Books 2005 ISBN 0 7176 2981 3*
- *Managing health and safety in construction: Construction (Design and Management) Regulations 2015. Approved Code of Practice and guidance L153 HSE Books 2015 ISBN 978 0 7176 6626 4*
- *A comprehensive guide to managing asbestos in premises HSG227 HSE Books 2002 ISBN 978 0 7176 2381 5*
- *Asbestos: The licensed contractors' guide HSG247 HSE Books 2006 ISBN 978 0 7176 2874 2*
- *Asbestos: The analysts' guide for sampling, analysis and clearance procedures HSG248 (2nd edition) HSE Books 2021 ISBN 9780616667079*
- *Asbestos: The survey guide HSG264 HSE Books 2012 ISBN 978 0 7176 6502 0*
- *Asbestos essentials task manual: Task guidance sheets for the building maintenance and allied trades HSG 210 HSE Books 2001 ISBN 0 7176 1887 0*
- *HSG53 – Respiratory Protective Equipment at Work*
- *EH 35 - Probable asbestos dust concentrations on construction processes (Revised December 1989)*
- *The Hazardous Wastes Regulations 2005*
- *The Environmental Protection Act 1990*
- *The Personal Protective Equipment at Work Regulations 1992*

Any subsequent amendments or additions together with the requirements of the Asbestos Abatement Scope of Works and instructions from the client's representative.

7.0 HEALTH AND SAFETY

- The Employer recognises that Health and Safety is of paramount importance. Under no circumstances is the Health of the Employer's Employees, the public or visitors to the site to be compromised. Where the Works affect such people, suitable safety arrangements shall be employed (e.g. scaffolds in the case of falling objects) and shall be detailed in appropriate Plan of Work Method Statements.
- The contractor shall comply within the current Health and Safety Legislative requirements and guidance notes in preparation and for the duration of the work.
- All work procedures and activities, including roles, responsibilities and communications regarding the Works are to be included within the LARC's site specific Plan of Work.
- Any requirements stipulated within the Tender documentation, which are relevant to the proposed Works, shall be incorporated within the LARC's site specific Plan of Work Method Statement.
- The risks identified in any Pre-Tender Health & Safety Plan and contained within this Tender are to be addressed in the LARC's Plan of Work.
- The LARC's employees may be required to undergo site induction training if required prior to working on the site and this should be included in the cost and programme.
- Should the proposed Works fall under Construction (Design and Management) Regulations 2015 (CDM 2015) regulations the hazards identified within any Pre-Tender Health and Safety Plan or Tender is to be addressed in the LARC's Plan of Work.
- Where the LARC becomes aware of significant hazards, which have not been adequately dealt with by the design process they shall inform the site asbestos manager and the client contact immediately. If necessary work will be suspended until the risks have been assessed by the LARC and adequate controls put in place. In such cases the LARC will be expected to make suitable amendments to the Health and Safety Plan and such amendments will be advised to the site asbestos manager and the client contact in a timely manner before the Works are undertaken.
- Power supplies to portable tools and equipment shall be 110V with centre point earth connection.
- Buildings undergoing asbestos removal Works shall not be left in a dangerous, insecure or unstable condition inside and outside of normal working hours (or within working hours where such will compromise the safety of any person). Adequate barriers, lighting, shoring, security and signage shall be utilised as necessary to ensure that Works are left in a safe condition.
- In accordance with the return Tender documents the LARC shall ensure that site access by unauthorised persons is prohibited throughout the term of the contract work.
- Notwithstanding the requirements of this Asbestos Abatement Scope of Works, or any Contract, the LARC shall include for compliance with any instructions, Improvement Notices or Prohibition Notices issued by the Local Authority or the HSE. Any site visit by the Enforcing Authority will be reported to the site asbestos manager and the client at the earliest opportunity.
- All work equipment shall be provided, used and maintained in a proper manner and, in particular, in accordance with The Provision and Use of Work Equipment Regulations 1992 and The Construction (Lifting Operations) Regulations 1998.
- The generation of dust may require the LARC to undertake assessments in respect of The COSHH (2002) Regulations. In such circumstances compliance with the exposure limits of the most recent issue of HSE document EH40 shall be met.
- All MFT sites have individual characteristics that should be understood by the contractor prior to submitting their Tender.

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The route to asbestos compliance

Acorn RAMS



Acorn Analytical Services
Air Monitoring &
Four Stage Clearance Information Pack

Contract Review Form
CDM Information
Plan of Work
Project Risk Assessment
COSHH Assessment

Project Number
B-49309

Site Address
-
North Manchester General Hospital
Delaunays Road
Crumpsall
Manchester
M8 5RB

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Acorn Analytical Services
Four Stage Clearance Information

1. Analytical Pre-Contract Review

Project Number	B-49309
Acorn Analyst	Aadam Sidat, Rayhaan Bhana
Client	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB
Client Contact	James Maxwell
Client Contact No	
Client Email	james.maxwell@mft.nhs.uk
Order Number	Awaiting PO
Site Address	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB
UPRN	-
Site Contact	Nigel Woods
Site Contact No	07938929655
Type Of Work	Air Monitoring & Four Stage Clearances, SOC
Works Dates	19/08/2024
Acorn Site Attendance	<Acorn Site AttendanceAir Mon & Four Stage Clearances / SOC>
Specific Requirements	Provision of Air Monitoring & Four Stage Clearances, SOC at North Manchester General Hospital, within Block 32, during both licenced and non-licenced removal works. SURVEYORS PLEASE NOTE: Surveyor to contact Project Manager before leaving site to inform of any no accesses during survey. Surveyor to document this when uploading data under the no access section. Operatives to refer to MFT General Technical Specifications for specific requirements, prior to undertaking works. s SITE ACCESS VIA RESET. RAMS & Permit must be submitted 7 working days prior to works starting on site. Site Inductions are held daily and all operatives must sign in at RESET Terminals on site. Project Managers or Site Asbestos Managers must meet operatives on site on the first day of works starting. MFT010 client only require concerto to upload documents

Acorn Analytical Services
Four Stage Clearance Information

Location For Site Laboratory Set Up	<Location for Site Laboratory SAir Mon & Four Stage Clearances />

AIB Cement 1-2 Pump	Yes	**AIB Cement 3+ Pump**	No	**Thermal 1-2 Pump**	No
Thermal 3+ Pump	No	**Spray Coating**	No	**SOC**	No

Project Completion Pack Required	No

Updated Asbestos Register Required	No

Acorn Analytical Services Limited has reviewed the request and can confirm that the organisation has the capability and resources available to undertake the work in accordance with documented in-house procedures, HSG248: The Analysts' Guide. The above work will be carried out as agreed. In the event of no response from the client it will be assumed that all is satisfactory and work will commence as agreed.

For Four Stage Clearances, a copy of the Licensed Contractor's plan of works must be obtained and read in conjunction with this document.

The following are applicable as designated in Type of Work:

All Four Stage Clearances will include DCU clearance(s) as per project requirements.

Certificate (Statement of Cleanliness) is Outside UKAS Accreditation.

Four Stage Clearances are not a requirement of non licensed materials but can be carried out at the Client's request.

2. Health And Safety Information/Assessment

Nearest A&E Department	<Nearest A&E DepartmentAir Mon & Four Stage Clearances / SOC>
Site Induction Arrangements	<Site Induction ArrangementsAir Mon & Four Stage Clearances / SOC>
Welfare Facility Details	<Welfare Facility DetailsAir Mon & Four Stage Clearances / SOC>
Client Confirmed Health And Safety Information	<Client Confirmed Health And SaAir Mon & Four Stage Clearances />

3. CDM Information

Client Address
Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB
Who Will Be Responsible For Ensuring The Job Runs Safely
Aadam Sidat, Rayhaan Bhana Acorn Analytical Services
Who Will Be The Principal Contractor If Applicable
<Who will be the principal contAir Mon & Four Stage Clearances />
Who Will Be The Principal Designer Be If Applicable
<Who will be the principal desiAir Mon & Four Stage Clearances />
Who Will Be The Designer (Client) Be If Applicable
Manchester Foundation Trust
How Will You Keep Everyone On Site Updated During The Job
Daily briefing before work starts, face to face as changes arise, written work instruction, follow plan of work and risk assessments and in house procedures.
Where Are Your Toilet, Washing (Basin With Hot And Cold Running Water) And Rest Facilities
<Where are your toilet, washingAir Mon & Four Stage Clearances />
F10 - Notification Of Construction Project Required ***(Is The Project Lasting Longer Than 500 Person Days, Or 30 Working Days With More Than 20 People Working At The Same Time.)***
No
What Are The Tasks You Will Be Undertaking On This Project
Air Monitoring & Four Stage Clearances, SOC

4. Air Sampling And Fibre Counting Principle

Air sampling involves drawing a known flow rate of air through a filter for a measured time, so that airborne particles are collected. The filter is prepared and examined by phase contrast microscopy. A known fraction of the filtered deposit is examined and fibres fitting a specific criteria (>5um long and <3um wide with an aspect ratio > 3:1) are counted to the World Health Organisation (WHO) guidelines. The calculated total number of fibres collected on the filter is divided by the volume of air taken to determine a fibre concentration in terms of fibres per centimetre cubed of air (f/cm^3). All work is undertaken following guidance in HSG248: The Analyst Guide.

Fibre Discrimination

This method applied, does not identify the type of fibres present. Acorn Analytical Services do not and are not UKAS accredited to perform any fibre discrimination.

Sampling Volumes

Guidance on the sample volumes and counting rules for air monitoring are detailed in HSE Document; The Analyst Guide HSG248.

With these guidelines in mind, the following rules are provided as a documented in-house method for leakage monitoring tests. The minimum volume of a monitoring test should be 480 litres unless urgency or the presence of background dust dictates otherwise. The sample may be collected at a flow rate of up to 10 litres/min. Personal Sampling should be collected at a flow rate of up to 4 litres/min.

Limitations on Counting

When planning a monitoring strategy, it should be remembered that a limit (i.e. 2400 graticule areas) is placed on the number of samples that can be analysed by Analysts during the course of an eight-hour shift. If this limit is likely to be exceeded, then a second Analyst must be available to assist in the analysis. Both Analysts are to sign the certification (initialling the air tests counted as usual). If this is not possible the emergency procedure below applies.

In some cases, it may be possible to take an initial series of tests at the commencement of stripping operations and then to reduce the flow rate to allow subsequent tests to be taken over a longer period of time.

Procedure for Filter Mounting

Undertaken in accordance with documented procedures and the requirements of HSG248 The Analysts Guide. – see Visual Task Sheets (available upon request).

5. Types Of Air Sampling

Static Air Sampling

With these guidelines in mind, the following rules are provided as a documented in-house method for static air sampling. The minimum volume of a monitoring test should be 480 litres unless urgency or the presence of background dust dictates otherwise. The sample may be collected at a flow rate of up to 10 litres/min.

Background Sampling (BT)

The objective of background sampling is to measure the concentration of respirable fibres present before any disturbance work commences. Background air sampling is advisable in order to determine the presence of other sources of fibres, which may affect future interpretation of other types of static air samples undertaken. When carrying out sampling of this nature, similar strategies to those described for leakage monitoring should be employed. A minimum of 480 litres of air should be achieved to ensure a limit of quantification of <0.010 f/ml

Reassurance Sampling (RT)

Reassurance sampling is usually conducted following an asbestos 'incident', when material may have been inadvertently disturbed or discovered after asbestos removal (e.g., during and/or after the removal of the enclosure after completion of the 4-stage clearance or following a sudden deterioration of a material such as collapse of a ceiling following a water leak).

Reassurance sampling should be carried out only once the area has been confirmed as visually clean from debris and dust. If debris or dust is present, then it should be cleaned up before sampling. A visually clean environment is a significant indicator of a dust-free situation. Dust disturbance should not be carried out as part of reassurance sampling unless there are effective controls in place to prevent dispersion of asbestos (e.g., a new enclosure is built, or the room/building is isolated from other rooms).

Reassurance Air Samples should be offered to all clients upon the completion of the four-stage clearance. A minimum of 480 litres of air should be achieved to ensure a limit of quantification of <0.010 f/ml.

Leak Testing (LT)

The removal of asbestos bearing materials are almost always undertaken inside specially erected enclosures fitted with dust handling units designed to prevent the egress of dust and fibres from the stripping area to the outside. Before the start of any removal operation, it is usual for the integrity of the enclosure to be tested by the placing of smoke generators inside and then searching the areas around the outside of the enclosure for signs of smoke leaks.

In spite of these precautions, it is not unusual for an enclosure to leak during the course of an asbestos removal project. To identify such leaks, it is good practice to carry out air monitoring of the area surrounding the enclosure during the course of the asbestos abatement works. The number and location of samples for monitoring purposes will depend on the size and complexity of the asbestos removal project. A number of sample positions should be considered for example, near the enclosure openings, near the airlock/baglock and near areas where there had been difficulty sealing. Leak testing will be required when the air extraction unit (i.e., the NPU) does not vent to the external atmosphere (i.e. it discharges inside the building).

It is advisable that a member of Acorn Analytical Services staff is present during the smoke testing of the enclosure at which point any weak or suspect areas can be identified. If an asbestos removal project is being carried out in an area around where other people may be present, it is good practice to carry out monitoring throughout the entire time the abatement works are in operation. A minimum of 480 litres of air should be achieved to ensure a limit of quantification of <0.010 f/ml.

Leak testing should involve a combination of short- and long-term sampling. Short-term sampling should be carried out daily, usually just after asbestos removal has started, to check that the controls and containment are effective. It is usually desirable to sample at higher flow rates so the presence of any significant leaks can be quickly determined by analysis of the sample on site. In some situations (e.g. where the enclosure polythene is the only barrier separating the public or other workers), sampling times may be shortened by taking two or more replicate samples side-by-side which are then analysed and the results pooled to achieve a minimum 480-litre sample. In addition, in occupied buildings longer-term sampling (e.g. for several hours)

should be carried out daily in areas adjacent to the enclosure to determine that there is no deterioration in the standard of control or enclosure integrity over the course of each work period.

Near Source (NS)

Static sampling may also be needed to assess/investigate various other situations and sources of release. The list below is illustrative and not exhaustive, to monitor, for example:

- Assess levels when working on Asbestos containing materials under semi controlled conditions.
- Specific areas inside very large enclosures such as power stations.
- Exposures where personal samples are likely to become damp or wet.
- Releases from known outdoor sources (e.g., asbestos disposal and waste transfer sites) which require a number of sampling points, both upwind and downwind, to assess the release due to variable wind direction and possible other sources of fibres in the vicinity.
- Specific tasks in very dusty operations.
- To monitor the ability to wet/suppress dust emissions.
- Situations where extended sampling is required (e.g., several 8-hour sampling periods over a week to give a more representative and sensitive average of occupant exposure).
- The simulation of specific disturbance or release scenarios from incidental or maintenance-type activities for in-place asbestos materials or residuals.

A minimum of 480 litres of air should be achieved to ensure a limit of quantification of <0.010 f/ml. In high-dust situations sampling volumes should be reduced. Analysts should exercise discretion in ensuring that the most appropriate sampling methodology is applied. The likely dust and fibre concentrations, sample time, volume and positioning/location should be taken into account in determining the most appropriate sampling parameters.

Where it is possible and conditions allow, larger sampling volumes should be collected to improve the analytical sensitivity. In many situations longer periods of sampling will increase both the analytical sensitivity and the representativeness of the sampling.

Far Source/Ambient/Perimeter sampling (FS)

Far-source and related sampling is often undertaken for reassurance or checking purposes (e.g., where an activity with the potential to release asbestos fibres is undertaken). These work activities should still be subject to control and dust suppression, as far as possible. These samples may be taken for the following reasons (the list below is not exhaustive):

- Around the edge/perimeter of contaminated waste and soil remediation work sites, where the asbestos is exposed on the surface and/or is being actively disturbed or removed.
- Around the exclusion zone of asbestos-containing buildings after a fire.
- On the edge of an exclusion zone of demolition work where asbestos materials have not been removed due to the condition of the building or structure (e.g. it is fire-damaged or derelict/ unsafe) or it has not been reasonably practicable to remove them (e.g. textured decorative coatings, floor tiles, other ACMs well bonded in the fabric of the building such as attached to concrete panels).
- Around the exclusion zone of sites where removal of external asbestos is taking place and it has not been possible to enclose the work.
- To assess the external ambient background for fibres.

As concentrations are likely to be low, an increased volume of air will need to be sampled to increase the LOQ. In many situations increased sampling times may be possible, which will give greater opportunity to include peak release events and give a more representative estimate of the average concentration at the site perimeter. At low concentrations the proportion of asbestos fibres in the PCM count is likely to be much less than compared with near-source situations. A minimum of 960 litres of air should be achieved to ensure a limit of quantification of <0.005 f/ml.

Clearance Sampling (CT)

Required at Stage 3 of the 4 stage clearance procedures. The purpose of the test is to assess whether the surfaces inside the enclosure have been sufficiently cleaned to allow the enclosure to be removed with minimal release of airborne fibres. To test this worst case, a dust disturbance simulation is carried out by brushing the surfaces inside the enclosure (e.g. sweeping with a broom) to raise any settled dust or residual asbestos adhering to the surfaces. To minimise any dilution effects air extraction units are turned off. Samples should be placed in areas close to where Asbestos materials have been removed. Details on the minimum number of air samples to be achieved and the location of the air samples is discussed in site assessment for reoccupation - Appendix 2. A minimum of 480 litres of air should be achieved to ensure a limit of quantification of <0.010 f/ml.

Pooling Air Tests

Static air tests should only be pooled if an assessment proves that it is absolutely required. Examples could include:

- If air sampling produces unreadable filters, then sampling for shorter periods with pooled samplers should be considered as this reduces the dust loading on each filter. There may be occasions when the work area is a source of non-asbestos dust that would not allow a sample filter to be analysed (i.e., gives such dense samples on membrane filters that asbestos fibres may be obscured). If this is the case an assessment of the work method/ circumstance should also be undertaken to review whether the overloading of the air samples can be managed.
- When undertaking Leak tests following the start of remedial works in occupied areas to gain an initial fibre concentration.
- In an emergency scenario where air monitoring results are required to re-open a sensitive area such as a hospital.

Where this is the case, it is permissible to achieve a measurement by pooling two or more simultaneous or consecutive samples having a total volume of at least 480 litres. Samples, which are pooled to generate a measurement should be taken within 1m of each other and are regarded as a single measurement. The pooling of Clearance samples should be avoided.

Personal Monitoring

Legal Requirements

The Management of Health and Safety at Work Regulation 5 requires Employers to have effective arrangements in place for managing health and safety. Personal monitoring records are a good indicator of performance and an aid to comparing and assessing removal situations. To achieve this sampling must be planned and recorded in a meaningful way.

The Control of Asbestos Regulations contain numerous references to personal sampling, including Regulation 19 requiring Employers to arrange regular monitoring of airborne fibres and keep records of the results, Regulation 11 Employers must ensure that personal exposure to asbestos is prevented, so far as reasonably practicable, and Regulation 22 Exposure records form part of health records that must be kept for any Employee engaged in licensed asbestos work.

Purpose of Personal Air Monitoring

- To check the effectiveness of the controls being employed (i.e., by comparison to previous concentrations of airborne fibre in similar situations and to the control limit).
- To provide data for personal exposure records.
- Support current and future risk assessments.
- To confirm appropriate RPE is being utilised.

Sampling and Time Weighted Averages

So that sampling results can be compared between jobs a standardised approach to sampling and recording is required.

4 Hour Time Weighted Averages

The control limit refers to a 'time weighted average' (TWA) of 0.1 fibres/ml of air averaged over a continuous period of 4 hours.

A single 4-hour period or a succession of sampling periods can be used. Sampling rate 1 litre/minute.

Short Term Personal Air Monitoring

Carrying out personal monitoring to assess fibre concentrations for short duration works- likely to fall under sporadic and low intensity (SALI) work.

Sampling rates for this type of monitoring would be set at the upper limit of the personal sample output of 3.5 litres/ minute with a minimum sample period of 12 minutes. The control limit for short term exposure limit is set at 0.6 f/ml.

RPE Suitability

Carrying out personal monitoring on operatives to ascertain the suitability of RPE in use. The sample period should normally reflect the duration of the operative's shift (e.g., 2-3 hours or more) to allow comparisons to be made against the control limit and exposure limit in place for the works.

Sampling Activity

To permit meaningful comparison sufficient relevant information of the work activity should be recorded. i.e.:

- The condition and type of materials being worked on. Including the scale of the work – e.g., 1 small panel or 100m^2 of panels.
- Task duration.
- The technique employed by the operative when working on the material. E.g., The removal technique/ type of maintenance work being undertaken.
- Controls in place (full/semi controlled conditions, negative pressure in use, fibre suppression methods, type of RPE in use).
- The Analyst should also be able to give an opinion on the activity, having observed during the sampling period. This could include an opinion if the controls outlined in the method statements and risk assessments were being sufficiently actioned during the works.

Analysts should keep a detailed record of the work undertaken by monitoring individuals' movements and tasks through viewing panels or CCTV and through discussion with the operative. These details are essential to allow meaningful interpretation of the sampling results. Analysts and their clients will need to make sure that sufficient resources are employed to enable the analyst to collect the relevant information (i.e., that the analyst has sufficient time on site and there are a sufficient number of analysts).

4 Hour time weighted averages should be completed on the TWA air monitoring certificate (CD171 – analytical paperwork). All other personal samples should be recorded on the personal air monitoring certificate (CD171 – analytical paperwork).

Employee Personal sampling

A system of periodic personal sampling should be adopted for all works where there is risk of exposure to Asbestos. This will enable Acorn Analytical Services Limited to monitor exposure and form suitable risk

assessments for works. The re-issued Quality Manual includes arrangements for provision of Personal air monitoring for the following tasks:

- Bulk sampling works
- Bulk analysis works
- Air monitoring works
- Enclosure entry works (4 stage clearance procedures)

Examples are shown in the table below:

Discipline	Durations	Flow rates (l/min)	Actions
Air sampling works including 4 stage clearance procedures	Short durations up to full shift (2-3 hours) – ~5% of air sampling jobs	1-3.5	Issue the personal certificates to the Quality Manager for review and upload to the drop area. Immediately inform QM of any personal results above STEL and the Control limit,

Type of air test	Sample rate (litres/ min)	Minimum volume of air to be sampled	Minimum no of graticules	Calculated airborne concentration at LOQ (20 fibres counted) (F/ml)
Personal Sampling				
4 Hour control limit	1	240	100	0.04
10-minute short term exposure limit	3.5	40	100	0.24
Specific Short duration activities	2 - 3.5	120	100	0.08
Assessment of suitability of RPE	1 - 3.5	40	100	0.24
Static Sampling				
Clearance indicator	3 – 13.5	480	200	0.010
Background				
Leak				
Reassurance				
Near Source				
Far source/Ambient/ Perimeter	3 – 13.5	960	200	0.005

NB: Stage 2 inspections should normally last no longer than 2-3 per shift inside the enclosure. So, a suitable personal sampling duration is the inspection time up to the 2-3 hour period.

Personal sampling results will be collated by the Technical and Quality Managers who will update Risk assessments accordingly.

Sampling when energetic wet blasting cleaning methods are used

Wet blasting methods are occasionally used to remove stubborn residual material or remnants such as from previous incomplete asbestos removals. These energetic methods can generate significant airborne dust, which can lead to unreadable/uncountable filters using PCM analysis. Consequently, different strategies may be required to obtain countable filters. Sampling and analysis strategies include:

- A series of short-term samples at a flow rate at 1 l/minute at the same sampling point can be taken and a time-weighted average calculated.
- If PCM analysis is going to be attempted, the filter should be cut in half before mounting a half filter for PCM analysis so that indirect preparation and/or fibre discrimination can be performed if required.

6. Control Limits

Worker exposure must be below the airborne exposure limit (Control Limit). The Asbestos Regulations have a single Control Limit for all types of asbestos of 0.1 fibres per centimetre cubed of air (f/cm^3). A Control Limit is a maximum concentration of asbestos fibres in the air (averaged over any continuous 4 hour period) that must not be exceeded. In addition, short term exposures must be strictly controlled and worker exposure should not exceed 0.6 fibres per centimetre cubed of air (f/cm^3) of air averaged over any continuous 10 minute period using respiratory protective equipment if exposure cannot be reduced sufficiently using other means.

7. Emergency Procedures

Personal contamination

In the event of personal contamination. The operative should take suitable measures to ensure they decontaminate and reduce the risk of spread of the materials so far as is reasonably practicable.

The affected personnel should:

- Put on their RPE at the earliest opportunity to prevent inhalation of asbestos dust, ensuring that any contamination to the face is removed with wet wipes before putting on the RPE.
- Dispose of potentially contaminated clothing/ footwear as Asbestos waste. This may require the affected person to change into disposable coveralls/ Footwear.
- Follow the process outlined in A15.3

Access into the area should only be considered once the risk has been mitigated and the source of the contamination investigated to avoid re-occurrence. This process should include gathering air samples for revie.

Unplanned disturbance of suspected or known asbestos on site.

In the event of any unplanned disturbance of any material believed to contain asbestos the operative will initiate the following procedures.

- Ensure suitable RPE and PPE is being worn.
- Ensure that access to the room remains restricted.
- Pick up and red bag any large pieces of debris. Use the H type vacuum cleaner to clean up any smaller pieces of debris. Wipe down all surrounding surfaces with wet wipes (the wipes should be disposed of in the red bag) If the debris is excessive then a licensed asbestos removal contractor should be contacted to assist in the clean-up operation.

- Seal any damaged or exposed area with duct tape.
- Ensure suitable decontamination procedures.
- Inform the client of the event.
- Inform the office to make arrangements for an analyst to attend site and undertake reassurance air samples.
- Access should only be allowed back into the room once the air samples show results of <0.010f/ml, and the client is satisfied the area is fit for re-occupation.
- Acorn Analytical Services Limited Health and Safety department will liaise with the client in relation to reporting the event under RIDDOR.

Elevated air sample results and remedial actions

All air monitoring results should be reported to the client on a shift basis by issuing the daily certificates. Elevated fibre concentrations should be reported to the relevant personnel immediately. Failure to report air monitoring results can lead to inadvertent exposure and non-compliance.

As the fibre monitoring will detect elevated levels only after it has occurred, it is important that a proactive approach is adopted. This can include:

- Detailed inspection of the works and methods including reviews of the controls in place.
- Good work practises to ensure exposure levels are kept at an absolute minimum.
- Inspection of the integrity of the enclosure and the control systems is carried out before starting work each shift.
- A visual check on the extent of door flap deflection can be made at the start of each shift (a door flap deflection of ~200–250 mm is expected at the base of the flap with an extraction air volume of 1000m³/hr).
- A review of Anemometer readings undertaken.
- In areas liable for enclosure breaches supplementary smoke testing and integrity checks can be undertaken.

The cause of any single elevated air test result (above 0.010 f/ml) should be investigated immediately. Work should be stopped, fibre suppression methods employed, and the situation investigated. Any areas subject to elevated fibre concentrations should be vacated and access restricted. The investigation should include:

- Inspecting the enclosure for defects;
- Checking there is sufficient airlock door flap deflection.
- Inspecting the NPUs to make sure that sufficient negative pressure and airflow is still being achieved;
- Checking with the licensed contractor to determine if there has been any change in removal methods or work practices or if operatives or waste bags have just come out of the enclosure.
- Consideration of other site factors which generate airborne material (e.g. dry brushing, handling machine-made mineral fibres (MMMF).

Any leaks or issues should be identified and rectified promptly by the licensed contractor. If a significant leak has been identified, a further smoke test should be carried out after the repair. When work resumes (irrespective of the original reason for the stoppage), resampling should be conducted at the earliest opportunity. If an elevated concentration of fibres (≥0.010 f/ml) is still found to be present, work should stop and the source should be investigated further (e.g., asbestos fibres from inside the enclosure, or possibly from elsewhere, or other non-asbestos fibres). Appropriate measures should be taken to rectify the release and/or increase the extent of the work area/exclusion zone.

In locations where elevated readings have been returned, suitable controls should be adopted to enter that location until it is demonstrated that the respirable fibre concentration is at an appropriate level for normal occupancy i.e., <0.010 f/ml

Where there is no Licensed removal contractor available on site- access should be restricted to the location of the elevated air test and the client should be consulted as to the best approach to rectify the problem. (i.e., organise for a licensed removal contractor to assist and further air monitoring to be completed).

Procedures for in the Event of Elevated Fibre Concentrations:

Elevated fibre concentrations (Contractors on Site - No enclosure)

- Stop all work and inform the foreman
- Vacate the surrounding area of all other persons
- Put on PPE & RPE
- Ensure operatives damp down the area with fibre suppressant spray
- Investigate the reason for the elevated fibre levels
- Ensure contractors amend the problem
- Reassurance air test, if result is <0.010 f/ml then;
- Give permission for contractors to resume work
- Additional monitoring and checks must be undertaken once work has resumed.
- Report to H&S Manager and the Client (submit certification)

Elevated fibre concentrations (Contractors on Site – Enclosure Breach)

- Stop all work and inform the foreman
- Vacate the surrounding area of all other persons
- Put on PPE & RPE
- Ensure operatives damp down the area with fibre suppressant spray
- Investigate the reason for the elevated fibre levels / locate the breach of enclosure
- Ensure contractors amend the problem
- If necessary, re-smoke test the whole area or part of the area, visually check the enclosure integrity
- Reassurance air test, if result is <0.010 f/ml then;
- Give permission for contractors to resume work
- Additional monitoring and checks must be undertaken once work has resumed.
- Report to H&S Manager and the Client (submit certification)

Elevated fibre concentrations (No Contractors on Site)

- Vacate the surrounding area of all other persons
- Secure the area and prevent access
- Inform the Client and provide advice – appoint LARC if necessary
- Access should only be allowed back into the room once the air samples show results of <0.010 f/ml, and the client has been satisfied the area is fit for re-occupation.#

Fire safety

The provision of suitable fire safety measures should be considered for all works. Attending personnel should familiarise themselves with the site fire arrangements. Where these fall short, the Health and Safety Manager should be contacted to discuss. Further information is available in the Health and Safety Manual – ref HS005

8. Analytical Arrangements

Witnessing of Enclosure Integrity

The exact ventilation requirements for each enclosure will be determined on an individual job basis. In many cases a flow rate of 0.2 m3/s for each 100m3 of enclosure volume is sufficient (equivalent to 8 air changes per hour)

For enclosures <120m3 in size, 1000m3/h negative pressure must be applied to the enclosure.

The LARC plan of works will establish the number of air changes required per hour and the amount of Negative Pressure Units required to achieve this considering factors such as volume of the enclosure including airlock/baglock, additional allowances for reduced airflow due to factors such as ducting, bends, filters, external influences such as wind pressures, temperature (temperature falls negative pressure will fall).

The ventilation rate selected will only be a guide to the negative pressure within the enclosure as the actual pressure will be dependent upon the extent of leakage into the enclosure.

Visual Inspection
The Analyst will perform a visual check of the enclosure to ensure constructed according to the LARC plan of work.

Smoke Testing
The smoke test will confirm both the integrity of the enclosure seal and the efficiency of the air extraction in order to achieve the required air changes per hour (example. all smoke is cleared from the enclosure within seven and a half minutes). Consideration shall be given to the size and position of the ventilation system and the segmenting of the work zone enclosures in order to achieve this.

- The Analyst will advise the contractor to ensure all smoke detection equipment, which may be affected by the smoke test, are isolated or protected before such tests are carried out.
- Smoke is released into the enclosure from a smoke generator, with the extraction equipment switched off.
- Escaping smoke identifies leaks that need to be dealt with (as far as possible) Where there are difficulties in obtaining an effective seal, it may be necessary to overcompensate, however, extraction rates should not be excessive as to cause damage to the enclosure (collapsing in).
- Once the enclosure is full of smoke, external areas are checked for the presence of smoke, including floors above and below and any foreseeable locations that smoke could emerge, and less obvious ones such as through cavity walls. These checks should be undertaken over a suitable time period. A torch will help identify minor leaks.
- Once the smoke has cleared and any leaks eliminated the enclosure then needs to be tested with the air extraction system running. The airlock flaps will be lifted and the enclosure walls will bow inwards indicating slight negative pressure inside the enclosure (check at this point any residual leaks are inwards)
- Only when the integrity of the enclosure and extraction equipment is proven, can asbestos removal commence.

Differential Pressure Monitors
The relative pressure in the enclosure can be monitored using differential pressure monitors by the LARC (The Analyst can review records of readings as part of Document Inspection) These provide a continuous indication of the 'negative pressure' A pressure difference of about 5 pascals or above is usually sufficient to ensure that there is not net outward movement of air from an enclosure within a building. For external areas, strong winds can affect air pressure within the enclosure from direct pressure on the enclosure sides. Monitoring should be used in conjunction with other indicators of the correct functioning of NPUs I.e. satisfactory smoke tests, tautness of enclosure walls and position of air flaps.

It is recommended the Analyst witnesses the enclosure integrity checks. On completion, the Analyst will issue a certificate with observations and whether permission was given for removal works to commence (or not).

Arrangements For The 4 Stage Clearance Will Be As Follows:

Following the completion of the licensed asbestos removal or remediation work, and at the request of the Asbestos Removal Contractor, the analyst shall:

Visually inspect all of the internal surfaces of the enclosure for debris, dust, fibres, suspect materials, and wet areas in accordance with Health and Safety Executive Guidance note HSG 248. Asbestos: The analysts' guide for sampling, analysis and clearance procedures. Areas which cannot be dried fully should be discussed with the senior manager prior to proceeding.

Ensure all materials as defined in the specification and contractors plan of works have been removed or made safe. No unsealed asbestos containing products may remain within an enclosure during clearance procedures. (If this is unclear then the senior manager should be contacted)

If required verbally inform the Asbestos Removal Contractor of a general description of any remedial works required to bring the area up to clearance standard.

Carry out clearance air testing within the enclosure in accordance with Health and Safety Executive Guidance note HSG 248. Asbestos: The analysts' guide for sampling, analysis and clearance procedures.

Deem a work zone as unsatisfactory should, in his / her opinion any of the above not be complied with.

Arrangements For Reassurance Air Testing Will Be As Follows:

Where required, following the removal of the enclosure and any pre-sheeting, reassurance air monitoring may be undertaken, in simulated conditions of future occupation in respect to air agitation, in areas where asbestos has been removed and in any rooms/areas inaccessible as a result of enclosure construction.

An inspection within inaccessible areas and pre-sheeted items shall also be undertaken for any possible asbestos contamination during the works.

Should the results of reassurance air monitoring exceed 0.01 f/m^3, or inaccessible areas be found to be contaminated as a result of the works, the Asbestos Removal Contractor shall be requested to re-clean the area, without re-erecting the enclosure, until further air monitoring indicates results as below 0.01 f/m^3.

Arrangements For Personal Sampling Will Be As Follows:

The analyst will undertake personal sampling where required (if unsure the senior manager should be contacted) and air monitoring procedures will be undertaken in accordance with Acorn Analytical Services' Control Manual'.

Arrangements For Decontamination Unit Clearance Testing Will Be As Follows:

The analyst will inspect the decontamination unit to ensure it is in a clean and tidy condition every day whilst on site. This may include, if required, background air monitoring. Prior to the decontamination unit leaving site a full clearance including visual inspection must be undertaken.

Arrangements For Certificates Of Reoccupation /Clearance Will Be As Follows:

The analyst will ensure that the site manager / representative is handed a copy of any reoccupation / clearance certification prior to leaving site. Where a site manager or representative is not available the analyst will contact the senior manager who will in turn contact the client for further instruction.

Reoccupation / clearance certificates for decontamination units will be given to the contractors on site supervisor.

9. Air Sampling and Fibre Counting Principle

Air sampling involves drawing a known flow rate of air through a filter for a measured time, so that airborne Measurement of the airborne fibre concentration is a statutory requirement under CAR2012. The regulations set out requirements for 'personal' sampling and ACOP L143 specifies circumstances/ situations for 'static' sampling.

Static sampling may be undertaken for a number of reasons including assessing leak and background concentrations. The purpose of the static sampling will define the strategy used and the number and position of the samples collected. Workers who are actively disturbing asbestos will generally do so close to their breathing zone, so personal sampling usually gives higher results than static samples. Where there is a clearly defined source, near source sampling will give information on the strength of the emission source. As the sampler is moved further away from the emission source, further mixing and dilution of the air will occur, and the measured concentration will decrease.

In situations where the location of the emission source is uncertain or diffuse, or the purpose is to measure the average exposure of the occupants, single or multiple samples may be taken. Samples should be taken in positions that are representative of normal occupation. In larger rooms and outside, samples may be collected at specified distances and directions from the source, to assess the spread or dilution of the emission. Static samples should normally be taken at a height between 1 and 2 metres above ground level (to reflect human exposure) using a downward-facing conductive cowl. The time of sampling and the flow rate will be selected to represent specific circumstances and several common static sampling strategies are described in section A.1.3.

Air sampling involves drawing a known flow rate of air through a filter for a measured time, so that airborne particles are collected. The filter is prepared, and then examined by phase contrast microscopy. The quantitative measurement of the fibres present is referred to as the airborne respirable fibre concentration. All work is undertaken following guidance in HSG248: The Analyst Guide (Second Edition).

Fibre Discrimination

Air samples are analysed using the WHO criteria. This is detailed in section A.10. This method applied, does not identify the type of fibres present. Acorn Analytical Services do not and are not UKAS accredited to perform any fibre discrimination. (See section A.1.13)

Sampling Strategy

Static sampling involves monitoring the air at one or more fixed sites or locations for various reasons, e.g., to assess a source or potential spread or to assess the extent of control and containment of asbestos in

particular situations. (e.g., leak testing). Static sampling is also a fundamental component of clearance procedures after licensed asbestos removal work.

Personal sampling of employees is required under Regulation 19 of CAR 2012 unless exposure is not liable to exceed the control limit. Where monitoring is required, it should cover a representative range of jobs and work methods (but particularly higher-hazard/-risk activities) and it should be performed at regular intervals. In personal sampling the filter is mounted on the person close to their breathing zone.

The air monitoring strategy to be employed (including the type of analysis which will be required) should be discussed and agreed with both the client and Licensed removal contractor before works commence.

10. Estimated Airborne Fibre Levels and Fibre Release

The contractor's plan of works is inspected prior to the project and must include specific assessment of estimated airborne fibre levels and fibre release. These estimated levels are utilised by the analyst to assess the levels during project management and analytical work. As a rule the contractors estimated levels are far higher than any expected levels likely to occur during project management and analytical work.

11. Certificate Of Cleanliness

Following removal of non-licenced asbestos containing material, if only localised methods of controls have been utilised then four stage clearance certification in accordance with HSG248 **cannot be issued**. *

In the event certification is required to confirm the premises are safe to use again analysts are to conduct a visual inspection followed by reassurance air tests.
The Analyst is to check all materials have been removed as agreed, and all debris cleaned up.
Certification is issued on CD207 'Certificate of Cleanliness following non-licensable ACM removal'

*If removal of non-licenced asbestos containing material has been removed from an enclosure under fully controlled conditions (including airlock/negative pressure) four stage clearance certification can be issued.

12. Site Assessment For Reoccupation (Four Stage Clearance)

Following asbestos removal, the premises must be assessed to determine whether they are thoroughly clean and fit for reoccupation (or, as appropriate, demolition). Once the licensed contractor is satisfied that the area is clean and ready for future use, the area should be assessed by an independent organisation which is accredited by UKAS. If this assessment of the workplace is passed as satisfactory, then a certificate of reoccupation is issued. The certificate is issued to the contractor and, as appropriate, to the client where the latter has engaged the Analyst.

Four stage clearances have four individual stages, and all four stages must pass prior to an area being satisfactory for reoccupation. If any stage of the four stage clearance fails all four stages of the paperwork must still be completed. The paperwork should show at what stage the clearance failed and why. Following stages of paperwork after the failed stage should state 'not completed due to failing at stage 'X'.

Under most circumstances, a representative of the Asbestos Removal Contractor who have carried out the asbestos removal work will accompany the Analyst during the inspection. For reasons of safety, no Analyst should enter an area for the purposes of inspection and testing alone unless another person in the building has been informed of their activities and the duration, they are likely to be in the enclosure.

During the planning and execution of removal works it may be beneficial for the attending analyst to visit site and undertake a pre-removal work site visit. This will enable potential clearance issues to be identified and resolved. There are numerous factors which can disrupt or impede successful clearance. These factors will influence the time taken to conduct the thorough visual inspection and could delay completion of the 4-stage clearance. Difficulties in completion of the 4-stage clearance can be avoided, eliminated or reduced by identification and remediation of potential issues in the scoping and planning. Analysts involvement in the initial scoping of the works will enable the licensed asbestos removal contractor outlining the complexities, extents and potential durations of the 4 Stage clearance procedures. These issues can be managed in a timely manner to ensure all parties are clear on the requirement for the Analysts 4 Stage clearance works. This scoping exercise is beneficial for the Analyst to conduct a suitable and sufficient Risk assessment and plan of work.

This plan of work should include:

- A suitable risk assessment of all hazards including exposure to asbestos and other health and safety factors. E.g., Work at height, confined/ restricted spaces, electrical/gas/isolations, lone working, Slips trips and falls,
- The complexity of the works and the likelihood of additional risks from inadequate cleaning by the licensed asbestos removal contractor.

Ideally the above planning works should be completed before any removal works commence. If this is not achievable then the analyst should be provided with relevant documentation (where available) including: the LARC plan of works, ASB 5 notification, plans, copy of the asbestos surveys, and any other relevant health and safety information in order to complete a desktop study before attending site in order to prepare their works. The LARC has a legal duty to cooperate

The Four Stages are as follows.

Upon arrival on site the Acorn Analytical Services Limited Analyst should liaise with the Asbestos Removal Contractor and agree the scope of the works this should include an inspection of the plan of works, which should detail;

- Where the asbestos was removed from.
- If any materials were to remain in situ.
- What the asbestos materials removed were.
- Diagram to show the work area including location of airlocks/ bag locks/waste transit route/skip/hygiene facilities.

If there is no plan of works on site or the contractor refuses to make it available the inspection should either stop or a failed certificate issued for stage 1. If the contractor has deviated from his plan of works then the Analyst must ensure that the contractor's plan of works is amended to cover the works undertaken.

The Analyst should then make an inspection of the decontamination unit and ensure it is clean and fully operational, as a guide the following should be checked prior to progressing to stage 2 visual inspection.

- Current clearance certificate available
- Gas/Electric/DOP test certificates available and within date
- DCU is level
- Sufficient shower heads per operative (1 head per 4 persons)
- Connected to water supply with hot running water available in shower section
- Dirty and Shower area free from stored items
- Decontamination equipment available (shower gel, towels to dry, nail brush)
- Heaters and Lighting working

- Self-Closing Doors
- Mirror in the clean end for checking correct positioning of RPE
- Waste bag available for disposal of contaminated PPE and RPE filters
- No visible dust or debris, unit drained of wastewater

The Analyst should check LARC records to ensure that there is evidence to support that daily visual checks of the enclosure have been carried out.

The Analyst should inspect the surrounding area to the enclosure including the waste transit route. The purpose of this inspection is to check for obvious signs of contamination arising from the work, either through leaks in the enclosure, burst bags or debris from inadequate decontamination procedures. Wet conditions should not halt stage 1 these checks however if there is insufficient light then it should be delayed until conditions improve. If the waste routes are strewn with debris that could be mistaken for asbestos, the Analyst should request that the routes be cleared to allow for adequate inspection. The integrity of the enclosure should also be checked. In the event asbestos debris is located it should be cleaned up immediately by the contractors. Any breach in the enclosure should be repaired before stage 2 commences. The analyst can refer to enclosure integrity checks and site records to demonstrate ongoing checks of the enclosure on a periodic basis have been undertaken.

The air extraction equipment should be in situ and operational. The pre filters on the air extraction equipment should have been replaced before the final clean by contractors (before Stage 2 commences).
The Analyst should examine the enclosure through the viewing panels or CCTV before entering to gain an initial impression of the job completeness. The Analyst must record the presence or absence of viewing panels or CCTV. Items to look out for include;

- Waste remaining in enclosure.
- Visible debris on the surfaces.
- Inadequate lighting to conduct inspection.
- Access equipment lacking (ladders or scaffolding).
- Puddles of water, wet patches or leaking pipes.
- Evidence sealant has been applied to surfaces.
- Potential hazards inside the enclosure.

The analyst should also inspect any ancillary equipment used to transport Asbestos waste such as wheelie bins. These should be clean and free from any dust or debris.

The licensed removal contractor (normally the supervisor) should have carried out a thorough visual inspection of the work area in preparation for the ‘handover’ of the site to the analyst for an independent multi-stage clearance procedure. This visual examination by the supervisor should be sufficiently thorough to make sure that it is completed to a satisfactory visual standard (i.e., no visible dust or debris). The licensed contractor should complete the handover document (including the signed declaration) to confirm the satisfactory completion of this process. The document should be presented to the analyst. Any deviations to the Plan of Work, limitations or additional notes on the handover form should be discussed before commencing with the stage 2 inspection. It is good practise to photograph the handover form as a record of the procedure and as a minimum the receipt of the handover form should be noted in the stage 1 certification site paperwork.

The analyst should not start the independent clearance until the handover document has been received and is satisfactory. If the licensed removal contractor cannot or will not supply the handover form, then the 4 stage clearance certificates should be populated to reflect a failure at stage 1. No further 4 stage clearance works should proceed until the form is supplied to the analyst.

The Analyst will only move onto Stage 2 and enter the enclosure once all the requirements of stage 1 are met.

The Analyst should record the findings of stage 1 on the Preliminary Site Inspection Certificate CD170a. This should include a detailed description of all elements including specific locations of the works. The stage 1 inspection will be supported by photographs and a site diagram.

Once completed the document should be signed and dated by both the attending analyst(s) and the Licensed removal contractor (site supervisor).

All stage 1 paperwork should be completed comprehensively before stage 2 of the 4 stage clearance commences.

Photographic evidence should be achieved and maintained with the certificates:

- Skip area and waste route demonstrating they are free from obvious asbestos debris and waste bags
- Transit route is clean and free from obvious asbestos debris and waste bags Operative transit route
- The DCU is free from obvious asbestos debris and waste bags. Photos should be taken of the clean end, shower and dirty end
- The areas surrounding the enclosure/work area are free from obvious asbestos debris and
- Waste bags

The stage 2 inspection is a crucial part of the 4-stage clearance procedure. Sufficient time and resource should be allowed for the analyst to undertake a comprehensive inspection of the work-space. The analyst should estimate and record the expected duration the stage 2 inspection should take. This estimate should allow for sufficient planning of the stage 2 inspection and include provisions for any known factors which may affect the duration of stage 2 of the 4-stage clearance. The analyst should utilise their own knowledge and experience of similar projects and complexity of works. and discuss any potential factors with the site supervisor who may have more comprehensive knowledge of the conditions inside the enclosure.

This is the stage at which the thorough visual inspection of the enclosure takes place. The Analyst must check;

- The completeness of the removal of the ACMs from the underlying surfaces.
- For the presence of any visible asbestos debris left inside the enclosure and airlocks or work area.
- For the presence of fine settled dust.

Equipment to be taken into the enclosure includes;

- Torch to identify dust settled on surfaces and augment the lighting in the enclosure.
- Screwdriver for picking behind difficult to access areas.
- Inspection mirror; useful for inspecting difficult to see areas.
- Wipeable sheet to make any notes.
- Camera or handheld device to record/take photographs.
- Wet wipes- For cleaning tools and assisting in checking for surface cleanliness.
- Handheld brush with attachable broom handle.

Equipment that must remain in the enclosure to help inspection;

- Access equipment, ladders/mobile towers of scaffolding.
- Lighting, a torch alone is not enough.
- H Type vacuum cleaner, for cleaning up minor amounts of dust or debris, also for decontamination procedure on leaving enclosure.
- Buckets of water and sponges for decontamination procedure on leaving the airlock.

It is the responsibility of the contractor to provide the Analyst with safe means of access to all surfaces within the enclosure. If no safe means of access is provided, the Analyst should inform the Technical Manager. The client should be informed and any restrictions on the complete inspection of the area detailed on the Inspection and Testing Certificate. All access equipment should be constructed by a trained person and be suitably labelled with inspection details before use.

Under most circumstances, a representative of the contractor who carried out the asbestos removal work will accompany the Analyst during the inspection. For reasons of safety, no Analyst should enter an area for the purposes of inspection and testing alone unless a responsible person in the building has been informed of their activities and the duration, they are likely to be in the enclosure. The contractor can rectify any minor problems found such as holes in the enclosure not visible from the outside and clean up minor/small amounts of dust debris found during the course of the inspection.

Visual Inspections should only take place when the enclosure is dry, and the Analyst should ensure the complete removal of all ACM as detailed within the Method Statement all visible dust and debris are removed from within the enclosure. Guidance on clearance and visual inspection is given in HSG248: The Analyst Guide.

The Analyst Guide emphasises that air sampling should only be used as a backup to thorough cleaning and visual inspection and should not be relied upon as the principal way of indicating whether the site environment is clean.

The visual inspection should be made with particular attention paid to areas where asbestos dust may have become trapped. The appendix to HSE Publication HSG 247 'The Contractors Guide' and HSG 248 The Analyst guide (edition 2) lists the following as places where asbestos debris is commonly found during visual inspections: (this list is not exhaustive);

- Brackets and clamps around pipes and elsewhere;
- Flanges and hatches of vessels and pipework;
- Screw holes, or around nails and battens from where asbestos has been removed;
- Roof voids;
- Cable trays and conduits, especially if they have a metal mesh construction;
- The undersides of equipment, furniture, and fittings;
- In holes or cavities in walls etc where pipes, cables or steelwork pass through;
- Around drains and sumps.
- All ledges, shelves, windowsills etc.;
- Any rough or porous surfaces e.g., breezeblock or rough concrete, support brackets, clamps, and pipe hangers;
- Nuts and bolts of flanges and hatches of vessels;
- Backs of pipes and vessels, especially when they are close to other surfaces, around conduits and inside cable trays, especially if metal mesh construction, holes in walls or partitions where pipes, cables or ducts pass through; underside of boilers and tanks;
- Folds or overlaps in the polythene sheeting used to construct the enclosure;
- Electrical installations such as fuse and switch boxes and inside light fittings.

All surfaces, such as pipes or beams, which have had asbestos abatement should be visually inspected with the aid of a torch to ensure that they are free of residual asbestos dust and debris. Particular attention should be paid to the points where pipe work etc. goes through a wall or the enclosure to a separate area and to the flanges and backs of pipes. It should be noted that areas which are particularly difficult to inspect, are also difficult to clean and are therefore the most likely areas in which residue material maybe left.

All horizontal surfaces such as the floor, top of conduits or other ledges should be checked. It should be assumed that any dust found contains asbestos and should be removed before testing is carried out. Where ceiling tiles have been removed, the surfaces to which the tiles have been joined should be given particular attention. In the case of suspended tiles fixed to a metal frame, any paintwork on the frame should be inspected to ensure that no pieces of tile are adhering to it. Where the tiles have been attached to a wooden frame either by nails or screws, they should have been removed and the holes cleaned to remove all traces of the tile.

Wet Enclosures

The area should be dry before the inspection is undertaken. In some cases, removal of asbestos is carried out to enable repairs to be made to leaking pipe work and in such a case ensuring that the area is dry before testing is not always possible. If this is the case, the certificates should be clearly marked to the effect that the area should be re-inspected and tested following repairs to the pipe work. If there is groundwater present there may be little that can be done to render the enclosure dry, however it may be necessary for the contractor to pump to prevent the area flooding.

Sprayed Sealant

Sealants such as PVA should not be sprayed before a visual inspection or disturbed air tests. The only exception to this is where there is sufficient non-asbestos dust (e.g., from concrete) to cause a failure in the air test. The Analyst has discretionary powers and, after due consideration and air testing, can allow sealant to be used in these circumstances. The circumstances must be recorded on the certificate of reoccupation. If an Analyst arrives on site and the enclosure is still wet from the sealant being sprayed the Analyst must fail the area and inform the contractor that stage 2 can only be carried out when the sealant has been washed off and the enclosure dry. If the sealant has already dried the Analyst will have to fail the area and consider the way forward. If evidence suggests the sealant is protecting a significant amount of asbestos dust the sealant will have to be removed and the area re-cleaned. The client should be informed.

Enclosures with Loose Rubble Flooring

In some areas (particularly under floor voids) only a dirt floor exists. The plan of work should identify a procedure to remove the rubble and loose soil after the ACM removal has taken place. The depth of removal will depend upon the level of contamination. In these cases, it is not practicable to remove all dust from the area before carrying out air testing. In such cases supplementary tests should be taken, by sampling the dirt floor, and the samples returned to the laboratory for inspection and analysis in accordance with Appendix 3 of the Quality Manual. The Technical Manager must be informed of the situation prior to the clearance certification being issued.

Clearances with Fixed Scaffold/Access Equipment in Place

Fixed or mobile scaffolding or other access equipment may have been used inside the enclosure for reasons such as removing high-level panels or ceiling tiles. The equipment should remain inside the enclosure for the thorough visual inspection to allow full access. This equipment should be fully decontaminated during final cleaning by the contractor. The scaffolding and other access equipment should be thoroughly visually inspected as part of stage 2 of the clearance procedures. It should be inspected after it has been used for inspection by the analyst. Particular attention should be paid to scaffolding boards (and gaps between them), poles and fixings. End pieces should have been capped.

Following dismantling of the enclosure, the scaffolding/access equipment can be removed. The analyst should conduct a final post-enclosure dismantling inspection of the area that the scaffolding or equipment previously occupied. Any residual material should be cleaned up. (Note: If the scaffolding is to remain for other maintenance work, the ground around and under the scaffolding should be reinspected for debris as far as reasonably practicable. The analyst should highlight in the CfR that there is the potential for some (likely to be minor) debris to be dislodged on final removal of the structure.)

Asbestos Remaining in Enclosure

In some cases, asbestos materials may be retained within an enclosure. If this is the case the Analyst should ensure (where possible) that the asbestos is in a suitable condition for the inspection to be deemed satisfactory. This may mean that the LARC may have to repair and seal such materials. The retained asbestos is to be clearly identified on the inspection and testing certificate.

It may be necessary to retain asbestos waste (bagged or wrapped) within the enclosure until Stage 4 commences and the enclosure can be removed. This situation may arise when oversized waste cannot be removed through the bag lock system. The items will be subject to inspection along with other items to ensure they are free from asbestos debris on the outside of the wrapping. The items will also need to be moved to allow the Analyst to inspect the underlying surfaces.

Where asbestos has been spray applied there may be crevices or holes where pipe work runs. These may contain asbestos but are impossible to clean so that all the asbestos is removed. In these cases, the Analyst may permit the use of a non-flammable sealant such as foam to fill the hole. However, the Analyst must be satisfied that as far as reasonably practicable the asbestos has been removed before the sealant is applied. This should also be in the plan of work and the client be aware this is the course of action before work commences. If the Analyst arrives on site and finds that sealant has already been applied, the Analyst should instruct the contractor to remove it before the stage 2 inspection begins.

If any materials are left within the enclosure that may contain asbestos these should be logged on the final certificate of reoccupation.

Use of Encapsulant and Sealant

Where asbestos has been sprayed onto porous surfaces (e.g., breeze blocks, bricks, plaster, and concrete), it is almost impossible to obtain an asbestos-free surface (see Figure A5.10). The analyst should satisfy themselves that further removal is not reasonably practicable, and should advise the contractor and/or building client to seal the residual
asbestos with a permanent proprietary sealant.

The visual inspection can restart once the sealant has been applied and dried. In these circumstances encapsulation of asbestos should not take place before the analyst has seen the residual asbestos. A note should be made on the CfR and recorded in the asbestos register and management plan for the premises.

Wet Blasting Removal

‘Wet blasting’ techniques are now being used to eliminate asbestos residues from previous old, poor-quality or incomplete removal work. Recleans represent a significant proportion of current removal notifications. The level of surface cleanliness achieved is likely to be superior in these situations. However, wet blasting cleaning is not required or compulsory. A satisfactory level of cleanliness can be achieved from conventional removal methods. The analyst should then judge if further cleaning, removal, or encapsulation is required.

Key points of the Stage 2 Inspection:

The analyst must visually check:

- The completeness of the removal of the ACMs from the underlying surfaces;
- For any visible debris left inside the enclosure (or work area) and airlock and bag lock (all compartments);
- For any fine settled dust;
- All areas, even those difficult to reach (access equipment should be used as necessary).
- Any equipment/ plant used during the removal works.

The analyst should utilise their torch to inspect all aspects and by running a wet wipe over surfaces to check for the presence of dust. High level surfaces including voids must be checked and the inspection mirror utilised where front on inspections cannot be undertaken.

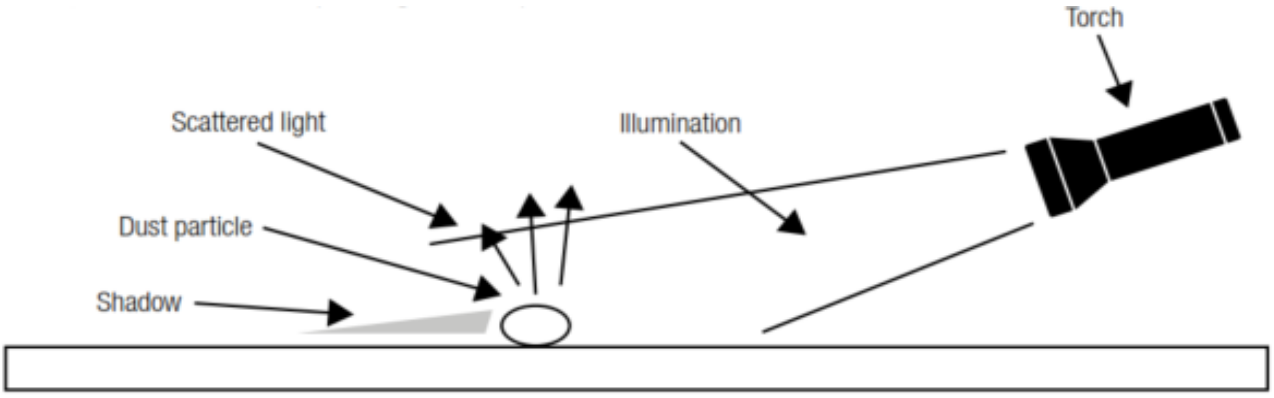


Diagram showing the effect of the low-angle torch in identifying dust particles.

Photographic evidence should be achieved and maintained with the certificates:

- The airlock and bag lock are free of waste bags, materials, and unnecessary equipment
- All ACMs have been completely removed (as far as reasonably practicable) from the underlying surfaces. Sufficient photos should be provided to cover the removal work area(s)
- The interior surfaces inside the enclosure are free from debris and fine settled dust. Sufficient photos should be provided of the enclosure including high-level surfaces (including scaffolding)
- Complex areas or evidence of limitations/caveats
- Evidence of completeness of the removal works

The analyst should take regular breaks during large/complex and lengthy stage 2 visual inspections. The analyst should retire from the enclosure, decontaminate, and take a break every 2-3 hours. These breaks may be more regular when completing works in physically demanding workspaces (crawling tunnels/workspaces with increased temperatures).

Unsatisfactory Visual Inspections

The Analyst will have to make judgements on the extent and significance of dust and debris found during the inspection. Some may be minor and can be cleaned up during the inspection. The analyst should make a judgement on the extent of additional cleaning likely to be necessary. The cleaning must be carried out by the licensed contractor. If the cleaning is deemed to be 'minor' (i.e., total cleaning time estimated to be <10 minutes) and is unlikely to breach the control limit (0.1 f/ml 4-hour TWA), this can be carried out without a formal failure being recorded. The need for additional cleaning should be noted on the clearance certificate. The analyst can remain within the enclosure during remediation.

More substantial dust and debris may indicate the final clean-up has not been undertaken thoroughly enough. It is the responsibility of the Contractor to undertake a final clean prior to visual inspection, if this has not been done the Analyst should withdraw from the enclosure and point out to the contractor and request a re-clean. The Analyst may point out areas which fall short of the standard required, but must make it clear to the contractor that the standard of the enclosure is unsatisfactory and it should be subject to a thorough visual inspection before 4 stage clearance procedures can commence again (Supported by another completed handover form) In the event there is a degree of further cleaning required to warrant the Analyst leaving the enclosure for the work to be undertaken by the Contractor, the visual inspection is deemed as failed and certification must be issued as such.

The Analyst must issue an inspection and testing certificate indicating that the area is not ready for occupancy and the Stage 3 and 4 certificates must state the area Failed at Stage 2.

The findings of the stage 2 inspection should be recorded on the Certificate of Reoccupation CD170b.

Air Sampling takes place once a thorough visual inspection has been carried out and the Analyst is satisfied that all the asbestos in the plan of work has been removed, and there is no visible debris or layers of settled dust. The resultant airborne fibre level must be <0.01 f/ml using the method described in section 14a.

Before air sampling commences the negative pressure or extraction equipment is cleaned, capped and switched off. When carrying out air sampling for clearance, enough samples should be taken at suitably distributed positions throughout the enclosure. There should always be at least two samples, unless the volume of the enclosure is less than 10 cubic metres, in which case one sample is sufficient. In accordance with The Analyst Guide "The number of samples taken should be at least the whole number next below (A 1/3 - 1), where A is determined as follows:

a) If the enclosure is less than 3 metres high, or enclosures, which are taller, but where the exposure is only likely to be at ground level, A is the area of the enclosure in square metres.
b) In other cases, A is one third of the enclosure volume in cubic metres. If there are large items of plant (e.g., boilers) in the enclosure, their volume may be subtracted from the gross volume before calculating A.

The formula given in The Analyst Guide should only be used as a guideline for the minimum number of samples to be taken. The individual planning the sampling strategy may judge that more samples are necessary, e.g., isolated rooms/areas within the enclosure.

The minimum volume of each clearance sample should be at least 480 litres. Where practicable, samples are usually collected at a flow rate of 8 litres/min over a period of 60 minutes, or 10 litres/min over a period of 48 minutes.

The findings of stage 3 should be recorded on the Air Monitoring Certificate CD170c. Any deviation from the above protocol should also be recorded.

Once the enclosure has passed stages 1, 2 and 3 the enclosure can be dismantled. Under normal circumstances the Analyst will remain on site during the dismantling unless deconstruction is not to take place for some time. If possible, reassurance air sampling should be carried out during the deconstruction process.

Preparation for Stage 3 Clearance Air Sampling

The Analyst must calculate the number of air tests required from the size of the enclosure. If planning to air test immediately following satisfactory completion of Stage 2 Visual Inspection, the Analyst may leave pumps (with cowls covered) and the flow meter in the first stage of the Airlock. Flow meters must not be taken into the enclosure.

The airlock and bag lock does not form part of the volume of the enclosure and should not be included in calculations.

Sampling pumps shall be distributed throughout the enclosure with at least half close to or underneath where the asbestos was removed from. This must be demonstrated by recording on diagram the location of the (former) ACM(s)
In relation to sampling points, or adding a statement such as 'ACM removed from ceiling throughout enclosure'

Flow rates are adjusted and recorded with the flowmeter in the airlock. The flowmeter and pumps are to be left in the first stage of the airlock. The Analyst can access these from the middle section. Once the flow rate on the pumps has been set, they must not be turned off and back on again prior to sampling. The flow is also recorded at the end of the sampling period outside the enclosure.

Site Field Blank

A site field blank must be performed for every clearance undertaken. A filter is mounted up into a cowl. The cowl is capped by the Analyst and taken into the enclosure. The filter is then exposed for a few seconds before been recapped. It is then counted with the other air tests and recorded on the appropriate line of CD170 (c) Stage 3 Air Monitoring Certificate.

Disturbance Procedure

Clearance sampling should be accompanied by activities designed to raise dust from surfaces at least to a degree appropriate to possible future activity in the area. This disturbance should be carried out using a brush. The brush should be made of a manmade fibre. For ergonomic reasons long handled brushes are available for large enclosures requiring extensive brushed disturbance. Dust disturbance should be conducted in the vicinity of the samplers and in areas where visual inspection or the original location leads to any suspicion of surface contamination. The disturbance should be undertaken on all surfaces within the enclosure including any items left in the enclosure i.e. ladders, other access equipment and H-Type Vacs. The disturbance should be carried out for at least 1½ minutes for each air measurement taken (no maximum time) within the enclosure, near the start of each full hour of sampling. All brushes used for raising duct should be disposed of as asbestos waste.

In the event of a Dusty Enclosure

In the event there is non-asbestos dust present that generates unreadable filters, the Analyst may consider sampling for shorter periods of time with paired samplers so that the dust loading on each filter is reduced. Samples, which are being pooled in this way, should be taken within 1 metre of each other. At the evaluation stage the same number of graticule areas must be counted on each contributing sample. If the samples fail again then the spraying of surfaces with sealant should be considered. This must only be done after the Analyst is satisfied the dust is non asbestos.

Photographic evidence should be achieved and maintained with the certificates:

- The areas are dry. Sufficient photos should be provided to cover the relevant area(s)
- The NPU's are sealed
- Sampling pumps in each of the locations
- Brush disturbance and capped NPU

Once the Clearance air samples have been counted and respirable fibre concentrations are <0.01 f/ml and the contractor has been authorised to remove the enclosure, a further visual inspection should be undertaken. This visual inspection should be undertaken by the contract foreman and the Analyst. A H Type Vacuum should be made available and be fully operational during this inspection. The Analyst will look for any obvious asbestos dust such as from the sheeting of the enclosure as it was dismantled or from debris which was missed during cleaning. The Analyst should also re-inspect the waste and transit route(s). If any dust or debris is found the contractor should clean it immediately to avoid spreading the contamination. If the area is too contaminated the site should be failed, re-enclosed, re-cleaned and the visual and disturbed air test repeated.

The Analyst should record what has been inspected and the outcome on Stage 4 Certificate of Reoccupation CD170d.

Photographic evidence should be recorded of the following elements:

- Remaining asbestos materials within the former enclosure.
- Areas with limitations/ caveats attributed to them.
- Evidence that former enclosure has been removed.
- General photographs of the workspace.

13. Decontamination Procedures – Preliminary Decontamination

Should the analyst undertake a risk assessment and consider partial decontamination appropriate they will undertake the procedure as follows:

Visual Task Sheet 2b – Preliminary Decontamination		
Preliminary Decontamination should be utilised when entering an enclosure with low risk of contamination to the operative. Situations include: Removal of Non Friable materials (Cement, Textured coating and floor tiles) or retrieving clearance air samples following a satisfactory completion of stage 2 of the 4 stage clearance (accompanied by satisfactory personal sampling results)	The Analyst should enter the DCU at the clean end, and remove their street clothes. The Analyst should put on 2x pairs of blue Category 5/6 coveralls (not red) and face fit their half face respirator in the mirror provided. Remembering to complete the Respirator pre use checks stipulated in visual task sheet 3.	The Analyst should leave the clean end wearing their respirator, 2x coveralls and wipe clean safety footwear. Remember that the DCU should be fit for purpose and all relevant certificates should be available for GAS, DOP and clearance analytical procedures from previous works.







Visual Task Sheet 2b – Preliminary Decontamination		
The analyst will require the following items: Waste bag for coveralls, Roll of cloth tape for sealing waste bags, wet wipes and decontamination equipment. Decontamination equipment within the airlock system (usually provided by the removal contractor- H type vacuum, Rags and bucket) should also be available	The Analyst will enter the clean end of the Airlock and remove 1x pair of coveralls. These should be hung from the available peg or taped hooks. DO NOT LEAVE THESE ON THE FLOOR AS THEY BECOME A TRIP HAZARD!	The Analyst walks through to the enclosure. Leaving the waste bag and tape along with decontamination equipment in the middle section of the airlock.







Visual Task Sheet 2b – Preliminary Decontamination		
Once work is completed, the operative should enter the dirty end of the airlock system and vacuum off their RPE and PPE using a buddy system if available.	The Analyst should then enter the Middle section of the airlock system and wipe clean mask , hands, face, boots and any Analytical equipment (Pumps, Torches)	The analyst should remove their coveralls rolling the coverall down (from the hood, down to the ankle) so as to enclose any possible contamination within the coveralls. These are then to be placed in the waste bag in the middle section. This should be tape sealed following use.







Visual Task Sheet 2b – Preliminary Decontamination		
The analyst should enter the clean end of the airlock and put on the clean pair of coveralls. They should then transit to the dirty end of the DCU. There, they should remove the coveralls and place in a waste bag in the dirty section of the DCU.	They should then enter the shower section of the DCU. As the Analyst has been able to assess the possible contamination they have been exposed to, they can assess whether now is the time to fully decontaminate within the shower. Use wet wipes or the shower equipment to clean the footwear, and if necessary place in a waste bag for transportation.	If the Analyst is happy that Preliminary decontamination is satisfactory, they can enter the Clean end of the DCU and remove their Respirator. If the analyst wishes to dispose of their P3 filter it should be placed in a waste bag in the shower section or posted through the flap to the dirty end. The respirator should be cleaned before being placed back into the mask box. See Visual task sheet 3.







14. Decontamination Procedures – Full Decontamination

Should the analyst undertake a risk assessment and consider full decontamination appropriate they will undertake the procedure as follows:

Visual Task Sheet 2a – Full Decontamination		
The analyst should enter the clean end of the DCU. The DCU should be checked to ensure it is fit for purpose (including DOP, GAS and clearance certification). Analyst should check RPE is fit for use (See Visual task sheet 3)	Analyst should remove street clothes and put on category 5/6 coveralls for use within the enclosure.	Analyst will utilise the mirror provided in the clean end to face fit the full face respirator. Analyst must be clean shaven and have clipped finger nails for entry into enclosures.







Visual Task Sheet 2a – Full Decontamination		
Enter shower section within DCU and transit footwear bagged, transit coveralls. Ensure waste bag is available for filter disposal. At this point you can leave personal toiletries.	Enter the Dirty end of the DCU with enclosure footwear (bagged) and put on transit shoes and transit coveralls.	Take enclosure footwear and enter the clean end of the Airlock. Remove transit shoes and coveralls, and place coveralls on hook provided. DO NOT LEAVE ON FLOOR!







Visual Task Sheet 2a – Full Decontamination		
Enter middle section of airlock, remove work footwear from bag and put on. Continue into the enclosure through the dirty section.	ONCE ENCLOSURE WORK IS COMPLETED: Enter the dirty end of the airlock. Decontaminate utilising the H type vacuum using the buddy system if available.	Enter the middle section, wipe clean enclosure footwear and place in waste bag and seal for later re-use. Use the bucket and rags provided by the contractor to wipe clean RPE and remove the work coveralls using the 'roll down' technique (roll down coveralls from the hood to the ankle) place in the waste bag and if necessary use rag and bucket again to further decontaminate.







Visual Task Sheet 2a – Full Decontamination		
Take the bagged work footwear and move into the clean end of the airlock. Put on transit shoes and coveralls.	Transit to the dirty end of the DCU. Remove transit footwear and place in a waste bag for re-use. Remove transit coveralls and place in waste bag provided by Contractor.	Enter Shower section wearing only the Respirator. Wash down bagged work and transit shoes. And place to one side.







Visual Task Sheet 2a – Full Decontamination		
Whilst still wearing Respirator, Shower and use sponge to clean RPE. Remove RPE and discard filter to waste bag or post through letterbox to the dirty end. Complete showering (Ensure you shower for at least 15 minutes and utilise nail brushes to ensure full decontamination)	Dry off using disposable towels and place in waste bag. Enter clean section and dry off further with disposable towels. Remember to take respirator and bagged footwear.	Place respirator in mask storage box. And dress in street clothes. Leave DCU through clean end.







15. Final Clearance Of Hygiene Unit/DCU

Visual Task Sheet 2a – Full Decontamination		
STEP 1 : Tape an asbestos waste bag to the outside of the DCU. The bag should taped near the dirty section door.	STEP 2: Enter the DCU via the clean end wearing all RPE and coveralls. (Take a sufficient number of pumps in ready for the clearance air testing).	STEP 3: Perform the visual inspection of the DCU dirty and shower section.







Visual Task Sheet 5 – DCU Clearance

The air samples within the DCU may be taken once the clearance air samples are underway in the asbestos removal enclosure, however the unit should remain attached to the services. If the DCU is required after, then a repeat clearance should be undertaken.

As a guide but not limited to the analyst should check the DCU;

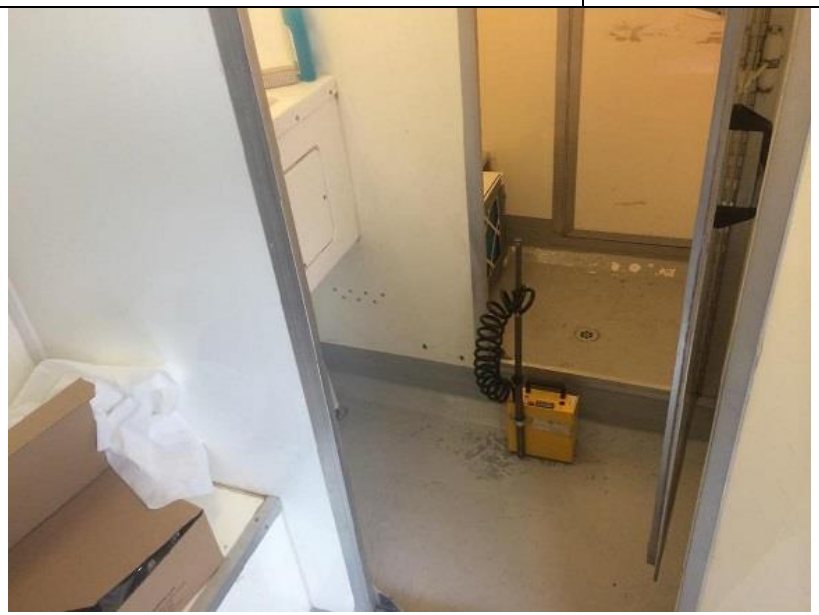
- has no stored items in what so ever

- is dry
- has effective seals between wall panels, floor joints and ceiling joints
- has clean vents
- has clean doors and surrounds
- had a clean NPU casting and transit cover, and be clean beneath
- clean sinks and showers and associated drains

An analyst should not issue a DCU clearance certificate if the DCU

- has flooring that is not over worn as such that it is not possible to sufficiently clean as dirt is ingrained
- has worn seals that harbour ingrained filth
- has any cracked surfaces

Visual Task Sheet 5 – DCU Clearance		
STEP 4: If satisfactory and the DCU is clean and dry the Analyst can commence with clearance air testing. Set the pump flow rate using the flowmeter in the clean end.	STEP 5: Air samples undertaken within both the shower and dirty section of the unit. A disturbance of 1.5 minutes for each air sample taken should be carried out	If the shower and dirty end of the unit is <10m² then one sample may be taken with the divide door left open. If the combined area is >10m² then 2 air samples must be taken, one in the dirty end and one in the shower section.





Visual Task Sheet 5 – DCU Clearance		
STEP 6: The Analyst must exit the DCU via the Dirty End.	STEP 7: Once outside the Analyst removes coveralls places in the asbestos waste bag taped onto the door and RPE must then be removed and decontaminated with wet wipes and returned to storage box.	STEP 8: To retrieve the pumps the Analyst repeats Steps 1 and 2, and exits repeating Step 6 and 7.





16. Entry Into LIVE Asbestos Enclosures

Entry into live asbestos enclosures is not permitted for Analysts.

In the event an Analyst is required to enter an enclosure, all removal works must cease. A reassurance Air Test must be conducted before entry. The Analyst must NOT proceed to enter if concentrations are not <0.01 f/m³. Personal monitoring must also be undertaken on the Analyst.

The reason for entering must be documented on the daily work log.

Analysts must report to the Technical Manager if they are of the opinion that Contractors or Clients are putting undue pressure on them to perform additional duties beyond their role as an Analyst. There shall be no such thing as a "pre-inspection" All inspections of enclosures shall be undertaken as a Four Stage Clearance following the aforementioned procedure.

17. Completed Records/Certificates

These will be issued to the Client at the end of each shift.

18. Respiratory And Personal Protective Equipment Details

The PPE and RPE requirements are determined by the site and works being undertaken. The analyst will wear the following PPE / RPE where required:

Respiratory Protective Equipment (RPE)		
Face mask fitted with a P3 filter as per face fit test for user. The mask can also be utilised with a power pack at the analysts discretion. Hooded masks fitted with a P3 filter can also be utilised by those who cannot be face fit tested.	To be worn during 4 stage clearances within enclosures Non powered RPE should not be worn for >60 minutes	
Sundstrom SR 100	To be worn, where deemed necessary, during enclosure set up, enclosure deconstruction or suitably controlled works.	
Personal Protective Equipment (PPE)		
Disposable overalls. Type 5/6 (BS EN ISO 13982-1). Blue or White	To be worn when entering enclsoures and contaminated areas.	
Safety footwear with steel toe cap (to BS EN ISO 20345).	To be worn during 4 stage clearances within enclosures or where deemed necessary.	

Personal Protective Equipment (PPE): PPE: Additional - As required in accordance with risk assessments		
Full hard hat (to BS EN397).	To be worn when the analyst deems there is a risk of head injury. Typically when overhead works are being undertaken on site, working at height and using powered access equipment. Work at height hard hats have an additional requirement for a chin strap – protect head during fall and not come off.	
High visibility safety wear (to BS EN471 Class 3).	To be worn when the analyst deems there is a visibly risk on site. Particularly within traffic areas.	
Plastic safety goggles or glasses (to BS EN166).	To be worn when the analyst deems there is a risk on site.	
Safety footwear with steel toe cap (to BS EN ISO 20345).	To be worn during all site works.	

19. General Health and Safety

Acorn Analytical Services Role With Regards To General Health & Safety Issues:

Analysts will:

- Take care of their own health and safety and that of people who may be affected by their actions
- Co-operate with others on health and safety, and not interfere with, or misuse, anything provided for their health, safety or welfare;
- Follow the training they have received when using any work items provided by Acorn Analytical Services.
- Report any unsafe acts or conditions observed

Should the analyst be unsure of any potential Health & Safety risks or hazards they should contact Acorn Analytical Services senior manager who will ensure appropriate action is taken.

Whilst present on site, Acorn Analytical Services on site analyst will undertake basic Health & Safety checks and relay relevant information to the contractor's supervisor and personnel. These include however are not limited to:

- Fire evacuation procedures for the site
- First aid facilities
- Welfare facilities
- House keeping
- Trip and fall hazards

Should the analyst be unsure of any potential Health & Safety risks or hazards they should contact Acorn Analytical Services senior manager who will ensure appropriate action is taken

20. Risk Assessment

These risk assessments are specific to this site and have been reviewed and dated as part of this plan of works. The Acorn Analytical Services Surveyor must review each assessment to ensure that they are fully aware of the required control measures and any emergency or first aid procedures.

The Acorn Analytical Services Surveyor must review the site for risks and should additional risks be identified the Acorn senior manager must be notified. Any additional required assessments will be carried out by the Senior Manager or Health & Safety Manager, dependent upon the risk with the Surveyor providing all relevant information. Completed additional assessments will be sent electronically to the Surveyor for review prior to proceeding with the works.

Employees have been made aware they are responsible for their own health and safety and how their acts or omissions may affect others, therefore they should not undertake any activity regarded as unsafe or where significant risks cannot be reduced to an acceptable level.

Acorn Analytical Services Limited utilises the following risk assessment table: Severity X Likelihood of occurrence = Risk Factor (S X L = RF). Hazards are identified, listing possible causes if appropriate and assessed for severity after controls have been put in place. These are then multiplied by the frequency or likeliness of an incident occurring and thus in turn produces the risk factor.

Acorn Analytical Services
Four Stage Clearance Information

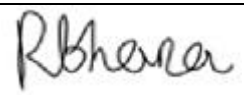
Assessment Table (Risk Assessments and COSHH Assessments)	
There are many methods of assessing health and safety risks in items of numerical value or ratings. Most are based on the principle: Likelihood x Severity of consequence = Risk Rating. In order to assess risk, you need first to identify the likelihood of something occurring and the potential consequences.	
1 - 4.	Low Risk: ensure controls are adhered to and activity may not alter.
5 - 8.	Moderate Risk: tolerable if cost of reduction would exceed the improvement gained in reducing the risk further.
9 - 20.	High Risk: (unacceptable): which cannot be justified except in extraordinary circumstances, where resources and finance are provided to control the risk irrespective of cost. Alternative means must be found to reduce the risk.

Risk Matrix (Likelihood X Severity)		**Likelihood**				
		Improbable (1)	Could Happen (2)	Even Chance (3)	Very Likely (4)	Probable (5)
Severity	First Aid (1)	1 = Low	2 = Low	3 = Low	4 = Low	5 = Moderate
	Minor Injury (2)	2 = Low	4 = Low	6 = Moderate	8 = Moderate	10 = High
	Major Injury (3)	3 = Low	6 = Moderate	9 = High	12 = High	15 = High
	Fatality (4)	4 = Low	8 = Moderate	12 = High	16 = High	20 = High

HAZARD = The potential to cause harm		**RISK** = The likelihood that harm will occur	
LIKELIHOOD X SEVERITY = RISK			
LIKELIHOOD : **1**=Improbable **2**=Could Happen **3**=Even Chance **4**=Very Likely **5**=Probable		**SEVERITY** : **1**=First Aid **2**=Minor Injury **3**=Major Injury **4**=Fatality	
RISK :	**1 TO 4 = LOW RISK**	**5 TO 8 = MODERATE RISK**	**9 TO 20 = HIGH RISK**

21. RAMS Acknowledgement and signature page

The following signatories acknowledge receipt of this Plan of Works and its appendices. They confirm that they have read and understood the whole document including all risk assessments (i.e. completed the appropriate risk assessment register and any required additional) and will ensure the work is executed in strict accordance with its contents.

Asbestos Analyst	Rayhaan Bhana	Signature		Date	
Asbestos Analyst	Aadam Sidat	Signature		Date	

Plan of Work Amendments

Any departures from the agreed plan of works will be confirmed by Acorn Analytical Services on site analyst who will seek authorisation from Acorn's project manager with overall responsibility for the contract.

Should it be required the licensed contractor will prepare an additional plan of work outlining any changes which will be checked and signed on site by Acorn Analytical Services on site analyst.

Should the changes be minor and only warrant written on site changes to the original plan of works, then Acorn Analytical Services on site analyst will still seek authorisation from the project manager, however will be required to validate and sign any addition changes.

Any changes in plan of works with regards to the licensed contractor must be signed by the contractors on site supervisor.

Document below any amendments made (include dates)

ACORN ANALYTICAL SERVICES STANDARD PROCEDURES

All procedures not documented within this plan of works are fully detailed within Acorn Analytical Services' Control Manual'. This manual is issued to each analyst and will be available on site at all times during the project.

Acorn Project Manager	Brendon Mullins	Contact No	07795 105 315	Email	brendon.mullins@acorn-as.com

Post Contract Completion	
Project Review	<Project ReviewFour Stage Clearance Pack>
Final Review By	
Clients Requirements met	
If 'No', please detail:	<Explain why requirements not mFour Stage Clearance Pack>
Project Invoiced	No
Invoiced Date	
Project Closure Date	

acorn
analytical services
The route to asbestos compliance

ASB5 and Method Statement



Plan of Work & Construction Phase Plan

JOB NO: L9840



Client Name:	Manchester University NHS Trust
Site Address*:	North Manchester General Hospital Antenatal (Block 32) Delaunays Road Crumpsall Manchester M8 5RB

I confirm that this is a suitable and sufficient plan of work as dated below:

Signed:		**Date of Site Visit:**	24/04/2024
POW prepared by:	Bob Clarke	**Peer Review:**	Mike Davies
Date:	14/08/2024	**Date:**	20/08/2024

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CONTENTS

Section 1:	Revisions to submitted plan of work	**Section 5:**	Areas of Activity
Section 2:	Scope of Works	**Section 6:**	Site Briefing
Section 3:	Waste Treatment	**Section 7:**	Certificate of Final Inspection
Section 4:	Site Specific Provisions	**Section 8:**	HSE Licence & Insurance, Risk Assessment & Drawings

A copy of the Company Asbestos Procedures (Issue 16) relating to this plan of works is available at our Head Office or electronically via the Supervisors iPad and can be produced upon request.

ALL PERSONNEL MUST SIGN THE SECTION 6: SITE BRIEFING SIGNATURE SHEET RELATING TO THIS DOCUMENT BEFORE STARTING WORKS

Section 1: Revisions to Submitted Plan of Work

The site supervisor is authorised to make any alterations to or deviations from this plan of work in agreement with LAR Head Office prior to the changes being made. Some changes may require further review of the risk assessment attached to this plan of work. A record of any alterations or deviations made by the Site Supervisor must be kept in the Project Record Sheet for return to the office. All site personnel to Section 6: Site Briefing Signature Sheet to confirm that they have read and understood any revisions to the original plan of work and/or risk assessments.

Date:	Rev No:	Revision	RA Review required	Revision authorised by:	RAMS changed by:	Toolbox Talk Completed

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Section 2: Scope of Works

Areas of Activity and Work Content*

Enclosure Work

Item 01 – Basement, Undercroft

- Cutting out of 4no hatches to floor to provide access into undercroft
- Form 1no enclosure for the following works:
- Removal of all plant within undercroft
- Removal of thermal insulation to pipework
- Removal of thermal insulation debris throughout undercroft
- Removal of floor tile debris throughout undercroft
- Removal of all brackets and fixings throughout undercroft
- Full clean of area
- Works to be carried out under fully controlled conditions

Non-Enclosure Work

Item 02 – Ground Floor

- Removal of mastic to windows

Work to be undertaken*	*Removal*	*Repair*	*Environmental Clean*	*Decontamination*	*Encapsulation*
	✓		✓	✓	
General Condition*	*Good*		*Poor*	✓	

Control Measures*	*Wet Stripping Equipment*	*Shadow Vacuuming*	*Wrap & Cut*	*DCU*	*Enclosure with Neg Pressure*	*Intact Removal of Panels*	*RPE*
	✓	✓	✓	✓	✓		✓

HIGH RISK ATIVITES ASSOCIATED WITH THIS PROJECT*					
MEWP (WAH)	**Hot Working**	**Excavations**	**Elevated Temperatures**	**Live Services**	**Confined Space**
N/A	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
OTHER (Specify):					

Client Contact*	Name:	Nigel Woods
	Tel:	07938 929655
	Email:	Nigel.woods.ext@dreso.com
Client Address	Drees and Sommer UK, Jackson House, Sibson Road, Sale M33 7RR	
Site Contact	Name:	As Above
	Tel:	As Above
	Email:	As Above
	Notes:	Client/Mark Richardson to provide all access and any relevant keys/passes

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LAR Contract Manager:	Bob Clarke / 07768 935 326 / bob.clarke@larltd.com	
Site Manger	DAYS	Mark Richardson / 07841 604 709 / mark.richardson@larltd.com
Site Supervisor	DAYS	Craig Thomas / 07858 636 075 / craig.thomas@larltd.com
	NIGHTS	N/A
	Full time supervisor to be in attendance at all times	
LAR Office Contact	Operations Team / 0161 947 9628 / operations@larltd.com	
Emergency Contact	0844 8480282 (available 24/7)	

Programme*	Start Date	04/09/2024	End Date	26/10/2024 (PM)
	Duration (Days)	49	Working Hrs	08:00-16:30
	Night Working		Weekend Working	✓
	No. of Men (Min)	2	No. of Men (Max)	7
Notification of Works	Enforcing Authority*		HSE (Health & Safety Executive)	
	Date Submitted	14/08/2024	Submitted By	Mariea Aldred
	Start Date	04/09/2024	End Date	26/10/2024
	Significant Cessation / Pause		Weekend Working – Saturdays Only	
	If dates differ from overall project duration, please state why		Non-notifiable works	

Sub-Contract Works
Sub-Contractor Name – Telephone – (Capacity)
-
-
-

Supplemental Site Forms Required *(please check)*			
Daily Inspection for Quill Blast Equipment		*Analyst Handover Form*	Yes
Suggestion Feedback Card		*Subcontractor Site Assessment*	

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Pre-Start	Site Induction Information	Client
	If induction required specify location, date, and time	On arrival to site on day 1 at 08:00
	Specify Client Permit to Work	Asbestos Works/Contaminated Areas
	Actions required by client before works commence:	• Inform all relevant site personnel and other trades of the works to be carried out and the access restrictions. • Clear areas of stored items prior to our arrival on site • Ensure all isolations have been carried out to enable to the works to commence • Arrange for site specific inductions to be given. • Provide power and water supply
	Isolations to be carried out and written confirmation provided:	Yes (see section 5)
	Does LAR work interface with any other client/public activities:	No
	If yes, describe	N/A
CDM	Principal Contractor:	LAR Ltd
	Principal Designer	Client
	Notification Required:	No
	CDM notifiable if greater than 30 days with more than 20 workers on site at any one time or greater than 500-man days.	
Temporary Works	Are temporary works applicable?	Yes
	If applicable, please describe	HERAS Fencing
	Are works subcontracted	N/A
	Temporary Works Coordinator	N/A
	Has the relevant information been provided to the subcontractor?	N/A
Design Requirements	Is there any specific design required (excluding scaffold)	Yes
	If applicable, please describe	Loads for HERAS fencing
	Has the design been provided by the client?	Yes
Other Licence Holders*	Are there any other licence holders involved in the works?	N/A
	State in what capacity	N/A
	Specify Name of Contractor	N/A
Asbestos Survey	Has a survey been provided	Yes
	Carried out by	Acorn Analytical Services / 01924 443 552
	Reference No.	B-45425
	Date:	18/02/2024

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	Survey Type	Demolition
	Survey provided to Supervisor	Yes
	Are there any other ACM's present within the building that may be affected by our works	No

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Analytical Attendances for this Project

Analyst appointed by	Client	Analytical Company	Acorn Analytical Services / 01924 443 552 / UKAS 2418
Attendance	Full Time		

Type of Monitoring Required	Yes / No / N/A	Frequency / No.
• 4 Stage Clearance	Yes	1no
• Background Monitoring	No	
• Reassurance Monitoring	No	
• Leak Monitoring	Yes	Daily
• Personal Monitoring	Yes- Client Analyst	See Below

Personal Monitoring [SP01-Q]

Item	Product Type	Operative Name	Pre-Clean	Tenting	Injecting/Wetting	Removal	Cleaning	De-Tenting	Bagging Waste	Encapsulation
1	Insulation (Wrap and cut)				✓	✓	✓			
1	Insulation Debris (Pipe etc.)					✓	✓			
	Choose an item.									
	Choose an item.									

Personal Monitoring if applicable – LAR minimum requirement is 96 litres counting 100 fields, the onsite supervisor will communicate this on site with the appointed analyst.

Supervisor to request the analyst on site to forward all analytical paperwork for this project to analytical@larltd.com

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Welfare	Welfare Arrangements	Permanent Facilities				
	Provided By	LAR Ltd				
	Location of Facilities	Within existing LAR site compound located outside of mortuary See location on site drawing				
	Additional Comments:	Facilities are available at all times whilst we are on site.				
	FACILITY PROVIDED BY	**CLIENT**	**LAR**	**PC**	**N/A**	
	Canteen		✓			
	Sufficient chairs & tables		✓			
	Toilet's male		✓			
	Toilet's female		✓			
	Drying room				✓	
	Storage for plant & materials		✓			
	Microwave		✓			
	Kettle		✓			
	Hot & cold running water	✓				
	Washing facilities		✓			
	Changing room				✓	
	Heating				✓	

	Description	**Provided by LAR**	**Provided by Client**	**Location**
Temporary Arrangements	Power Supply	10kva transformer	3 Phase Supply	Throughout Building
	Water Supply		Mains Tap (Bib Tap)	External of Building
	Heras Fencing/Hoarding	DCU / Skip / Around Building		See Drawing
If applicable, specify the contractor carrying out the installation of temporary supplies				

PPE	Specify below any general site PPE required in addition to that used for main removal works		
	Description	**Required**	**Specify Type & Details**
		Yes	Cloth/Grip Glove (General Purpose)
		Yes	Hard Hat
		Yes	Hi-Viz

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		Yes	Steel Toe Capped Boots
		Yes	Ear Defenders
		Yes	Safety Glasses
	Other please specify:		

Emergency Procedures [LAR Procedure SP01-P]	Muster Point (Non-Contaminated)	See Drawing
	Muster Point (Contaminated)	See Drawing
	First Aid Kit	Welfare Facilities
	Nominated First Aider	LAR Supervisor
	Nearest A&E	Onsite
	Access, Fire and Hazard Risks	The site supervisor will liaise with the appropriate representative, where applicable, and will ensure that all operatives on site are aware of the site-specific fire exits and fire escape routes and existing site hazards.
	Fire Extinguishers Supplied By	LAR Ltd
	Specify the Type of Extinguisher	Fire Trolly (Water & Foam)
	Location of Extinguisher	See drawing provided

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Section 3: Waste Treatment

How is waste being removed from site	Licensed landfill site via the waste contractor specified below with waste being kept in a sealed lockable skip on site			
LAR Waste Vehicle to be Used	No – But supervisor van to be used to transfer to onsite skip			
If transferring, please state approximate quantity of waste	00 Bags		00 Parcels	
ADEQUATE ARRANGEMENTS MUST BE IN PLACE FOR THE REMOVAL OF WASTE. WASTE SHOULD NOT REMAIN WITHIN THE ENCLOSURE OR BUILD UP WHERE IT RESTRICTS ACCESS / MOVEMENT WITHIN THE ENCLOSURE				
Location of Waste Skip	Refer to the site drawing provided			
If 'Skip', what size and how many:	Size:	16 Yard	Estimated No of Skips:	1
		35 Yard		2
Name of Waste Contractor:	Waste Wave			
Is the skip required at the start of the project?	Yes			
If no, specify what day/date the skip is required	N/A			
Is a consignment note required?	Yes			
Waste to be recycled	Timber to be recycled at LAR Ltd Transfer Station			
Is a skip available for use on site? Is so please describe.	N/A			
Is a general waste skip required?	N/A			

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Section 4: Site Specific Provisions

Plant and Equipment:

Description	No. / Size	Additional Info
Decontamination Unit	1	
Type H Vacuum Cleaners	6	
6500m³h NPU	3	
Ducting grey	15 Metres	
Flame Retardant Visqueen minimum required	3 Rolls	
Waste bags minimum required	800	
Timber	100	
Injection Unit (safe strip) Needle type (hard-set insulation)	1	
Fibre suppressant (safe strip)	3 Litres	
Killer Sprayer	6	
Fibre suppressant (damp strip)	15 Litres	
Smoke generator and canisters	✓	
CCTV sets 4 cameras	✓	
Vision panels	14	
10kva Transformer Phase 3	6	
HAV gloves	3	
Ear Defenders	4	
Sufficient nail brushes, towels, soap, and shampoo will be provided for the project as required.	✓	

Please Note: The amount of plant on site will vary during the project dependent on the scope of works and the number of operatives on site. ****Where relevant, the above equipment meets BS 8520****

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List of Plant to be Hired:

Description	No or size	LAR to provide	Required at commencement of works
Festoon Lighting	4 x 25lm	✓	Yes
Reciprocating Saw (Metal Blades)	3 & 10 Packs	✓	Yes
Mi-Tower	1	✓	No – Supervisor to advise
6-tread steps	1	✓	No – Supervisor to advise
Hand Lamps	6	✓	Yes
Medium Breaker with chisel attachment	1	✓	Yes
2-way radios	6	✓	Yes
15 min escape sets	6	✓	Yes
Harness	6	✓	Yes
Gas Monitors	4	✓	Yes
Floor Dolly	1	✓	Yes
Fire Trolley	2	✓	Yes
Spanset Tripod	1	✓	Yes

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Section 5: Areas of Activity

	WORK AREA DETAILS				
Item No & Location*	1 – Basement Undercroft				
Description of Work	• Cutting out of 4no hatches to floor to provide access into undercroft • Form 1no enclosure for the following works: • Removal of all plant within undercroft • Removal of thermal insulation to pipework • Removal of thermal insulation debris throughout undercroft • Removal of floor tile debris throughout undercroft • Removal of all brackets and fixings throughout undercroft • Full clean of area • Works to be carried out under fully controlled conditions				
HIGH RISK ACTIVITIES	N/A				
Programme *(or see attached)*	**See attached programme**				
Photos	   				
Form of Asbestos	Insulation / Debris				
Bulk Sample Results*	Chrysotile: ✓	Amosite: ✓	Crocidolite:		
Condition of Asbestos	Poor				
Size of Job (area or volume) *	922m³				
Specify Size of ACM	Throughout undercroft				
How is the ACM fixed?	Glued / Debris				
Expected Exposure Levels	**ACM**	**Task**	**Fixing**	**AER**	**MER**
	Insulation (Pipe etc.)	Removal	Residue	0.05	0.037
	Insulation (Pipe etc.)	Removal	Debris	2	0.047
	Insulation (Pipe etc.)	Fine Cleaning	Residue	0.05	0.03
	Insulation (Wrap and cut)	Removal	Residue	1	0.133
	Insulation (Wrap and cut)	Removal	Sectional	1	0.04

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	Type of Respirator			FFPA (Scott Vision/Phantom)	
	Eye Protection Required			Full Face Mask for works within the enclosure	
	Hand Protection			Cloth / HAV Gloves	
	Is the Area Contaminated?			Yes – Undercroft Only	
	If yes, specify controls			Blue overalls & full-face mask to be used for setting up	
	WORKING AT HEIGHT				
	Does task require works at height?			No	Platform Height – N/A
	Height of Void Spaces			N/A	
	Access Equipment			N/A	
	If 'stepladders' are to be used – state reason:			*If steps are to be used it will be for short duration where other platforms can't be utilised.*	
	Fixed Scaffolding			N/A	
	Is the Scaffold Licenced?			N/A	
	ISOLATIONS				
	Are there specific isolations required?			No – But confirmation of being redundant required	
	Will any services within the area remain live?			No	**Note unless proof of isolation has been provided services are to be assumed LIVE and must not be removed**
	Type	**IS IT LIVE?**	**Is Isolation Required**	**How is this Managed**	**Cert Required**
	Electrical LV			Redundant – Client has confirmed as redundant	Received
	Electrical (Others)			Redundant – Client has confirmed as redundant	Received
	Pipework			Redundant – Client has confirmed as redundant	Received
	ENCLOSURE				
	Describe Airlock to be Used			Airlock (3m x 1m x 2m High) with viewing panels to be used for equipment and personnel	
	If not the minimum size, please specify why:			N/A	
	Will a separate Baglock be used?			Yes, 3m x 2m x 1m Baglock	
	If 'No' state, why not:			N/A	
	Will any waste remain in enclosure due to size and form part of the 4 Stage Clearance?			No	
	Does any part of the enclosure need weather protection			Yes – Air cube located externally	
	If 'Yes' state, how this will be achieved			Tufboard	
	WASTE & TRANSIT ROUTE [SP01-M]				
	Will the DCU be directly connected to the work area			No	
	If no, please state why.			Multiple Airlocks / Lack of space	

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Detail	Waste Route	Transit Route
Distance	Up to 50(m)	Up to 50(m)
Internal Make up of Surface	Wood	Wood
Surface Protection	Cover with Corex	Cover with Corex
External Make up of Surface	Concrete (smooth)	Concrete (smooth)
Surface Protection	Sweep prior to work	Sweep prior to work
Segregation	Barrier Tape	Barrier Tape
Walls to be Sheeted	No	No
Transit Method	Carrying Euro Bin with Drop Side Waste Compartment of Van	Direct to DCU
Waste for the work area	800No. Bags	

Please refer to drawings for enclsoure sizes and NPU calculations

Supervisor to record site specific calculations from anenometer readings and record in the site paperwork

1. Preliminary Works

- Complete and sign dynamic risk assessment at start of project and update in the event of any significant changes.
- Set up Decontamination Unit to power and water as per attached drawing [LAR Procedure SP01-G].
- Ensure provision for waste has been set up.
- Supervisor to take photos of area prior to commencing works and upload within the Dropbox job folder or email.
- Pre-clean to be carried out as follows:
    - Carry out a clean of the floor areas where the airlocks, baglocks and waste and transit routes are to be located using a H-type vacuum
    - Cover the floor where the airlocks, baglocks and waste and transit routes will be located with corex
    - In the basement plant room, seal out the external duct using 1000-gauge flame retardant visqueen and tape
    - Erect pods over the areas of floor to be cut out using 1000-gauge flame retardant visqueen and timbers
    - Then, within the pods, wearing full face mask and blue coveralls, cut out sections of the flooring to aid access to the undercroft and then form part of the enclosure using recip saws and a breaker where required whilst utilising a H-type vacuum in the shadow vacuum method.
    - The removed sections of flooring are to remain within the pods, to be disposed of within the live area
    - Wearing a full-face mask and blue coveralls, install timbers as props to the edges of the openings within the undercroft to provide additional support to the flooring
- Ensure the isolations set out above have been carried out and certificate of isolation has been received.

STOP & HOLD	Prior to continuing ensure that the isolations stated within the isolation section have been carried out certificates in place	DATE	SIGN

- [LAR Procedure SP01-I] The enclosure will be formed using the structure of the room, 50mm x 50mm PAR timbers + 1000-gauge flame retardant visqueen.
- A viewing panel will be fixed to the enclosure as per the drawing provided.
- CCTV camera to be connected to provide vision into the work area as shown on the drawing provided.
- CCTV cameras to be moved around the area to provide full visibility as the works progress.
- Warning signs to be fixed to the airlock and enclosure.
- Warning signs to be fixed to the barrier tape.
- Air movement tape to be positioned within the middle stage of airlock together with viewing panel for viewing.
- NPU ducted to external atmosphere via door in basement plant room.

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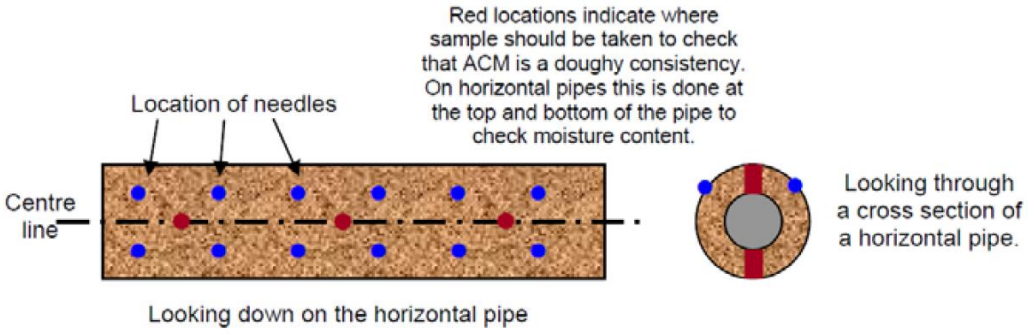
- Anemometer readings to be taken from negative pressure units and figures recorded onto the supervisor's site paperwork.
- If the readings indicate that the NP Unit are drawing in sufficient airflow and the flap displacement is between 200mm and 300mm then the smoke test will be carried out.
- Smoke and negative pressure test as per [LAR Procedure SP01-L] witnessed by the site supervisor and / or site analyst
- Whilst asbestos removal works are carried out, smoke heads within Antenatal are to be isolated at 07:00 and turned back on at 17:00, whilst they are isolated LAR supervisor is to carry out a waking watch of the building every 30 minutes and fill in attached waking watch sheet to confirm it has been carried out
- If required, LAR to bag smoke heads using red asbestos waste bags only (no other bags to be used) at the start of each shift and the bags **must** be removed at the end of each shift (under no circumstances must smoke heads be bagged whilst LAR are not onsite)

2. Asbestos Abatement Works

- On successful smoke test and all necessary isolations, commence works as follows:
- All waste generated during the below process will be single bagged into red waste bags and double bagged into clear asbestos labelled waste bags through the bag lock / Airlock [LAR Procedure SP01-N].
- When working in the undercroft, harnesses, 2-way radios, gas monitors, escape kits to be utilised and floor dolly and tripod to be set up
- Firstly, spray the removed sections of flooring with a fibre suppressant damp strip via a low-pressure hand sprayer
- Once wetted, remove and dispose of as contaminated waste
- Then, in the undercroft, spray any obvious debris within the undercroft around the hatches with a fibre suppressant damp strip via a low-pressure hand sprayer
- Once wetted, remove the larger pieces of debris and place into asbestos waste bags
- Once all larger pieces of debris have been removed around the hatches, utilise a H-type vacuum cleaner to remove any remaining debris
- Repeat the above process throughout the undercroft to remove all AIB and floor tile debris
- Once all the debris within the undercroft has been removed, at the 1st pipe with hard set insulation, wrap the pipework in 1000-gauge visqueen and seal with cloth tape
- Once sealed, small sections of the insulation where the pipe is to be cut will be injected at 1lm intervals with a fibre suppressant damp strip, being mixed automatically by the red box and then left to soak for 2-3 hours

Horizontal Pipe Lagging

- Ensure pipe is wrapped prior to needle insertion using 1000 gauge poly and cloth tape or cling film
- Place straight needles in locations shown



- The injection liquid will be regulated, and saturation checked and confirmed by the supervisor/competent operative via carrying out testing with a knife.
- Once at doughy consistency, the section of insulation will then be scraped off using handheld scrapers and wire brushes where required and placed into asbestos waste bags
- Once the small sections have been removed and pipe cleaned, the exposed ends of the insulation will be sealed with cloth tape, prior to cutting out the pipe in small 1lm sections using a reciprocating saw. A 2nd operative will support the opposite end of the pipe during the cutting out process where required
- Repeat the above process to remove all pipework with hard set lagging within the undercroft in 1lm sections

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- Once all the pipework with hard set insulation has been removed, spray any MMMF lagging to pipework with a fibre suppressant damp strip
- Once wetted, remove all MMMF insulation to the pipework in manageable sections with the aid of handheld tools whilst utilising a H-type vacuum in the shadow vacuum method for controlled removal
- Once all MMMF insulation has been removed from the pipework, spray the pipework with a fibre suppressant damp strip
- Once wetted, remove the pipework in 1lm sections, using a recip saw to cut the pipework
- Repeat the above process to remove all remaining pipework within the undercroft
- Once all the pipework has been removed, spray any cables and associated cable trays with a fibre suppressant damp strip
- Once wetted, remove the cables in manageable sections with the aid of handheld tools such as cable cutters and disposed of as contaminated waste, larger cables and the cable trays are to be but into manageable sections for disposal using a recip saw whilst utilising a H-type vacuum in the shadow vacuum method for controlled removal
- Repeat the above process until all cables and associated trays have been removed
- Once the cables and associated trays have been removed, spray any remaining brackets and fixings to the walls and ceiling of the undercroft with a fibre suppressant damp strip
- Once wetted, remove the brackets and fixings to the walls and ceiling throughout the undercroft with the aid of handheld tools such as a screwdriver whilst utilising a H-type vacuum in the shadow vacuum method for controlled removal
- Repeat the above process until all the brackets and fixings to the walls and ceilings have been removed
- Once all the brackets and fixings have been removed, spray the 1st wall to be cleaned with a fibre suppressant damp strip
- Once wetted, carry out a clean of the wall using handheld scrapers, wire brushes and scouring pads whilst utilising a H-type vacuum in the shadow vacuum method for controlled removal
- Repeat the above process to clean all remaining walls and the ceiling within the undercroft

3. Final Clean & Supervisor Visual

- On completion of the above works, the area will be thoroughly cleaned using Type H vacuum cleaners and wiped down with damp disposable cloths. This will include the removal of dust and debris on all surfaces, items, and equipment.
- Prior to handing over the area to the analyst, the site supervisor will enter the enclosure and carry out a thorough visual inspection and record duration below.
- Supervisor to complete Analyst Handover form and retain a copy or photograph of it

4. Analyst to Conduct 4 Stage Clearance Procedures [LAR Procedure SP01-O]

- The supervisor will liaise with the onsite analyst if anything will be left in the enclosure e.g., mobile towers.
- The analyst will carry out the visual inspection and air testing, any access equipment which was used for our purposes will be left in the enclosure for the analyst to utilise.

UNLESS OTHERWISE STATED THERE HAS BEEN NO ALLOWANCE FOR ENCAPSULATION ON COMPLETION OF THE WORKS

- Analyst to forward all air monitoring certification for this project to analytical@larltd.com
- The area will then be de-tented, and the 4th stage of the clearance carried out.
- Supervisor to take photos of area on completion of works and upload within the Dropbox job folder.

5. Final Inspection

- Prior to leaving site, the LAR Site Supervisor is to carry out a final walk-through visual inspection of the work area and transit route to ensure that the site is left in a clean and tidy condition
- Supervisor to contact LAR head office to confirm off hire of skip / plant if applicable.
- Complete Section 7: Certificate of Final Inspection

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WORK AREA DETAILS	Item No & Location*	2 – Ground Floor				
	Description of Work	• Removal of mastic to windows				
	HIGH RISK ACTIVITIES	N/A				
	Programme *(or see attached)*	**See Attached Programme**				
	Photos					
	Form of Asbestos	Mastic				
	Bulk Sample Results*	Chrysotile	Amosite	Crocidolite		
		✓				
	Condition of Asbestos	Sealed				
	Size of Job (area or volume) *	Approximately 50no windows				
	Specify Size of ACM	Small amounts to windows				
	How is the ACM fixed?	Glued				
PPE & RPE	Expected Exposure Levels	**ACM**	**Task**	**Fixing**	**AER**	**MER**
		Sealant	Removal	Glue	0.01	0.027
	Type of Respirator	P3 Half Face (Sundstrom)				
	Eye Protection Required	Safety Glasses				
	Hand Protection	Cloth / HAV Gloves				
	Is the Area Contaminated?	No				
	If yes, specify controls	N/A				
WORKING AT HEIGHT	Does task require works at height?	Yes	Platform Height – 0.6m			
	Height of Void Spaces	N/A				
	Access Equipment	6-tread Steps / mi-tower				
	If 'stepladders' are to be used – state reason:	*If steps are to be used it will be for short duration where other platforms can't be utilised.*				
	Fixed Scaffolding	N/A				

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ISOLATIONS	Are there specific isolations required?	No	
	Will any services remain live?	N/A	**Note unless proof of isolation has been provided services are to be assumed LIVE and must not be removed**
WASTE & TRANSIT	Will a DCU be required	No	
	Waste Route	Through building to skip at front of building	
	Transit Method	Carrying Wheelie Bin	
	Waste for the work area	25no Bags	

1. Preliminary Works

- Complete and sign dynamic risk assessment at start of project and update in the event of any significant changes.
- Ensure provision for waste has been set up.
- Supervisor to take photos of area prior to commencing works and upload within the Dropbox job folder.
- No enclosure required but the area of work will be cordoned off with barrier tape & warning signs

2. Asbestos Abatement Works

- All waste generated during the below process will be single bagged into red waste bags and double bagged into clear asbestos labelled waste bags
- At the 1st window with mastic to be removed, cut the frame out using a recip saw whilst utilising a H-type vacuum as a local exhaust, where required utilise 6-tread steps/mi-tower to access the higher levels of the window
- Once the frame has been cut out, wipe clean and place in a designated area for others to dispose of
- Once the frame has been cut out, spray the mastic to the brickwork with a fibre suppressant damp strip via a low-pressure hand sprayer
- Once wetted, remove the mastic with the aid of handheld scrapers and a kango where required, whilst utilising a H-type vacuum in the shadow vacuum method for controlled removal
- Repeat the above process for all windows with mastic on the ground floor

3. Final Clean & Supervisor Visual

- On completion of the above works, the area will be thoroughly cleaned using Type H vacuum cleaners and wiped down with damp disposable cloths. This will include the removal of dust and debris on all surfaces, items and equipment.
- Prior to handing over the area to the analyst, the site supervisor will enter the enclosure and carry out a thorough visual inspection and record duration below.
- Supervisor to complete Analyst Handover form and retain a copy or photograph of it

4. Air Monitoring

- The supervisor will liaise with the onsite analyst
- The analyst will carry out reassurance air monitoring
- Analyst to forward all air monitoring certification for this project to analytical@larltd.com
- Supervisor to take photos of area on completion of works and upload within the Dropbox job folder.

5. Final Inspection

- Prior to leaving site, the LAR Site Supervisor is to carry out a final walk-through visual inspection of the work area and transit route to ensure that the site is left in a clean and tidy condition
- Supervisor to contact LAR head office to confirm off hire of skip / plant if applicable.
- Complete Section 7: Certificate of Final Inspection

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Section 6: Site Briefing Signature Sheet

By signing this document, you are confirming that you have read this plan of work and that your contract manager/supervisor has carried out a full briefing or communicated the information contained within. In doing so, has effectively communicated its contents to you in a way which you understand the task and what is required of you on this project, you understand this plan of work, the full extent of your duties and the required PPE & RPE required when working on this project.

You shall not deviate from this plan of work under any circumstances, unless given a task specific briefing by your Supervisor, and there after all revised working methods have been carefully assessed and recorded on the amendments section of this document.

Should any site conditions change, or should unforeseen problems arise, you will stop works immediately and inform your contract manager/supervisor.

Supervisor Sign Off

Name (Print)	Signature	Date & Time

Operative Sign Off

Name (Print)	Signature	Date & Time

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Section 7: Certificate of Final Inspection

Project Name	North Manchester General Hospital Antenatal (Block 32) Delaunays Road Crumpsall Manchester M8 5RB

Enclosure Works:

In accordance with the requirements of the Plan of Work, I, as supervisor on this project, confirm that I have carried out an inspection of the work area detailed above prior to the visual inspection by the Independent Analyst.

(A) I have inspected the works and have instructed further cleaning to be carried out to the following areas:-

(B) Upon re-inspection, I confirm that the areas have been cleaned to my satisfaction and is now suitable for visual inspection by the analyst.

(C) I confirm the area has been cleaned to my satisfaction and is suitable for visual inspection by the analyst.

Non-Enclosure Works:

(D) In accordance with the requirements of the plan of work, I, as supervisor on this project, confirm that I have carried out an inspection of the work area detailed, and I confirm that the area has been cleaned and left in a satisfactory condition.

Item No	Tick Relevant Box				COMPLETION PHOTOS TAKEN	Signed	Dated
	A	B	C	D			
1							

Clients Comments					
Supervisors to inspect the site with the clients representative on completion before leaving site to ensure works have been carried out to the clients satisfaction and the site has been left in a clean and tidy condition. If the client has any comments or you are unable to complete with the client before you leave, please state below:					
Clients Signature:		**Print Name:**		**Date:**	

NB. A COPY OF THIS FORM CAN BE PHOTOCOPIED/PHOTOGRAPHED AND EMAILED TO CLIENT ON REQUEST

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Section 8: HSE Licence & Insurance

HSE

Health and Safety Executive

Health and Safety at Work etc Act 1974
Control of Asbestos Regulations 2012

Licence to undertake work with asbestos

Licence Number 972403975

The Health and Safety Executive, in pursuance of the powers conferred on it by the Control of Asbestos Regulations 2012, licences

LAR Limited
Unit 5, Crossley Park Industrial Estate
Crossley Road
STOCKPORT
Cheshire
SK4 5BF ("the licensee")

to undertake work with asbestos subject to the conditions below. The licence is granted from **20 March 2024** and shall remain valid until **19 March 2027** unless revoked in writing by an authorised Person.

CONDITIONS

1. This licence or a copy thereof, should be made available on request by the licensee for inspection by any person to whom the licensee submits a tender or quotation for work with asbestos and shall be available for inspection at all worksites.

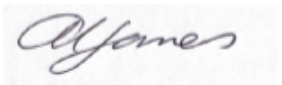
2. The licensee shall give notice in writing of the work to the appropriate HSE or local authority office at least 14 days before the work is commenced, or such other period as the authority will allow. The notice shall specify the type of work to be carried out, the likely duration of the work, the address of the premises at which the work is to be carried out and the date of commencement of the work activity. The enforcing authority must be informed in writing as soon as possible if this information changes. This condition will only apply to licensable work with asbestos as defined in Regulation 2 of the Control of Asbestos Regulations 2012 or when the licensee hires out employees (at operative level) to other licensees.

3. (a) Prior to submitting the notice of work required by Condition 2 the following documents shall be prepared by the licence holder:

   i) a suitable and sufficient written statement of the plan of work to be used.
   ii) a suitable and sufficient written specification for the equipment for the protection and decontamination of those engaged in asbestos work and also for the protection of other persons, as appropriate to the work.

   (b) The licensee shall, on request by HSE and/or the local authority provide copies of the documents referred to in 3(a) and/or allow inspection of those documents as required.
   (c) Work carried out under the notice of work required by Condition 2 shall be carried out in accordance with the suitable and sufficient plan of work and the equipment, as specified in (a) (i) and (ii).

The plan of work and written specification must be provided on request and be available at the time of notification.

Signature 

A person authorised by the Health and Safety Executive to act in that capacity

Name: **Amanda James**
H M Inspector of Health & Safety
Asbestos Licensing Unit

Date: **04 March 2024**

FOD ASB2A

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VERLINGUE

To Whom It May Concern,

29th April 2024

RE: LAR Limited

BUSINESS DESCRIPTION Asbestos removal contractors, contamination cleansing, deep clean contractors and soft strip demolition carried out by Bona Fide Subcontractors

We can confirm that we act as insurance brokers on behalf of the above insured, and that the following covers are in place:

Employers Liability

Insurer:	Miles Smith Limited
Policy number:	B190355241020
Cover period:	3rd May 2024 to 2nd May 2025
Indemnity limit:	£20,000,000

Public Liability

Insurer:	Miles Smith Limited
Policy number:	B190355241020
Cover period:	3rd May 2024 to 2nd May 2025
Indemnity limit:	£20,000,000 – Any one occurrence

Products Liability

Insurer:	Miles Smith Limited
Policy number:	B190355241020
Cover period:	3rd May 2024 to 2nd May 2025
Indemnity limit:	£20,000,000 – Any one occurrence and in the aggregate

Extended to include:- Working on Licensed Premises
Hot working subject to policy Burning
Welding and Cutting Conditions
Working in confined spaces
Working at height and not subject to any height limit other than demolition work
Asbestos Removal

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A General Principals Clause is included in respect of Employers and Public Liability only. Please note this document is intended for use as evidence that the insurance as described herein, has been effected and shall be subject to all terms and conditions of the policy and that in the event of any inconsistency herewith, the terms and conditions of such policy shall prevail.

We trust the above meets with your approval, but if you do require any further assistance then please do not hesitate to contact us.

Yours faithfully,

Amanda Pilkington
Senior Client Adviser
Verlingue Limited
Tel: (+44)1612424334
Email: amanda.pilkington@verlingue.co.uk

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PLANNING RISK ASSESSMENT

L9840

Project:	NMGH Antenatal (Block 32)	Assessed By:	R Clarke	Date:	14/08/2024

			PERSONS at RISK						
ACTIVITY/ OPERATION:	**SIGNIFICANT RISKS/HAZARDS:** (Including Environmental Risks, Residual Significant Risks Identified by the Designers)	**Risk:**	**Site Personnel**	**Public**	**Subcontractor**	**Others**	**ACTIONS REQUIRED:** TO REDUCE OR CONTROL RISKS	**Risk after control actions:**	**ACTION BY: Name**
Working with an ACM **Insulation and debris containing Chrysotile & Amosite**	• Exposure to Asbestos: • Spread of asbestos • Release of Asbestos to atmosphere	H	X				All works will be carried out in accordance with the plan of works and LAR standard procedures to reduce the air borne fibre level within the enclosure. All operatives will be wearing the appropriate RPE throughout the works as identified within the plan of works • Full enclosure entry working • RPE/PPE • Negative pressure units • Viewing panel/CCTV to be used. • Smoke and integrity test • Sprays of fibre suppressant to be utilised. • Injection of fibre suppressant to be utilised. • Shadow vacuuming • Full time leak testing • Personnel monitoring • 4-stage clearance • Respirator zone segregation • Waste & transit route segregation • Other ACM's are present within the building which will not be disturbed during our project	L	LAR Supervisor

PLANNING RISK ASSESSMENT

L9840

ACTIVITY/ OPERATION:	SIGNIFICANT RISKS/HAZARDS: (Including Environmental Risks, Residual Significant Risks Identified by the Designers)	Risk:	PERSONS at RISK				ACTIONS REQUIRED: TO REDUCE OR CONTROL RISKS	Risk after control actions:	ACTION BY: Name
			Site Personnel	Public	Subcontractor	Others			
Working with an ACM (non-enclosure works) **Mastic containing Chrysotile**	• Exposure to Asbestos: • Spread of asbestos • Hazardous waste	H	X				All works will be carried out in accordance with the plan of works and LAR standard procedures to reduce the air borne fibre level. All operatives will be wearing the appropriate RPE throughout the works as identified within the plan of works • Sprays of fibre suppressant to be utilised. • RPE/PPE • Shadow vacuuming • Part time reassurance testing • Respirator zone segregation • Double bag waste to secure and dispose in line with waste management processes	L	LAR Supervisor
Work at Height **Platform Level 0.6m**	• Fall of Men and Material • Access to and egress from work area and high-level areas.	H	X				• All platforms to be erected by competent and PASMA trained operatives • Preferred working methods will be 6-tread steps / mi-tower within the work areas. • Steps to be used only for short duration where other access is restricted. 3 points of contact to be maintained at all times.	L	LAR Supervisor
Slips, Trips & Falls	• Slips and Trips • Loose leads • Poor house keeping • Poor lighting	M	X				• The surrounding area to the work site is to be kept clear of excess materials, well lit & all staff will wear safety shoes. Any potential trip hazards will be removed or highlighted if they can't be removed. • Clean any spillage immediately. • All cables to be elevated where possible and taped. Tape cables crossing the floors. • Temporary lighting to be utilised, hand lamps, festoon lighting, stand up lamps.	L	LAR Supervisor

PLANNING RISK ASSESSMENT

L9840

ACTIVITY/ OPERATION:	SIGNIFICANT RISKS/HAZARDS: (Including Environmental Risks, Residual Significant Risks Identified by the Designers)	Risk:	PERSONS at RISK				ACTIONS REQUIRED: TO REDUCE OR CONTROL RISKS	Risk after control actions:	ACTION BY: Name
			Site Personnel	Public	Subcontractor	Others			
Manual handling	• Removal of Waste / risk of dropping / spill / litter • Handling of Plant and materials	M	X				• All waste will be removed using appropriately signed bags and will be loaded to a manageable weight for the individual, assessed by competent persons. • Carrying of plant to be a two-man operation • Use of sealed wheelie bins to transfer waste • Pipe work will be cut into 1/2 m lengths weighing no more than 15kg per parcel. Handling of the parcels to be assessed for a manageable weight for the individuals by competent persons. • Housekeeping, double bag and clean-up process	L	LAR Supervisor
General Works	• Injury to eyes • Noise or dust	M	X				• Safety glasses / goggles to be worn for the duration of the works. • Full face Respirators	L	LAR Supervisor
General Works	• Injury to hands • Contact with Sharps	M	X				• Gloves to be worn for duration of the works. • Cloth/Grip Glove (General Purpose) • HAV (Heavy mechanical tools)	L	LAR Supervisor
COSHH	• Exposure to COSHH substance	M	X				• COSHH assessments to be carried out and made available via company Dropbox. • COSHH controls to be applied, according to the COSHH assessment for each substance in use on site.	L	LAR Supervisor
DCU & Water	• Risk of Legionella • Leaks, misuse of water • Burst pipe / flood	M	X			X	• Mobile decontamination units are only filled at the site or position of use. • Use only clean mains water supply. • Report any leaks or pipe bursts for repair. • None return valves to be used. • Fill tanks with a hose, not a bucket.	L	LAR Supervisor

ACTIVITY/ OPERATION:	SIGNIFICANT RISKS/HAZARDS: (Including Environmental Risks, Residual Significant Risks Identified by the Designers)	Risk:	PERSONS at RISK				ACTIONS REQUIRED: TO REDUCE OR CONTROL RISKS	Risk after control actions:	ACTION BY: Name
			Site Personnel	Public	Subcontractor	Others			
							• Do not adopt continuous refill or top up procedure, batch fill the reservoir and empty before refilling. • Emergency response plan in case of flood		
Use of Hand Tools	• Contact with sharp edges resulting from failure of hand tools i.e. loose heads, handles etc. • Contact with blade of open bladed tools whilst cutting and shaping visqueen sheeting for formation of enclosures	M	X				• Supervisor to ensure that the correct tools are being used for the tasks. • Use scissors/safety knives with concealed blades and safety bladed hand tools where possible • All open bladed knives in use to have re-tractable blades • Visual inspection of equipment prior to use ensuring defective tools withdrawn from service • All blades on open bladed knives to be retracted when not in use • Users to wear gloves, when possible, to reduce risk from injury • Cuts to be made away from user	L	LAR Supervisor
Use of reciprocating saw	• Electrocution • Failure of cutting blade • Eye Injuries • Fire • Back Injuries • HAV	H	X				• Visual inspection of cutting equipment and leads for any visible signs of damage prior to using. • Plant to be 110 volts. • All isolation certificates to be issued by client prior to cutting out. • All plant to be serviced and tested every 6 months tools to be maintained in good condition. • Operatives to be trained and competent in the use of the equipment • Opposite end to the cut to be supported whilst cutting. The material will be lifted as cutting takes place to prevent the blade from jamming.	L	LAR Supervisor

			PERSONS at RISK						
ACTIVITY/ OPERATION:	**SIGNIFICANT RISKS/HAZARDS:** (Including Environmental Risks, Residual Significant Risks Identified by the Designers)	**Risk:**	**Site Personnel**	**Public**	**Subcontractor**	**Others**	**ACTIONS REQUIRED:** TO REDUCE OR CONTROL RISKS	**Risk after control actions:**	**ACTION BY: Name**
							• Eye protection to be worn (Scott Vision Full Face) when cutting out • Based on previous noise assessment data we anticipate the noise levels within the area to be no more than 100 dB (A). • Ear protection zones shall be marked with notices as far as is reasonably practicable; workers who use the equipment and/or work within 4 metres will wear ear plugs. • Operatives to wear warm padded (HAV) gloves. • Supervisor to monitor and record exposure times to ensure Action value is worked to and employing task rotation where applicable. • EAV – Exposure Action Value = 47 minutes • ELV – Exposure Limit Value = 3 hours – 8 minutes. • Establish contents of pipes prior to being cut and if required purge contents to ensure all potential stagnant liquids/gases have been cleared. • The supervisor or appointed competent operative will identify the locations where the pipework is to be cut by tagging the cut point with an appropriate tag or marking.		
Vehicle / Plant Movement	• LAR staff and other site personnel coming into contact with the vehicle • Leaks / spills of oil	M	X		X	X	• Vehicle reversing activities are to be avoided wherever possible. • Where reversing activities are unavoidable particularly whilst manoeuvring decontamination units / vehicle movement will be supervised by the Site Supervisor or a banks man. • Follow site traffic routes at all times.	L	LAR Supervisor

			PERSONS at RISK						
ACTIVITY/ OPERATION:	**SIGNIFICANT RISKS/HAZARDS:** (Including Environmental Risks, Residual Significant Risks Identified by the Designers)	**Risk:**	**Site Personnel**	**Public**	**Subcontractor**	**Others**	**ACTIONS REQUIRED:** TO REDUCE OR CONTROL RISKS	**Risk after control actions:**	**ACTION BY: Name**
							• Operatives are to keep to designated walkway routes at all times. Cross roads at designated points only. • Vehicles must be parked in a manner that does not cause obstruction to other vehicles or pedestrians. • Do not use mobile phones whilst driving		
Use breaker	• Electric shock, electrocution or other electrical hazards • Failure of cutting blade • Noise • Dust • Vibration • Collision with other services i.e. pipe work.	H	X				• Visual inspection of equipment and leads prior to use for exposed cables or damage to equipment. All electrical cabling to be isolated and certificates issued by client. • Plant to be serviced and recorded electrical inspection and test every six months (if hired certificate of inspection to be with equipment) • Tools maintained in good working condition • Pipe work to be isolated • Low noise equipment to be used and ear protection to be worn when identified by the equipment manufacturers. • Eye protection to be worn. (High impact goggles or full-face Sabre Phantom powered respirator) • Debris to be removed from enclosure as work progresses to prevent build-up of waste along with providing periods of rest from using equipment. • Breakers to be maximum of 110 volt • Vibration measurement of medium duty breakers (worst case scenario) is 10 m/s2 allowing 30 minutes trigger time per day to reach Exposure Action Value and 2 hours per	L	LAR Supervisor

ACTIVITY/ OPERATION:	SIGNIFICANT RISKS/HAZARDS: (Including Environmental Risks, Residual Significant Risks Identified by the Designers)	Risk:	PERSONS at RISK				ACTIONS REQUIRED: TO REDUCE OR CONTROL RISKS	Risk after control actions:	ACTION BY: Name
			Site Personnel	Public	Subcontractor	Others			
							day (10 per week) to reach Exposure Limit Value. • Operatives to wear warm padded (HAV) gloves. • Supervisor to monitor and record exposure times to ensure Action value is worked to and employing task rotation where applicable.		
Restricted Access	• Restricted access and egress • Insufficient lighting • Difficult rescue • Poor communication via restricted space entry team to the outside man in the event of an emergency.	H	X				• Site-specific Emergency Rescue plan to be produced and included with RAMS • Entry teams to work in sight of each other to achieve good communication. • Selection of operatives. Ensure suitable size/weight for rescue and that medical reports do not highlight any concerns • Tripod and winch to be positioned to aid recovery in the event of an emergency, operatives to wear harnesses in the event of an injury. • Additional access points to be formed to aid escape. • Floor dolly to be positioned within the confined space area to be used in the event of an injury. • Adequate lighting to be set up and maintained throughout the works including emergency lighting all 110 volt. • Head torches will also be provided to aid cleaning and in use of rescue procedures. • Two way radios to be used to maintain good lines of communication between entry team and outside man. • Air horns to be used to warn the team in the space in the event of an injury.	L	LAR Supervisor

PLANNING RISK ASSESSMENT

L9840

ACTIVITY/ OPERATION:	SIGNIFICANT RISKS/HAZARDS: (Including Environmental Risks, Residual Significant Risks Identified by the Designers)	Risk:	PERSONS at RISK				ACTIONS REQUIRED: TO REDUCE OR CONTROL RISKS	Risk after control actions:	ACTION BY: Name
			Site Personnel	Public	Subcontractor	Others			
Environmental Risk Assessments									
Energy management	• Use of resources	M		X		X	• Turn off and switch off when not in use • Use of energy efficient equipment • Monitoring of energy use where possible	L	LAR Supervisor

Signed by person preparing risk assessments:		Date:	14/08/2024

Supervisors Amendments/Additions to Site Specific Risk Assessments

Activity/Operation	Significant Risks/ Hazards (including Environmental Risks, Residual Significant Risks Identified by the Designers)	Persons at Risk				Actions Required (to reduce or control risks)	Risk High (H) Medium (M) Low (L)	Action by: (name)
		Site Personnel	Public	Subcontractors	Others			

Supervisors Comments:

SUPERVISORS SIGNATURE: **DATE:**

DYNAMIC RISK ASSESSMENT

Has the site environment or working conditions changed from:

A - The point the project was planned
B - During the course of the works

Considerations to include:

Adverse weather
Temperature (High/Low)
Traffic or vehicle movements
Site security
Lighting
Noise
Services (isolations)
Working at height (Edge protection/access)
Welfare
Fire plan & emergency escape routes
Chemicals or harmful substances
Segregation of works (General public/other trades)
Waste/transit routes (sole use and clear)
Environmental (Discovery of birds/bats/bees etc)
Additional asbestos not previously identified
Housekeeping (site free of obstacles, trip hazards etc)
Appropriate RAMS, PPE/RPE, plant, equipment, tools for the planned works

Supervisor Signature

I certify that I have carried out a thorough assessment of all on site risks prior to commencing of work
Any additional risks identified have been recorded within the site specific risk assessments template and communicated back to LAR Operations and the Manager responsible for planning the works (if required)

Signature……..

Date……

NMGH, Antenatal (Block 32)

L9840

Work Area/Ref:

Item 1 – Basement, Undercroft

Scope of works:

- **Form 1no enclosure for the following works:**
- **Cutting out of 4no hatches to floor to provide access into undercroft**
- **Removal of all plant within undercroft**
- **Removal of thermal insulation to pipework**
- **Removal of thermal insulation debris throughout undercroft**
- **Removal of floor tile debris throughout undercroft**
- **Full clean of area**
- **Works to be carried out under fully controlled conditions**

Airlock / Baglock Minimum 3m x 2m x 1m Where Practicable

Ceiling/Floor Void Size:

Key:

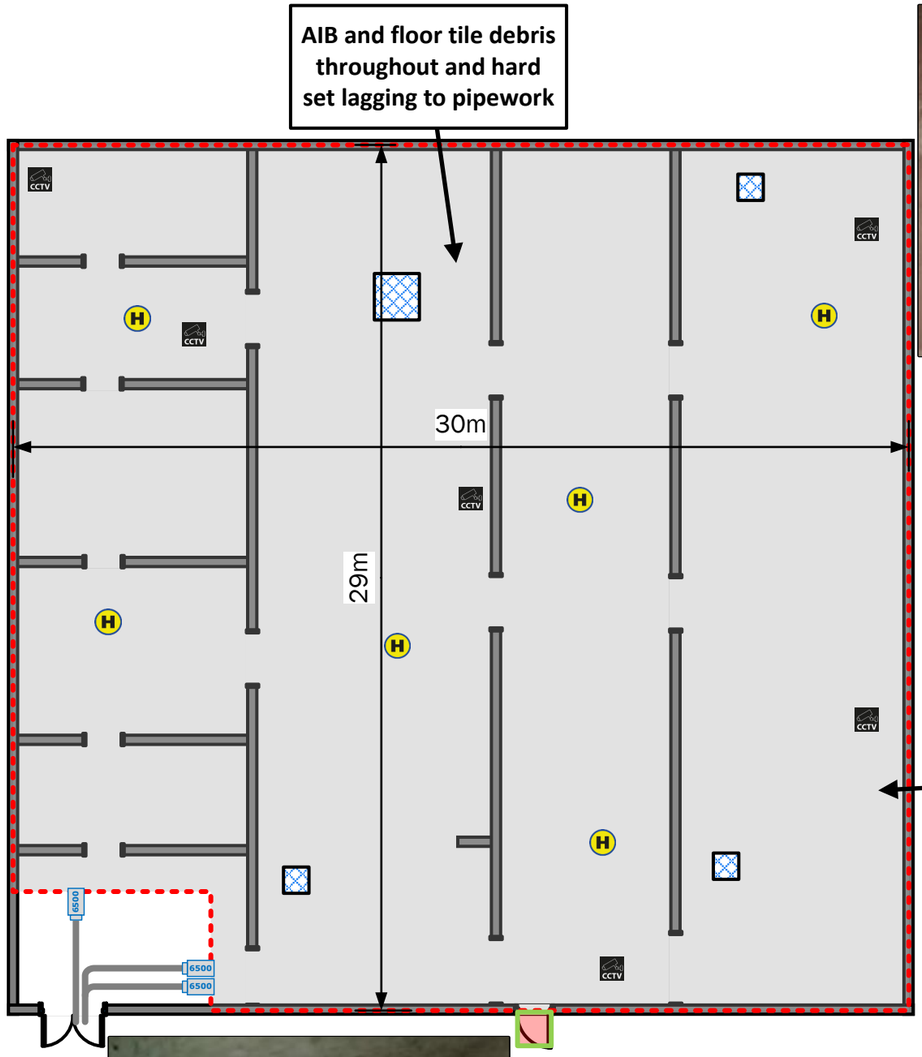
VIEWING PANEL
WASTE ROUTE
TRANSIT ROUTE
AIRLOCK
BAGLOCK
ENCLOSURE
MOBILE HYGIENE UNIT
1500 NPU
2500 NPU
6500 NPU
VAN
SKIP
NON-CONTAMINATED MUSTER POINT
CONTAMINATED MUSTER POINT
ASBESTOS DEBRIS
DRAW FILTER
DRAIN
FIRE EXTINGUISHER
FIRST AID
FIRE EXIT
TEMPORARY FENCING
TOILETS
WELFARE
GENERATOR
CCTV
H-TYPE VAC
POWER SUPPLY
WATER SUPPLY
AIR INLET CUBE

Authorised by Estimator

















Calculation of NPU capacity

Width	Height	Length	Airlock	Baglock	Add Section	Ceiling Void	Volume	Air Changes Per hour	Minimum Negative Pressure Required
m	m	m	m³	m³	m³	m³	m³	16 or 8	m³/hour
29	**1**	**30**	**24**	**6**	**21.5**		922	8	7372

Proposed number & size of NPU's to be usd	@	1500	Total Value of NPU's	**19500**
	@	2500		
	3 @	6500		
Capacity is 85% of NPU rating, average reading taken from service records			-15%	16575
Ducting ADD length for ONE NPU only = 1% loss per mtr per NPU	5	Mtr	5%	15746
BENDS ADD Total amount of bends PER NPU only = 2% loss per bend	1	Each	2%	15415
Is unit suitable after calculations	**Yes**		Minimum requirement **7372**	NPU Capacity after deductions **15415**

Air Intake

Method	m3/hour	Quantity
Air Cube	4000	1
Airlock	1500	4
Baglock	1500	1
Draw Filter	300	
	m3/hour	
Total AIR IN	**11500**	

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NMGH, Antenatal (Block 32)

L9840

Work Area/Ref:

Ground Floor – Location of Airlocks and Baglock

Scope of works:

Airlock / Baglock Minimum 3m x 2m x 1m Where Practicable

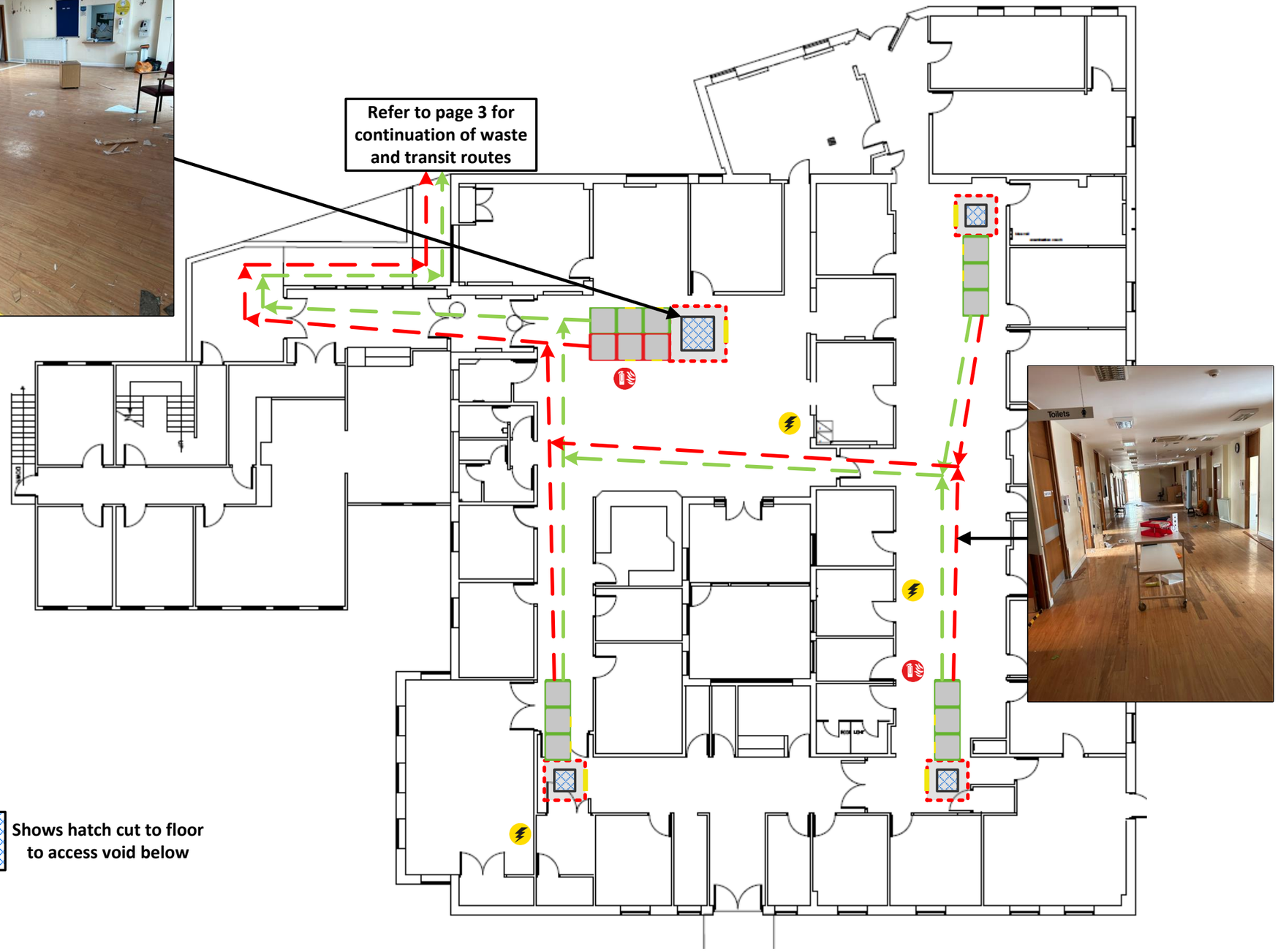
Ceiling/Floor Void Size:

Key:

- VIEWING PANEL
- WASTE ROUTE
- TRANSIT ROUTE
- AIRLOCK
- BAGLOCK
- ENCLOSURE
- MOBILE HYGIENE UNIT
- 1500 NPU
- 2500 NPU
- 6500 NPU
- VAN
- SKIP
- NON-CONTAMINATED MUSTER POINT
- CONTAMINATED MUSTER POINT
- ASBESTOS DEBRIS
- DRAW FILTER
- DRAIN
- FIRE EXTINGUISHER
- FIRST AID
- FIRE EXIT
- TEMPORARY FENCING
- TOILETS
- WELFARE
- GENERATOR
- CCTV
- H-TYPE VAC
- POWER SUPPLY
- WATER SUPPLY
- AIR INLET CUBE

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Shows hatch cut to floor to access void below

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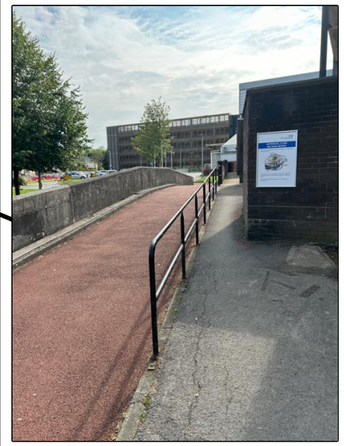
Work Area/Ref: **Continuation of waste and transit route and location of 16cy skip, DCU and van**

Scope of works:

Airlock / Baglock Minimum 3m x 2m x 1m Where Practicable

Ceiling/Floor Void Size:





Key:

- VIEWING PANEL
- WASTE ROUTE
- TRANSIT ROUTE
- AIRLOCK
- BAGLOCK
- ENCLOSURE
- MOBILE HYGIENE UNIT
- 1500 NPU
- 2500 NPU
- 6500 NPU
- VAN
- SKIP
- NON-CONTAMINATED MUSTER POINT
- CONTAMINATED MUSTER POINT
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- DRAW FILTER
- DRAIN
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- TOILETS
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- POWER SUPPLY
- WATER SUPPLY
- AIR INLET CUBE

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Work Area/Ref: **Continuation of waste route and location of 35cy skips and welfare**

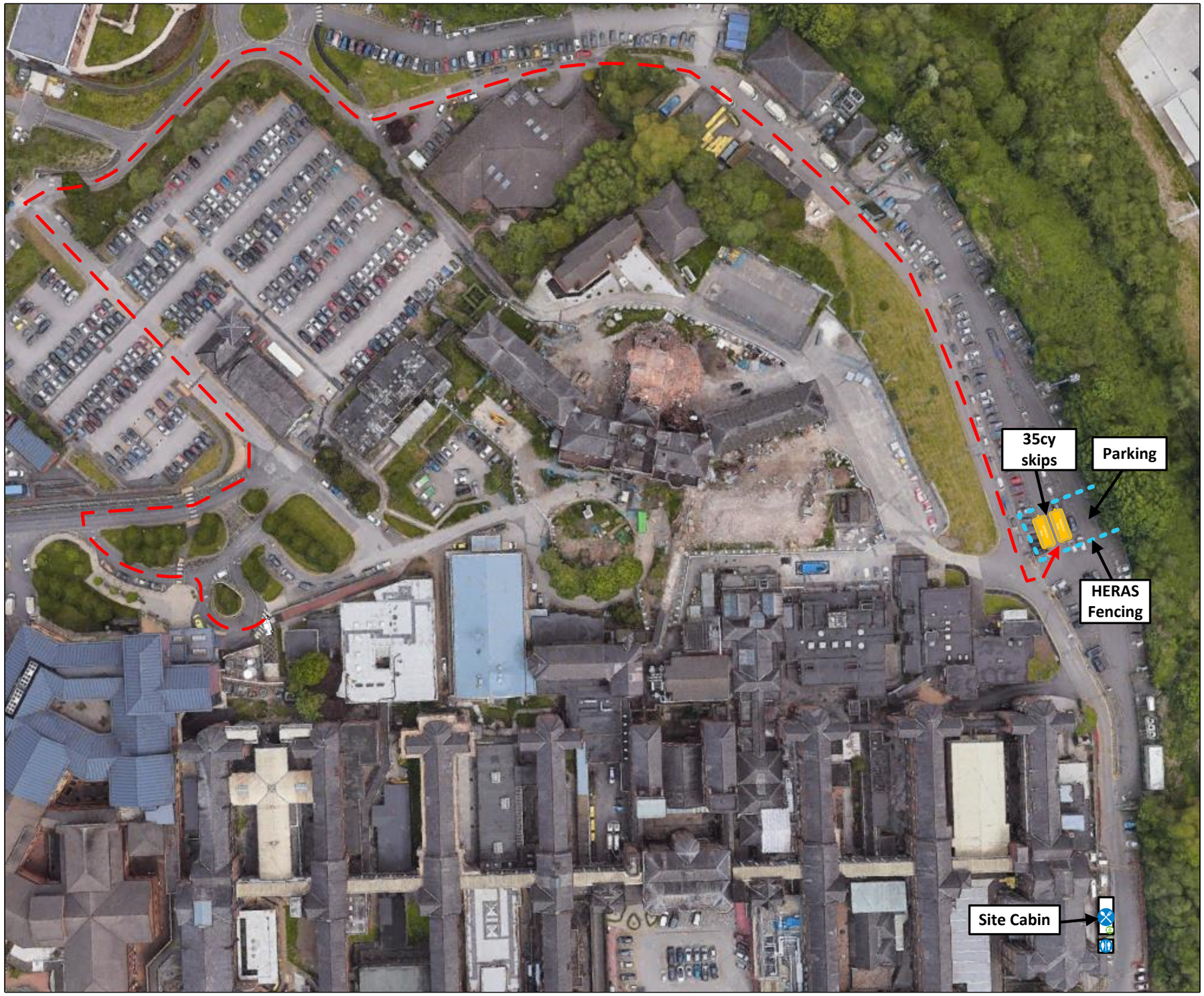
Scope of works:

Airlock / Baglock Minimum 3m x 2m x 1m Where Practicable

Ceiling/Floor Void Size:

Key:

- VIEWING PANEL
- WASTE ROUTE
- TRANSIT ROUTE
- AIRLOCK
- BAGLOCK
- ENCLOSURE
- MOBILE HYGIENE UNIT
- 1500 NPU
- 2500 NPU
- 6500 NPU
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- WATER SUPPLY
- AIR INLET CUBE



Authorised by Estimator

The Abatement Specialists

HSE

Health and Safety Executive

Control of Asbestos Regulations 2012

Notification of asbestos work

To improve the management of licensed asbestos work through auditing by the asbestos industry, HSE may share limited data provided on the ASB5 form with trade associations and relevant bodies. The data shared will be limited to: name of licensee, licence expiry date, site location, dates of work, nature of work

Notification Number: F51348FF0B Submitted Date: 28/08/2024

About you and your licence

Notification type	This is an UPDATE to a previously submitted notification
Licence number	972403975
Expiry date	19/03/2027
Licence holder name	LAR Ltd
Address	Unit 5 Crossley Park Industrial Est Crossley Road STOCKPORT SK4 5BF
Phone Number	01619479628
Email	asb5@larltd.com

Job details

Name of company contracted to	Manchester University NHS Foundation Trust
Phone number of company contracted to	07938 929655
Contact name at company contracted to	Mr Nigel Woods
Site address	North Manchester General Hospital Antenatal Block 32 Delaunays Road MANCHESTER M8 5RB
Multiple site addresses	No, there are not multiple site addresses

In which local authority is the site address (Country, Geographical Area, Local Authority)
England, Greater Manchester, Manchester

Exact work location or description of where on premises work is to be carried out
Antenatal Block 32 - Basement Undercroft

Person preparing plan of work	Mr Robert Clarke
Mobile number	07768 935326
Site supervisor	Mr Craig Thomas
Mobile number	07858 636075

Timing and duration of work

Actual start date of set up on site	04/09/2024
Expected finish date of work	26/10/2024

Waiver required?	No, this notification does not require a waiver
Duration of work (no days)	47 Days
Job start and finish times	08.00-16.30
Night working	No, night working is not involved
Weekend working	Yes, weekend working is involved
Significant cessation / pause	Yes, there will be a significant cessation or pause during the work

Cessation / pause details
Weekend Working - Saturday's Only

About the work

ACM Type	Asbestos insulation
Work to be undertaken	Removal Environmental Decontamination
General condition of asbestos material	Poor
Main type of asbestos	Amosite

Details of the type of work to be undertaken, general condition and main type of asbestos
Removal of all plant within undercroft, removal of thermal insulation to pipework, removal of thermal insulation debris throughout undercroft, removal of floor tile debris throughout undercroft, removal of all brackets and fixings throughout undercroft and full clean of area. Works to be carried out under fully controlled conditions. Main type of asbestos is Amosite & Chrysotile and is in poor condition.

Total Size of job (area or volume)	1 x 16 Yrd Skip & 2 x 35 Yrd Skips
Minimum number of person employed per shift	2
Maximum number of person employed per shift	7
Who is appointing the analytical organisation used for the four-stage clearance?	Client
How many enclosures are covered by this notification and stated in the Plan of Work?	1

Control measures and risks

Control measures used to reduce exposure	BS8520 controlled wet strip Shadow vacuuming Wrap and cut Decontamination Enclosure of work under negative pressure RPE

How the work will be supervised and monitored	Via CCTV Using enclosure entry
Non-asbestos risks	Yes, there are non asbestos risks that make the asbestos work more difficult

Details of non-asbestos risks

Restricted Space - Site-specific Emergency Rescue plan to be produced and included with RAMS. Entry teams to work in sight of each other to achieve good communication.

Special premises	No, the asbestos removal is not taking place on special premises
Enforcing authority	The enforcing authority is - HSE

Notifier contact details and declaration

Declaration	I declare that an ACoP compliant plan of work has been prepared
Notifier name	Mr Robert Clarke
Position	Contracts Director

EMERGENCY RESCUE

Procedure for Emergency Rescue when working in a confined space

SITE:	**Antenatal (Block 32), North Manchester General Hospital, Delaunays Road, Crumpsall, Manchester, M8 5RB**	**DATE:**	**14/08/2024**

1.0	**Initial considerations**	
	1. Floor Dolly 2. 2-way Radios 3. Harnesses 4. Gas Monitors 5. Spanset Tripod 6. 15-minute Escape Kits	
2.0	**Minimisation of Risk**	
	1. The operatives are to be conversant with confined space working. 2. The health of the operatives at the start of the shift is to be considered. A simple health check for any simple illnesses will be made. Anyone with known relevant health problems will not be allowed in the floor void 3. The physical risks of working in the void will be considered the proposed mitigating measures will be recorded. Eg trip hazards will be eliminated where possible and any remaining hazards will be identified and passed on to the operatives. 4. A tripod will be set up over 1no opening to the void to aid removing an injured person from the void 5. A “top man” with communication with all the team will be located at the void entry point who will maintain contact with the team whilst working via two way radio 6. The operatives will have at least 1 first aider in the team. 7. Floor Dolly to be utilised for the movement Injured person to exit points	
3.0	**Rescue Plan**	
	1. If an incident occurs the un- injured operatives will raise the alarm with the “top man”. 2. If the IP is able to walk he will be assisted out of the undercroft 3. If the IP is unable to move the first aider will render first aid and the emergency services will be called. 4. Once the emergency services are in attendance LAR operatives will assist as directed to remove the IP.	
4.0	**Nearest Accident & Emergency (A&E)**	
	North Manchester General Hospital, Delaunays Road, Crumpsall, Manchester M8 5RB Tel: 0161 795 4567	

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The route to asbestos compliance

4 stage Clearance Paperwork



Asbestos Certificate of Reoccupation

Site Address:	Client:
North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB

Project No.:	B-49309	Report No.:	RC-20241014083931	Completion Date:	23/10/2024

This certificate is issued in accordance with the documented in-house methods for carrying out4 stage reoccupation procedures which is accredited by UKAS and follows Guidance set out in HSG 248 (Edition 2).

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Certificate of Reoccupation

Project No.:	B-49309	**Report No.:**	RC-20241014083931		
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Asbestos Removal Contractor:**	LAR Ltd,
Representative Confirming Start and Acknowledging Outcome	Satisfactory	**Location of Enclosure/ Work Area:**	Antenatal Basement	**Asbestos Removal Contractor's Site Supervisor:**	Craig Thomas
Description of Work:	Description of works:- Removal of all plant within undercroft and thermal insulation to pipework, thermal insulation debris throughout undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings and full clean of the undercroft. All works are done under fully controlled conditions, the asbestos is in poor condition and contains Amosite & Chrysotile.				

Laboratory Equipment

Microscope No.:	600386	**Flow Meter:**	FM021/FM076	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM027	**Tally Counters:**	TC004/TC005	**Filter Batch No.:**	5254
NPL Test Slide:	1647	**Stopwatch:**	SW058	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Satisfactory.

Certificate of Reoccupation
Stage 1

Stage 1: Preliminary check of site condition and job completeness:

Stage 1 Start:	Plan of work checked to confirm areas to be assessed?	Details of any problems, differences, or fixed installations:	Description and location of any ACMs being retained:
14/10/2024 08:49	YES	Waste pipe not removed as this was live.	No known ACMs remaining.

Are the following intact and operational:

Work areas:	Enclosures/air extraction:	Hygiene facilities:	Viewing panel fitted?
YES	YES	YES	Both

Are the following areas and their immediate surroundings free of obvious asbestos debris and asbestos waste sacks:

Skip area/waste route:	Transit route:	Hygiene Facilities:	Enclosure/work area:
YES	YES	YES	YES

Stage 1 of 4: Pass/Fail

Comments:	Skip & DCU located outside of Antenatal unit surrounded by fencing.

Analyst Name:	Greg Allen	**Analyst Signed:**		**Pass/Fail:**	PASS
Contractor's Representative Name:	Craig Thomas	**Contractor's Representative Name Signed:**		**Stage 1 Finish:**	14/10/2024 09:15

Certificate of Reoccupation
Stage 2

Stage 2 of 4: Thorough visual inspection:

Stage 2 Start:	Airlock/baglock/enclosure are free of waste bags, materials and unnecessary equipment:	All ACMs have been completely removed from the underlying surfaces:	Interior surfaces inside the enclosure are free from debris and fine settled dust:
14/10/2024 09:30	YES	YES	YES

Estimated Time (Hours) for Stage 2:	720	**Actual Time (Hours) for Stage 2:**	670
Time difference between estimate and actual comment if >20%:	N/A		
Receipt of completed handover form – Date and Time:	14/10/2024 08:40		

Stage 2 of 4: Pass/Fail

Pass/Fail:	PASS	**Comments:**	Stage 2 started at 09:36 Acorn leave for lunch at 11:48. Acorn re-enter the enclosure at 13:10. Acorn leave the enclosure at 15:30. 15/10/2024 Acorn enter the enclosure at 09:05. Acorn leave the enclosure at 11:32. Acorn enter the enclosure at 13:12 Acorn leave the enclosure at 15:16 16/10/2024 - Acorn enter the enclosure at 08:43 Acorn leaves the enclosure at 11:00. Non asbestos paper located throughout the enclosure. Non asbestos DPC is located around the edge of the walls throughout the enclosure.

Analyst Name:	Greg Allen	**Analyst Signed:**		**Stage 2 Finish:**	16/10/2024 11:00

Certificate of Reoccupation
Stage 3

Stage 3 of 4: Inside the enclosure:

Stage 3 Start:	Enclosure/work areas are dry?	Air movers switched off and sealed?	Evidence of lock down sprays used?
16/10/2024 10:57	YES	YES	YES
Original floor surface uncovered?	**Disturbance method used:**	**Total time of disturbance (minutes):**	**Area (m^2)/Volume (m^3) of enclosure:**
YES	Brush	15	600m2

Stage 3 of 4 Clearance Air Monitoring

Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	N/A	70	Field Blank (Counted)	Site Cabin to Enclosure	-	-	-	-	-	-	-	0	200	-	-	-
2	65	105	Clearance	Basement Undercroft	10:57	12:13	76	8	8	8.0	608	1.5	158	0.010	0.001	**< 0.01**
3	118	235	Clearance	Basement Undercroft	10:58	12:15	77	8	8	8.0	616	2	156	0.010	0.001	**< 0.01**
4	253	235	Clearance	Basement Undercroft	10:59	12:17	78	8	8	8.0	624	2	154	0.010	0.001	**< 0.01**
5	262	280	Clearance	Basement Undercroft	11:02	12:20	78	8	8	8.0	624	1.5	154	0.010	0.001	**< 0.01**
6	293	281	Clearance	Basement Undercroft	11:05	12:26	81	8	8	8.0	648	3	149	0.010	0.002	**< 0.01**
7	65	70	Clearance	Basement Undercroft	13:29	14:35	66	8	8	8.0	528	2.5	182	0.010	0.001	**< 0.01**
8	118	105	Clearance	Basement Undercroft	13:30	14:37	67	8	8	8.0	536	2.5	180	0.010	0.001	**< 0.01**
9	253	235	Clearance	Basement Undercroft	13:34	14:40	66	8	8	8.0	528	2	182	0.010	0.001	**< 0.01**
10	262	280	Clearance	Basement Undercroft	13:39	14:45	66	8	8	8.0	528	2.5	182	0.010	0.001	**< 0.01**

Certificate of Reoccupation
Stage 3

Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
11	293	281	Clearance	Basement Undercroft	13:41	14:50	69	8	8	8.0	552	3.5	174	0.010	0.002	**< 0.01**
12	118	70	Clearance	Ground Floor - Pod 4	08:11	09:24	73	8	8	8.0	584	1	165	0.010	0.001	**< 0.01**
13	252	105	Clearance	Ground Floor - Pod 3	08:13	09:25	72	8	8	8.0	576	1.5	167	0.010	0.001	**< 0.01**
14	293	281	Clearance	Pod 2	08:17	09:20	63	8	8	8	504	1.5	191	0.010	0.001	**< 0.01**
15	118	280	Clearance	Pod 1	08:15	09:18	63	8	8	8	504	2	191	0.010	0.001	**< 0.01**

Certificate of Reoccupation
Stage 3

Acknowledgement

Pass/Fail:	PASS - The area is cleared for the enclosure to be removed.	**Comments:**	Satisfactory a yields a result at <0.010f/ml.

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	17/10/2024 08:28

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Certificate of Reoccupation
Stage 4

Stage 4 of 4: Assessment of site for reoccupation:

Stage 4 Start:	Former enclosure/work area and the immediate surrounding area is free from any visible debris, asbestos sacks and waste?	Transit route and waste routes are free from any asbestos debris, asbestos sacks and waste?	All ACMs in the scope of work have been removed and any known ACMs remaining are intact?
23/10/2024 08:15	YES	YES	YES

Stage 4 of 4: Pass/Fail

Pass/Fail:	PASS - The area can be reoccupied.	Comments:	Satisfactory.

Analyst Name:	Greg Allen	Analyst Signed:		Stage 4 Finish:	23/10/2024

Completion Statement

I have been advised by the analyst that the Certificate for Reoccupation can be issued as the area has passed all four stages.

Contractor's Representative Name:	Craig Thomas	Contractor's Representative Signed:		Date and Time:	23/10/2024 08:55
Analyst Name:	Greg Allen	Analyst Signed:		Date and Time:	23/10/2024 08:55

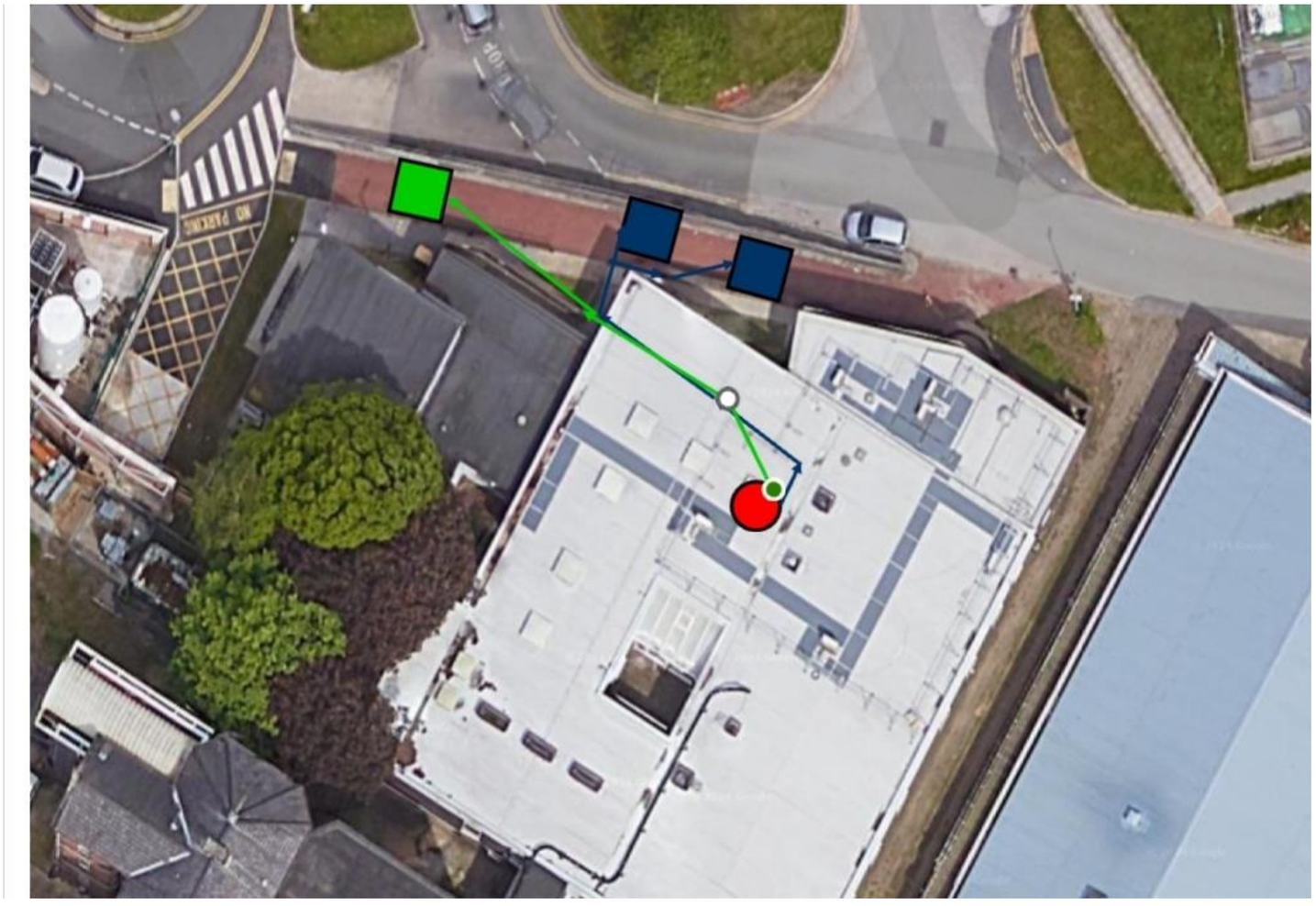
Copies Issued To:	Client & LAR.

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Site Layout Diagram

Project No.:	B-49309	Report No.:	RC-20241014083931

Site Diagram:



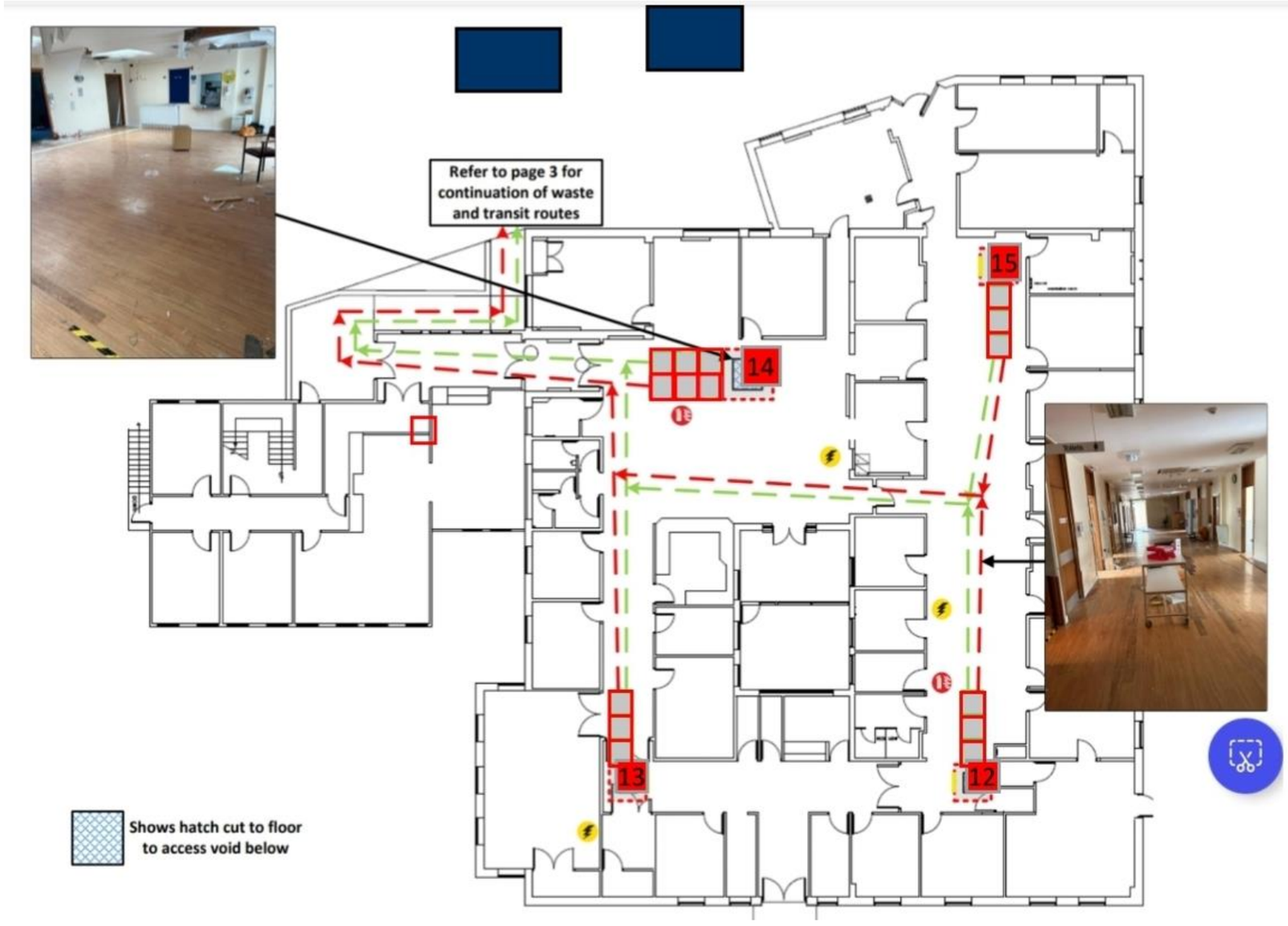
Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

Site Layout Diagram

Project No.:	B-49309	Report No.:	RC-20241014083931

Site Diagram:



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
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- Skip
- Transit Route
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Site Layout Diagram

Project No.:	B-49309	Report No.:	RC-20241014083931

Site Diagram:



Key for Diagram

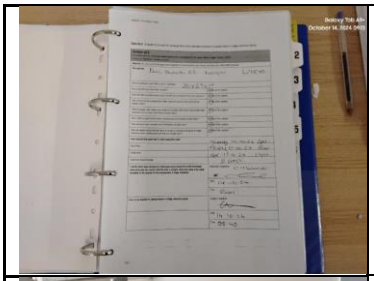
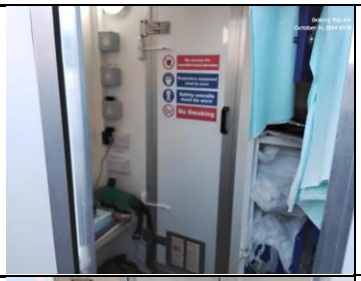
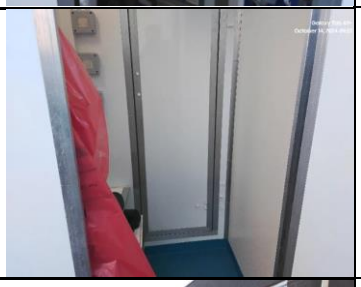
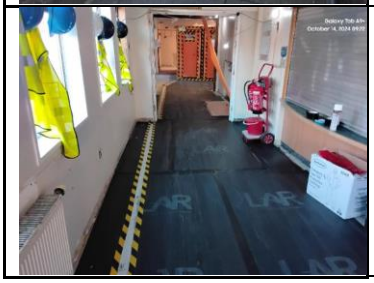
- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

Site Layout Diagram

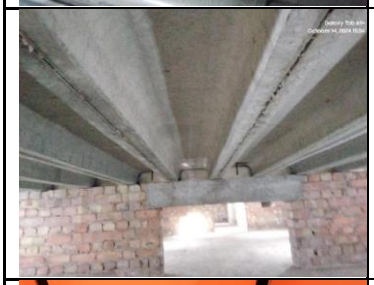
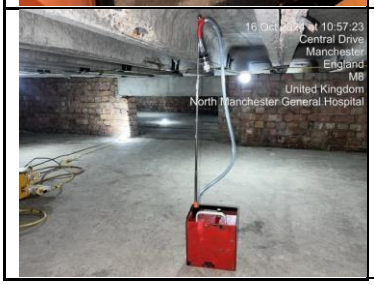
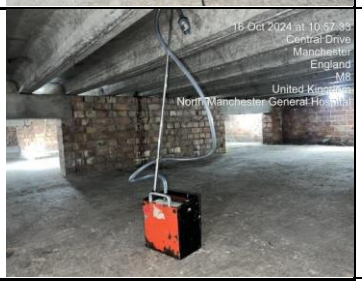
We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	14/10/2024
Analyst Name:	Greg Allen	**Analyst Signed:**		**Date:**	14/10/2024

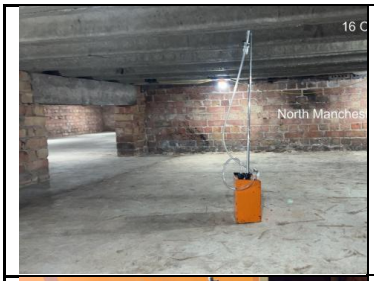
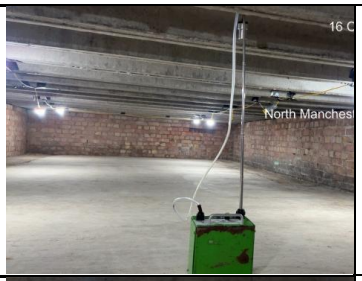
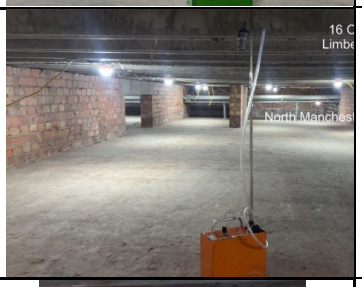
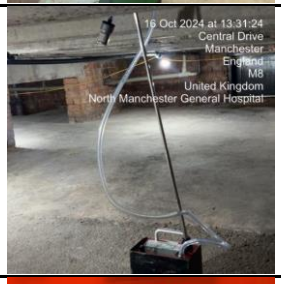
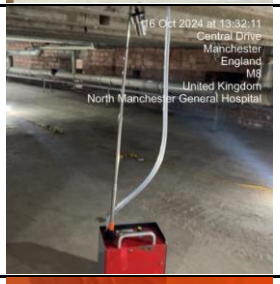
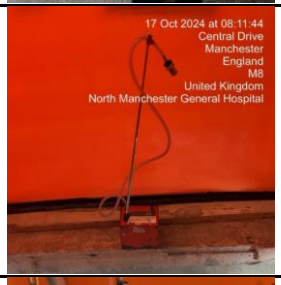
Photograph Appendix

	Handover form		Stage 1 - The DCU is free from obvious asbestos debris and waste bags.
	Stage 1 - The DCU is free from obvious asbestos debris and waste bags.		Stage 1 - The DCU is free from obvious asbestos debris and waste bags.
	Stage 1 - The DCU is free from obvious asbestos debris and waste bags.		Stage 1 - The DCU is free from obvious asbestos debris and waste bags.
	Stage 1 - The areas surrounding the enclosure/work area are free from obvious asbestos debris and waste bags.		Stage 1 - Skip area and waste route are free from obvious asbestos debris and waste bags.
	Stage 1 - Transit route is clean and free from obvious asbestos debris and waste bags.		Stage 1 - Transit route is clean and free from obvious asbestos debris and waste bags.
	Stage 1 - Transit route is clean and free from obvious asbestos debris and waste bags.		Stage 2 - The interior surfaces inside the enclosure are free from debris and fine settled dust.

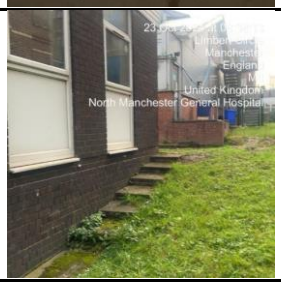
Photograph Appendix

	Stage 2 - All ACMs have been completely removed (as far as reasonably practicable) from the underlying surfaces.		Stage 2 - The interior surfaces inside the enclosure are free from debris and fine settled dust.
	Stage 2 - The interior surfaces inside the enclosure are free from debris and fine settled dust.		Stage 2 - The interior surfaces inside the enclosure are free from debris and fine settled dust.
	Stage 2 - All ACMs have been completely removed (as far as reasonably practicable) from the underlying surfaces.		Stage 2 - The interior surfaces inside the enclosure are free from debris and fine settled dust.
	Stage 2 - All ACMs have been completely removed (as far as reasonably practicable) from the underlying surfaces.		Stage 2 - The airlock and baglock are free of waste bags, materials and unnecessary equipment.
	Stage 2 - The airlock and baglock are free of waste bags, materials and unnecessary equipment.		Stage 2 - All ACMs have been completely removed (as far as reasonably practicable) from the underlying surfaces.
	Stage 3 - The sampling pumps in each of the sampling locations		Stage 3 - The sampling pumps in each of the sampling locations

Photograph Appendix

	Stage 3 - The sampling pumps in each of the sampling locations		Stage 3 - The sampling pumps in each of the sampling locations
	Stage 3 - The sampling pumps in each of the sampling locations		Stage 3 - The sampling pumps in each of the sampling locations
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Photograph Appendix

	Stage 3 - The NPUs are sealed.		Stage 3 - The brush used for disturbance of surfaces.
	Stage 4 - The former enclosure area.		Stage 4 - The former enclosure area.
	Stage 4 - The former enclosure area.		Stage 4 - The former enclosure area.
	Stage 4 - The former enclosure area.		Stage 4 - The former enclosure area.
	Stage 4 - The former enclosure area.		Stage 4 - The former enclosure area.

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The route to asbestos compliance

Analytical Paperwork

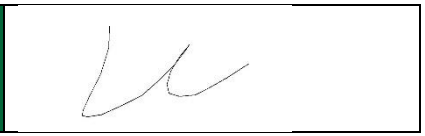


Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240819130201
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes
Acorn arrive onsite , met with LARC supervisor to dicuss today's ongoing works. Acorn are to run reassurance air monitoring where removal works have been conducted to the floor. Reassurance air monitoring results return satisfactory. Acorn leave site

Acknowledgement

Analyst Name:	Kieran Halse	**Analyst Signed:**		**Date and Time:**	19/08/2024 15:00

2418

Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240819130201	**Date:**	19/08/2024 15:00

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	North Manchester General Hospital

Laboratory Equipment

Microscope No.:	600945	**Flow Meter:**	FM065/FM070	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM036	**Tally Counters:**	TC069/TC098	**Filter Batch No:**	5033
NPL Test Slide:	8882	**Stopwatch:**	SW057	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Satisfactory.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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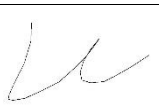
Air Sampling Test Certificate

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Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1		308	Field Blank	Area of work	-	-	-	-	-	-	-	-	-	-	-	-
2	07	309	Reassurance	32/00/35	12:30	13:30	60	8.2	8.2	8.2	492	2	192	0.010	0.001	**< 0.01**
3	14	310	Near-source	32/00/041	12:31	13:32	61	8.2	8.2	8.2	500	3	188	0.010	0.002	**< 0.01**
4	313	311	Near-source	31/00/49	14:00	15:00	60	8.2	8.2	8.2	492	3	198	0.010	0.001	**< 0.01**
5	280	312	Reassurance	32/00/003	14:01	15:02	61	8.2	8.2	8.2	500	3	188	0.010	0.002	**< 0.01**

Acknowledgement

Pass or Fail Statement:	All air monitoring results return with a satisfactory fibre concentration level of <0.010f/ml

Analyst Name:	Kieran Halse	**Analyst Signed:**		**Date and Time:**	19/08/2024 15:00

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Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20240819130201	Analyst Name:	Kieran Halse

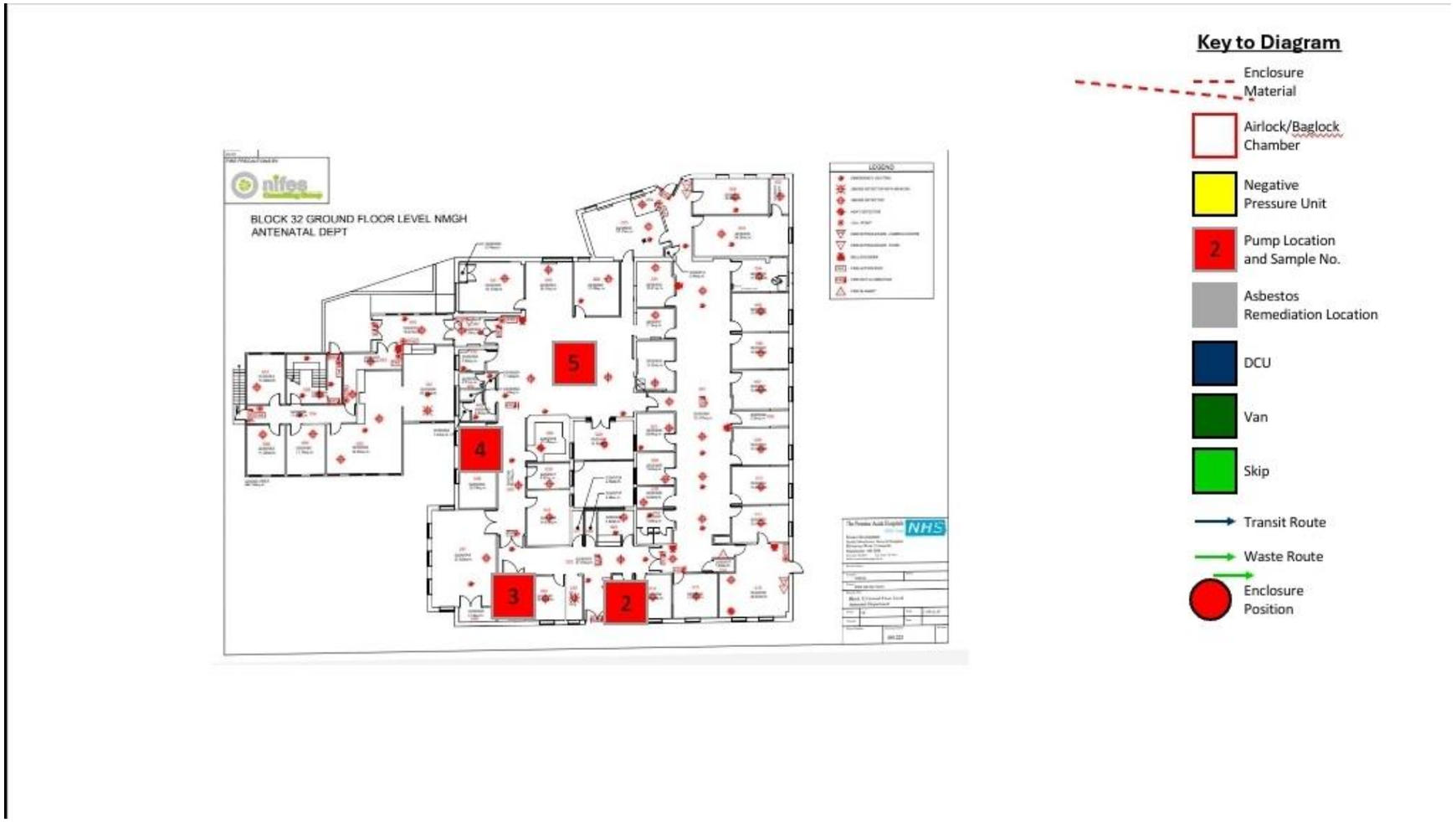
	Area of work

Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240819130201

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

2418

Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	19/08/2024
Analyst Name:	Kieran Halse	**Analyst Signed:**		**Date:**	19/08/2024

Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240821143656
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes
JR arrives on site and and go to sign in via RESET. JR is unable to sign in on RESET as the job has not been put on. JR signs in with LAR at their site cabins. Craig Thomas LAR supervisor walks JR over to the Jon and shows the area of work. Works have been completed and concluded when JR arrives, sections of the ceiling underneath where the ducting is has been removed to allow access to the woven for it to be removed. Reassurance air monitoring is conducted in numerous rooms which have been completed, on going grinding works are occurring which could potentially have an effect on the analysis of the sample.

Acknowledgement

Analyst Name:	Joel Robinson	**Analyst Signed:**		**Date and Time:**	21/08/2024 15:41

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Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240821143656	**Date:**	21/08/2024 15:41

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Removal of woven to ducting in Block 32 Ante Nasal under semi controlled conditions.

Laboratory Equipment

Microscope No.:	600899	**Flow Meter:**	FM030/FM063	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM028	**Tally Counters:**	TC091/TC092	**Filter Batch No:**	5218
NPL Test Slide:	3827	**Stopwatch:**	SW032	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Site lab within DCU welfare unit which is clean and has adequate lighting

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	NA	283	Field Blank	To work area and back to site lab	-	-	-	-	-	-	-	-	-	-	-	-
2	AC11	258	Reassurance	32/00/020	14:21	15:21	60	8.4	8.4	8.4	504	3	190	0.010	0.002	**< 0.01**
3	AC204	260	Reassurance	32/00/021	14:21	15:22	61	8.4	8.4	8.4	512	1.5	187	0.010	0.001	**< 0.01**
4	AC294	261	Reassurance	32/00/023	14:23	15:23	60	8.4	8.4	8.4	504	2	190	0.010	0.001	**< 0.01**
5	AC319	262	Reassurance	32/00/024	14:25	15:25	60	8.4	8.2	8.3	498	1	192	0.010	0.001	**< 0.01**

Acknowledgement

Pass or Fail Statement:	Satisfactory as reassurance air monitoring returned satisfactory fibre concentration levels of <0.010f/ml.

Analyst Name:	Joel Robinson	**Analyst Signed:**		**Date and Time:**	21/08/2024 15:41

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Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20240821143656	Analyst Name:	Joel Robinson

	Sample 2 reassurance air test
	Sample 3 reassurance air test
	Sample 4 reassurance air test

Photograph Appendix

		Sample 5 reassurance air test

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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240821143656

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

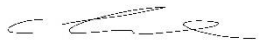
- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

2418

Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas (LAR Ltd)	**Contractor Signed:**		**Date:**	21/08/2024
Analyst Name:	Joel Robinson	**Analyst Signed:**		**Date:**	21/08/2024

Site Diary

Project No.:	B-49309	**Report No.:**	AM-20241002093411
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Plan of works - Lar are undertaking:
Cutting out of 4no hatches to floor to provide access into undercroft
- Form 1no enclosure for the following works:
- Removal of all plant within undercroft
- Removal of thermal insulation to pipework
- Removal of thermal insulation debris throughout undercroft
- Removal of floor tile debris throughout undercroft
- Removal of all brackets and fixings throughout undercroft
- Full clean of area.

- Works to be carried out under fully controlled conditions.

Location Antenatal Basement Undercroft.

Acorn arrive on site and meet with LAR and sign in on reset.

LAR are wire brushing walls and floor in todays shift.

Site Diary

Leakage, personal and reassurance will be undertaken in todays shift.

Air monitoring has started.

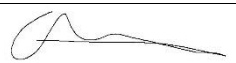
Air monitoring has finished

Leakage and reassurance air monitorng has yielded a result at <0.010f/ml

Acorn inform LAR of the results.

Acorn leave site.

Acknowledgement

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	02/10/2024 15:00

2418

Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20241002093411	**Date:**	02/10/2024 15:00

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Antenatal (Block 32) Basement Undercroft.

Laboratory Equipment

Microscope No.:	600386	**Flow Meter:**	FM021/FM076	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM027	**Tally Counters:**	TC004/TC005	**Filter Batch No:**	5254
NPL Test Slide:	1647	**Stopwatch:**	SW058	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Satisfactory.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

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Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	N/A	70	Field Blank	N/A	-	-	-	-	-	-	-	-	-	-	-	-
2	PS017	105	Personal	Block 32 Basement Undercroft	09:15	11:45	150	1.5	1.5	1.5	225	5.5	200	0.021	0.006	**< 0.03**
3	118	70	Leak	External Pod 4	09:18	10:25	67	8	8	8.0	536	1.5	180	0.010	0.001	**< 0.01**
4	293	79	Leak	External Pod 1	09:20	10:28	68	8	8	8.0	544	1.5	177	0.010	0.001	**< 0.01**
5	62	280	Reassurance	DCU 48 Dirty End	10:55	11:55	60	8	8	8.0	480	1.5	200	0.010	0.001	**< 0.01**
6	293	281	Reassurance	DCU 44 Dirty End	10:59	12:00	61	8	8	8.0	488	0.5	197	0.010	0.000	**< 0.01**
7	62	280	Leak	External Pod 2	11:02	12:04	62	8	8	8.0	496	2	194	0.010	0.001	**< 0.01**
8	118	79	Leak	External NPU	13:15	14:21	66	8	8	8.0	528	2.5	183	0.010	0.001	**< 0.01**
9	293	235	Leak	External Enclosure	13:20	14:27	67	8	8	8.0	536	1.5	180	0.010	0.001	**< 0.01**

Personal Sample Information

Sample No.:	2	**Person's Name:**	Nathan Pollard	**Job Title:**	Asbestos removal operative
Licensed Contractor:	Lar Ltd	**Type of Work:**	Removal of thermal insulation pipework within undercroft.	**Type of Asbestos being Removed:**	Thermal insulation residues
Removal Method:	Cutting out of 4no hatches to floor to provide access into undercroft - Form 1no	**Controls Used:**	Full face powered respirator, type 5, 6 category 3 coveralls, works under negative	**Type of RPE worn:**	Full face powered respirator.

	enclosure for the following works Removal of all plant within undercroft - Removal of thermal insulation to pipework - Removal of thermal insulation debris throughout undercroft - Removal of floor tile debris throughout undercroft - Removal of all brackets and fixings throughout undercroft - Full clean of area - Works to be carried out under fully controlled condition.		pressure, H-type vac & fibre suppressant		
Other factors which may affect the result:	N/A				

Acknowledgement

Pass or Fail Statement:	Satisfactory.

2418

Air Sampling Test Certificate

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	02/10/2024 15:00

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Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20241002093411	Analyst Name:	Greg Allen

		Enclosure picture.
		Enclosure picture.
		Enclosure picture.

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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20241002093411

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

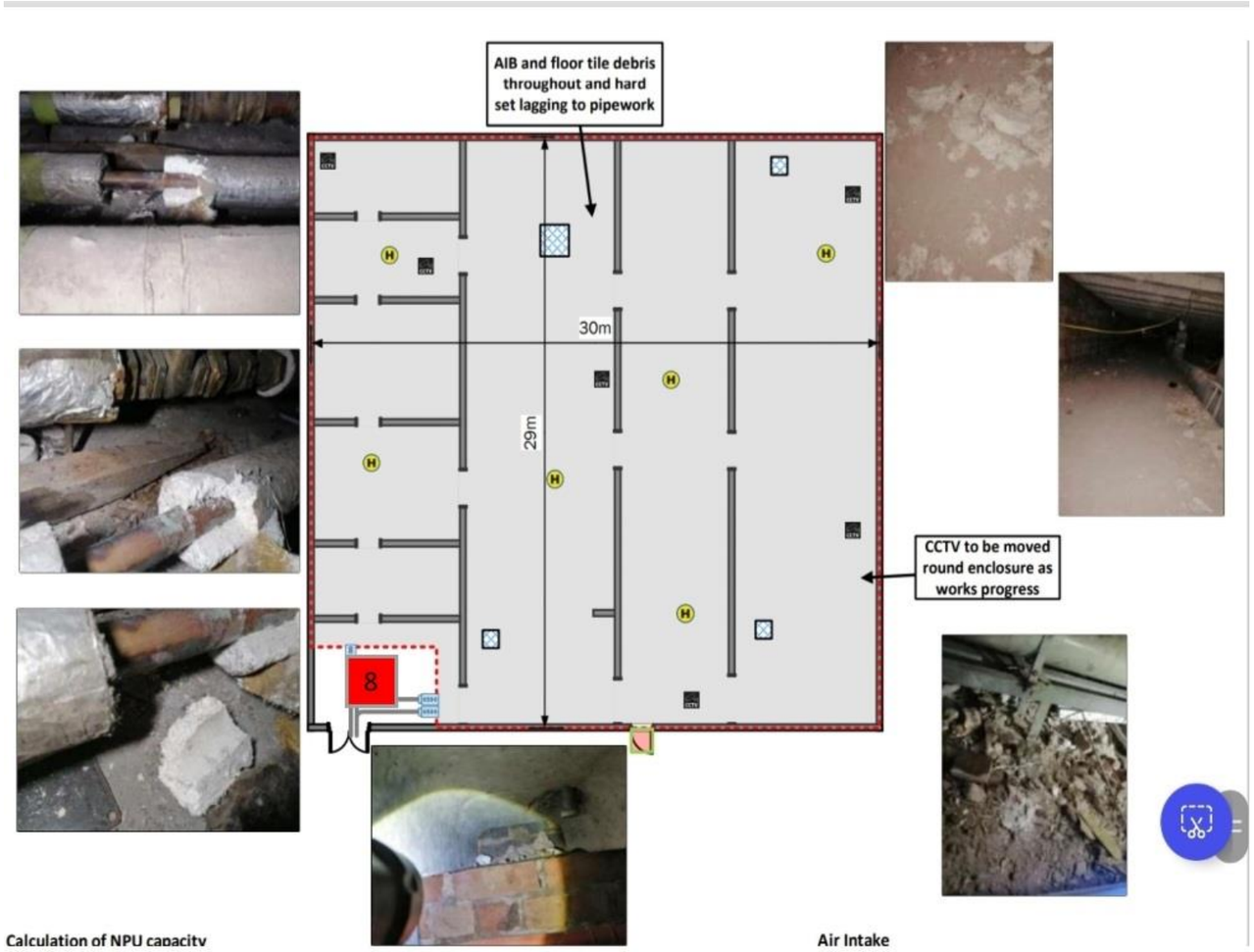
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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20241002093411

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
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- Waste Route
- Enclosure Position

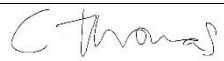
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Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	02/10/2024
Analyst Name:	Greg Allen	**Analyst Signed:**		**Date:**	02/10/2024

Site Diary

Project No.:	B-49309	**Report No.:**	AM-20241003103246
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Acorn survey report reference :- B-45425r1

Removal works :- Removal of all plant within the Undercroft and removal of thermal insulation to pipework, thermal insulation debris throughout the undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings. A full environmental clean of the undercroft will then be taken place. All works are to be complete under fully controlled conditions.
The Asbestos is in a poor condition and contains Amosite and Chrysotile.

Acorn are onsite to provide analytical support during these ongoing works.
AH of Acorn Analytical Services arrives on site. Sign in via RESET at estates and locate the LARC site compound/work area.
Meet with LARC Site Manager Mark Richardson and LARC Site Supervisor Craig Thomas.
Run through plan of works and establish site laboratory within the LARC site welfare cabin on site.

Within todays shift, x5 operatives are to continue with removal works within the live enclosure to the undercroft area.
Acorn are to monitor these works within the live enclosure with leakage and personal air monitoring through out the course of todays shift.

Air tests undertaken throughout the couse of todays shift return satisfactory fibre concentration levels.
Live enclosure works to continue within next shift.

Site Diary

Acorn leave site (15:30).

Acknowledgement

Analyst Name:	Arran Husthwaite	**Analyst Signed:**		**Date and Time:**	03/10/2024 15:30

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Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20241003103246	**Date:**	03/10/2024 15:30

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Block 32 - Ante Natal

Laboratory Equipment

Microscope No.:	600383	**Flow Meter:**	FM006/FM017	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM017	**Tally Counters:**	TC079/TC080	**Filter Batch No:**	5008
NPL Test Slide:	5871	**Stopwatch:**	SW063	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Satisfactory

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

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Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	AC08	129	Leak	Ground Floor - Airlock opening	09:30	11:33	123	4	4	4.0	492	2	196	0.010	0.001	**< 0.01**
2	AC72	147	Leak	Ground Floor - Escape pod airlock	09:32	11:35	123	4	4	4.0	492	3	196	0.010	0.002	**< 0.01**
3	AC308	115	Leak	Ground Floor - Escape pod airlock	09:34	11:36	122	4	4	4.0	488	1	197	0.010	0.001	**< 0.01**
4	AC330	117	Leak	Ground Floor - Escape pod airlock	09:37	11:38	121	4	4	4.0	484	1	199	0.010	0.001	**< 0.01**
5	736	225	Personal	Within the enclosure	09:40	11:45	125	1.5	1.5	1.5	188	1	200	0.026	0.001	**< 0.03**
6	AC081	129	Leak	Ground Floor - Airlock opening	12:55	14:55	120	4	4	4.0	480	2	200	0.010	0.001	**< 0.01**
7	AC72	147	Leak	Ground Floor - Escape pod airlock	12:57	14:58	121	4	4	4.0	484	2	199	0.010	0.001	**< 0.01**
8	AC308	115	Leak	Ground Floor - Adjacent polythene seal	13:00	15:00	120	4	4	4.0	480	1	200	0.010	0.001	**< 0.01**
9	AC330	117	Leak	Ground Floor - Adjacent polythene seal to riser	13:01	15:01	120	4	4	4.0	480	1	200	0.010	0.001	**< 0.01**

Personal Sample Information

Sample No.:	5
Licensed Contractor:	LAR Ltd

Person's Name:	Brad Longshaw
Type of Work:	Removal of Asbestos Thermal Insulation residue/debris under

Job Title:	Asbestos Removal Operative
Type of Asbestos being Removed:	Asbestos Thermal Insulation

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Air Sampling Test Certificate

			fully controlled conditions		
Removal Method:	Hand held tools and abrasive techinqes (wire brushing) and vaccing of debris	**Controls Used:**	Fibre suppresent and shadow vaccing	**Type of RPE worn:**	Full face power assisted respirator
Other factors which may affect the result:	Brick dust may affect filter				

Acknowledgement

Pass or Fail Statement:	Air tests undertaken within todays shift return satisfactory fibre concentration levels

Analyst Name:	Arran Husthwaite	**Analyst Signed:**		**Date and Time:**	03/10/2024 15:30

Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20241003103246	Analyst Name:	Arran Husthwaite

	Example of pump location
	Example of pump location

Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20241003103246

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

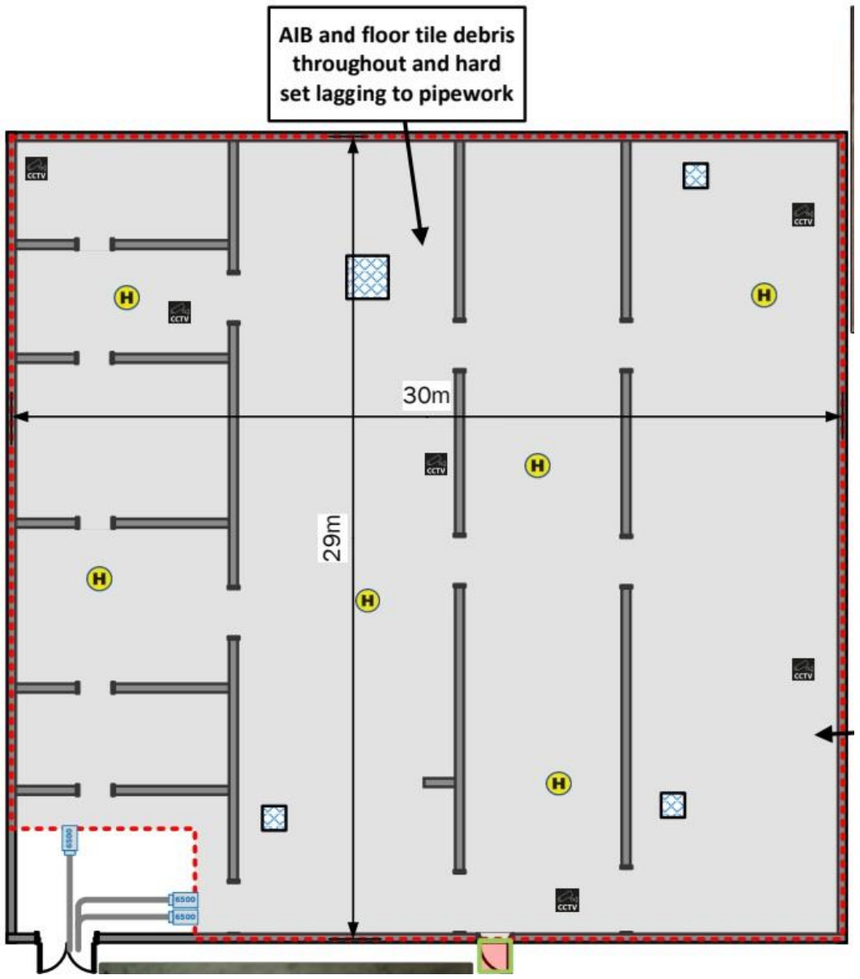
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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20241003103246

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
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Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Mark Richardson	**Contractor Signed:**		**Date:**	03/10/2024
Analyst Name:	Arran Husthwaite	**Analyst Signed:**		**Date:**	03/10/2024

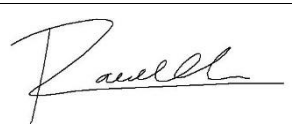
Site Diary

Project No.:	B-49309	**Report No.:**	AM-20241007102019
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes
Description Of Works: Provision of Air Monitoring & Four Stage Clearances, SOC at North Manchester General Hospital, within Block 32
Site Diary: PAW From Acorn arrives on site and meets with LARC Site Supervisor C.Thomas to discuss todays on going works. Acorn will conduct Leakage and Personal Air Monitoring. During the course of todays shift, LAR will continue with fine cleaning works within the undercroft. Air monitoring commences. Personal Air Monitoring result is satisfactory. Air Monitoring completed. Air Monitoring results are satisfactory, Fibre concentration levels are below <0.010f/ml. Acorn leave site.

Site Diary

Acknowledgement

Analyst Name:	Michal Pawlak	**Analyst Signed:**		**Date and Time:**	07/10/2024 15:28

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Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20241007102019	**Date:**	07/10/2024 15:28

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Block 32 Undercroft.

Laboratory Equipment

Microscope No.:	214404	**Flow Meter:**	FM024/FM080	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM008	**Tally Counters:**	TC003/TC006	**Filter Batch No:**	5239
NPL Test Slide:	1809	**Stopwatch:**	SW060	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Laboratory conditions are satisfactory. Lab set-up is within LAR cabins.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

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Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	N/A	338	Field Blank	To Work Area And Back	-	-	-	-	-	-	-	-	-	-	-	-
2	AC102	135	Leak	Block 32 - Adjacent To Sealed Void	09:20	10:21	61	8.5	8.5	8.5	518	1.5	185	0.010	0.001	**< 0.01**
3	AC121	229	Leak	Block 32 - Adjacent To Riser	09:22	10:24	62	8.5	8.5	8.5	527	1.5	182	0.010	0.001	**< 0.01**
4	AC317	276	Leak	Adjacent To Airlock (POD 1)	09:26	10:27	61	8.5	8.5	8.5	518	1	185	0.010	0.001	**< 0.01**
5	AC102	326	Leak	Adjacent To Airlock (POD 2)	10:32	11:34	62	8.5	8	8.2	508	1.5	189	0.010	0.001	**< 0.01**
6	AC121	333	Leak	Adjacent To Airlock (POD 3)	10:34	11:36	62	8.5	8	8.2	508	1	189	0.010	0.001	**< 0.01**
7	AC317	338	Leak	Adjacent To Airlock (POD 4)	10:36	11:39	63	8.5	8.2	8.4	529	2	181	0.010	0.001	**< 0.01**
8	AC60	135	Leak	Adjacent To Baglock (POD1)	13:19	14:22	63	8.5	8.5	8.5	536	1	179	0.010	0.001	**< 0.01**
9	AC115	229	Leak	Adjacent To Air Inlet Cube	13:23	14:25	62	8.5	8.2	8.4	521	2.5	184	0.010	0.001	**< 0.01**
10	AC321	276	Leak	Adjacent To NPU	13:25	14:31	66	8.5	8.2	8.4	554	1.5	176	0.010	0.001	**< 0.01**
13	AP015	329	Personal	Block 32 - Undercroft	09:17	11:54	157	3	3	3.0	471	2.5	200	0.010	0.001	**< 0.01**

Personal Sample Information

Sample No.:	13	Person's Name:	Greg Temple	Job Title:	Operative

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Air Sampling Test Certificate

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Licensed Contractor:	LAR	**Type of Work:**	H-Type Vaccuming within Undercroft.	**Type of Asbestos being Removed:**	Thermal Insulation.
Removal Method:	H-Type Vaccum.	**Controls Used:**	Fibre Suppressant to minimise any dust disturbance.	**Type of RPE worn:**	Full Face Powered respirator, Category 3 Type 5/6 coveralls and cutlass gloves.
Other factors which may affect the result:	N/A				

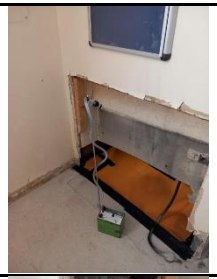
Acknowledgement

Pass or Fail Statement:	Pass, Satisfactory.

Analyst Name:	Michal Pawlak	**Analyst Signed:**		**Date and Time:**	07/10/2024 15:28

Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20241007102019	Analyst Name:	Michal Pawlak

	Sample 2 - Void
	Sample 3 - Riser.

Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20241007102019

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20241007102019

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
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- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

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Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	07/10/2024
Analyst Name:	Michal Pawlak	**Analyst Signed:**		**Date:**	07/10/2024

Site Diary

Project No.:	B-49309	**Report No.:**	AM-20241011112434
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Acorn survey report :- B-45425r1
Description of works:- Removal of all plant within undercroft and thermal insulation to pipework, thermal insulation debris throughout undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings and full clean of the undercroft. All works are done under fully controlled conditions, the asbestos is in poor condition and contains Amosite & Chrysotile.
Acorn are onsite to provide analytical support during the on-going project.
Today's shift LAR are continuing with the fine cleaning within the enclosure, PTH is to run leakage air testing during these works.
Site diary:- 09:50am Phill Harmer from Acorn arrives onsite and signs in via reset, then meets with Mark Richardson (LAR site manager) & Craig Thomas (Site supervisor) and discus the job. PTH reads POW to confirm.
10:30am Leakage air testing deployed.
LAR break for dinner
13:00pm Leakage air testing deployed
Results of am & pm air testing are satisfactory
15:00pm Acorn leaves site.

Site Diary

Acknowledgement

Analyst Name:	Phillip Harmer	**Analyst Signed:**		**Date and Time:**	11/10/2024 15:00

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Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20241011112434	**Date:**	11/10/2024 15:00

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Antenatal Block 32 - Basement

Laboratory Equipment

Microscope No.:	600751	**Flow Meter:**	FM056/FM062	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM030	**Tally Counters:**	TC036/TC071	**Filter Batch No:**	5206
NPL Test Slide:	3712	**Stopwatch:**	SW066	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Acorn are set up within LAR site cabin, area is clean and tidy with adequate lighting, and the temperature is satisfactory.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

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Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	NA	171	Field Blank (Counted)	Working area	-	-	-	-	-	-	-	0	200	-	-	-
2	AC96	182	Leak	Adjacent air lock	10:30	11:32	62	8.5	8.5	8.5	527	2.5	182	0.010	0.001	**< 0.01**
3	AC69	246	Leak	Adjacent air lock	10:30	11:32	62	8.5	8.5	8.5	527	2	182	0.010	0.001	**< 0.01**
4	Ac35	266	Leak	Adjacent air lock	10:31	11:33	62	8.5	8.5	8.5	527	2	182	0.010	0.001	**< 0.01**
5	AC108	284	Leak	NPU area	10:34	11:36	62	8.5	8.5	8.5	527	2.5	182	0.010	0.001	**< 0.01**
6	AC96	171	Leak	Adjacent air lock	13:00	14:00	60	8.5	8.5	8.5	510	1	188	0.010	0.001	**< 0.01**
7	AC108	182	Leak	Adjacent air lock	13:00	14:00	60	8.5	8.5	8.5	510	1.5	188	0.010	0.001	**< 0.01**

Acknowledgement

Pass or Fail Statement:	Results of all air testing results are satisfactory

Analyst Name:	Phillip Harmer	**Analyst Signed:**		**Date and Time:**	11/10/2024 15:00

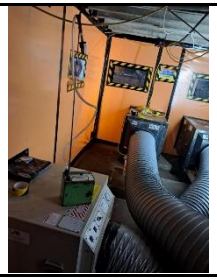
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Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20241011112434	Analyst Name:	Phillip Harmer

	Leakage air test
	Leakage air test
	Leakage air test

Photograph Appendix

		Leakage air test

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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20241011112434

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20241011112434

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

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2418

Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	11/10/2024
Analyst Name:	Phillip Harmer	**Analyst Signed:**		**Date:**	11/10/2024

Site Diary

Project No.:	B-49309	**Report No.:**	RC-20241014083931
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Description of works:- Removal of all plant within undercroft and thermal insulation to pipework, thermal insulation debris throughout undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings and full clean of the undercroft. All works are done under fully controlled conditions, the asbestos is in poor condition and contains Amosite & Chrysotile.

LAR Supervisor Craig Thomas invites Acorn to start the 4 stage clearance.

Acorn start the 4 stage clearance.

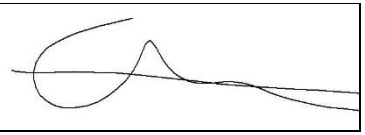
Stage 1 is satisfactory.

Stage 2 has started.

Acorn leave the enclosure for the day.

Site Diary

Acknowledgement

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	14/10/2024

Site Diary

Project No.:	B-49309	**Report No.:**	RC-20241015083931
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

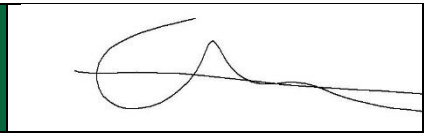
Description of works:- Removal of all plant within undercroft and thermal insulation to pipework, thermal insulation debris throughout undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings and full clean of the undercroft. All works are done under fully controlled conditions, the asbestos is in poor condition and contains Amosite & Chrysotile.

15/10/2024 - Site Diary.

Acorn enter the enclosure to continue the 2nd stage.

Acorn leave the enclosure for the day.

Acknowledgement

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	15/10/2024

Site Diary

Project No.:	B-49309	**Report No.:**	RC-20241016083931
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Description of works:- Removal of all plant within undercroft and thermal insulation to pipework, thermal insulation debris throughout undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings and full clean of the undercroft. All works are done under fully controlled conditions, the asbestos is in poor condition and contains Amosite & Chrysotile.

Acorn enter the enclosure.

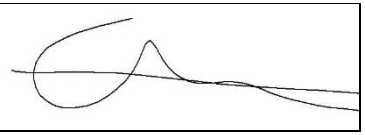
Stage 2 is satisfactory.

Acorn start Stage 3.

Acorn signout and leave site.

Site Diary

Acknowledgement

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	16/10/2024

Site Diary

Project No.:	B-49309	**Report No.:**	RC-20241017083931
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Description of works:- Removal of all plant within undercroft and thermal insulation to pipework, thermal insulation debris throughout undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings and full clean of the undercroft. All works are done under fully controlled conditions, the asbestos is in poor condition and contains Amosite & Chrysotile.

Acorn continue Stage 3

Pump 15 - Cowl - 281, Pump 293, Start Time 08:17 Finish Time 09:20, Start Flow - 8, End Flow - 8, Result 1.5 Fibres 191 Field's

Pump 14 - Cowl 280, Pump 118 Start Time 08:15 Finish Time 09:18, Start Flow - 8, End Flow -8, Result 2 Fibres 191 Field's

Stage 3 is satisfactory.

LAR Start removal of enclosure.

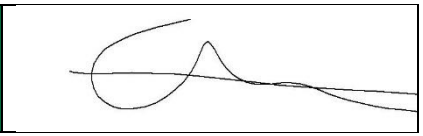
Acorn undertake DCU Clearances on 44 & 48.

DCU is satisfactory.

Site Diary

Acorn leave site.

Acknowledgement

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	17/10/2024

Site Diary

Project No.:	B-49309	**Report No.:**	RC-20241023083931
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Description of works:- Removal of all plant within undercroft and thermal insulation to pipework, thermal insulation debris throughout undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings and full clean of the undercroft. All works are done under fully controlled conditions, the asbestos is in poor condition and contains Amosite & Chrysotile.

23/10/2024 - Site Diary.

Acorn arrive on site and meet with LAR.

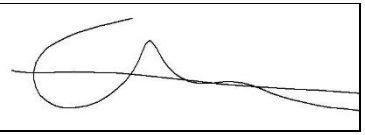
Acorn undertake Stage 4.

Stage 4 is satisfactory.

Acorn leave site.

Site Diary

Acknowledgement

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	23/10/2024 08:55

Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240904102028
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes
Acorn arrive on site and sign in via RESET system at Estates as well as the LAR site cabin. JR is shown the area of work by the LAR site manager Mark Richardson. All the grinding works have concluded prior to acorn being on site and therefore all that is required is reassurance air monitoring spread out along the ground floor. Reassurance air monitoring is conducted.

Acknowledgement

Analyst Name:	Joel Robinson	**Analyst Signed:**		**Date and Time:**	04/09/2024 12:28

2418

Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240904102028	**Date:**	04/09/2024 12:28

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Block 32 ante nasal ground floor LAR have conducted grinding works to the bitumen floor throughout the ground floor. Acorn are on site to conduct Reassurance air monitoring for the conclusion of these works

Laboratory Equipment

Microscope No.:	600899	**Flow Meter:**	FM030/FM063	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM028	**Tally Counters:**	TC091/TC092	**Filter Batch No:**	5226
NPL Test Slide:	3827	**Stopwatch:**	SW032	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Site lab in LAR site cabin which is clean with adequate lighting

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	NA	283	Field Blank	To work area and back to site lab	-	-	-	-	-	-	-	-	-	-	-	-
2	AC11	258	Reassurance	32/00/003	10:45	11:45	60	8.4	8.4	8.4	504	2	190	0.010	0.001	**< 0.01**
3	AC204	260	Reassurance	32/00/043 corridor	10:46	11:46	60	8.4	8.4	8.4	504	1	190	0.010	0.001	**< 0.01**
4	AC294	261	Reassurance	Corridor adjacent sheeting and to 32/00/033 corridor	10:47	11:47	60	8.4	8.4	8.4	504	1	190	0.010	0.001	**< 0.01**
5	AC319	262	Reassurance	32/00/009	10:49	11:49	60	8.4	8.4	8.4	504	0.5	190	0.010	0.000	**< 0.01**
6	AC52	263	Reassurance	32/00/009	10:49	11:49	60	8.4	8.2	8.3	498	1.5	192	0.010	0.001	**< 0.01**

Acknowledgement

Pass or Fail Statement:	Satisfactory as air monitoring results return a satisfactory fibre concentration level of <0.010f/ml.

Analyst Name:	Joel Robinson	**Analyst Signed:**		**Date and Time:**	04/09/2024 12:28

Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20240904102028	Analyst Name:	Joel Robinson

	Sample 2
	Sample 3
	Sample 4

Photograph Appendix

	Sample 5
	Sample 6

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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240904102028

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

2418

Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas (LAR Ltd)	**Contractor Signed:**		**Date:**	04/09/2024
Analyst Name:	Joel Robinson	**Analyst Signed:**		**Date:**	04/09/2024

Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240910092322
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

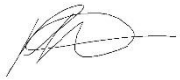
Comments/Notes

Acorn survey report reference :- B-45425r1

Removal works :- Removal of all plant within Undercroft and removal of thermal insulation to pipework, thermal insulation of debris throughout undercroft, removal of floor tile debris within undercroft and removal of all brackets and fixings and full clean of the undercroft. All works are done under fully controlled conditions, the asbestos is in poor condition, and they contain Amosite and Chrysotile.
Acorn are onsite to provide analytical support during the ongoing works.
Today's shift LAR will continue with the site set up and Acorn are to run reassurance air testing during set up and then witness the smoke test.
Site Diary:-
08:00am Phill Harmer from Acorn arrives onsite and signs in via reset, and then meets with Mark Richardson (LAR site manager) and Craig Thomas (LAR site supervisor) and is shown the working area and discus the job. PTH reads POW to confirm.
09:00am Reassurance air testing deployed while LAR are setting up the enclosure.
Results of morning air testing are satisfactory
11:25am Smoke test completed - satisfactory no leaks witnessed the area is now live.
LAR break for dinner and will enter the enclosure at approximately 13:00pm at that time PTH is to run leakage and personal air testing.
13:00pm Leakage and personal sampling deployed.
Results of air testing are satisfactory PTH informs CT of results
15:05pm PTH leaves site.

Site Diary

Acknowledgement

Analyst Name:	Phillip Harmer	**Analyst Signed:**		**Date and Time:**	10/09/2024 15:05

2418

Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240910092322	**Date:**	10/09/2024 15:05

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Antenatal Block 32 - Basement

Laboratory Equipment

Microscope No.:	600751	**Flow Meter:**	FM056/FM062	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM030	**Tally Counters:**	TC036/TC071	**Filter Batch No:**	5019
NPL Test Slide:	3712	**Stopwatch:**	SW066	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Acorn are set up within LAR site cabin. Area is clean and tidy, with adequate lighting and temperature is satisfactory.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

acorn analytical services

Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	NA	172	Field Blank (Counted)		-	-	-	-	-	-	-			-	-	-
2	AC318	182	Reassurance	Ground floor - Air lock	09:00	10:02	62	8.5	8.5	8.5	527	1.5	182	0.010	0.001	**< 0.01**
3	AC75	246	Reassurance	Ground floor - Escape pod	09:00	10:02	62	8.5	8.5	8.5	527	1.5	182	0.010	0.001	**< 0.01**
4	AC318	171	Leak	Outside air lock	13:00	14:02	62	8.5	8.5	8.5	527	0.5	182	0.010	0.000	**< 0.01**
5	AC75	246	Leak	NPU area	13:00	14:02	62	8.5	8.5	8.5	527	2.5	182	0.010	0.001	**< 0.01**
6	AP09	182	Personal	Within the area	13:01	14:35	94	1.5	1.5	1.5	141	3.5	200	0.034	0.006	**< 0.04**

Personal Sample Information

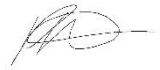
Sample No.:	6	**Person's Name:**	Jacob Hill	**Job Title:**	Operative
Licensed Contractor:	LAR	**Type of Work:**	Bagging up rubble before removal of pipework and debris start	**Type of Asbestos being Removed:**	Thermal Insulation debris, thermal insulation to pipework and FT debris
Removal Method:	Wrapping and cutting (this isn't happening on this shift)	**Controls Used:**	Fiber suppression used	**Type of RPE worn:**	Type 5/6 overalls and full face battery powered respirator
Other factors which may affect the result:	Brick dust/mmmf insulation				

2418

Air Sampling Test Certificate

Acknowledgement

Pass or Fail Statement:	All air testing results are satisfactory

Analyst Name:	Phillip Harmer	**Analyst Signed:**		**Date and Time:**	10/09/2024 15:05

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Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20240910092322	Analyst Name:	Phillip Harmer

	Reassurance air testing - Main air lock
	2nd Air lock - emergency exit
	3rd Air lock - emergency exit

Photograph Appendix

	4th Air lock - emergency exit
	Personal air testing on Jacob Hill
	Leakage air testing

		Leakage air testing

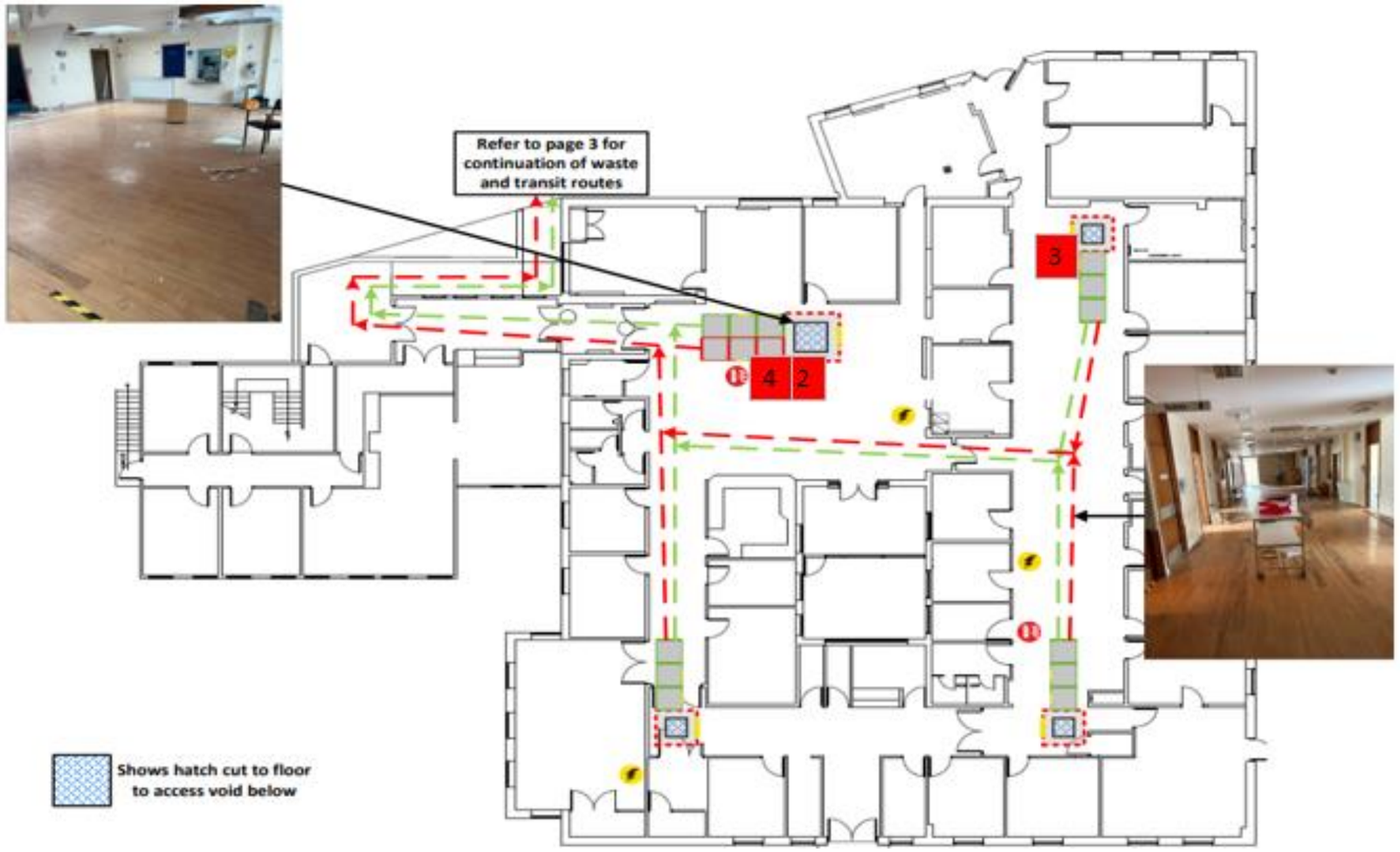
2418

Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240910092322

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

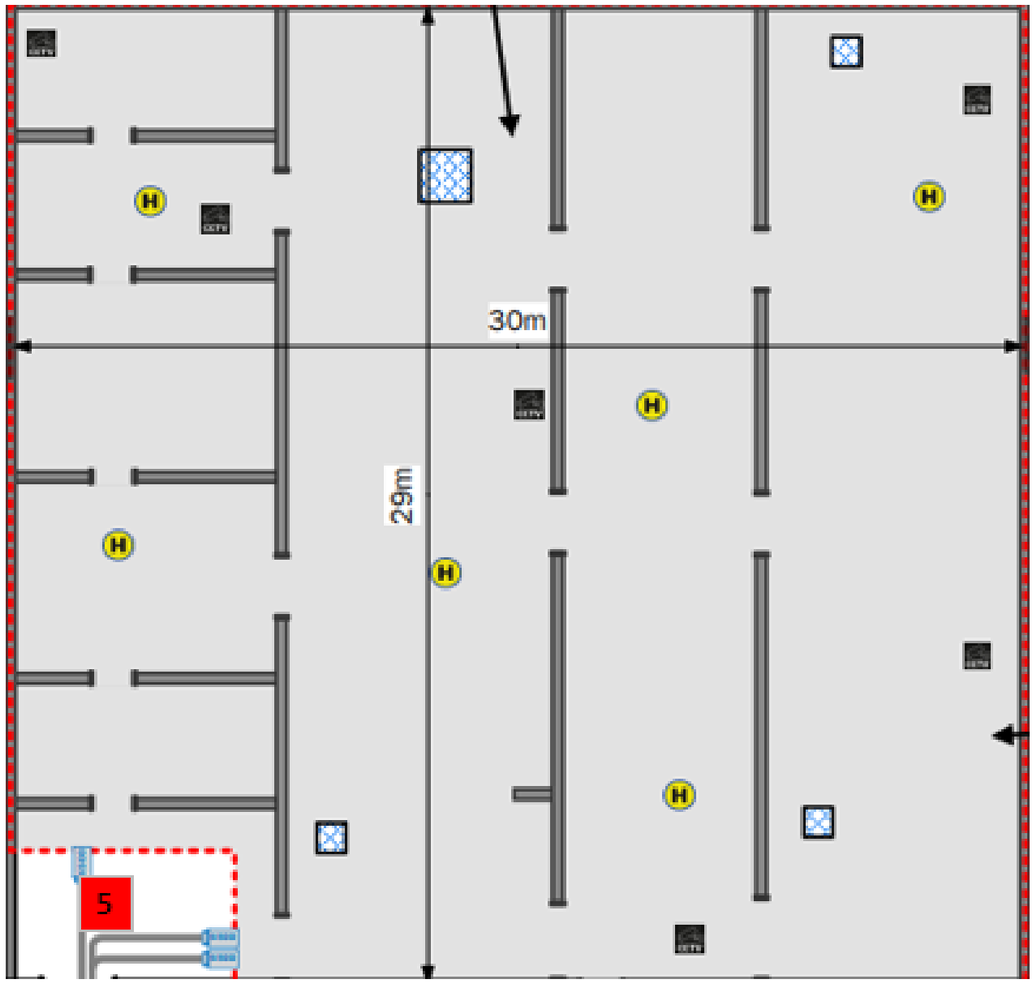
2418

Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240910092322

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

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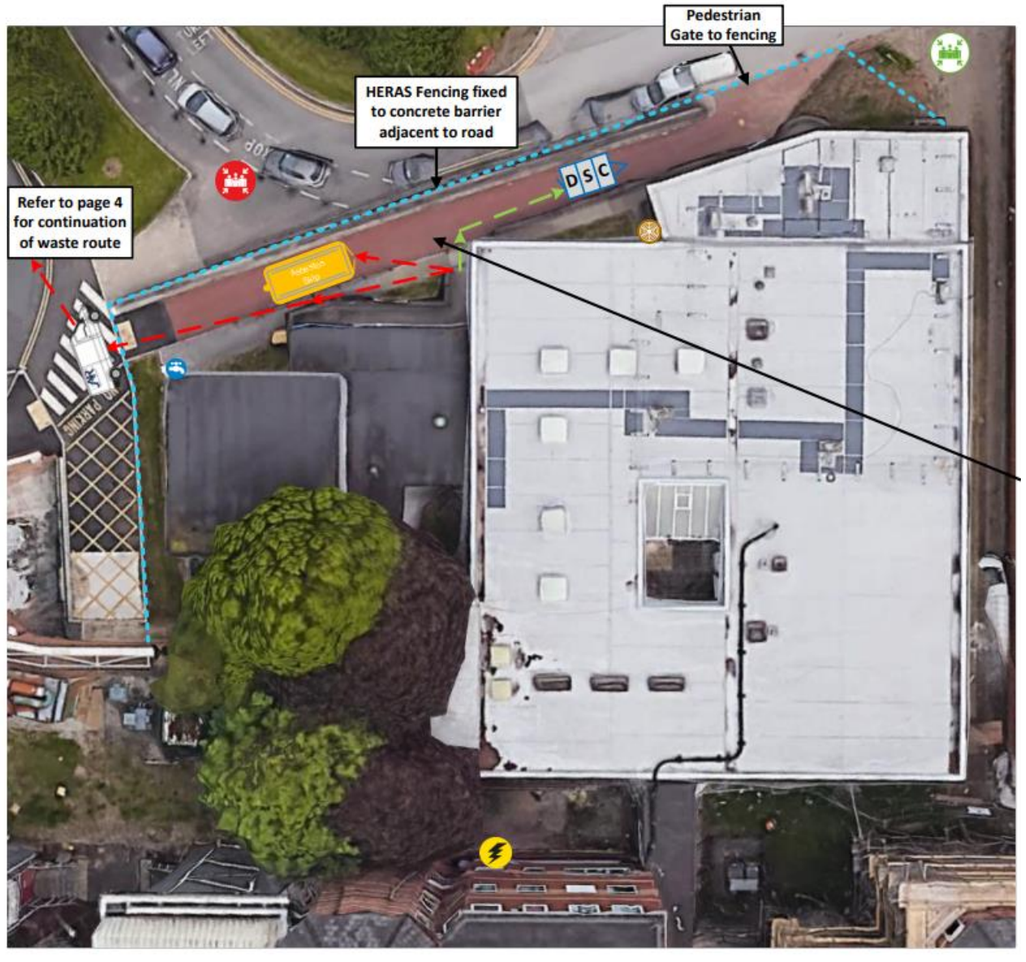
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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240910092322

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



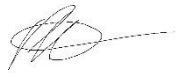
Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	10/09/2024
Analyst Name:	Phillip Harmer	**Analyst Signed:**		**Date:**	10/09/2024

Smoke Test Certificate

Project No.:	B-49309	**Report No.:**	ST-20240910104611

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Enclosure Location and Reference:**	Block 32 - Undercroft
				Contractor's Site Supervisor:	Craig Thomas

Declaration

Pass/Fail:	PASS	**Comments:**	No leaks witnessed during the smoke test - satisfactory - area is now live.

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

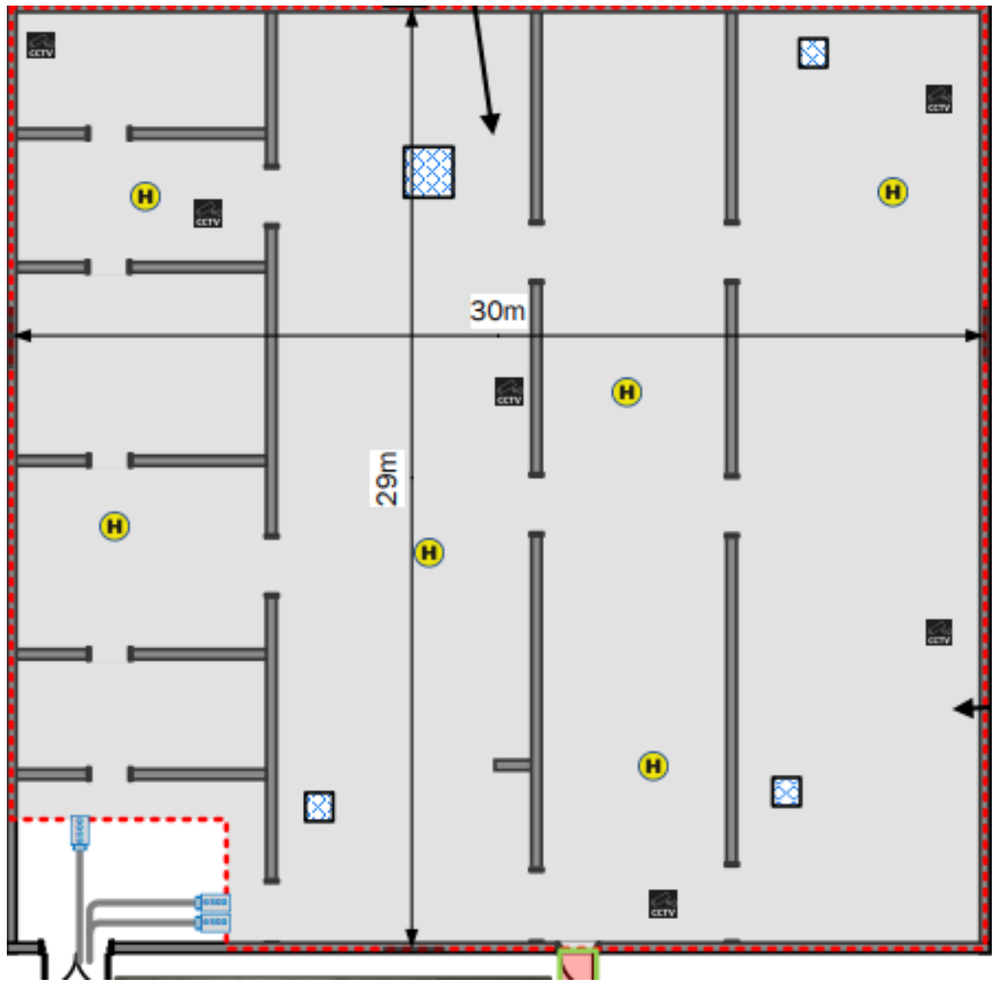
Analyst Name:	Phillip Harmer	**Analyst Signed:**			
Contractor Supervisor Name:	Craig Thomas	**Contractor Supervisor Signed:**		**Date and Time:**	10/09/2024 11:25

Site Layout Diagram

Project No.:	B-49309	Report No.:	ST-20240910104611

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.

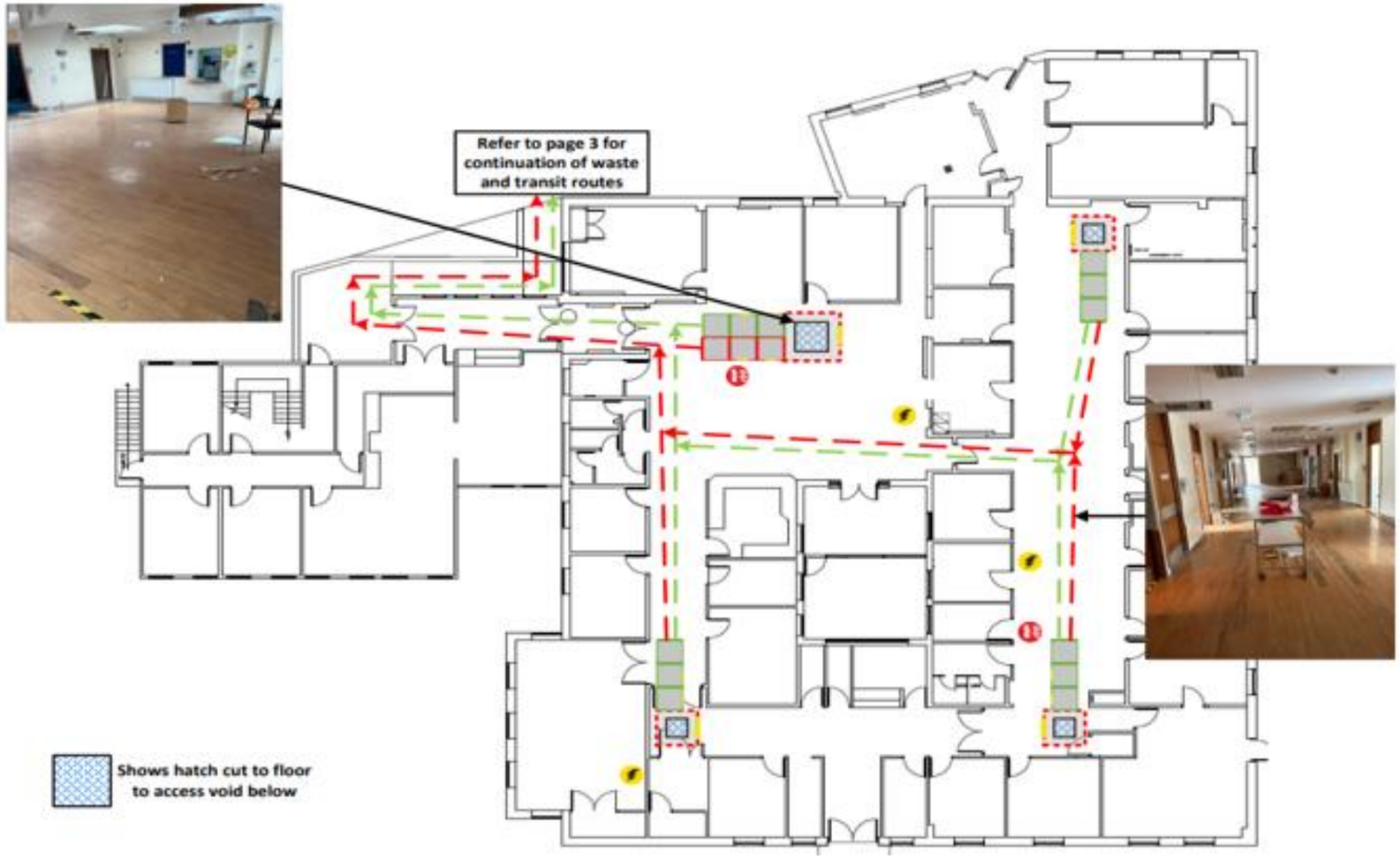
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Site Layout Diagram

Project No.:	B-49309	Report No.:	ST-20240910104611

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.

Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	10/09/2024
Analyst Name:	Phillip Harmer	**Analyst Signed:**		**Date:**	10/09/2024

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Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240913093140
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Acorn survey report reference :- B-45425r1

Removal works :- Removal of all plant within the Undercroft and removal of thermal insulation to pipework, thermal insulation debris throughout the undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings. A full environmental clean of the undercroft will then be taken place. All works are to be complete under fully controlled conditions.
The Asbestos is in a poor condition and contains Amosite and Chrysotile.

Acorn are onsite to provide analytical support during these ongoing works.

AH of Acorn Analytical Services arrives on site. Sign in via RESET at estates and locate the LARC site compound/work area.

Meet with LARC Site Manager Mark Richardson and LARC Site Supervisor Craig Thomas.
Run through plan of works and establish site laboratory within the LARC site welfare cabin on site.

Within todays shift, x4 operatives are to continue with removal works within the live enclosure to the undercroft area.
Acorn are to monitor these works within the live enclosure with leakage and personal air monitoring through out the course of todays shift.

Site Diary

Leakage air tests and personal monitoring undertaken throughout the course of the morning.

Following dinner break, operatives undertake a waste run. Acorn continue to monitor the live enclosure works with leakage air tests.

All air tests undertaken within todays shift return satisfactory fibre concentration levels.

Acorn leave site (15:15).

Acknowledgement

Analyst Name:	Arran Husthwaite	**Analyst Signed:**		**Date and Time:**	13/09/2024 15:00

2418

Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240913093140	**Date:**	13/09/2024 15:00

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Block 32 - Ante Natal

Laboratory Equipment

Microscope No.:	600383	**Flow Meter:**	FM006/FM017	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM017	**Tally Counters:**	TC079/TC080	**Filter Batch No:**	5008
NPL Test Slide:	5871	**Stopwatch:**	SW063	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Site laboratory is within the site welfare cabin and is satisfactory for a site laboratory set-up.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

acorn analytical services

Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	AC08	129	Leak	Ground Floor - Airlock opening	09:00	10:05	65	8	8	8.0	520	3	185	0.010	0.002	**< 0.01**
2	AC72	147	Leak	Ground Floor - Baglock opening	09:01	10:08	67	8	8	8.0	536	3	180	0.010	0.002	**< 0.01**
3	AC308	115	Leak	Ground Floor - Escape pod airlock	09:04	10:12	68	8	8	8.0	544	2	177	0.010	0.001	**< 0.01**
4	AC330	117	Leak	Ground Floor - Escape pod airlock	09:06	10:14	68	8	8	8.0	544	1	177	0.010	0.001	**< 0.01**
5	736	269	Personal	Personal - Gary Richardson	10:18	11:38	80	2	2	2.0	160	3	200	0.030	0.005	**< 0.03**
6	AC08	269	Leak	Ground Floor - Airlock opening	10:21	11:31	70	8	8	8.0	560	1	172	0.010	0.001	**< 0.01**
7	AC72	268	Leak	Ground Floor - Escape pod airlock	10:24	11:33	69	8	8	8.0	552	2	174	0.010	0.001	**< 0.01**
8	AC08	129	Leak	Waste route	13:21	14:22	61	8	8	8.0	488	1	197	0.010	0.001	**< 0.01**
9	AC72	147	Leak	Adjacent polythene seal	13:24	14:24	60	8	8	8.0	480	2	200	0.010	0.001	**< 0.01**
10	AC308	115	Leak	Adjacent polythene seal to riser	13:27	14:30	63	8	8	8.0	504	1	191	0.010	0.001	**< 0.01**

Personal Sample Information

Sample No.:	5
Licensed Contractor:	LAR

Person's Name:	Gary Richardson
Type of Work:	Operative is undertaking removal the removal of

Job Title:	Asbestos Removal Operative
Type of Asbestos being Removed:	Asbestos Thermal Insulation

Air Sampling Test Certificate

2418

			Asbestos Thermal Insulation to pipework		
Removal Method:	Insulation has been injected using needle machine	**Controls Used:**	Works being undertaken under fully controlled conditions, ACM has been fully saturated and injected using needle machine prior to removal	**Type of RPE worn:**	Full face, power assisted respirator
Other factors which may affect the result:	Sections of the pipework are non-asbestos MMMF lagging. These sections are to be removed in the same manor and treated as Asbestos.				

Acknowledgement

Pass or Fail Statement:	All air tests undertaken within todays shift return satisfactory fibre concentration levels.

Analyst Name:	Arran Husthwaite	**Analyst Signed:**		**Date and Time:**	13/09/2024 15:00

Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20240913093140	Analyst Name:	Arran Husthwaite

	Example of pump location
	Example of pump location
	Example of pump location

Photograph Appendix

		Escape pod airlock
		Escape pod airlock
		Escape pod airlock

Photograph Appendix

		Airlock and Baglock

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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240913093140

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

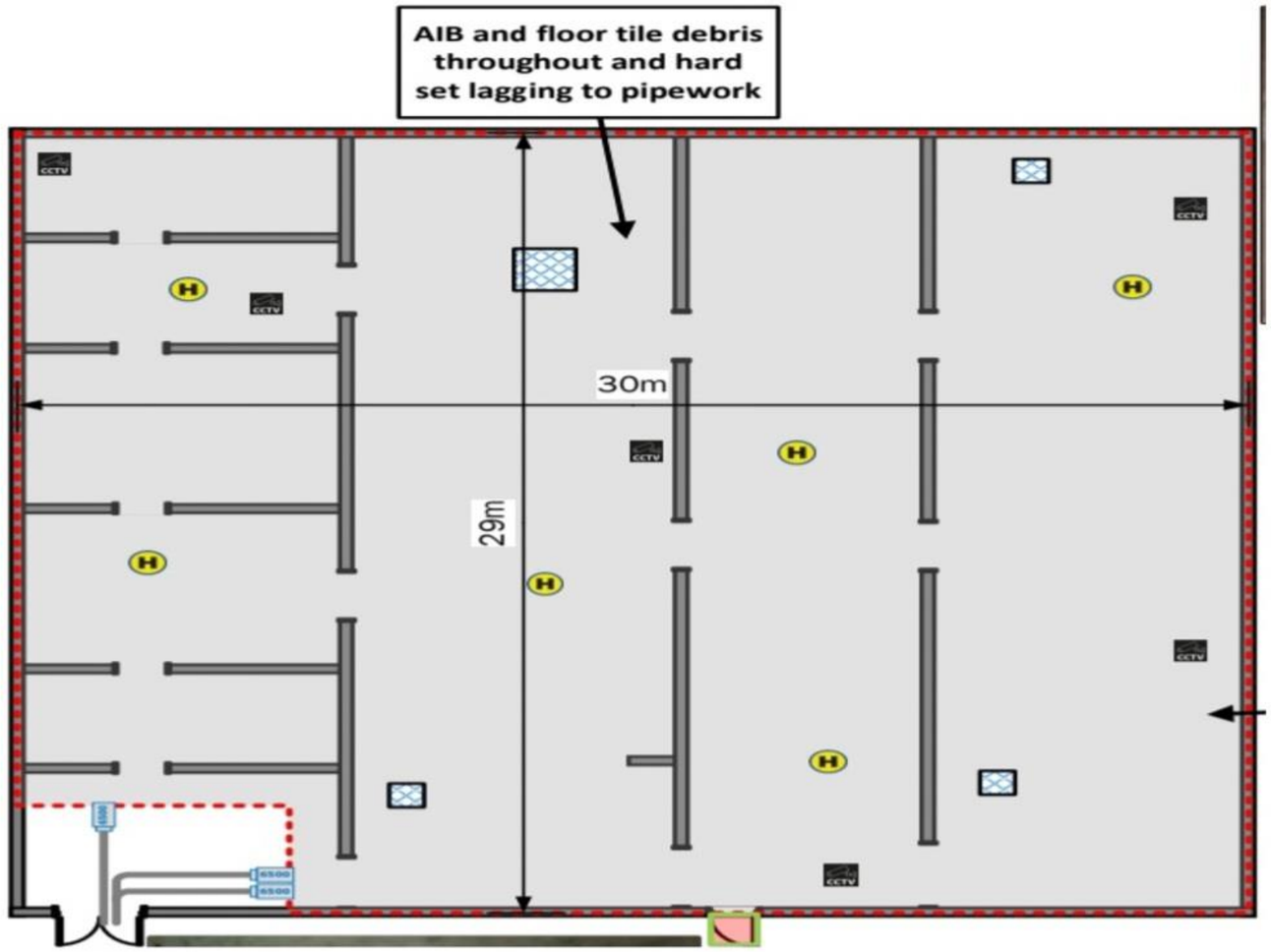
- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240913093140

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

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Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Mark Richardson	**Contractor Signed:**		**Date:**	13/09/2024
Analyst Name:	Arran Husthwaite	**Analyst Signed:**		**Date:**	13/09/2024

Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240916103821
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Acorn survey report reference :- B-45425r1

Removal works :- Removal of all plant within the Undercroft and removal of thermal insulation to pipework, thermal insulation debris throughout the undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings. A full environmental clean of the undercroft will then be taken place. All works are to be complete under fully controlled conditions. The Asbestos is in a poor condition and contains Amosite and Chrysotile. Acorn are onsite to provide analytical support during these ongoing works.

AS of Acorn Analytical Services arrives on site.

Sign in via RESET at estates and locate the LARC site compound/work area.

Meet with LARC Site Manager Mark Richardson and LARC Site Supervisor Craig Thomas. Run through plan of works and establish site laboratory within the LARC site welfare cabin on site.

Within todays shift, x4 operatives are to continue with removal works within the live enclosure to the undercroft area.

Site Diary

Acorn are to monitor these works within the live enclosure with leakage and personal air monitoring through out the course of todays shift. Leakage air tests and personal monitoring undertaken throughout the course of the shift. All air tests undertaken within todays shift return satisfactory fibre concentration levels. Acorn leave site (16:15).

Acknowledgement

Analyst Name:	Aadam Sidat	**Analyst Signed:**		**Date and Time:**	16/09/2024 16:00

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Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240916103821	**Date:**	16/09/2024 16:00

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Block 32 - Antenatal

Laboratory Equipment

Microscope No.:	600480	**Flow Meter:**	FM045/FM072	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM002	**Tally Counters:**	TC047/TC048	**Filter Batch No:**	5021
NPL Test Slide:	3339	**Stopwatch:**	SW065	**Exposed Filter Diameter (mm):**	22.4
NPL Visible Bands:	YES				

Test Conditions:	Site laboratory is within the site welfare cabin and is satisfactory for a site laboratory set-up.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

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Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	-	328	Field Blank (Counted)	Sample Location	-	-	-	-	-	-	-	0	200	-	-	-
2	AC270	062	Leak	Ground Floor - Adjacent to Airlock	09:42	11:52	130	4	4	4.0	520	3	185	0.010	0.002	**< 0.01**
3	AC315	086	Leak	Adjacent to Airlock	09:45	11:55	130	4	4	4.0	520	1	185	0.010	0.001	**< 0.01**
4	AC316	087	Leak	Adjacent to Airlock	09:47	11:57	130	4	4	4.0	520	2	185	0.010	0.001	**< 0.01**
5	AC270	086	Leak	Adjacent to riser	13:22	14:25	63	8.5	8.5	8.5	536	0.5	179	0.010	0.000	**< 0.01**
6	AC315	252	Leak	Adjacent to riser	13:23	14:26	63	8.5	8.5	8.5	536	2	179	0.010	0.001	**< 0.01**
7	AC316	328	Leak	Adjacent to Airlock	13:27	14:30	63	8.5	8.5	8.5	536	2	179	0.010	0.001	**< 0.01**
15	AP018	151	Personal	Jacob Hill	09:40	11:57	137	2	2	2.0	274	3	200	0.018	0.003	**< 0.02**

Personal Sample Information

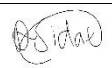
Sample No.:	15	**Person's Name:**	Jacob Hill	**Job Title:**	Removal Operative
Licensed Contractor:	LAR	**Type of Work:**	Notifiable Licensed Work	**Type of Asbestos being Removed:**	Thermal insulation
Removal Method:	Injection - Wrap and cut.	**Controls Used:**	Injection, fibre suppressant, H-type vac, NPU.	**Type of RPE worn:**	Full face powered respirator
Other factors which may affect the result:	MMMF lagging				

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Air Sampling Test Certificate

Acknowledgement

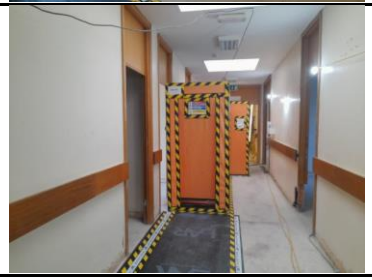
Pass or Fail Statement:	Air test results are satisfactory. Fibre concentration levels are below <0.010f/ml.

Analyst Name:	Aadam Sidat	**Analyst Signed:**		**Date and Time:**	16/09/2024 16:00

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Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20240916103821	Analyst Name:	Aadam Sidat

	Enclosure
	Enclosure

2418

Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240916103821

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

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Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	16/09/2024
Analyst Name:	Aadam Sidat	**Analyst Signed:**		**Date:**	16/09/2024

Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240917145613
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Acorn survey report reference :- B-45425r1

Removal works :- Removal of all plant within the Undercroft and removal of thermal insulation to pipework, thermal insulation debris throughout the undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings. A full environmental clean of the undercroft will then be taken place. All works are to be complete under fully controlled conditions. The Asbestos is in a poor condition and contains Amosite and Chrysotile. Acorn are onsite to provide analytical support during these ongoing works.

AS of Acorn Analytical Services arrives on site.

Sign in via RESET at estates and locate the LARC site compound/work area.

Meet with LARC Site Manager Mark Richardson and LARC Site Supervisor Craig Thomas.

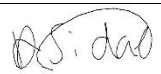
Within todays shift, x4 operatives are to continue with removal works within the live enclosure to the undercroft area.

Acorn are to monitor these works within the live enclosure with leakage air monitoring through out the course of todays shift.

Site Diary

All air tests undertaken within todays shift return satisfactory fibre concentration levels. Over the course of the afternoon Acorn carry out reassurance air testing B-49496. Acorn leave site (16:15).

Acknowledgement

Analyst Name:	Aadam Sidat	**Analyst Signed:**		**Date and Time:**	17/09/2024 15:30

2418

Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240917145613	**Date:**	17/09/2024 15:30

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Block 32 - Antenatal

Laboratory Equipment

Microscope No.:	600480	**Flow Meter:**	FM045/FM072	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM002	**Tally Counters:**	TC047/TC048	**Filter Batch No:**	5129
NPL Test Slide:	3339	**Stopwatch:**	SW065	**Exposed Filter Diameter (mm):**	22. 4
NPL Visible Bands:	YES				

Test Conditions:	Test conditions are satisfactory.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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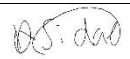
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Air Sampling Test Certificate

Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	-	328	Field Blank (Counted)	Sample location	-	-	-	-	-	-	-	0.5	200	-	-	-
2	AC270	062	Leak	Adjacent to Airlock	09:22	11:37	135	4	4	4.0	540	2	178	0.010	0.001	**< 0.01**
3	AC315	086	Leak	Adjacent to riser	09:23	11:38	135	4	4	4.0	540	1	178	0.010	0.001	**< 0.01**
4	AC316	087	Leak	Adjacent to riser	09:25	11:40	135	4	4	4.0	540	0.5	179	0.010	0.000	**< 0.01**

Acknowledgement

Pass or Fail Statement:	Air test results are satisfactory. Fibre concentration levels are below <0.010f/ml.

Analyst Name:	Aadam Sidat	**Analyst Signed:**		**Date and Time:**	17/09/2024 15:30

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Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20240917145613	Analyst Name:	Aadam Sidat

	Enclosure

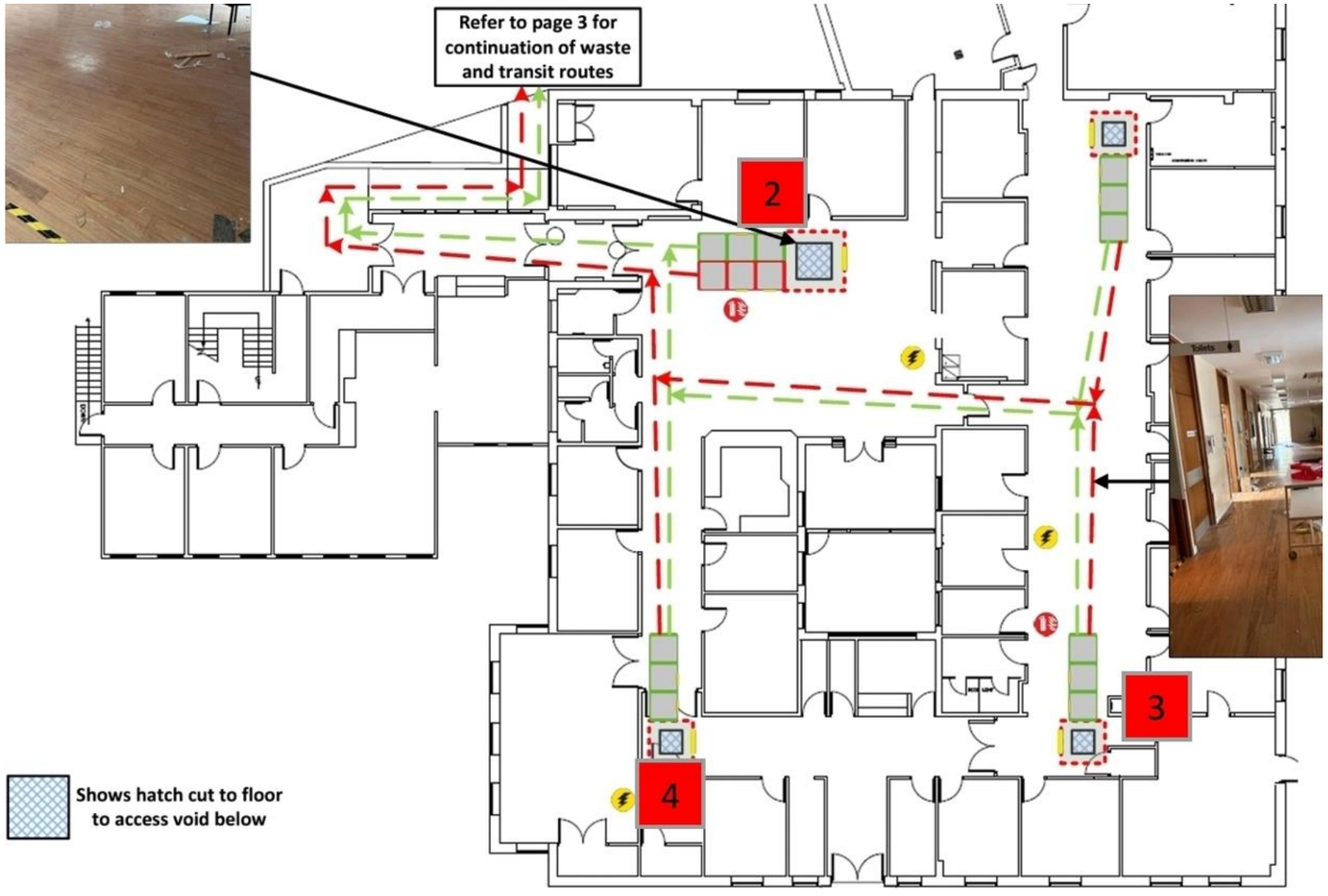
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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240917145613

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

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Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	17/09/2024
Analyst Name:	Aadam Sidat	**Analyst Signed:**		**Date:**	17/09/2024

Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240918104455
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Acorn survey report reference :- B-45425r1

Removal works :- Removal of all plant within the Undercroft and removal of thermal insulation to pipework, thermal insulation debris throughout the undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings. A full environmental clean of the undercroft will then be taken place. All works are to be complete under fully controlled conditions. The Asbestos is in a poor condition and contains Amosite and Chrysotile. Acorn are onsite to provide analytical support during these ongoing works.

AS of Acorn Analytical Services arrives on site.

Sign in via RESET at estates.

Meet with LARC Site Manager Mark Richardson and LARC Site Supervisor Craig Thomas.

Within todays shift, x6 operatives are to continue with removal works within the live enclosure to the undercroft area.

Acorn are to monitor these works within the live enclosure with leakage and personal air monitoring through out the course of todays shift. Leakage air tests and personal monitoring undertaken throughout the course of the shift.

Site Diary

All air tests undertaken within todays shift return satisfactory fibre concentration levels.

Acorn leave site (15:15).

Acknowledgement

Analyst Name:	Aadam Sidat	**Analyst Signed:**		**Date and Time:**	18/09/2024 15:00

2418

Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240918104455	**Date:**	18/09/2024 15:00

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Block 32 - Antenatal

Laboratory Equipment

Microscope No.:	600480	**Flow Meter:**	FM045/FM072	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM002	**Tally Counters:**	TC047/TC048	**Filter Batch No:**	5129
NPL Test Slide:	3339	**Stopwatch:**	SW065	**Exposed Filter Diameter (mm):**	22.4
NPL Visible Bands:	YES				

Test Conditions:	Test conditions are satisfactory.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

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Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	N/A	328	Field Blank (Counted)	Sample location	-	-	-	-	-	-	-	0.5	200	-	-	-
2	AC270	062	Leak	Adjacent to Airlock	09:48	11:52	124	4	4	4.0	496	1.5	194	0.010	0.001	**< 0.01**
3	AC315	086	Leak	Adjacent to Airlock	09:49	11:53	124	4	4	4.0	496	0.5	194	0.010	0.000	**< 0.01**
4	AC316	087	Leak	Adjacent to Airlock	09:50	11:54	124	4	4	4.0	496	1	194	0.010	0.001	**< 0.01**
5	AC270	087	Leak	Adjacent to Airlock	13:12	14:17	65	8.5	8.5	8.5	552	1	174	0.010	0.001	**< 0.01**
6	AC315	127	Leak	Adjacent to riser	13:14	14:19	65	8.5	8.5	8.5	552	0.5	174	0.010	0.000	**< 0.01**
7	AC316	328	Leak	Adjacent to riser	13:16	14:21	65	8.5	8.5	8.5	552	2	174	0.010	0.001	**< 0.01**
15	AP018	151	Personal	Enclosure	09:47	12:03	136	2	2	2.0	272	2	200	0.018	0.002	**< 0.02**

Personal Sample Information

Sample No.:	15	**Person's Name:**	Kyle Temple	**Job Title:**	Asbestos Removal Operative
Licensed Contractor:	LAR	**Type of Work:**	Removal of contaminated pipework under fully controlled conditions.	**Type of Asbestos being Removed:**	Thermal Insulation
Removal Method:	Cutting of pipework - lagging has already been stripped using injection.	**Controls Used:**	Fibre suppressant. H type vac. NPU.	**Type of RPE worn:**	Full face powered respirator.

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Air Sampling Test Certificate

Other factors which may affect the result:	Unknown

Acknowledgement

Pass or Fail Statement:	Air test results are satisfactory. Fibre concentration levels are below <0.010f/ml.

Analyst Name:	Aadam Sidat	**Analyst Signed:**		**Date and Time:**	18/09/2024 15:00

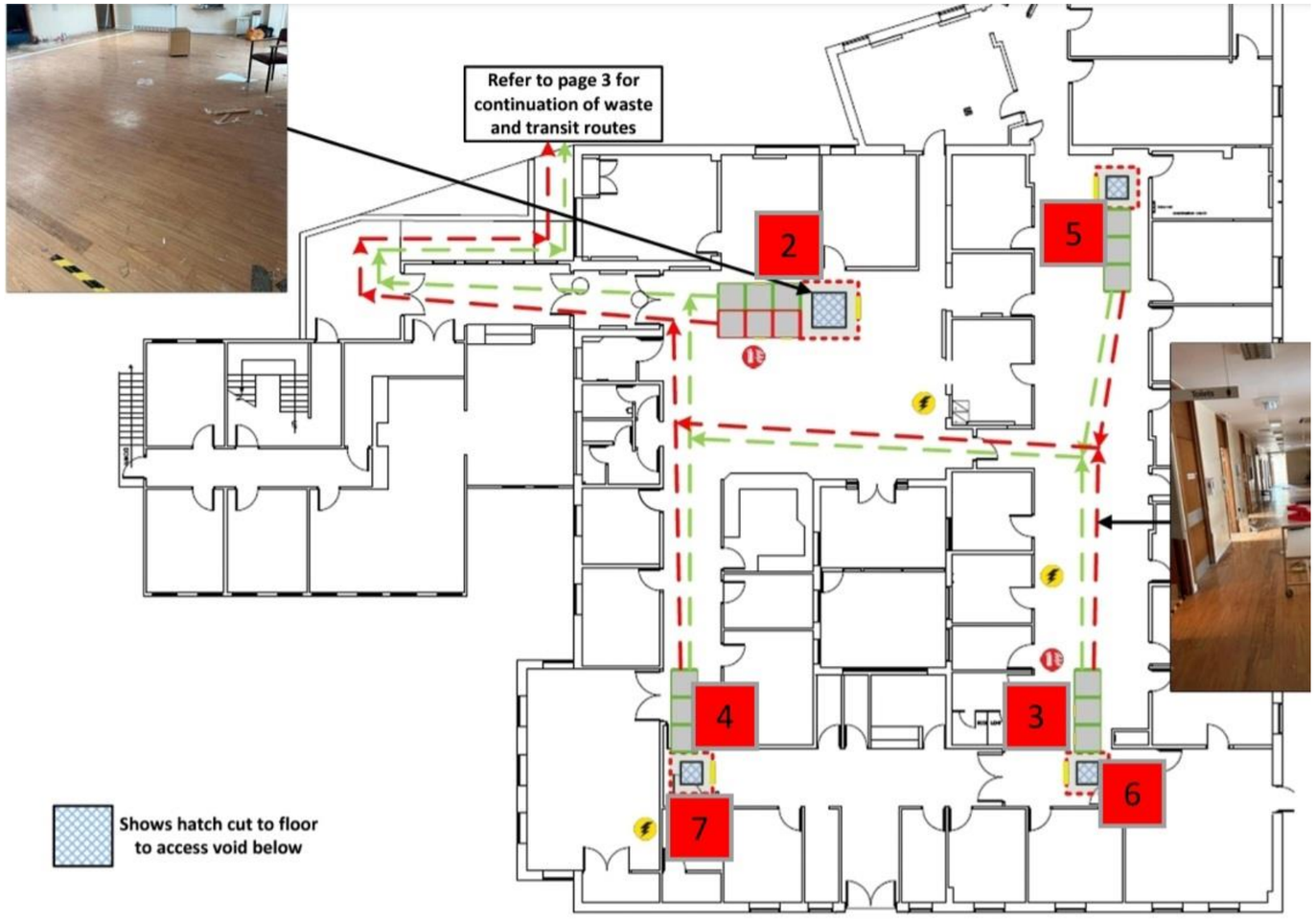
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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240918104455

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

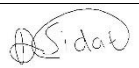
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Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	18/09/2024
Analyst Name:	Aadam Sidat	**Analyst Signed:**		**Date:**	18/09/2024

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Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240923101714
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Acorn survey report reference: B-45425r1

Removal Works - Removal of all plant within the undercroft and removal of thermal insulation to pipework, thermal insulation debris throughout the undercroft, removal of floor tile debris within the undercroft and removal of all brackets and fixings. A full environmental clean of the undercroft will then take place. All works are to be carried out under fully controlled conditions. Acorn are on site to provide analytical support for the duration of these works.

Site Diary -

Acorn arrive on site and meet with LARC Supervisor as well as x7 operatives.

Over the course of todays shift, LAR will be cutting out brackets to the walls within the undercroft.

Acorn will carry out leakage and personal air montioring.

Air Monitoring commences.

Air Monitoring completed.

Site Diary

Acorn leave site.

Acknowledgement

Analyst Name:	Rayhaan Bhana	**Analyst Signed:**		**Date and Time:**	23/09/2024 15:30

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Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240923101714	**Date:**	23/09/2024 15:30

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	ANC Block 32.

Laboratory Equipment

Microscope No.:	600775	**Flow Meter:**	FM066/FM067	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM029	**Tally Counters:**	TC053/TC054	**Filter Batch No:**	5276
NPL Test Slide:	7796	**Stopwatch:**	SW046	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Satisfactory

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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Air Sampling Test Certificate

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Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	N/A	271	Field Blank	To area of work and back	-	-	-	-	-	-	-	-	-	-	-	-
2	AP16	284	Personal	Greg Temple	09:58	12:01	123	4.0	4.0	4.0	492	2.5	196	0.010	0.001	**< 0.01**
3	AC64	34	Leak	Ground Floor - Adjacent to Hatch cut	09:58	11:07	69	8.5	8.5	8.5	586	0.5	167	0.010	0.000	**< 0.01**
4	AC100	108	Leak	Ground Floor - Adjacent to Hatch Cut	10:00	11:09	69	8.5	8.4	8.4	580	1	166	0.010	0.001	**< 0.01**
5	AC328	248	Leak	Ground Floor - Adjacent to Airlock/Baglock (Pod 1)	10:01	11:10	69	8.5	8.5	8.5	586	3	164	0.010	0.002	**< 0.01**
6	AC64	248	Leak	Ground Floor - Adjacent to Pod 3	13:27	14:30	63	8.5	8.3	8.4	529	0.5	182	0.010	0.000	**< 0.01**
7	AC100	270	Leak	Ground Floor - Adjacent to Pod 4	13:28	14:31	63	8.5	8.3	8.4	529	1	182	0.010	0.001	**< 0.01**
8	AC328	271	Leak	External - Adjacent to NPU'S	13:29	14:32	63	8.5	8.1	8.3	523	1	184	0.010	0.001	**< 0.01**

Personal Sample Information

Sample No.:	2	**Person's Name:**	Kyle Temple	**Job Title:**	Operative
Licensed Contractor:	LAR LTD	**Type of Work:**	Removal of brackets to walls within undercroft	**Type of Asbestos being Removed:**	Thermal Insulation
Removal Method:	Wrap and cut	**Controls Used:**	Negative pressure unit, NPU, Fibre Surfactant	**Type of RPE worn:**	Category 3 type 5/6 coveralls and a full face

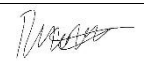
2418

Air Sampling Test Certificate

					respirator mask with a p3 filter.
Other factors which may affect the result:	N/A				

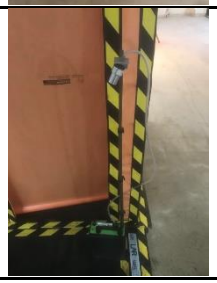
Acknowledgement

Pass or Fail Statement:	All air test results are satisfactory, with a fibre concentration level of <0.010f/ml.

Analyst Name:	Rayhaan Bhana	**Analyst Signed:**		**Date and Time:**	23/09/2024 15:30

Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20240923101714	Analyst Name:	Rayhaan Bhana

	Sample 3
	Sample 4
	Sample 5

Photograph Appendix

		Sample 6
		Sample 7
		Sample 8

2418

Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240923101714

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

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Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	23/09/2024
Analyst Name:	Rayhaan Bhana	**Analyst Signed:**		**Date:**	23/09/2024

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Site Diary

Project No.:	B-49309	**Report No.:**	AM-20240926135917
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB

Comments/Notes

Plan of works: LAR are under taking -
Cutting out of 4no hatches to floor to provide access into undercroft
- Form 1no enclosure for the following works:
- Removal of all plant within undercroft
- Removal of thermal insulation to pipework
- Removal of thermal insulation debris throughout undercroft
- Removal of floor tile debris throughout undercroft
- Removal of all brackets and fixings throughout undercroft
- Full clean of area
- Works to be carried out under fully controlled conditions

Location Antenatal Basement Undercroft.

Acorn arrive on site and meet with LAR and sign in on reset.

LAR are wire brushing walls and floor in todays shift.

Site Diary

Acorn undertake Leakage & Personal air monitoring.

Personal & Leakage air monitoring has started.

Acorn undertake a specific sample in Block 25

Personal air monitoring has finished and yields a result at <0.025f/ml.

Leakage air monitoring has finished and yielded a result at <0.010f/ml.

Acorn inform LAR of the results.

Acorn leave site.

Acknowledgement

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	26/09/2024 14:30

2418

Air Sampling Test Certificate

Project No.:	B-49309	**Report No.:**	AM-20240926135917	**Date:**	26/09/2024 14:30

Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Specific Area of Work:**	Antenatal (Block 32) Basement Undercroft

Laboratory Equipment

Microscope No.:	600386	**Flow Meter:**	FM021/FM076	**Graticule Diameter (µm):**	100
Stage Micrometer:	SM027	**Tally Counters:**	TC004/TC005	**Filter Batch No:**	5254
NPL Test Slide:	1647	**Stopwatch:**	SW058	**Exposed Filter Diameter (mm):**	22
NPL Visible Bands:	YES				

Test Conditions:	Satisfactory site conditions.

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (Edition 2).

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UKAS TESTING
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Air Sampling Test Certificate

acorn analytical services

Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
2	Ps017	70	Personal	Basement Undercroft	09:33	11:41	128	1.5	1.5	1.5	192	2.5	200	0.025	0.003	**< 0.03**
3	293	105	Leak	External Pod 4	09:40	10:43	63	8	8	8.0	504	2	191	0.010	0.001	**< 0.01**
4	298	235	Leak	External Pod 2	09:45	10:45	60	8	7.9	8.0	480	2.5	200	0.010	0.001	**< 0.01**
5	293	280	Leak	External NPUs	09:50	10:51	61	8	8	8.0	488	1	197	0.010	0.001	**< 0.01**
6	320	105	Leakage	External Pod 3	11:05	12:06	61	8	8	8.0	488	3	197	0.010	0.002	**< 0.01**
7	293	79	Leak	External enclosure	11:04	12:10	66	8	8	8.0	528	2.5	182	0.010	0.001	**< 0.01**
8	118	70	Leak	External Pod 1	13:10	14:15	65	8	8	8.0	520	3.5	185	0.010	0.002	**< 0.01**
9	293	280	Leak	External NPUs	13:20	14:21	61	8	7.9	8.0	488	1.5	197	0.010	0.001	**< 0.01**

Personal Sample Information

Sample No.:	2	**Person's Name:**	Jacob Hill	**Job Title:**	Asbestos removal operative
Licensed Contractor:	LAR Ltd	**Type of Work:**	Asbestos removal	**Type of Asbestos being Removed:**	Thermal insulation residues throughout
Removal Method:	Cutting out of 4no hatches to floor to provide access into undercroft - Form 1no enclosure for the following works:	**Controls Used:**	Full face powered respirator, type 5, 6 category 3 coveralls, works under negative pressure, H-type vac & fibre suppressant	**Type of RPE worn:**	Full face powered respirator.

Air Sampling Test Certificate

	- Removal of all plant within undercroft - Removal of thermal insulation to pipework - Removal of thermal insulation debris throughout undercroft - Removal of floor tile debris throughout undercroft - Removal of all brackets and fixings throughout undercroft - Full clean of area - Works to be carried out under fully controlled condition				
Other factors which may affect the result:	N/A				

Acknowledgement

Pass or Fail Statement:	Satisfactory.

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	26/09/2024 14:30

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Air Sampling Test Certificate

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Photograph Appendix

Project No.:	B-49309	Report No.:	AM-20240926135917	Analyst Name:	Greg Allen

		Asbestos Waste Skip
		NPU location & Trunking
		Pod 2 Location

Photograph Appendix

		Pod 4 Location
		Airtest Location
		Airtest Location

Photograph Appendix

	DCU Location

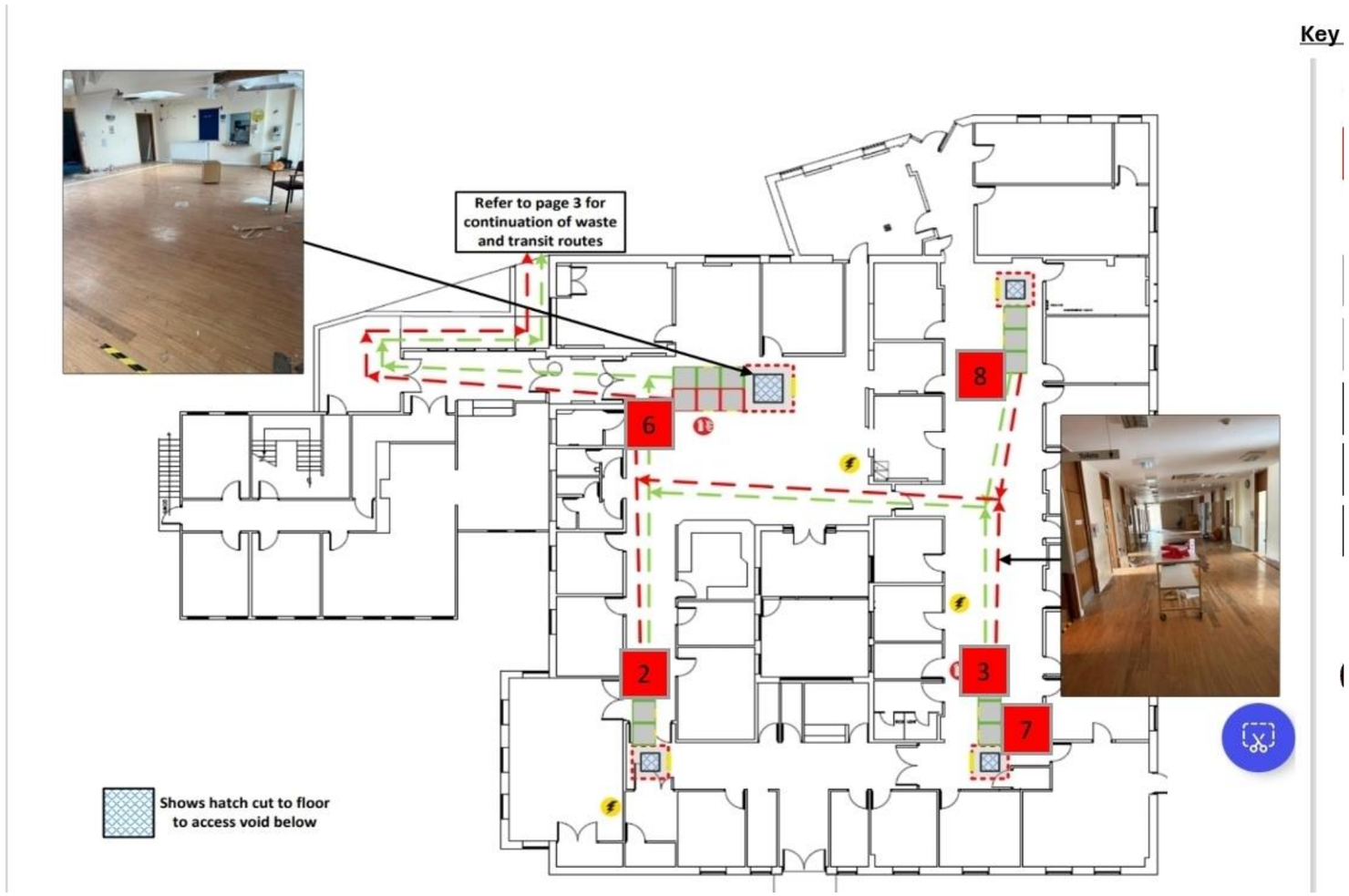
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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240926135917

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

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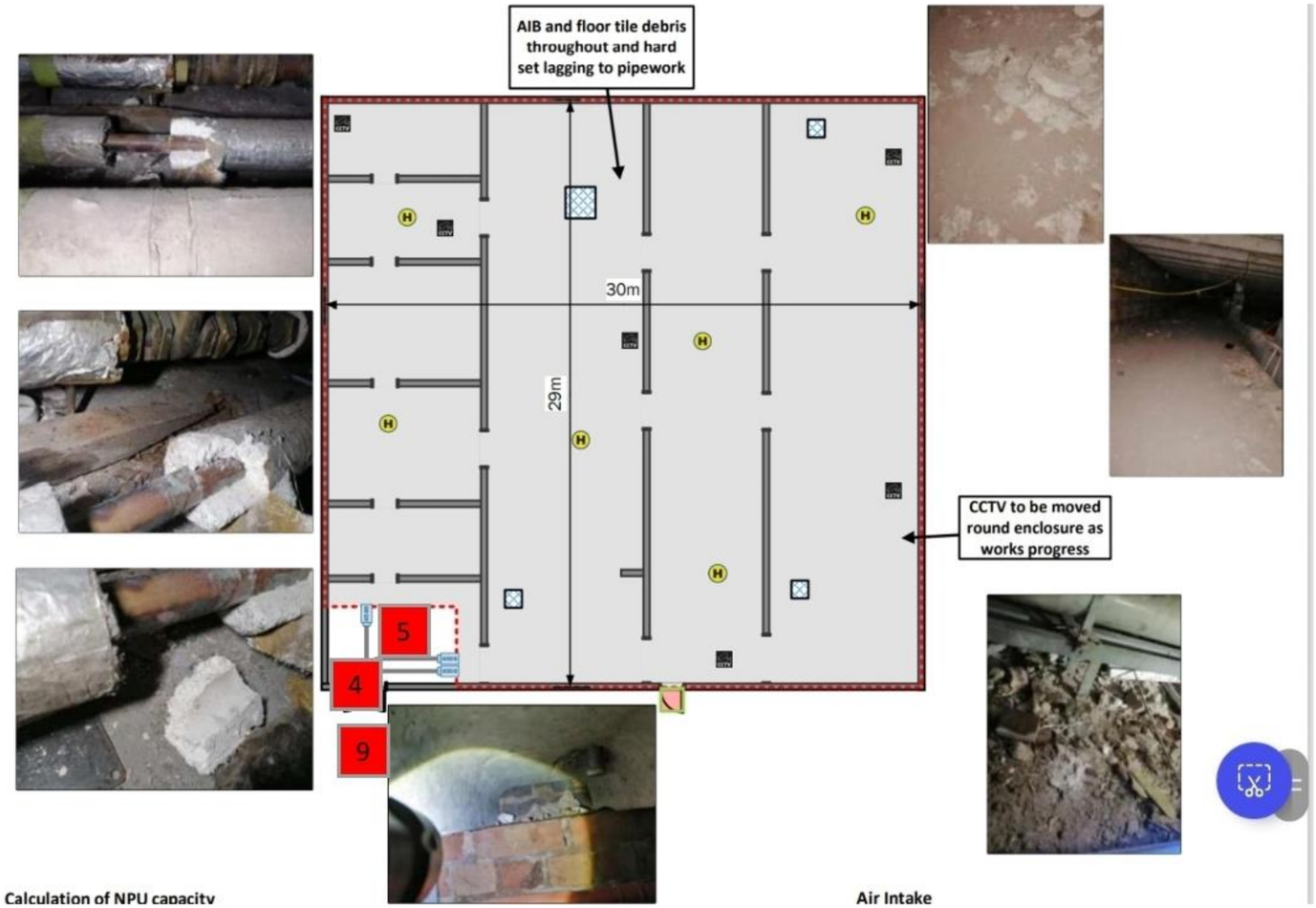
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Site Layout Diagram

Project No.:	B-49309	Report No.:	AM-20240926135917

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



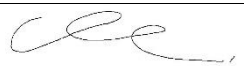
Key for Diagram

- Enclosure Material
- Airlock/Baglock Chamber
- Negative Pressure Unit
- 2 — Pump Location and Sample No.
- Asbestos Remediation Location
- DCU
- Van
- Skip
- Transit Route
- Waste Route
- Enclosure Position

Site Layout Diagram

Acknowledgement

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	26/09/2024
Analyst Name:	Greg Allen	**Analyst Signed:**		**Date:**	26/09/2024

Certificate of Inspection of Hygiene Facility

Project No.:	B-49309	**Report No.:**	HF-20241021084003	**DCU Number:**	44
Client Name and Address:	Manchester Foundation Trust Estates and Facilities Directorate North Manchester General Hospital Delaunays Road Crumpsall M8 5RB	**Site Address of the Hygiene Facility:**	North Manchester General Hospital Delaunays Road Crumpsall Manchester M8 5RB	**Asbestos Removal Contractor:**	LAR Ltd - Unit 5 Crossley Park Industrial Estate, Crossley Road, Stockport SK45BF
Start Date:	17/10/2024	**Start Time:**	12:40	**Site Supervisor:**	Craig Thomas

This certificate is issued in accordance with the documented in-house method for carrying out air sampling and fibre analysis procedures which is accredited by UKAS and follows the guidance set out in HSG248 (edition 2)

Thorough visual inspection

Hygiene facilities are free of waste, debris, dust, contaminated clothing, waste bags etc?	**Interior surfaces are free from debris and fine settled dust**
YES	YES

Pass/Fail:	PASS - The hygiene facility is free of visible asbestos waste, debris and surface dust.	**Comments:**	Satisfactory

Analyst Name:	Greg Allen	**Analyst Signed:**		**Visual Inspection Completed**	17/10/2024 12:45

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Certificate of Inspection of Hygiene Facility

Clearance air monitoring inside the hygiene facility

All areas are dry?	Air movers switched off and sealed?	Disturbance method used:	Total time of disturbance (minutes):
YES	YES	Brush	1.5

Floor area of shower and dirty end of the hygiene facility (m²):	Number of air samples:	Pass/Fail:
<10	1	PASS - The hygiene unit is cleared for removal from the site and re-use.

Analyst Name:	Greg Allen	Analyst Signed:		Stage 2 Finish:	17/10/2024 12:47

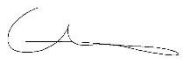
Laboratory Equipment

Microscope No.:	600386	Flow Meter:	FM021/FM076	Graticule Diameter (µm):	100
Stage Micrometer:	SM027	Tally Counters:	TC004/TC005	Filter Batch No:	5300
NPL Test Slide:	1647	Stopwatch:	SW058	Exposed Filter Diameter (mm):	22
Band 5 Visible:	YES				

Certificate of Inspection of Hygiene Facility

Sample No.	Pump No.	Cowl No.	Test	Location	Start Time	Finish Time	Sample Time (T)	Initial Flow (l/m)	Final Flow (l/m)	Avg. Flow (F) (l/m)	Volume (V) (V=T*F)	Fibres	Fields	Limit of Quants	Calculated Result (f/ml)	Recorded Result (f/ml)
1	N/A	70	Field Blank	N/A	-	-	-	-	-	-	-	-	-	-	-	-
2	263	280	Clearance	Between Shower & Dirty End	13:00	14:03	63	8	8	8.0	504	1	191	0.010	0.001	**< 0.01**

Pass or Fail Statement:	I have been advised by the analyst that the Hygiene Facility Inspection Certificate can be issued as the Hygiene Facility has passed all stages.

Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	17/10/2024 14:10

Acknowledgement

Pass or Fail Statement:	I have been advised by the analyst that the Hygiene Facility Inspection Certificate can be issued as the Hygiene Facility has passed all stages.

Contractor's Representative Name:	Craig Thomas	**Contractor's Representative Name Signed:**		**Date and Time:**	17/10/2024 14:10
Analyst Name:	Greg Allen	**Analyst Signed:**		**Date and Time:**	17/10/2024 14:10

Copies Issued To:	LAR Ltd

Certificate of Inspection of Hygiene Facility

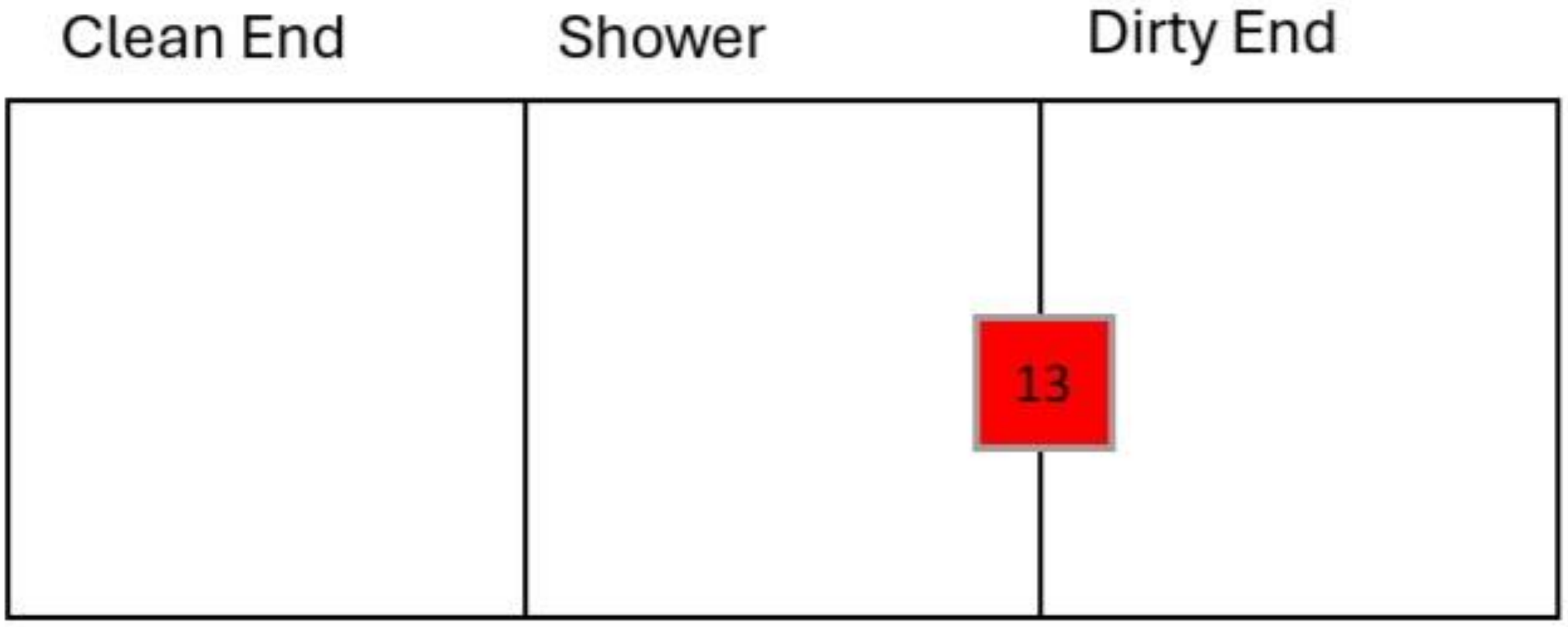
Photographs

	Pump
	Dirty End
	Clean End

Certificate of Inspection of Hygiene Facility

Site Diagram:

Diagrams must be inclusive of approximate enclosure dimensions



Certificate of Inspection of Hygiene Facility

We the undersigned agree that the diagram is an accurate indication of the site layout for the project.

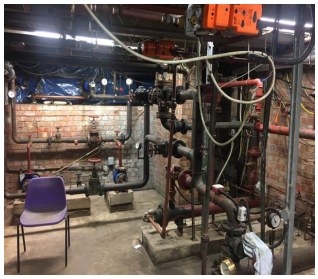
Contractor Name:	Craig Thomas	**Contractor Signed:**		**Date:**	17/10/2024
Analyst Name:	Greg Allen	**Analyst Signed:**		**Date:**	17/10/2024

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analytical services
The route to asbestos compliance

Removed Asbestos



Site Register



Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/001	Plant Room	Walls
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	11	22	Thermal Insulation



No Access:	Condition:	Surface Treatment:	Identification:	Recommended Action:
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.



Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	125	250	Thermal Insulation



No Access:	Condition:	Surface Treatment:	Identification:	Recommended Action:
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.



Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	121	250	Thermal Insulation



No Access:	Condition:	Surface Treatment:	Identification:	Recommended Action:
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	126	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Pipework
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	124	30	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Pipework
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	122	30	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	128	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	119	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Cobwebs
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	120	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	118	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	127	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Pipework
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	123	30	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Wall
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	111	2	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	112	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	104	150	nyl & Bitumen Adhesiv
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	114	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Wall
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	110	2	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	115	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	113	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	117	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.





Building:	Floor:	Location:	Location Description:	Item:
Block 32	-1	32/-1/002	Void Chambers	Floor
Project Number:	**Approach:**	**Sample Number:**	**Extent:**	**Material:**
B-49309	R	116	250	Thermal Insulation
No Access:	**Condition:**	**Surface Treatment:**	**Identification:**	**Recommended Action:**
True			Removed	Item Removed Known

This item has been removed.
It was removed by: LAR
It was removed on: 23/10/2024
Acorn project ref.: B-49309
No further action is required.

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analytical services
The route to asbestos compliance

Remaining Asbestos



No asbestos containing materials remain following the completion of these works.