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Asbestos Abatement Scope of Works

Site Name & Address:	North Manchester General Hospital Former EBME Block 06

Project Reference:	Former EBME	Consultancy:	MFT
Client Contact:	Thomas Hallworth	Author:	James Maxwell
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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

Former EBME Workshop – 906/00/035, 906/00/036, 906/00/037, 906/00/041 & 906/00/043

1.4 CONTACT DETAILS

Name	Organisation / Company & Role	email
Thomas Hallworth	P&ED MFT	Thomas.Hallworth@macegroup.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 the removal of the identified overlying RAAC roofing. ACMs have been identified to the ceiling void above the mentioned areas and therefore is required to be removed as part of the works.

The building is of brick and concrete construction spread over two floors located adjacent the multi-story car park. The proposed works are to be undertaken to the ground floor area which formerly house the EBME workshop and stores. The area can be accessed via separate external doors. Items present in table 1 form the basis for the scope of the removal works.

In order for the LARC to assist and coordinate the works with the Principal Contractor, 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. The LARC will provide all power, water and required access equipment to facilitate the works along with procuring the relevant competent contractors to undertake any required isolations/inspections to services within the works area. Any additional surveys associated with the above will be procured directly by the LARC.

1.6 EXISTING INFORMATION

Reports can be issued upon request

Associated Surveys	Refurbishment
Asbestos Consultancy:	Acorn Analytical Services Ltd
Survey Report Reference (s)	B-39207 issued November 2022

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;

- Insulating Board Debris
- Vinyl Flooring

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	S PS P	Sample Number	Extent	UoM	Identification
1	906/00/035	Reception Office	Presumed insulating board debris within ceiling void. Debris has been located within ceiling voids in adjacent rooms	Insulating Board	Presumed		10	m2	Amosite & Chrysotile
	906/00/036	Workshop	Vinyl floor covering	Vinyl	Sampled	2/B-24309	65	m2	Chrysotile
	906/00/036	Workshop	Insulating board debris over within ceiling void over MMMF ceiling tiles adjacent to windows.	Insulating Board	Sampled	3/B-39207	65	m2	Amosite & Chrysotile
	906/00/036	Corridor / Store	Insulating board debris to timber / former skylight over within ceiling void.	Insulating Board	Sampled	4/B-39207	1	m2	Amosite & Chrysotile
	906/00/036	Corridor / Store	Vinyl floor covering	Vinyl	Sampled	1/B-24309	10	m2	Chrysotile
	906/00/037	Staff Room	Presumed insulating board debris within ceiling voids. Debris has been located within ceiling voids in adjacent rooms	Insulating Board	Presumed		15	m2	Amosite & Chrysotile
	906/00/037	Staff Room	Vinyl floor covering beneath carpet	Vinyl	Sampled	1/B-24309	10	m2	Chrysotile
	906/00/041	Decontamination Room	Insulating board debris over within ceiling void over secondary suspended metal ceiling tiles above MMMF ceiling tiles in office area.	Insulating Board	Sampled	2/B-39207	10	m2	Amosite & Chrysotile
	906/00/043	Corridor / Store	Insulating board debris to timber / former skylight over within ceiling void.	Insulating Board	Sampled	4/B-39207	1	m2	Amosite & Chrysotile

Item	Location	Location Description	Item	Material	S PS P	Sample Number	Extent	UoM	Identification
	906/00/043	Corridor / Store	Vinyl floor covering	Vinyl	Sampled	1/B-24309	10	m2	Chrysotile

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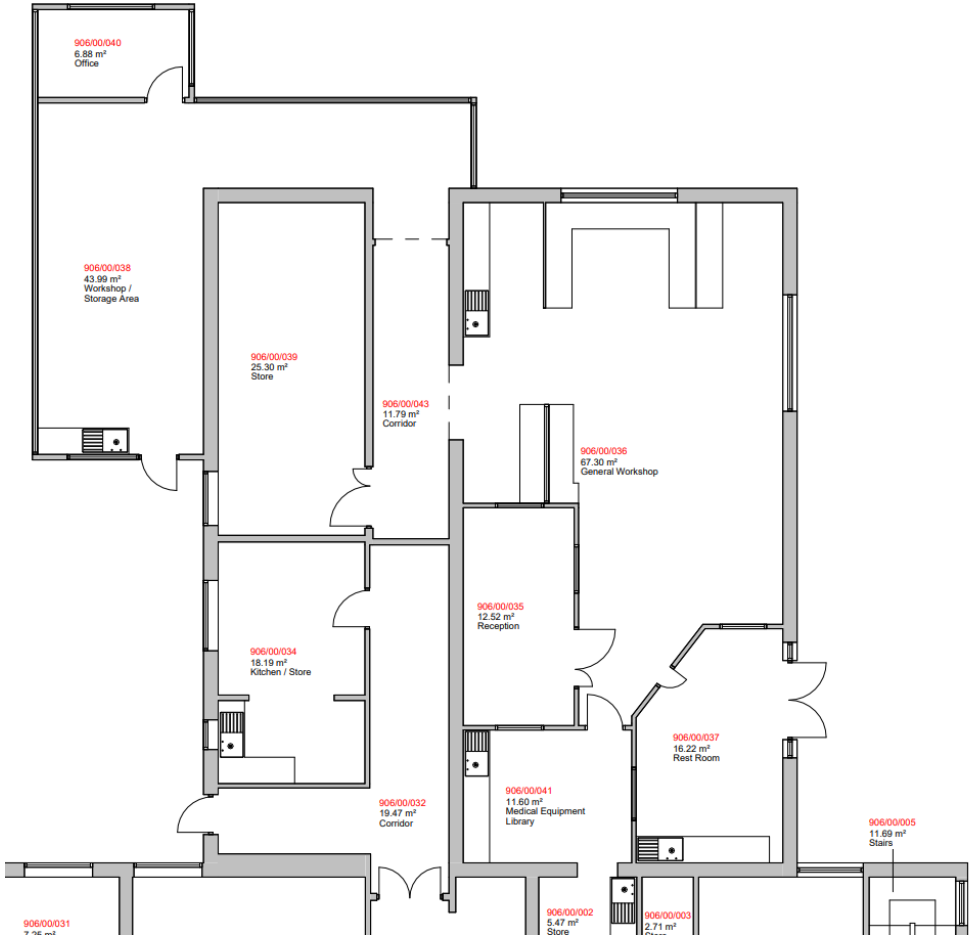
Plan 1

Block 906 – Former EBME workshop area



Item Number:	Item 1		
Locations:	Block 906		
Asbestos Material & Quantity (LM or m²)	See table 1 above for full extents and locations		
Full / Local Control	Fully controlled	**NLW / NNLW / ASB5**	ASB5
Detailed Information:			

Brief Overview

The proposed works are to be undertaken to enable the removal of the identified overlying RAAC roofing. ACMs have been identified to the ceiling void above the mentioned areas and therefore is required to be removed as part of the works.
The building is of brick and concrete construction spread over two floors located adjacent the multi-story car park. The proposed works are to be undertaken to the ground floor area which formerly house the EBME workshop and stores. The area can be accessed via separate external doors. Items present in table 1 form the basis for the scope of the removal works.

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

Several areas can potentially be used to site the DCU, welfare and vehicles, this can be discussed further on site during scoping visits. The contractor is to allow for the provision of water, power, welfare and other associated preliminaries.

Isolation requirements / permits

It is planned that all electrical, water and heating services will be isolated for the works to commence. This needs to be confirmed by the project manager upon liaison with the estates team.

Electrical

This element is to be confirmed by the project manager. Electrical services are present throughout the area with some serving the lab benches. These will most likely require isolations so that the furniture can be removed to enable full access during the proposed removal works.

Heating

This element is to be confirmed by the project manager. Heating installations including radiators are present within the works area. Isolations to these elements will be required in order to facilitate an element of soft stripping works to open up the partition walls to facilitate full safe access to the ceiling throughout the proposed work area.

M&E survey

The project manager is to finalise any requirements for an M&E survey.

Medical gas pipework

Medical gas pipework is present within the proposed works area as it was used for testing and calibration of the equipment within the former EBME department. The project manager is to provide isolation certificates for this pipework to ensure all are isolated or redundant during the works.

Existing services attached to the RACC ceiling

All services redundant or otherwise are to remain in situ where fixed to the RACC ceiling. This will reduce any possibility of damage being caused and the associated risks. The project manager is to confirm this.

Fire detection system

The project manager will provide further information on the current fire detection system and whether this is to remain in situ or temporary provision required. As the cabling and fixtures are present to the ceiling area which will fall into the remit for removal it is anticipated that it will be isolated for removal.

Work set-up and abatement

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

Isolations are required to the fire alarm system during works which will be facilitated by the estates electrical department, these isolations will typically run from 08.00 to 15.30.

- Should any electrical cables remain live, an electrical safety inspection will be undertaken to determine if they are in a condition that will enable full cleaning to be undertaken
- All redundant brackets, fixings and pipework will be cut out and removed as part of the works where not attached to the overlying RACC
- Where present all sacrificial insulation to pipework is to be removed to expose bare pipework for satisfactory cleaning
- Any loose/stored items will be deemed contaminated and must be removed as asbestos waste.
- 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;

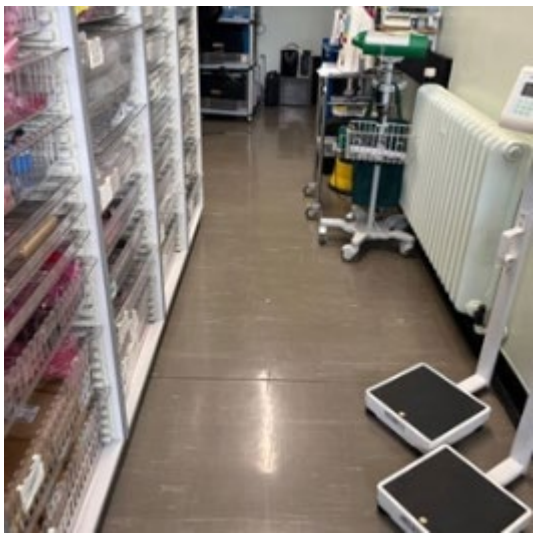
- Asbestos
- Fire alarm isolation

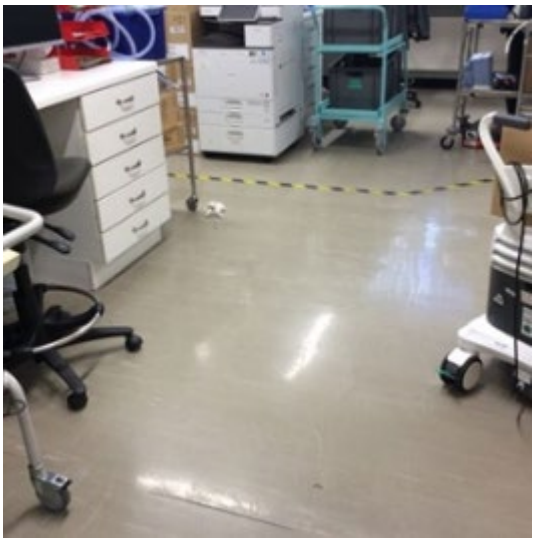
Refer to section 3 for additional requirements

Photo 1 & 2 – Indicative photos of area

Photo 3 & 4 – Indicative photos of area

Photo 5 & 6 – Indicative photos of area





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. 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. 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 a operational and serviceable condition on completion of the work, MFT or the Principal Contractor 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 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 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 / 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 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)	N	**Item Numbers Applicable to:**	N/A
Additional Comments:			

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)	N	**Item Numbers Applicable to:**	N/A
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)	N	**Item Numbers Applicable to:**	N/A

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:	TBC
Contractor Appointment:	TBC
Notification to HSE (where applicable):	TBC
Project commencement:	TBC
Project completion:	TBC

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 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 enclosure. A fire alarm isolation permit request will be required. This is to be arranged via the Principal Contractor/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 / 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 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 / 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/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.
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.