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Refurbishment & Demolition Survey

On Behalf of

Imperial War Museum
Imperial War Museum Duxford
Cambridge
CB224QR

For

Building 6 Imperial War Museum Duxford Cambridge CB224QR



PREPARED BY: SL ENVIRONMENTAL LTD.

SURVEY ISSUE DATE: 23.03.2017

SURVEY NUMBER: SAS 4580

SURVEYOR: Cleaveland Calixte

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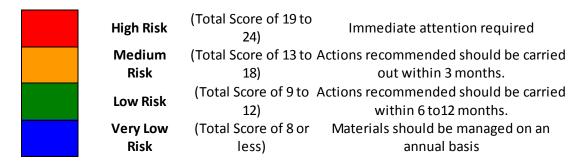
Section 1: Executive Summary

SL Environmental Ltd. was requested by Imperial War Museum to undertake a Refurbishment and Demolition Survey to Imperial War Museum Building 6. The purpose of the survey was to inspect and record the presence of asbestos containing materials on site to allow for safe management of the building in accordance with the requirements under the Control of Asbestos Regulations 2012.

1.1 Asbestos Materials Identified

Building	Floor	Location	Item Description	Risk Assessment Score	Recommendation
Building 6	Ground Floor	022 - Stores	Ceiling panels	4	Remove
Building 6	Ground Floor	031 - Stores	Ceiling panels	4	Remove
Building 6	Ground Floor	038 - Plant room	Gaskets	7	Remove
Building 6	Ground Floor	038 - Plant room	Electrics	7	Remove
Building 6	Ground Floor	043 - Stores	Electrics	7	Remove
Building 6	First Floor	012 - Loft	Residue to pipe	11	Remove
Building 6	First Floor	012 - Loft	Debris to floor	11	Remove
Building 6	Second Floor	002 - Loft	Residue to floor	12	Remove
Building 6	Second Floor	002 - Loft	Residue to floor	12	Remove

Key to colour coded Recommendations indicating level of Urgency;



The risk assessment scores detailed within this report should be used as a guide to prioritising work and the Management Plan should be consulted for a comprehensive guide to managing the risks from asbestos.

The recommendation given is largely based on reducing the material assessment parameters, e.g. through encapsulation or removal. When deciding on prioritisation and the

required action, full consideration should also be given to controlling the priority assessment parameters, e.g. through restricting access etc.

'Any asbestos materials identified or suspected will need to be inspected periodically to check that it has not deteriorated or been damaged. As a minimum, the material should be checked every six to twelve months even if it is in good condition and not going to be disturbed'. (Regulation 4 CAR 2012) SL Environmental Ltd. can undertake re-inspection surveys on your behalf and produce updated asbestos registers and in addition periodic reminders can be issued to ensure re-inspections are undertaken promptly.

1.2 Materials sampled and identified as Non Asbestos

Building	Floor	Location	Sample Number	Item Description	Photograph
Building 6	Ground Floor	001 - Lobby	001	Panel to wall	
Building 6	Ground Floor	004 - Lobby	As 001	Panel to wall	
Building 6	Ground Floor	006 - Stores	As 001	Panel to wall	
Building 6	Ground Floor	007 - Lobby	002	Panel to wall	
Building 6	Ground Floor	015 - Stores	003	Wall panel	
Building 6	Ground Floor	029 - Toilet	005	Toilet cistern	8
Building 6	Ground Floor	030 - Toilet	005	Toilet cistern	
Building 6	First Floor	003 - Stores	As 007	Bitumen to floor	
Building 6	First Floor	004 - Stores	As 007	Bitumen to floor	
Building 6	First Floor	005 - Stores	As 007	Bitumen to floor	
Building 6	First Floor	006 - Stores	007	Bitumen to floor	
Building 6	First Floor	006 - Stores	006	Wall panels	

Building	Floor	Location	Sample Number	Item Description	Photograph
Building 6	First Floor	013 - Loft	015	debris to floor	
Building 6	Second Floor	001 - Loft	008	Panel to wall	
Building 6	Second Floor	003 - Loft	013	Debris to floor	

1.3 Rooms/Locations – No Asbestos Containing Materials Identified

No asbestos has been identified in the following locations:						
Building	Floor	Location				
Building 6	Ground Floor	001 - Lobby				
Building 6	Ground Floor	002 - Stores				
Building 6	Ground Floor	003 - Tea room				
Building 6	Ground Floor	004 - Lobby				
Building6	Ground Floor	005 - Office				
Building6	Ground Floor	006 - Stores				
Building 6	Ground Floor	007 - Lobby				
Building6	Ground Floor	008 - Stores				
Building 6	Ground Floor	009 - Lobby				
Building6	Ground Floor	010 - Lobby				
Building6	Ground Floor	011 - Toilet				
Building6	Ground Floor	012 - Toilet				
Building6	Ground Floor	013 - Stores				
Building6	Ground Floor	014 - Stores				
Building6	Ground Floor	015 - Stores				
Building6	Ground Floor	016 - Lobby				
Building6	Ground Floor	017 - Office				
Building6	Ground Floor	018 - Stores				
Building6	Ground Floor	019 - Lobby				
Building6	Ground Floor	020 - Office				
Building6	Ground Floor	021 - Office				
Building6	Ground Floor	023 - Office				
Building6	Ground Floor	024 - Office				
Building6	Ground Floor	025 - Office				
Building6	Ground Floor	026 - Office				
Building6	Ground Floor	027 - Office				
Building6	Ground Floor	028 - Corridor				
Building6	Ground Floor	029 - Toilet				
Building6	Ground Floor	030 - Toilet				
Building6	Ground Floor	032 - Stores				
Building6	Ground Floor	033 - Lobby				
Building6	Ground Floor	034 - Stores				
Building6	Ground Floor	035 - Lobby				
Building6	Ground Floor	036 - Stores				
Building6	Ground Floor	037 - Stores				
Building6	Ground Floor	039 - Stores				
Building6	Ground Floor	040 - Stores				
Building6	Ground Floor	041 - Stores				
Building6	Ground Floor	042 - Stores				
Building6	Ground Floor	044 - Stores				

No asbestos has been identified in the following locations:					
Building	Floor	Location			
Building 6	Ground Floor	045 - Lobby			
Building6	First Floor	001 - Stairwell			
Building6	First Floor	002 - Office			
Building6	First Floor	003 - Stores			
Building6	First Floor	004 - Stores			
Building6	First Floor	005 - Stores			
Building6	First Floor	006 - Stores			
Building6	First Floor	007 - Stairwell			
Building6	First Floor	008 - Office			
Building 6	First Floor	009 - Office			
Building6	First Floor	010 - Office			
Building 6	First Floor	011 - Corridor			
Building6	First Floor	013 - Loft			
Building 6	First Floor	014 - Loft			
Building6	First Floor	015 - Loft			
Building 6	Second Floor	001 - Loft			
Building6	Second Floor	003 - Loft			
Building 6	External	001 - External			

1.4 Variations to Scope

1.4.1 Rooms/Locations - No Access Gained

No Access has been gained to the following locations							
Building Location Comments Photograph							
Building 6	Ground Floor: 046 - Room Whole location	No key available at time of survey.	No Photo Available				

1.4.2 Rooms/Locations – Limited Access Gained

N/A

Section 2: Introduction

2.1 Aims and Objectives

The purpose of a Refurbishment and Demolition Survey, as defined within the HSE publication *HSG 264 Asbestos: The Survey Guide* is to locate and describe, as far as reasonably practicable, the presence and extent of any suspect asbestos containing material (ACM) in the area where the refurbishment will take place or in the whole building if demolition is planned. The survey is fully intrusive and involves destructive inspection, as necessary, to gain access to all areas. Any variations to this will be listed within Section 1.4 of this report.

It should be noted that this type of survey is disruptive and involves aggressive inspection techniques that are likely to cause damage to the fabric of the building. Unless prior agreement has been made with regards to re-instatement SL Environmental Ltd. will cover any penetrations made with tape and polythene, where this is reasonably practicable to do so.

The inspection and testing was conducted during normal working hours of operation minimising any disruption to the occupiers as far as practical. It should be noted that occupied or operational buildings place certain restrictions on the scope of the survey in respect of intrusive access and sampling strategy and that it may prove impossible to adequately investigate all areas of the property at the time of the initial survey. Where this is the case it may be required to undertake additional surveys or inspections just prior to or during the proposed refurbishment or demolition works, in order to account for all hidden ACMs.

Each section of this report focuses on one or two aspects; no section should be taken and read as a stand-alone document. It is imperative that each section is read in conjunction with each other.

It should be noted that this report is not intended to be used as a bill of quantities for the removal of asbestos containing materials and that it should only be used as a supporting document when accompanied by an appropriate Technical Specification and Scope of Works. These documents can be prepared by SL Environmental Ltd. upon request.

2.2 Project Particulars

Client Details:	Imperial War Museum			
Survey Undertaken by:	Lead Surveyor(s): Cleaveland Calixte Assistant Surveyor(s): Josh Hazelwood			
Date(s) of Survey:	23/02/2017			
Report Prepared by:	Joshua Hazelwood 23/03/2017			
Quality Control by:	James Whitelegg 23/03/2017			
SL Environmental Ltd. Project Manager:	Cleaveland Calixte			
Site Description:	Museum			

Section 3: Site Work and Observations

SL Environmental Ltd. surveyors undertook the inspection of the property on the 23/02/2017 Our Surveying Team visually assessed the majority of the building structure. Where possible asbestos containing materials were identified sampling was carried out. However, where structures and features of the building were replicated it was not considered reasonably practical to sample every item. Samples were therefore taken at points and intervals, which appeared to be representative of the general location in accordance with HSG248 and HSG264.

Consequently, it is possible that some items observed or not found to contain asbestos may comprise of asbestos materials outside the immediate location of the sampling/inspection point. Similarly, since it was not possible to expose the entire fabric of the building and its contents, some asbestos materials may have been obscured at the time of our survey.

Examples of such materials may include:

- Hidden or sealed risers voids/riser
- Concealed or Bricked up voids/riser
- Fuses and Electrical Switch-gear
- Concealed pipe and tank gaskets
- Damp proof membranes
- Buried/underflooritems
- Firebreaks within inaccessible ceilings
- Fire Doors

Unless otherwise stated the following locations would not normally be included in the scope of a Refurbishment and Demolition Survey. Such areas may include:

- Within all plant and boiler castings
- Within all live electrical cabinets, switch, fuse and distribution boxes
- Main roof level unless otherwise stated
- Below floor level and floor boards unless otherwise stated
- Above all solid ceilings
- Behind all solid walls
- Internal cavities of partition walls
- Within all ventilation/extraction/heating and floor ducts
- Above asbestos insulation board ceiling panels, unless otherwise stated
- Behind all fixed asbestos insulation board cladding/boxing panels
- Within lift motors/machinery unless otherwise stated
- Unless stated to the contrary areas with heights greater than 3.0 metres have not been accessed during the course of this survey.

Following all sampling the areas and materials were left in a stable condition. All samples (where appropriate) were identified with SL Environmental Ltd. sample identification labels.

Section 4: Methodology and Limitations of Method

4.1 Nominated Laboratory

All samples were analysed by AMS Management (GB) LLP at their Office and Laboratory based at Unit 1, 9 Cannon Lane, Tonbridge, Kent, TN9 1PP.

4.2 UKAS Accredited Laboratory

AMS Management LLP is UKAS accredited for asbestos fibre counting and asbestos identification. Laboratories meeting UKAS requirements for calibration and testing comply with the requirements of BS5750/ISO series of standards

4.3 In-House Methods

Analysis of the samples was carried out using AMS Management's in-house methods as described in their Quality Control Manual. All Laboratory techniques used are carried out in accordance with HSE guidance document HSG 248 Asbestos: The analysts' guide for sampling, analysis and clearance procedures.

Identification of asbestos fibres was based on the following analytical procedure:

- a) A preliminary visual examination of the whole of the bulk sample was made to assess the sample type and the required sample treatment (if necessary); where possible a representative sub-sample treatment was undertaken at this stage.
- b) Sample treatment was undertaken (where required) to release or isolate fibres.
- c) A detailed and thorough search under the microscope was made to classify the fibre types present.
- d) Representative fibres were mounted in appropriate RI liquids on microscope slides.
- e) The different fibrous components were identified using PLM.

4.4 Limitations

We recommend that any work undertaken in the removal or treatment of Asbestos-based materials/products should be carried out in conjunction with the information detailed in the asbestos survey report. The condition of the asbestos has been categorised, therefore enabling prioritisation of any work involving either Asbestos removal or encapsulation/treatment.

All efforts were made during the visual survey to identify and establish the presence/absence of asbestos-based material and their location.

However, asbestos is frequently concealed within the structural fabric of the building and its structures to which access was not reasonably practical at the time of the survey. Therefore, is deemed inaccessible within the scope of superficial survey. This applies to any suspect material that subsequently becomes exposed as a result of any demolition procedures. We cannot accept any liability for the report not containing information on concealed spaces or within inaccessible features such as cavity walls which may exist within the fabric of the building where the extent and presence of these is not evident through inaccessibility or insufficient knowledge of the structure at the time of the survey.

It is understood and agreed that no survey can guarantee that all asbestos present in a building has been identified. Consequently, no such survey should be considered definitive and further exhaustive investigations are recommended in conjunction with any remedial, major or minor refurbishment or demolition work.

Bulk samples have been taken from all materials, which upon visual inspection appeared likely to contain asbestos. The exceptions to this, at the surveyors' discretion, are certain items composed of bitumen (notably Sink Pads), plastic, resin or rubber which may contain asbestos.

Fire or other doors may contain asbestos material sandwiched between timber and or other products; sampling is likely to cause noticeable damage. Therefore, internal and external doors of this type were not sampled during the survey. Doors within the building that may contain a sandwiched material, in particular fire doors should be considered as Priority 3 material, unless specified as a different category within this report or is confirmed that no asbestos material is present. Unless requested specifically fire doors are not sampled as part of a Refurbishment and Demolition Survey as intrusion into the fabric of a fire door would render the fire door ineffective

Samples have not been taken of any suspected asbestos containing materials where sampling would endanger the surveyor or affect the functional performance of the item concerned. For example fuse linings, gaskets, fire doors, ropes associated with heating, glazing or power plant. In these instances the products have been assumed to contain asbestos.

Plant and machinery have not been inspected during the course of this survey unless specifically requested prior to commencement of this survey. Similarly, Lift machinery and shafts have not been inspected during the course of this survey unless specifically requested prior to the commencement of this survey. Electrical equipment has not been accessed during the course of this survey. Electrical equipment casing was not opened unless it could be positively established that the equipment was disconnected from the supply. It is assumed that all electrical fuse boxes contain asbestos due to the age of the installations.

Unless stated to the contrary areas with heights greater than 3.0 metres have not been accessed during the course of this survey.

Asbestos containing materials (ACM's) concealed behind other asbestos containing materials may not have been located during the survey. It should be assumed that further asbestos containing materials may be present. During a survey on site no asbestos materials suspected or visually identified will be removed from site or damaged to gain access to any materials concealed by this material. As such further asbestos containing materials may be present behind the identified materials only being exposed following the asbestos removal works

This report is issued in confidence to the client and SL Environmental Ltd. Cannot accept any responsibility to any third parties to whom this report is circulated, in part or in full, and any such parties rely on the contents of the report solely at their own risk.

Materials extents are approximations only, assigned by the surveyor at the time of the survey. It should be noted that such extents may be for specific, visible amounts of asbestos item and not for the complete amount. As such, the stated extents should not be used as a basis of any Scope, bill of quantity or Specifications of Works for that item.

Materials were not sampled where it was considered that other visually identical materials sampled elsewhere were of a similar composition.

No density checks have been carried out on board or cement materials and thus such materials have been referred to as asbestos insulating board (AIB) or asbestos cement within this report based solely on their physical appearance.

It is understood that SL Environmental Ltd. undertook the survey on the basis that the land on which the building or structure stands including surrounding land is not contaminated.

During a survey on site no asbestos materials suspected or visually identified will be removed from site or damaged to gain access to any materials concealed by this material. As such further asbestos containing materials may be present behind the identified materials only being exposed following the asbestos removal works.

Section 5: Definition of Asbestos Material

Asbestos is a generic term used for fibrous forms of several naturally occurring silicate materials that have been exploited for their unique combination of properties of flexibility, high tensile strength, incombustibility, low-thermal conductivity and resistance to chemical attack.

For Regulatory purposes, in Great Britain, Control of Asbestos Regulations 2012 (CAR2012) defines asbestos as any of the following minerals used below, or any mixture of them:



Anthophyllite, Tremolite and Actinolite also belong to the Amphibole mineral group. However, these three asbestos forms have rarely been used commercially in the UK. These forms of asbestos are generally only found as a contaminant or in a mixture with Chrysotile, Amosite, or Crocidolite.

5.1 Health effects

Asbestos-related diseases are currently responsible for more than 4000 deaths a year in the UK alone. Inhalation of all asbestos fibres can potentially cause a number of respiratory diseases for which there is currently no cure. Whilst exposure to all asbestos fibre types can be potentially fatal, it is generally accepted that exposure to blue and brown (amphibole group) asbestos is more hazardous than white.

http://www.hse.gov.uk/statistics/causdis/asbestos.htm

Section 6: Assessment of Risk

Category Explanation

Basic Principles

Asbestos that is found to be present does not necessarily create an unacceptable risk. Asbestos is the hazard, the risk can only be defined when this hazard is assessed within the environment in which it is found. This assessment must take into account the activities carried out near or on the asbestos for the assessment to be able to present viable recommendations.

General Guidelines for an Assessment

There are two types of assessment that may be carried out: the Material Assessment and the Priority Assessment. The scores for these can then be combined to give an overall Hazard Risk Assessment Score.

The Material Assessment - this assesses the likelihood of asbestos material to release fibres into the air should it be disturbed. This assessment can be undertaken as part of the survey, as it requires no knowledge about the building use etc. The main parameters that determine the likelihood of the material to release airborne fibres and the relative hazard of the types of fibre released are;

- Product type
- Extent of damage or deterioration
- Surface treatment

Asbestos type

The material assessment algorithm (see attached key to assessment) will give a good initial guide to the priority for a control action, as it will identify the high-risk materials. However, a high material score may not always require a high priority control action, if no one needs to enter the area, or suitable precautions to reduce the risk can be taken on the few occasions when the area is occupied.

Materials with assessment scores of 10 or more are regarded as having a high potential to release fibres, if disturbed. Scores of 7 to 9 are regarded as having a medium potential and of 5 to 6 a low potential. Scores of 4 or less have a very low potential to release fibres.

The Priority Assessment - this takes into account various human factors in order to modify the priority assigned by the material assessment. This can only be effectively achieved with direct input from the building occupiers / managers. Parameters, which should be considered, would include;

- The location of the material
- Its extent
- The use to which the location is put
- The level of occupancy of the area
- The activities carried on in the area, and
- The likelihood/frequency with which maintenance activities are likely to take place.

A detailed risk assessment can only be carried out with the detailed knowledge of the above parameters. Although the surveying team may be able to contribute some of the information required for the risk assessment, the duty holder under the *Control of Asbestos Regulations 2012* is required to make the risk assessment, using the information given in the survey and their detailed knowledge of the property and the activities carried out within. This risk assessment will form the basis of the management plan.

Each of the above parameters consists of a number of subheadings, which are all individually assessed. These assessments are then averaged for each main heading.

Other factors, such as planned refurbishment, may override the priority for remediation or the type of remediation.

The potential for disturbance must also be assessed, as does the feasibility of the management system in operation. For example:

- If the asbestos is retained could it interrupt the safe maintenance/repairs required and would the services that would be affected by this be critical to the occupiers?
- If the asbestos is within a locked room can access be adequately controlled?

The two points raised above relate to instances such as; the failure of an electrical supply above a suspended asbestos ceiling. In this case the occupier would usually no longer be able to trade or a department would have to be shut. An electrical contractor would be brought in on an emergency basis. The individual - electrician - would be placed in a situation where the safety guidelines regarding the asbestos may seem of secondary importance to the needs of their client and this could subsequently lead to the hazard being ignored.

In cases such as these the asbestos should either be removed or, if retained, a procedure of dealing with emergencies must be set up to ensure that critical access points were provided and maintained.

The results from the Material assessment and the Priority assessment can then be graphed within the Risk Assessment Summary table to give a final risk assessment.

High Risk

Using the above principles, materials can be categorised. The top priority (High Risk) would be given to those materials that present an unacceptable risk and require immediate attention. It does not mean that this material must be removed; it means that steps must be taken to remove the risk from those affected by it. This could be as simple as locking a room or undertaking minor repair works or setting up a safe management procedure etc.

Further Categories

Whether a material must be removed is a Client decision. We are willing to give our advice based on our experience. In essence if there is no budget to remove asbestos then a more economical answer will be its management. In extreme cases management may mean total segregation of a room, area or building until such time as the budget can be made available. When surveying properties of any number it is important to realise that management must begin as soon as practicable to allow a programme of remedial works to proceed. It would be impossible to remove every item of asbestos overnight and there is little point in trying.

Prioritisation

The risk categories / scores allocated should be used as a means of prioritising work. When the risk has been contained it is then necessary to address the next phase, which is, what should be removed, repaired and/or managed.

Management and control actions

The priority assessment score and the material assessment score are the two outputs from the risk management assessment and can be ranked to determine the priority of the management and control actions.

Management actions may include;

- Maintain and update asbestos register
- Monitor condition
- Restrict access / isolate
- Label
- Inform
- Train
- Define and use safe systems of work
- Operate a permit to work system

Control actions may include;

- Clean up debris
- Repair
- Encapsulate
- Enclose
- Remove

Category Codes - Material Assessment

Cumulative score	Action Required		
10 to 12	This is allocated to those items requiring urgent attention as they currently, or in the foreseeable future, present an unacceptable risk. That is to say that fibre concentrations could rise above 0.01 fibres/m. High risk with a significant potential to release fibres.		
7 to 9	These are items which as single entities have a high risk of being damaged/disturbed or where there is an accumulation of asbestos materials in a single location that when examined as a whole have a high risk of being damaged/disturbed. Medium risk.		
5 to 6	These are items that have no, or very little, sign of historical damage and are usually board or panels, which are not easily accessed. Low risk.		
4 or less	This covers asbestos cement, resins, Artex, plastics, rubber etc. containing asbestos, which do not generally present a significant risk. Very lowrisk.		

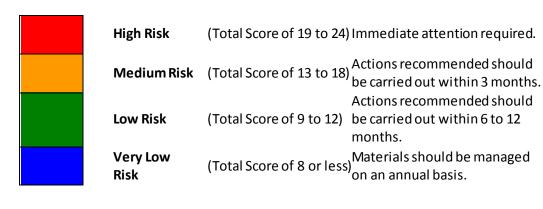
	1	
Sample Variable	Score	Examples of Scores
	1	As best os reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, as best os cement, etc.)
Product Type (or debris from product)	2	As best os insulating board, mill boards, other low density insulation boards, as best os textiles, gaskets, ropes and woven textiles, as best os paper and felt
	3	Thermal insulation (e.g. pipe and boiler lagging), sprayed as bestos, loose as bestos, as bestos mattresses and packing
	1	
	0	Good condition: no visible damage
Extent of damage /	1	Low damage: a few scratches or surface marks; broken edges on boards, tiles etc.
deterioration	2	Medium damage, significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres
	3	High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris
	1	<u> </u>
	0	Composite materials containing a sbestos: reinforced plastics, resins, vinyl tiles
Surface Treatment	1	Enclosed s prays and lagging, a sbestos insulating board (with exposed face painted or encapsulated), as bestos cement sheets etc.
Surface freatment	2	Unsealed asbestos insulation board, or encapsulated lagging and sprays
	3	Unsealed lagging and sprays
	1	
	1	Chrysotile
As bestos Type	2	Amphibole asbestos excluding Crocidolite
	3	Crocidolite
Total Score		

Category Codes - Priority Assessment

This is allocated to those items in a position which presents an unacceptable risk to occupiers etc. To 9 These are ritems is stuated in high use, readily accessible positions, which may also be located in an area accessed on a routhle basis for maintenance. In the sear items that will very rarely be disturbed through normal occupation or maintenance, or are in locations on have entered that will be release. A or less This covers items which are in locations not readily accessible and are unlikely to be disturbed. Assessment parameter Score Assessment parameter Score Assessment parameter Score Assessment bearing the release. Assessment parameter Score Barples of score variables Rare disturbance activity (e.g. little used storer com) (but disturbance activity) (e.g. little used storer com) (but disturbance activity (e.g. little used storer com) (but disturbance (e.g. indisturbance (e.g. indisturbance (e.g. indisturbance (e.g. indisturbance (e.g. indisturbance) (e.g. indisturbance (e.g. indisturbance) (e.g. indistur	Cumulative score			Action Required	
Accessibility Contact	10 to 12	This is allocated to	those items in a po	osition which presents an unacceptable risk to occupiers etc.	
Assessment parameter Score Assessment parameter Score Assessment barameter Score Assessment barameter Score Assessment barameter Barand study of score variables Normal occupant activity 1 Main type of activity in area 2 Barand study of score variables Accessibility Capability 1 Accessibility Capability Daily of study of stu	7 to 9				
Assessment parameter Score Assessment Normal occupant activity 0 1 Care disturbance activity (e.g., little used store room) (e.g., first business activity (e.g., little used store room) (e.g., first business activity which may contact AOMs) (e.g., first business activity business activity which may contact AOMs) (e.g., first business activity business activity which may contact AOMs) (e.g., first business activity business activity which may contact AOMs) (e.g., first business activity business activity which may contact AOMs) (e.g., first business activity (e.g., first business activity)	5 to 6				
Normal occupant activity	4 or less	This covers items w	hich are in location	ns not readily accessible and are unlikely to be disturbed.	
Main type of activity in area Accessibility	Assessment parameter	Score	Assessment	Examples of score variables	
Main type of activity in area	Normal occupant activity				
Begint title uses fore room) Begint title uses fore room)		0		1	
Main type of activity in area 2 E.g. office type activity		Ů			
Periodic disturbance 2		1			
Likelihood of Disturbance	Main type of activity in area				
High levels of disturbance (e.g. fire door with AIB sheet in constant use)		2			
		2			
Accessibility 1		3		(e.g. fire door with AIB sheet in constant use)	
Accessibility	Likelihood of Disturbance				
Accessibility		0		Usuallyinaccessible	
Location	Accessibility	1		Occasionally likely to be disturbed	
Location Cutdoors Large Rooms or well-ventilated areas	Accessibility	2		·	
Location 1				,	
Rooms up to 100m²					
Rooms up to 100m' Confined spaces	Location				
Extent					
Xtent					
Street 2 3 3 3 3 3 5 50m² or ≥10mto ≤50m 3 3 50m² or ≥50m					
Average Score Human Exposure Potential Number of occupants	Extent				
Average Score Human Exposure Potential Number of occupants 0					
Number of occupants	Average Score	3		250H 01250H	
Number of occupants 1					
Number of occupants 1	numan exposure Potential	0		None	
Average time each use Type of maintenance activity 2 3 3 4 to 10					
Frequency of use Type of maintenance activity Type of maintenance activity	Number of occupants				
Frequency of use Table Ta		3			
Average time each use 2		0		Infrequent	
Average time each use Average time each use	Eroguanovafusa	1		Monthly	
Average time each use Comparison of the compa	riequelicyoluse	2		Weekly	
Average time each use 1 2					
Average Score Maintenance Activity Type of maintenance activity Type of maintenance activity Type of maintenance activity Type of maintenance activity Average Score Discrepance of maintenance activity Type of maintenance activity Average Score Discrepance of maintenance activity Average Score Average Score National Sturbance (e.g. possibility of contact when gaining access) Low disturbance (e.g. changing light bulbs in AIB ceiling) Medium disturbance (e.g. lifting one or two AIB ceiling tiles to access a valve) High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for re-cabling) ACM unlikely to be disturbed for maintenance S1 per year >1 per year >1 per year >1 per year >1 per month		_			
Average Score	Average time each use				
Average Score Maintenance Activity Type of maintenance activity 2 Minor disturbance (e.g. possibility of contact when gaining access) Low disturbance (e.g. changing light bulbs in AIB ceiling) Medium disturbance (e.g. lifting one or two AIB ceiling tiles to access a valve) High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for re-cabling) ACM unlikely to be disturbed for maintenance 1	_				
Maintenance Activity Type of maintenance activity 2 Indicate the property of maintenance activity 2 Indicate the property of maintenance activity 2 Indicate the property of maintenance activity Indicate the property of maintenance activity and property of the property o	Average Score	3		>6 nours	
Type of maintenance activity 1 2 4 Brequency of maintenance activity 2 Frequency of maintenance activity 0 Average Score Minor disturbance (e.g. possibility of contact when gaining access) Low disturbance (e.g. changing light bulbs in AIB ceiling) Medium disturbance (e.g. lifting one or two AIB ceiling tiles to access a valve) High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for re-cabling) ACM unlikely to be disturbed for maintenance ≤1 per year >1 per year >1 per month Average Score					
Type of maintenance activity 2 Compossibility of contact when gaining access Low disturbance (e.g. changing light bulbs in AIB ceiling)	iviaintenance Activity			Minor dicturbance	
Type of maintenance activity 2 Dow disturbance (e.g. changing light bulbs in AIB ceiling)		0			
Type of maintenance activity 2 (e.g. changing light bulbs in AIB ceiling) Medium disturbance (e.g. lifting one or two AIB ceiling tiles to access a valve) High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for re-cabling) ACM unlikely to be disturbed for maintenance 1					
Type of maintenance activity 2 Medium disturbance (e.g. lifting one or two AIB ceiling tiles to access a valve) High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for re-cabling) O ACM unlikely to be disturbed for maintenance ≤1 per year >1 per year >1 per month Average Score		1			
2 (e.g. lifting one or two AIB ceiling tiles to access a valve) High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for re-cabling) O	Type of maintenance activity				
3 High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for re-cabling) O ACM unlikely to be disturbed for maintenance ≤1 per year >1 per year >1 per month Average Score		2			
Frequency of maintenance activity O ACM unlikely to be disturbed for maintenance ≤1 per year >1 per year >1 per month Average Score		3		High levels of disturbance (e.g. removing a number of AIB ceiling	
Frequency of maintenance activity 1 2 3 3 Average Score		0			
2 >1 per year >1 per month Average Score	Eroquoncy of maintanana antivity	1			
Average Score Average Score	rrequency or maintenance activity	2			
		3		>1 per month	
Total Score	Average Score				
Total Scote	Total Score				
	Total Score				

Example Hazard Risk Assessment Summary

	Total Score
Material Score	6
Priority Score	4
Overall Score	10



Survey Date: 23 February 2017	SAS 4580	Surveyor: Cleaveland Calixte	Refurbishment & Demolition		
				Hazard Risk A	ssessment Summary
Building 6	Schedule of Findings		Α	19-24	High potential to release fibres
Imperial War Museum Duxford			В	13-18	Medium potential to release fibres
Cambridge	<u>30</u>	<u>scriedule of Findings</u>	С	9-12	Low potential to release fibres
CB224QR			D	8 or less	Very low potential to release fibres
			E	0	No as be stos detected

Building	Buildin		Comments	No coi	mments.		
Floor	Ground	d Floor	Comments	140 001	milenes.		
Location	001 - L	obby	Item Description	Panel	to wall	Recommendations	CONTROL SECTION
Sample No.	001		Extent	2m2			
Product Type	0	N/A	Activity	0	N/A		
Condition	0	N/A	Accessibility	0	N/A	Risk Assessment Category	
Surface Treatment	0	N/A	Potential for exposure	0	N/A	F	
Asbestos Type	0	N/A	Maintenance Activity	0	N/A	_	

Building	Building 6		Comments	No co	mments.				
Floor	Ground	l Floor							
Location	004 - Lo	obby	Item Description	Panel	to wall	Recommendations			
Sample No.	As 001		Extent	N/A					
Product Type	N/A	N/A	Activity	N/A	N/A				
Condition	N/A	N/A	Accessibility	N/A	N/A	Risk Assessment Category			
Surface Treatment	N/A	N/A	Potential for exposure	N/A	N/A	F			
Asbestos Type	N/A	N/A	Maintenance Activity	N/A	N/A	_			

Building Floor	Buildin Ground	<u> </u>	Comments	No co	No comments.				
Location	006 - Stores		Item Description	Panel	to wall	Recommendations			
Sample No.	As 001		Extent	N/A					
Product Type	N/A	N/A	Activity	N/A	N/A				
Condition	N/A	N/A	Accessibility	N/A	N/A	Risk Assessment Category			
Surface Treatment	N/A	N/A	Potential for exposure	N/A	N/A	F			
Asbestos Type	N/A	N/A	Maintenance Activity	N/A	N/A	_			

Survey Date: 23 February 2017	SAS 4580	Surveyor: Cleaveland Calixte	Refurbishment & Demolition			
				Hazard Risk As	ssessment Summary	
Building 6			А	19-24	High potential to release fibres	
Imperial War Museum Duxford	Sal	nedule of Findings	В	13-18	Medium potential to release fibres	
Cambridge	<u> 30</u>	iedule of Filidings	С	9-12	Low potential to release fibres	
CB224QR			D	8 or less	Very low potential to release fibres	
			Е	0	No as bestos detected	

Building	Buildin	ng 6	Comments	No comments.					
Floor	Ground	d Floor	Comments	140 00	illinents.				
Location	007 - Lo	obby	Item Description	Panel	Panel to wall Recommendations				
Sample No.	002		Extent	2m2					
Product Type	0	N/A	Activity	0	N/A				
Condition	0	N/A	Accessibility	0	N/A	Risk Assessment Category			
Surface Treatment	0	N/A	Potential for exposure	0	N/A	F			
Asbestos Type	0	N/A	Maintenance Activity	0	N/A	_			

Building	Buildin		Comments	No co	mments.				
Floor	Ground								
Location	015 - St	ores	Item Description	Wallp	panel	Recommendations			
Sample No.	003		Extent	6m2					
Product Type	0	N/A	Activity	0	N/A				
Condition	0	N/A	Accessibility	0	N/A	Risk Assessment Category	A STATE OF THE STA		
Surface Treatment	0	N/A	Potential for exposure	0	N/A	F			
Asbestos Type	0	N/A	Maintenance Activity	0	N/A	_			

Building	Building 6 Ground Floor		Comments	No co	mments.				
Floor Location	022 - St		Item Description	Coilin	Selling and the selling and th				
Sample No.	004	tores	Extent	Ceiling panels 40m2		Recommendations			
Product Type	1	AC, as bestos reinforced composites etc.	Activity	0	Rare disturbance activity	Remove			
Condition	1	Low damage	Accessibility	0	Usuallyinaccessible	Risk Assessment Category	1		
Surface Treatment	1	Encloseds prays and lagging, asbestos insulating board, asbestos cement etc.	Potential for exposure	0	Very low	D			
Asbestos Type	1	Chrysotile	Maintenance Activity	0	Minor Disturbance				

Survey Date: 23 February 2017	SAS 4580	Surveyor: Cleaveland Calixte	Refurbishment & Demolition			
				Hazard Risk A	ssessment Summary	
Building 6			Α	19-24	High potential to release fibres	
Imperial War Museum Duxford	Schedule of Findings		В	13-18	Medium potential to release fibres	
Cambridge	<u> 30</u>	nedule of Fillulings	С	9-12	Low potential to release fibres	
CB224QR			D	8 or less	Very low potential to release fibres	
			E	0	No as bestos detected	

Building	Buildin	g 6	Comments	No co	mments.		
Floor	Ground Floor		Comments	NO COI	illillents.		
Location	029 - To	pilet	Item Description	Toilet	cistern	Recommendations	
Sample No.	005		Extent	1m2			
Product Type	0	N/A	Activity	0	N/A		
Condition	0	N/A	Accessibility	0	N/A	Risk Assessment Category	
Surface Treatment	0	N/A	Potential for exposure	0	N/A	F	
Asbestos Type	0	N/A	Maintenance Activity	0	N/A	_	

Building	Buildin		Comments	No comments.				
Floor	Ground	d Floor	Comments	110 00	initiones.			
Location	030 - To	oilet	Item Description	Toilet	cistern	Recommendations	AND THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED	
Sample No.	005		Extent	1m2				
Product Type	0	N/A	Activity	0	N/A			
Condition	0	N/A	Accessibility	0	N/A	Risk Assessment Category		
Surface Treatment	0	N/A	Potential for exposure	0	N/A	F		
As best os Type	0	N/A	Maintenance Activity	0	N/A	_		

Building	Buildin	•	Comments	No co	mments.				
Floor	Ground	Hoor							
Location	031 - St	tores	Item Description	Ceilin	g panels	Recommendations			
Sample No.	014		Extent	40m2					
Product Type	1	AC, as bestos reinforced composites etc.	Activity	0	Rare disturbance activity	Remove			
Condition	1	Low damage	Accessibility	0	Usuallyinaccessible	Risk Assessment Category			
Surface Treatment	1	Encloseds prays and lagging, asbestos insulating board, asbestos cement etc.	Potential for exposure	0	Very low	D			
Asbestos Type	1	Chrysotile	Maintenance Activity	0	Minor Disturbance		1		

Building 6
Imperial War Museum Duxford
Cambridge
CB224QR

Survey Date: 23 February 2017

Schedule of Findings

Surveyor: Cleaveland Calixte

Refurbishment & Demolition							
Hazard Risk Assessment Summary							
А	19-24	High potential to release fibres					
В	13-18	Medium potential to release fibres					
С	9-12	Low potential to release fibres					
D	8 or less	Very low potential to release fibres					
E	0	No as bestos detected					

Building	Buildin	ng 6	Comments	No co	mmants		
Floor	Floor Ground Floor		Comments	No comments.			
Location	038 - Plant room		Item Description	Electr	ics	Recommendations	
Sample No.	ple No. Presumed		Extent	2m2			
Product Type	2	As bestos insulating board, millboards, gaskets & ropes etc.	Activity	0	Rare disturbance activity	Remove	
Condition	1	Low damage	Accessibility	0	Usuallyinaccessible	Risk Assessment Category	
Surface Treatment	1	Enclosed sprays and lagging, asbestos insulating board, asbestos cement etc.	Potential for exposure	0	Very low	D	
Asbestos Type	I 3 I Crocidolite		Maintenance Activity		Minor Disturbance		

SAS 4580



Building	Buildin	g 6	Comments	No.co	mmonts		
Floor	Ground	d Floor	Comments	Comments No comments.			
Location	038 - Plant room		Item Description	Gaske	ets	Recommendations	20.00
Sample No.	Presun	ned	Extent	Extent Throughout			
Product Type	2	As bestos insulating board, millboards, gaskets & ropes etc.	Activity	0	Rare disturbance activity	Remove	The same of the sa
Condition	1	Low damage	Accessibility	0	Usuallyinaccessible	Risk Assessment Category	
Surface Treatment	1	Enclosed sprays and lagging, asbestos insulating board, asbestos cement etc.	Potential for exposure	0	Verylow	D	30
Asbestos Type	3	Crocidolite	Maintenance Activity	0	Minor Disturbance		1

Building	Buildir	ng 6	Comments	No comments.			
Floor	Ground	d Floor	Comments No comments.		billilents.		
Location	043 - S	tores	Item Description	Electr	ics	Recommendations	
Sample No.	Presun	ned	Extent 2m2				
Product Type	2	As bestos insulating board, millboards, gaskets & ropes etc.	Activity	0	Rare disturbance activity	Remove	
Condition	1	Low damage	Accessibility	0	Usuallyinaccessible	Risk Assessment Category	
Surface Treatment	1	Enclosed sprays and lagging, asbestos insulating board, asbestos cement etc.	Potential for exposure	0	Verylow	D	
Asbestos Type	3	Crocidolite	Maintenance Activity	0	Minor Disturbance		



Building 6
Imperial War Museum Duxford
Cambridge
CB224QR

Survey Date: 23 February 2017

SAS 4580

Surveyor: Cleaveland Calixte

Schedule of Findings

Refurbishment & Demolition						
	Hazard Risk As	ssessment Summary				
А	19-24	High potential to release fibres				
В	13-18	Medium potential to release fibres				
С	9-12	Low potential to release fibres				
D	8 or less	Very low potential to release fibres				
Е	0	No as bestos detected				

Building	Buildin	ng 6	Comments	No Ac	cess Gained: No key available attime c	ofcurvov	
Floor	Ground Floor		Comments	NO AC	cess dailled. No key available at time t	n survey.	
Location	046 - R	oom	Item Description	Whole	elocation	Recommendations	
Sample No.	N/A		Extent	N/A			
Product Type	N/A	N/A	Activity	N/A N/A			
Condition	N/A	N/A	Accessibility	N/A	N/A	Risk Assessment Category	No Photo Available
Surface Treatment	N/A	N/A	Potential for exposure	N/A	N/A	N/A	
Asbestos Type	N/A	N/A	Maintenance Activity	N/A	N/A		

Building	Buildin	g 6	Comments	No co	mmants					
Floor	First Flo	oor	Comments	No comments.						
Location	003 - Stores		Item Description	m Description Bitumen to floor Recommendations						
Sample No.	As 007		Extent	N/A						
Product Type	N/A	N/A	Activity	N/A	N/A					
Condition	N/A	N/A	Accessibility	N/A	N/A	Risk Assessment Category				
Surface Treatment	N/A	N/A	Potential for exposure	N/A	N/A	F				
Asbestos Type	N/A	N/A	Maintenance Activity	N/A	N/A	_				

Building	g Building 6 First Floor		Comments	No co	mments.			
Floor			Comments	NO COI	illilents.			
Location	004 - Stores		Item Description	Bitum	en to floor	Recommendations		
Sample No.	As 007		Extent	N/A				
Product Type	N/A	N/A	Activity	N/A	N/A			
Condition	N/A	N/A	Accessibility	N/A	N/A	Risk Assessment Category	-	
Surface Treatment	N/A	N/A	Potential for exposure	N/A	N/A	F		
As best os Type	N/A N/A		Maintenance Activity	N/A	N/A	_		

Survey Date: 23 February 2017		SAS 4580	Surveyor: Cleaveland Calixte		Refurbishment & Demolition				
					Hazard Risk A	ssessment Summary			
	Building 6			Α	19-24	High potential to release fibres			
	Imperial War Museum Duxford	Schedule of Findings		В	13-18	Medium potential to release fibres			
	Cambridge	<u>30</u>	<u>leadle of Finalings</u>	С	9-12	Low potential to release fibres			
	CB224QR			D	8 or less	Very low potential to release fibres			
				Е	0	No as bestos detected			

Building	Buildin	g 6	Comments	No.co	mments.		
Floor	First Floor		Comments	NOCO	illiletits.		
Location	005 - Stores		Item Description	Bitumen to floor Recommendations			
Sample No.	As 007		Extent	N/A			
Product Type	N/A	N/A	Activity	N/A	N/A		
Condition	N/A	N/A	Accessibility	N/A	N/A	Risk Assessment Category	
Surface Treatment	N/A	N/A	Potential for exposure	N/A	N/A	F	
Asbestos Type	N/A	N/A	Maintenance Activity	N/A	N/A	_	

Building	Buildin	g 6	Comments	No co	mments.		
Floor			Comments	INO COI	illillents.		
Location			Item Description	Bitum	en to floor	Recommendations	
Sample No.	007		Extent	50m2			200000 30 19
Product Type	0	N/A	Activity	0	N/A		
Condition	0	N/A	Accessibility	0	N/A	Risk Assessment Category	
Surface Treatment	0	N/A	Potential for exposure	0	N/A	F	
Asbestos Type	0	N/A	Maintenance Activity	0	N/A	_	

Building Floor	Buildin First Fl		Comments	No co	mments.		
Location	006 - Stores		Item Description	Wallp	panels	Recommendations	
Sample No.	006		Extent	Extent 8m2			
Product Type	0	N/A	Activity	0	N/A		
Condition	0	N/A	Accessibility	0	N/A	Risk Assessment Category	
Surface Treatment	0	N/A	Potential for exposure	0	N/A	F	
Asbestos Type	0	N/A	Maintenance Activity	0	N/A	_	

Survey Date: 23 February 2017	SAS 4580	Surveyor: Cleaveland Calixte	Refurbishment & Demolition				
			Hazard Risk Assessment Summary				
Building 6			А	19-24	High potential to release fibres		
Imperial War Museum Duxford	Schedule of Findings		В	13-18	Medium potential to release fibres		
Cambridge	<u> 30</u>	ledule of Filldings	С	9-12	Low potential to release fibres		
CB224QR			D	8 or less	Very low potential to release fibres		
			E	0	No as bestos detected		

Building	Buildin	g 6	Comments	No co	No comments.		
Floor	First Flo	oor	Comments	NO CO	illillents.		
Location	012 - Lo	oft	Item Description	Debri	s tofloor	Recommendations	
Sample No.	012		Extent	Throu	ghout		
Product Type	3	Thermal insulation, sprayed asbestos, loose asbestos etc.	Activity	0	Rare disturbance activity	Remove	
Condition	3	High da mage	Accessibility	0	Usuallyinaccessible	Risk Assessment Category	
Surface Treatment	3	Unsealed lagging and sprays	Potential for exposure	0	Very low	C	
Asbestos Type	2	Amphibole asbestos excluding crocidolite	Maintenance Activity	0	Minor Disturbance		

Building	Buildin	g 6	Comments						
Floor	First Floor		Comments	NO CO	No comments.				
Location	012 - Lo	oft	Item Description	Resid	ue to pipe	Recommendations			
Sample No.	011		Extent	15m					
Product Type	3	Thermal insulation, sprayed asbestos, loose asbestos etc.	Activity	0	Rare disturbance activity	Remove			
Condition	3	High da mage	Accessibility	0	Usuallyinaccessible	Risk Assessment Category			
Surface Treatment	3	Unsealed lagging and sprays	Potential for exposure	0	Very low	C			
Asbestos Type	2	Amphibole asbestos excluding crocidolite	Maintenance Activity	0	Minor Disturbance	J			

Building	Buildin	g 6	Comments	No co	mments.		
Floor	First Fl	oor	Comments	NO CO	illiletits.		
Location	013 - L	oft	Item Description	debris	s to floor	Recommendations	
Sample No.	015		Extent	Extent N/A			
Product Type	N/A	N/A	Activity	N/A	N/A		A San
Condition	N/A	N/A	Accessibility	N/A	N/A	Risk Assessment Category	
Surface Treatment	N/A	N/A	Potential for exposure	N/A	N/A	F	
As best os Type	N/A	N/A	Maintenance Activity	N/A	N/A	_	The second second

Survey Date: 23 February 2017	SAS 4580	Surveyor: Cleaveland Calixte	Refurbishment & Demolition			
				Hazard Risk As	ssessment Summary	
Building 6			А	19-24	High potential to release fibres	
Imperial War Museum Duxford	Schedule of Findings		В	13-18	Medium potential to release fibres	
Cambridge	<u> 30</u>	ledule of Filldings	С	9-12	Low potential to release fibres	
CB224QR			D	8 or less	Very low potential to release fibres	
			E	0	No as bestos detected	

Building	Buildin	g 6	Comments	nents No comments.			
Floor	Second	l Floor	Comments				
Location	001 - Lo	oft	Item Description	Panel	to wall	Recommendations	The state of the s
Sample No.	008		Extent	Extent 2m2			
Product Type	0	N/A	Activity	0	N/A		
Condition	0	N/A	Accessibility	0	N/A	Risk Assessment Category	
Surface Treatment	0	N/A	Potential for exposure	0	N/A	F	
Asbestos Type	0	N/A	Maintenance Activity	0	N/A	_	

Building		Building 6 Comments		No comments.				
Floor	Second	Floor						
Location	002 - Lo	oft	Item Description	Resid	ue to floor	Recommendations	ALCOHOL: NAME OF PERSONS ASSESSMENT	
Sample No.	010		Extent	Throu	ghout			
Product Type	3	Thermal insulation, sprayed asbestos, loose asbestos etc.	Activity	0	Rare disturbance activity	Remove		
Condition	3	High damage	Accessibility	0	Usuallyinaccessible	Risk Assessment Category		
Surface Treatment	3	Unsealed lagging and sprays	Potential for exposure	0	Verylow	C	4	
Asbestos Type	3	Crocidolite	Maintenance Activity	0	Minor Disturbance	S		

Building	Buildin	•	Comments	No comments.						
Floor	Second Floor		Comments	NO CO	No comments.					
Location	002 - Lo	oft	Item Description	Resid	ue to floor	Recommendations				
Sample No.	. 009 Extent		Extent	Throughout						
Product Type	3	Thermal insulation, sprayed a sbestos, loose a sbestos etc.	Activity	0	Rare disturbance activity	Remove				
Condition	3	High da mage	Accessibility	0	Usuallyinaccessible	Risk Assessment Category				
Surface Treatment	3	Unsealed lagging and sprays	Potential for exposure	0	Very low	C	A CONTRACTOR			
Asbestos Type	3	Crocidolite	Maintenance Activity	0	Minor Disturbance					

Survey Date: 23 February 2017	SAS 4580	Surveyor: Cleaveland Calixte		Refurbishment & Demolition			
				Hazard Risk A	ssessment Summary		
Building 6			А	19-24	High potential to release fibres		
Imperial War Museum Duxford	Sal	nedule of Findings	В	13-18	Medium potential to release fibres		
Cambridge	<u> 30</u>	ledule of Filldings	С	9-12	Low potential to release fibres		
CB224QR			D	8 or less	Very low potential to release fibres		
			E	0	No as bestos detected		

Building	Buildin	g 6	Comments	Comments No comments.			
Floor	Second	l Floor	Comments				
Location	003 - Lo	oft	Item Description	Debris	s to floor	Recommendations	THE RESERVE THE PARTY OF THE PA
Sample No.	013		Extent	Throu	ghout		
Product Type	0	N/A	Activity	0	N/A		
Condition	0	N/A	Accessibility	0	N/A	Risk Assessment Category	
Surface Treatment	0	N/A	Potential for exposure	0	N/A	F	
Asbestos Type	0	N/A	Maintenance Activity	0	N/A	_	



ASBESTOS BULK ANALYSIS TEST REPORT

management (GB) LLF
Unit 1, 9 Cannon Lane

Tonbridge, Kent TN9 1PP Tel: 01732 368359 Fax: 01732 368361

Web: www.ams-management.co.uk

Registered in England and Wales OC311295

TEST REPORT NUMBER: J033122 Issue No: 01

Site/Location:-	Imperial War Museum, Duxford NA			
Your Order:-	SAS4580			
Date Sampled:-	N/A			
Analysed By:-	Alan Kane			
Date Analysed:-	01.03.17			

Report Date: 01.03.17

TEST RESULTS

AMS Ref No.	Client Sample ID	Sample Location/Details	Sample/Material Type	Analysis Result	Content
BS097825	SAS4580/001	Panel To Door	Insulating Board	Asbestos Not Detected	Negative
BS097826	SAS4580/002	Panel To Door	Insulating Board	Asbestos Not Detected	Negative
BS097827	SAS4580/003	Wall Panel	Insulating Board	Asbestos Not Detected	Negative
BS097828	SAS4580/004	Ceiling Panels	Cement Products	Chrysotile	Positive
BS097829	SAS4580/005	Toilet Cistern	Plastic/Resin Products	Asbestos Not Detected	Negative
BS097830	SAS4580/006	Wall Panel	Insulating Board	Asbestos Not Detected	Negative
BS097831	SAS4580/007	Bitumen To Floor	Bitumen Products	Asbestos Not Detected	Negative
BS097832	SAS4580/008	Wall Panel	Insulating Board	Asbestos Not Detected	Negative
BS097833	SAS4580/009	Debris To Floor	Insulation Debris	Chrysotile + Crocidolite	Positive
BS097834	SAS4580/010	Debris To Floor	Insulation Debris	Chrysotile + Crocidolite	Positive
BS097835	SAS4580/011	Residue To Pipe	Residue	Amosite	Positive
BS097836	SAS4580/012	Debris To Floor	Insulation Debris	Amosite	Positive
BS097837	SAS4580/013	Debris To Floor	Insulation Debris	Asbestos Not Detected	Negative
BS097838	SAS4580/014	Ceiling Panels	Cement Products	Chrysotile	Positive

.....END......

Key to fibre content: Trace = Trace asbestos identified (1 to 2 fibres present); Positive = Asbestos identified (more than 2 fibres present).

Method: The analysis has been performed using the AMS 'In House' method of transmitted/polarised light microscopy and centre stop dispersion staining (Ref Appendix



ASBESTOS BULK ANALYSIS TEST REPORT



Unit 1, 9 Cannon Lane Tonbridge, Kent TN9 1PP Tel: 01732 368359 Fax: 01732 368361

Web: www.ams-management.co.uk

Registered in England and Wales OC311295

2-Technical Procedure of Quality Manual), based on HSG248 and is covered by our UKAS Accreditation.

The following are outside the scope of our UKAS Accreditation:

- 1. Quantitative fibre content (Guidance on the percentages of asbestos used in various products is available in HSG264)
- 2. Sample Locations/Details supplied by the client. (AMS do not accept any responsibility for any discrepancy or inaccuracy arising from samples labelled or collected by clients or third parties)
- 3. Material Type/Description.
- 4. Any Interpretations or Opinions expressed in this Test Report

Samples are retained for not less than 6 months from date of analysis unless specifically requested otherwise.

This report relates only to the samples tested. This report may not be reproduced except in full, without prior approval of the laboratory

For and on behalf of AMS Management (GB) LLP						
Alan Kane						



ASBESTOS BULK ANALYSIS TEST REPORT



Unit 1, 9 Cannon Lane Tonbridge, Kent TN9 1PP Tel: 01732 368359 Fax: 01732 368361

Web: www.ams-management.co.uk

Registered in England and Wales OC311295

TEST REPORT NUMBER: J033776 Issue No: 01

Client: SL Environmental Limited
Unit 16 Blue Chalet Industrial Park, London
Road, West Kingsdown, London, TN15 6BT

Samples collected by:- Client

Date samples received by Lab:- 22.03.17

Laboratory Samples Analysed at:- Tonbridge

Total Number of Samples:- 1

Site/Location:-	Imperial War Museum, Duxford NA	
Your Order:-	SAS 4580	
Date Sampled:-	N/A	
Analysed By:-	Alan Kane	
Date Analysed:-	23.03.17	

Report Date: 23.03.17

TEST RESULTS

AMS Ref No.	Client Sample ID	Sample Location/Details	Sample/Material Type	Analysis Result	Content
BS100017	SAS4580/015	Debris To Floor	Dust/Debris	Asbestos Not Detected	Negative

.....END......

Key to fibre content: Trace = Trace asbestos identified (1 to 2 fibres present); Positive = Asbestos identified (more than 2 fibres present).

Method: The analysis has been performed using the AMS 'In House' method of transmitted/polarised light microscopy and centre stop dispersion staining (Ref Appendix 2-Technical Procedure of Quality Manual), based on HSG248 and is covered by our UKAS Accreditation.

The following are outside the scope of our UKAS Accreditation:

- 1. Quantitative fibre content (Guidance on the percentages of asbestos used in various products is available in HSG264)
- 2. Sample Locations/Details supplied by the client. (AMS do not accept any responsibility for any discrepancy or inaccuracy arising from samples labelled or collected by clients or third parties)
- 3. Material Type/Description.

Alan Kane

4. Any Interpretations or Opinions expressed in this Test Report

Samples are retained for not less than 6 months from date of analysis unless specifically requested otherwise.

This report relates only to the samples tested. This report may not be reproduced except in full, without prior approval of the laboratory

For and on behalf of AMS Management (GB) LLP

Section 8: Health and Safety Statement

8.1 Health and Safety Statement

SL Environmental Ltd. Staff are competent in Health & Safety Legislation. Surveyors have all completed the BOHS P402 'Building Surveys and Bulk Sampling for Asbestos'.

All Staff attend regular refresher courses and are also required to comply with SL Environmental Ltd's Company Health and Safety Policy. Inexperienced and trainee Staff are always accompanied by an experienced surveyor.

A competent member of staff, prior to the survey commencing, carries out Risk Assessments. The Risk Assessment includes all the Common Hazards and those specific to the site as highlighted by the owner of the premises.

8.2 Common Hazards

The most common site hazards encountered when performing a survey are:

- Working at height
- Confined spaces
- Elevated temperatures
- Chemical hazards
- Electrical hazards
- Biological hazards
- Noise hazards

8.2.1 Working at Height

No high level sampling is undertaken unless adequate access equipment is available, which may include the use of mobile tower, 'cherry pickers' or scaffold platforms. All staff will be fully trained prior to using such equipment.

Where extension ladders are used the ladder is secured either by ties or with the assistance of an additional member of staff.

8.2.2 Confined Spaces

No confined spaces were entered during the survey unless specifically requested by the Client. Survey Staff are trained to recognise the different types of confined space, which may give rise to hazardous conditions. Entry to confined spaces is only carried out when the appropriate equipment is in place as required by the **Confined Spaces Regulations.**

8.2.3 Chemical hazards

Chemical hazards are normally site specific and it will be the responsibility of the owner to ensure that the survey team are fully aware of the hazards and the procedures needed to protect themselves.

8.2.4 Electrical Hazards

Sampling will not normally disturb electrical installations without the presence and supervision of a qualified electrician. Storage heaters fuse boxes and electrical wiring will only be sampled when a competent electrician has isolated the equipment.

8.2.5 Biological Hazards

Microbiological hazards are relatively rare but may be found during surveys, for example, due to Weill's disease or Leptospirosis from stagnant water in a basement contaminated with rat's urine.

8.2.6 Noise Hazards

Where a surveyor's exposure to noise is liable to be at or above the lower exposure action value or peak of and in accordance with the Control of Noise at Work Regulations, a suitable and sufficient assessment of the risk to their health and safety from that noise shall be undertaken. The assessment shall identify those measures which need to be taken to minimise the risk including the provision and use of suitable hearing protection as required.

8.2.7 Lift Plant Room

Lift rooms will not be entered unless specifically requested by the Client. A competent lift engineer must accompany the surveying team at all times during inspection.

8.3 Personal Protective Equipment (PPE)

Surveyors will normally wear CE (Type) 5/6 standard overalls during sampling or when entering contaminated areas.

8.4 Respiratory Protective Equipment (RPE)

All Surveyors are issued with ori-nasal Half Masks and Full face with positive pressure masks if required. Surveyors will have received proper training in *selection, use and maintenance of respiratory protective equipment* in accordance with HS (G) 53.

Where an area is suspected to be heavily contaminated a laboratory may be used to carry out air reassurance tests prior to the survey-taking place. This is carried out to establish if there is an unacceptable exposure level in the areas where the survey team would be expected to visit.

Section 9: Glossary of Terms

Definitions-Samples, Assessments and Recommendations

Samples

The levels of identification of samples recorded within the survey are as follows:

- 1) **Sample** taken on site by the Surveyor and analysed by the laboratory.
- 2) **Extrapolated** (X) from a visually similar Suspect asbestos item that has been analysed. In this case the sample will be classified as being 'Strongly Presumed' asbestos. Extrapolated samples are not indicated on the plans with unique numbers but are shown in relation to the Key only.
- 3) **Presumed** to be asbestos. This will normally be because the item could not be sampled due to excessive height (such as soffits), was located in an occupied area, or located in an area whereby sampling may have presented a risk to the Surveyor.
- 4) **Known** to be asbestos. This will normally be because an ACM has previously been sampled and identified as asbestos. Asbestos samples taken historically by either SL Environmental Ltd. or a third party, will have been sampled and analysed in accordance with the relevant standards prevalent at that time and may not be subsequently included under the methods or accreditation set out within this report. SL Environmental Ltd. cannot verify the accuracy of any samples taken and analysed by a third party.

Assessments

Two types of assessment may be carried out, a Material Assessment and a Priority Assessment. Generally it is not a requirement of Refurbishment and Demolition surveys to assess the condition of material, due to the fact that the material is most likely to be removed. However there is a possibility that materials may be managed for a period of time (Longer than 3 months) before removal and to assist with this SL Environmental Ltd. have completed Material Assessments within this report.

Should items remain in situ then the priority must be established by carrying out a priority assessment which requires a detailed knowledge of the property. The responsibility for this lies with the duty holder, although SL Environmental Ltd. can assist with the provision of information or generic assessments where agreed. Further details of these are given in Appendix 2.

More information on assessments can be found within the Category Explanation section towards the rear of this report.

Recommendations

The recommendations given within this report are categorised as follows:

MANAGE

Where asbestos is left in situ there is a duty to formulate and implement a Management Plan to help prevent accidental damage occurring and to help prevent accidental exposure.

The basic requirements of this policy are (from L127):

- Keep and maintain an up-to-date record of the location, condition, maintenance and removal of all asbestos-containing materials
- Maintain it in a good state of repair and regularly monitor the condition
- Inform anyone who is likely to disturb it about the location and condition of the material
- Have arrangements and procedures in place, so that work which may disturb the materials complies with the Control of Asbestos Regulations 2012
- Review the plan at regular intervals

(The monitoring and labelling of asbestos is discussed overleaf and is based on 'A comprehensive guide to managing asbestos in premises' HSG 227)

SL Environmental Ltd. can provide a suitable Management Plan to accompany any asbestos register / survey on request.

Monitoring

The condition of ACMs should be monitored and recorded. The time period between monitoring will vary depending on the type of ACM, its location and the activities in the area concerned, but should not be more than 12 months.

Monitoring would involve a visual inspection, looking for signs of disturbance, scratches, broken edges, cracked or peeling paint and debris.

Where deterioration has occurred, a recommendation on what remedial action to take would need to be made.

Labelling

A decision is required on whether to label ACMs. The decision will depend on the confidence in the administration of the asbestos management system and whether communication with workers and contractors coming to work on site is effective.

Labelling ACMs should not be solely relied on as a control measure; however it is one of the most effective methods of preventing exposure to building occupants (and, in particular, maintenance workers). If, for any reason, management procedures fail, it may act as an effective last barrier to uncontrolled damage to the ACM.

Most ACMs can be marked with an asbestos warning label similar to that shown to the right.

It may not always be prudent or practical to label all installations of asbestos; for example high level items such as roof sheets, flue cowls and soffits or items such as gaskets to pipe flanges, textured coating and floor tiles.

SL Environmental Ltd. can provide labels or a labeling service on request.

ENCAPSULATE & MANAGE

When this recommendation has been given, the ACM is raw and requires encapsulating with a suitable sealant or the existing sealant or covering has deteriorated and the installation requires either a complete or partial re-encapsulation. Suitable sealants for encapsulation or minor repair work may include the following:

Asbestos insulating board can be treated with an elastomeric paint.

Asbestos cement can be sealed with an alkali resistant and water-permeable sealant. Where asbestos cement roofing has been identified, such as to garages or sheds, it will usually only be necessary to seal the internal surfaces.

Sectional pipe insulation can usually be coated with a calico wrap and then painted over with an elastomeric paint. Minor holes in hard-set thermal insulation can be filled with non-asbestos plaster and if necessary wrapped with calico.

Spray coating can be overlain with strips of calico and painted over with an elastomeric paint.

The following points on sealant materials used in the encapsulation/repair of an instal lation should be noted:

- 1) The sealant must be adequately fire-rated / resistant to any generated heat.
- 2) The sealant must not cause delamination of the product because of the weight increase.
- 3) If impermeable paint is used, back painting is required.

We recommend that sealing or painting of damaged insulating board, insulation or coatings should be undertaken by a licensed contractor and is likely to be subject to a 14-day notification to the HSE, (as per the Control of Asbestos Regulations 2012).

REMOVE

Where an ACM is damaged, in a position whereby it may be vulnerable to damage or will be disturbed in forthcoming refurbishment / maintenance works; then a recommendation for removal has been made.

All work with asbestos must be carried out in accordance with the Control of Asbestos Regulations 2012.



Works with Asbestos Cement

Works on or removal of asbestos cement should be carried out following the guidelines of the HSE within HSG 189/2 Working with Asbestos Cement. Whilst there is no requirement for these works to be carried out by a licensed contractor, in practice it is unlikely that an unlicensed contractor will possess the necessary expertise or insurance to undertake such works properly.

Works with licensable ACMs

Work with asbestos insulation, asbestos coating and asbestos insulation board should in most cases be undertaken by a licensed contractor and is likely to be subject to a 14 day notification to the HSE, (as per the Control of Asbestos Regulations 2012). Works should be carried out in accordance to HSG 247 - Asbestos: The licensed contractors guide.

Items of asbestos debris, residue or dust may require either a localised decontamination of the immediate area adjacent to the identified asbestos or a full decontamination of the room/area.

The exact extent of any asbestos installation or asbestos debris / residue / dust may not always be stated within the survey report. The survey report will also not state which methods of removal/decontamination should be followed and does not represent a Scope/Specification of Works.

Controlled techniques used in the removal of asbestos may or may not involve the use of asbestos enclosures depending on the Scope and Specification of Works. If used, enclosures will normally be constructed from polythene and contain:

- Filtered negative pressure units to create air-flow and to filter out air-borne asbestos particles.
- Airlocks for safe access/egress from the work area.
- Bag locks for the safe removal of bagged up asbestos waste.

The asbestos item itself may be treated by a suppressant (damping) system prior to removal, with finer amounts of generated waste being removed by HEPA-filtered H-type vacuum cleaners.

Decontamination units (DCUs) provide the means to effectively decontaminate operatives involved in the asbestos removal process. DCUs normally consist of a clean and dirty end, with a middle section providing showering. Airflow and wastewater within the unit are filtered.

Removal of non-asbestos materials, which are located close to the asbestos source and which are either fibrous or porous by their nature, such as Machine Made Mineral Fibre (MMMF) ceiling tiles or MMMF pipe insulation, may be deemed necessary during the asbestos removal, due to possible contamination before or during the works.

Four-stage clearance involving air monitoring and visual inspections of the affected work area will be required; such procedures should be carried out in accordance to HSG 248 - Asbestos: The analyst's guide for sampling, analysis and clearance procedures.

Where asbestos debris has been identified, access to these areas should be restricted until such remedial works have been undertaken. If access is required then a further assessment should be undertaken to ascertain the potential for exposure.

SL Environmental Ltd. can provide specification and procurement of asbestos remediation and asbestos removal work and offer full site monitoring, providing a full audit trail from beginning to end.

Works with Notifiable, Non-Licensable ACM

As of 6 April 2012, work with certain ACM will be classed as Notifiable, Non-Licensed Work (NNLW), depending on material type and work being carried out and the likely hood of fibre release. This work will require notification to the relevant enforcing authority (no minimum notification period); training and medical examinations for staff carrying out the work and health registers kept for this staff if the work is being carried out by non-licensed operatives.

Works on or removal of such materials should be carried out following the guidelines of the HSE within *HSG 210 Asbestos Task Manual*. Whilst there is no requirement for these works to be carried out by a licensed contractor, in practice it is unlikely that an unlicensed contractor will possess the necessary expertise or insurance to undertake such works properly.

SL Environmental Ltd. can assist in assessing the material regarding its category from the three listed above should the need for disturbance or removal of the ACM arise.

SPECIFIC

Specific recommendations may include such options as placing a physical barrier to prevent the accidental disturbance of the ACM, or enclosing the ACM with an airtight barrier.

The following points on enclosing an ACM should be noted:

- 1) Any barriers / enclosing material must be adequately fire-rated / resistant to any generated heat.
- 2) An assessment should be made whether access is required to the enclosure for maintenance or repairs.

If the ACM is asbestos insulation, asbestos coating or asbestos insulation board and the enclosure of it is likely to cause disturbance, then the work should in most cases be undertaken by a licensed contractor and is likely to be subject to a 14-day notification to the HSE, (as per the Control of Asbestos Regulations 2012).

Further Investigation may be recorded if the results of sample analysis are in conclusive.

Where a presumed asbestos item is in good condition (and sealed) it may often be prudent to manage the item as asbestos rather than undergo the additional cost of sampling.

Where a presumed asbestos item is in poor condition (and/or unsealed) and requires attention, it may often be prudent to undergo the additional cost of sampling the item first, to ensure that it does contain asbestos, prior to undergoing removal/remediation works.

Please note that should the Recommendations highlighted anywhere within this report not prove practical to the Client - then SL Environmental Ltd. may be able to provide suitable alternatives.

