

CLIENT:
WALES & WEST HOUSING ASSOCIATION
3 ALEXANDRA GATE
FFORDD PENGAM
TREMORFA
CARDIFF
CF24 2UD

PROJECT NO: 37850/JL/MS

DATE: NOVEMBER 2010



H.S.E. LICENSE NUMBER
(NO. 4970704042)

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**MANAGEMENT SURVEY
OF
COMMUNAL AREAS TO FLATS 30 & 31, TREMYNYDD, CF42 5LJ**



REGISTERED ADDRESS

ENVIRONTEC LIMITED • ENVIRONTEC HOUSE • THE STREET • HATFIELD PEVEREL • CHELMSFORD • ESSEX CM3 2EJ • REGISTERED IN ENGLAND NO. 2981693

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1.0 EXECUTIVE SUMMARY

- 1.1 No asbestos containing materials have been identified during this survey.
- 1.2 All areas were accessed during the survey.
- 1.2.1 The client should note that if demolition or refurbishment works are undertaken then some areas may be accessed that were physically and visually impossible to access and identify within the scope of this survey and report. The client should therefore exercise some caution when such works are undertaken.

2.0 INTRODUCTION

- 2.1 Following evaluation of the clients requirements and considering the aim and purpose of the survey and detailed planning considerations we have undertaken a **Management Survey** where reasonably practicable of Communal Areas to 30 & 31, Tremynydd, CF42 5LJ
- 2.2 The communal areas are constructed with brick and plasterboard wall with concrete stairs, built in the 1980's.
- 2.3 The building consists of communal areas, ground to first stairs used as access to flats 30 & 31.
- 2.4 The site survey has been undertaken and report compiled in accordance with the **HSG 264: Asbestos: The Survey Guide**.

The type of survey undertaken may vary, depending on the aim and purpose for which it is to be used. Surveys before demolition and refurbishment will continue to be required under **Control of Asbestos Regulations (CAR) 2006** and the **Construction (Design & Management) Regulations 2007**. However, it is anticipated that most surveys will be undertaken to comply with the **Duty to Manage Asbestos in Non-Domestic Premises Regulation 4 of the Control of Asbestos Regulations 2006**. In these cases, the aim of an asbestos survey is, as far as reasonably practical, to locate and assess all the Asbestos Containing Materials (ACMs) present in the building and its purpose is to present the information collected in a way which allows the employer to manage the risk.

- 2.5 This survey report is in a number of sections, the essential sections will be the Asbestos Register (Appendix 1) which is a detailed systematic diligent inspection and sampling report of each room with enhanced annotated Plans (Appendix 3) indicating where samples have been taken and asbestos positively identified.

3.0 SURVEY TYPE

3.1 Management Survey

- 3.1.1 A *management survey* is the standard survey. Its purpose is to locate as far as reasonably practicable, the presence and extent of any suspect Asbestos Containing Materials in the building which could be damaged or disturbed during normal occupancy, including foreseeable maintenance and installation, and to assess their condition.
- 3.1.2 The purpose of the survey is to assist the client to comply with the *Health and Safety at Work Act 1974* and the *Control of Asbestos Regulations 2006 (Regulation 4)* which contains an explicit duty on the owners and occupiers of non domestic premises who have maintenance and repair responsibilities, to assess and manage the risks from the presence of asbestos.
- 3.1.3 Every effort has been made to identify all asbestos materials so far, as was reasonably practical to do so within the scope of the survey and the attached report. Methods used to carry out the survey were agreed with the client prior to any works being commenced.
- 3.1.4 Survey techniques used involves trained and experienced surveyors using the combined diligent approach with regard to visual examination and necessary bulk sampling. It is always possible after a survey that asbestos based materials of one sort or another may remain in the property or area covered by that survey, this could be due to various reasons:
- Asbestos materials existing within areas not specifically covered by this report are therefore outside the scope of the survey.
 - Asbestos may well be hidden as part of the structure to a building and not visible until the structure is dismantled at a later date. (This is covered in the scope of a Refurbishment and Demolition Survey)
- 3.1.5 Debris from previous asbestos removal projects may well be present in some areas; general asbestos debris does not form part of this survey however all good intentions are made for its discovery.
- 3.1.6 Where an area has been previously stripped of asbestos i.e. plant rooms, ducts etc. and new coverings added, it must be pointed out that asbestos removal techniques have improved steadily over the years since its introduction. Most notably would be the Control of Asbestos at Work Regulations (1987) or other similar subsequent regulations laying down certain enforceable guidelines. Asbestos removal prior to this regulation would not be of today's standard and therefore debris may be present below new coverings.
- 3.1.7 A limited inspection only has been carried out of pipework concealed by overlying non-asbestos insulation. Inspection of pipework has been restricted primarily to areas where insulation was removed it is not practicable to inspect the entire pipework which would require the removal and replacement of all overlying non-asbestos insulation, therefore this has been considered outside the scope of this survey.
- 3.1.8 This survey will detail all areas accessed and all samples taken, where an area is not covered by this survey it will be due to No Access for one reason or another i.e. working in sensitive location or just simply no access as keys not available such as a sub-station.
- 3.1.9 Access for the survey may be restricted for many reasons beyond our control such as where electrical equipment is present and live. Our operatives have a duty of care under the Health and Safety at Work act (1974) for both themselves and others.

- 3.1.10 Certain materials contain asbestos to varying degrees and some may not be uniformed (textured coating for example). Where this is the case the samples will be taken in accordance with the sampling regime however this may not be representative of the whole product throughout.
- 3.1.11 This survey is purely an Asbestos Management survey which involves minor intrusive works. We have not inspected flues, ducts, risers, undercrofts, voids or any similarly enclosed areas, the access to which necessitated the use of specialist equipment or tools, or which would have caused damage to decoration, fixtures, fittings or the structure there may be asbestos concealed in these voids, risers, undercrofts etc. These areas will **not** be mentioned as a **no access** area in this report as the report will be misleading to the client as these areas and asbestos identified in these areas are outside the scope of an Asbestos Management Survey.
- 3.1.12 We have not inspected lift shafts, plant rooms or similar which require the attendance of a specialist engineer.

4.0 SITE SPECIFIC SURVEY INFORMATION

- 4.1 The report is the result of the analysis of suspect materials and a visual inspection.
- 4.2 The survey was undertaken and completed by an Environtec Ltd asbestos survey team.
- 4.3 Access was arranged with Anthony Williams who enabled and provided all keys and access facilities to all necessary areas of the building.
- 4.4 The physical survey was undertaken on the 2 November 2010 and completed on the same day.
- 4.5 The site survey was undertaken by Joe Thomas, Consultant with the assistance of James Lidbury, during normal business hours of 9.00 am to 5.00 pm and completed in one day. The report was compiled by Joe Thomas.
- 4.6 The bulk analysis of suspect materials for asbestos content was undertaken on the 5 November 2010 by Anna Gebal.
- 4.7 During the site survey work the building remained partially occupied.
- 4.8 Samples were taken of suspected materials and where possible photographs of the samples taken. Clearly it is not possible to sample every material encountered therefore, where common areas and features exist, representative samples were taken and extrapolations were made to the nature of the material.
- 4.9 Where suspected asbestos materials form a duct cover, false ceiling, etc or where these materials would require disturbing to gain access to an area, they have not been displaced, as any physical disturbance of these materials may have resulted in a release of airborne asbestos fibres which may pose a hazard to health.
- 4.10 Plans of the premises were provided by the client/prepared by Environtec Ltd to assist in the location and designation of rooms for ease of reference. It must be noted that these plans are not to be regarded as accurate but for assistance purposes only. These plans are located within the appendices of this report.

4.11 During the period of the survey electrical supplies and artificial illumination were operative in all areas of the building.

4.12 It must be noted that the information contained within this report is compiled and dealt with in a number of sections to enable and give a complete overall assessment and conclusion when considering the asbestos materials positively identified and possible potential hazards.

It is therefore recommended that when passing information onto third parties such as contractors etc that the complete report be issued to ensure that all information is available to such responsible parties that they may consider all options and actions to be undertaken to so far as is reasonably practicable.

4.13 The survey included the following areas of the site:

Communal entrance lobby/stairs/landing and roof void

4.14 The following areas were specifically excluded from the survey

Location	Reason For Exclusion
Flats 30 & 31	Outside agreed scope of survey
All other areas outside 4.13	Outside agreed scope of survey

5.0 CAVEAT AGREED WITH CLIENT

5.1 We have not inspected any part requiring specialist access equipment other than stepladders. Any requirement for specialist access equipment has been specifically excluded unless otherwise stated.

5.2 Whilst every effort will have been made to identify the true nature and extent of the asbestos material present in the building to be surveyed, no responsibility has been accepted for the presence of asbestos in materials other than those sampled at the requisite density i.e. if 5 out of 20 samples of visually identified ceiling tiles were analysed negative, there could be a possibility of one tile being asbestos but could easily be missed.


5.3 Accessible is defined as reasonably and safely reachable by foot or reachable from a step ladder up to 3m. Opening electrical equipment (e.g. switchboxes), plant (e.g. boilers, air handling units and ducted systems) and hazardous installation (e.g. chemical containers) are specifically excluded.

5.4 Where suspected asbestos materials form a duct cover, false ceiling, etc or where these materials would require disturbing to gain access to an area, they have not been displaced, as any physical disturbance of these materials may have resulted in a release of airborne asbestos fibres which may pose a hazard to health.

6.0 QUALITY ASSURANCE STATEMENT

Project Ref: 37580/JL/MS

This report has been compiled by the following authorised staff member of Environtec Ltd.

Name: Joe Thomas **Signed:** PP 
Date: 17/11/2010 **Designation:** Consultant

The contents of this report have been checked by the Survey Quality Administrator.

The results are accurate and any conclusions and recommendations made are suitable and in line with current company policy.

Name: Janet Welsh **Signed:** pp 
Date: 17/11/2010 **Designation:** Survey Quality Administrator

APPENDIX 1

ASBESTOS REGISTER

The following are the summary of asbestos materials and priority rating assessments and should be read in conjunction with the attached plans and report

General Sampling Strategy: a) Panels: One sample every 20 m² and one of each different item. b) Lagging: One sample every 3 m (if pipe runs in excess of 20 m, one every 6 m). c) Floor Tiles: One sample of each different type and one sample per 20 m² section. d) Cement Products: One sample of each different item. 4 maximum of large scale roofs. e) Artex: Two samples per independent location. f) Spray Coating: One sample per 20-25 m². **Confirmation if there is a deviation from the aforementioned. Yes ☐ No ☐**

BUILDING: COMMUNAL AREAS TO FLAT 30 & 31, TREMYNYDD, CF42 5LJ				DATE: 2 NOVEMBER 2010	
FLOOR/AREA: FIRST FLOOR/COMMUNAL AREA		SURVEY TYPE: MANAGEMENT SURVEY			PROJECT REF: 37850/JL/MS

Location ✓ A	No. of Occupants ✓ B	Description (product type) *C	Approx Extent of Material ✓ D	Condition (Surface Treatment) *E	Condition (Damage/Deterioration) *F	Vulnerability to Damage ✓ G	Sample No/ Analytical Result (Asbestos Type) *H	Total Score MA +PA = * ✓	Priority Rating	Recommendations
Landing (101)		Textured coating to plasterboard ceiling	9 m ²	Sealed	No visible damage or deterioration	Rare	BS45793/S1 No asbestos detected			No action required
Landing (101)		Textured coating to plasterboard ceiling	9 m ²	Sealed	No visible damage or deterioration	Rare	BS45794/S2 No asbestos detected			No action required
Landing (101)		All other areas visually no asbestos detected; plasterboard walls, glued linoleum to floor, timber doors and frames, timber loft hatch and surround, UPVC window and sill, modern live electrical switch box, timber boxing to wall, rubber stair nosing								

Indicates parameter for Material Assessment algorithm (MA)	Product type *C Surface treatment *E Extent of damage *F Asbestos type *H	Priority Rating: Very low <9 Low 10-12 Medium 13-15 High ≥16
Indicates parameter for Priority Assessment algorithm (PA)	Location ✓ A No. of Occupants ✓ B Vulnerability to damage ✓ G Extent of materials ✓ D	
All the following areas have been checked:	A: Roof/external eaves and soffits B: Boilers/vessels pipes C: Ceilings D: Ducts E: Flooring F: Air handling systems G: Industrial appliances H: Heating system I: Interior walls/panels	

BUILDING: COMMUNAL AREAS TO FLAT 30 & 31, TREMYNYDD, CF42 5LJ				DATE: 2 NOVEMBER 2010	
FLOOR/AREA: GROUND FLOOR/COMMUNAL AREA		SURVEY TYPE: MANAGEMENT SURVEY			PROJECT REF: 37850/JL/MS

Location ✓ A	No. of Occupants ✓ B	Description (product type) *C	Approx Extent of Material ✓ D	Condition (Surface Treatment) *E	Condition (Damage/Deterioration) *F	Vulnerability to Damage ✓ G	Sample No/ Analytical Result (Asbestos Type) *H	Total Score MA +PA = * ✓	Priority Rating	Recommendations
Entrance lobby & stairs		Textured coating to plasterboard ceiling	4 m ²	Sealed	No visible damage or deterioration	Rare	Strongly presumed similar to BS45793/S1 No asbestos detected			No action required
Entrance lobby & stairs		Textured coating to plasterboard ceiling	4 m ²	Sealed	No visible damage or deterioration	Rare	Strongly presumed similar to BS45794/S2 No asbestos detected			No action required
Entrance lobby & stairs		All other areas visually no asbestos detected; plasterboard walls, glued linoleum to floor and stairs, rubber stair nosing, UPVC door and frame								

Indicates parameter for Material Assessment algorithm (MA)	Product type *C Surface treatment *E Extent of damage *F Asbestos type *H	Priority Rating: Very low <9 Low 10-12 Medium 13-15 High ≥16
Indicates parameter for Priority Assessment algorithm (PA)	Location ✓ A No. of Occupants ✓ B Vulnerability to damage ✓ G Extent of materials ✓ D	
All the following areas have been checked:	A: Roof/external eaves and soffits B: Boilers/vessels pipes C: Ceilings D: Ducts E: Flooring F: Air handling systems G: Industrial appliances H: Heating system I: Interior walls/panels	

BUILDING: COMMUNAL AREAS TO FLAT 30 & 31, TREMYNYDD, CF42 5LJ				DATE: 2 NOVEMBER 2010	
FLOOR/AREA: ROOF VOID/COMMUNAL AREA		SURVEY TYPE: MANAGEMENT SURVEY			PROJECT REF: 37850/JL/MS

Location ✓ A	No. of Occupants ✓ B	Description (product type) *C	Approx Extent of Material ✓ D	Condition (Surface Treatment) *E	Condition (Damage/Deterioration) *F	Vulnerability to Damage ✓ G	Sample No/ Analytical Result (Asbestos Type) *H	Total Score MA +PA = * ✓	Priority Rating	Recommendations
Roof void		Visually no asbestos detected; plasterboard floor, man made mineral fibre to floor, modern felt to underside of roof, block walls, timber panel to wall, timber loft hatch and surround								

Indicates parameter for Material Assessment algorithm (MA)		Product type *C Surface treatment *E Extent of damage *F Asbestos type *H			Priority Rating: Very low <9 Low 10-12 Medium 13-15 High ≥16	
Indicates parameter for Priority Assessment algorithm (PA)		Location ✓ A No. of Occupants ✓ B Vulnerability to damage ✓ G Extent of materials ✓ D				
All the following areas have been checked:		A: Roof/external eaves and soffits B: Boilers/vessels pipes C: Ceilings D: Ducts E: Flooring F: Air handling systems G: Industrial appliances H: Heating system I: Interior walls/panels				

APPENDIX 2

BULK ANALYSIS CERTIFICATE

Head Office: Environtec House, The Street, Hatfield Peverel, Chelmsford, Essex CM3 2EJ

email: enquiries@environtec.com website: www.environtec.com

CERTIFICATE FOR THE IDENTIFICATION OF ASBESTOS FIBRES

Client:	Wales & West Housing Association	Surveyor:	Joe Thomas
Client Address:	3 Alexandra Gate, Ffordd Pengam, Tremorfa, Cardiff, CF24 2UD	Analysis Report No:	BO/10/10719
Attention of:	Anthony Williams	Report Date:	05 November 2010
Site Address:	Flats 30 & 31 Tremynydd	Site Reference No:	37850/JL/MS
Date Samples Taken:	02 November 2010	No. of Samples:	2
Date Samples Received:	04 November 2010	Obtained:	Collected
Date of Analysis:	05 November 2010		
Analysed By:	Anna Gebal		

Method Statement

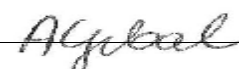
Samples of material, referenced below, have been examined to determine the presence of asbestos fibres, using Environtec 'In House' documented technical method of transmitted/polarised light microscopy and centre stop dispersion staining, in accordance with our UKAS Accreditation, based on the HSG 248 Asbestos: The Analyst Guide. Calibration of equipment and general quality control procedures are in accordance with our in house quality control document. Sampling methods are in accordance with documented in-house procedures and UKAS Accreditation.

Disclaimer

If samples have been DELIVERED the site address and actual sample location or sample type is given by the client at the time of delivery. Environtec are not responsible for the accuracy or competence of the sampling by third parties. Under these circumstances Environtec cannot be held responsible for the interpretation of the results shown. When the test certificate indicates that bulk samples were taken by the client, they are outside the scope of our UKAS Accreditation for sampling. Environtec takes responsibility of information reported, only when a staff member of Environtec takes the sample (s).

Sample Number	Sample Location / Sample Type	Fibre Type Detected
BS45793-S1	Landing (101) - Ceiling - Textured Coating	NADIS
BS45794-S2	Landing (101) - Ceiling - Textured Coating	NADIS

<p>Material type is a subjective opinion by the analyst based on asbestos content, appearance and experience. On rare occasions where there is an element of doubt for samples which are borderline or too insignificant to determine whether the material is asbestos insulation board or asbestos cement, you will be notified and offered a water absorption test. A water absorption test is a longer process undertaken to supplement asbestos analysis and has a cost implication. We will advise you accordingly should this situation arise.</p> <p>Environtec Ltd cannot be held responsible for inaccuracies based on the material type opinion if a water absorption test has been offered and refused. Material type opinion falls outside the scope of our UKAS accreditation.</p>	K	NADIS	= NO ASBESTOS DETECTED IN SAMPLE	
		CROCIDOLITE	= Typically Known as Blue Asbestos (Amphibole Group)	
		AMOSITE	= Typically Known as Brown Asbestos (Amphibole Group)	
		E	CHRYSTOTILE	= Typically Known as White Asbestos (Serpentine Group)
			ANTHOPHYLLITE	= Asbestos (Amphibole Group)
		Y	ACTINOLITE	= Asbestos (Amphibole Group)
			TREMOLITE	= Asbestos (Amphibole Group)
		All samples will be retained in the laboratory for a minimum of 6 Months.		

Typed by:	Anna Gebal	Authorised Signatory:	
Page Number:	Page 1 of 1	Print name:	Anna Gebal

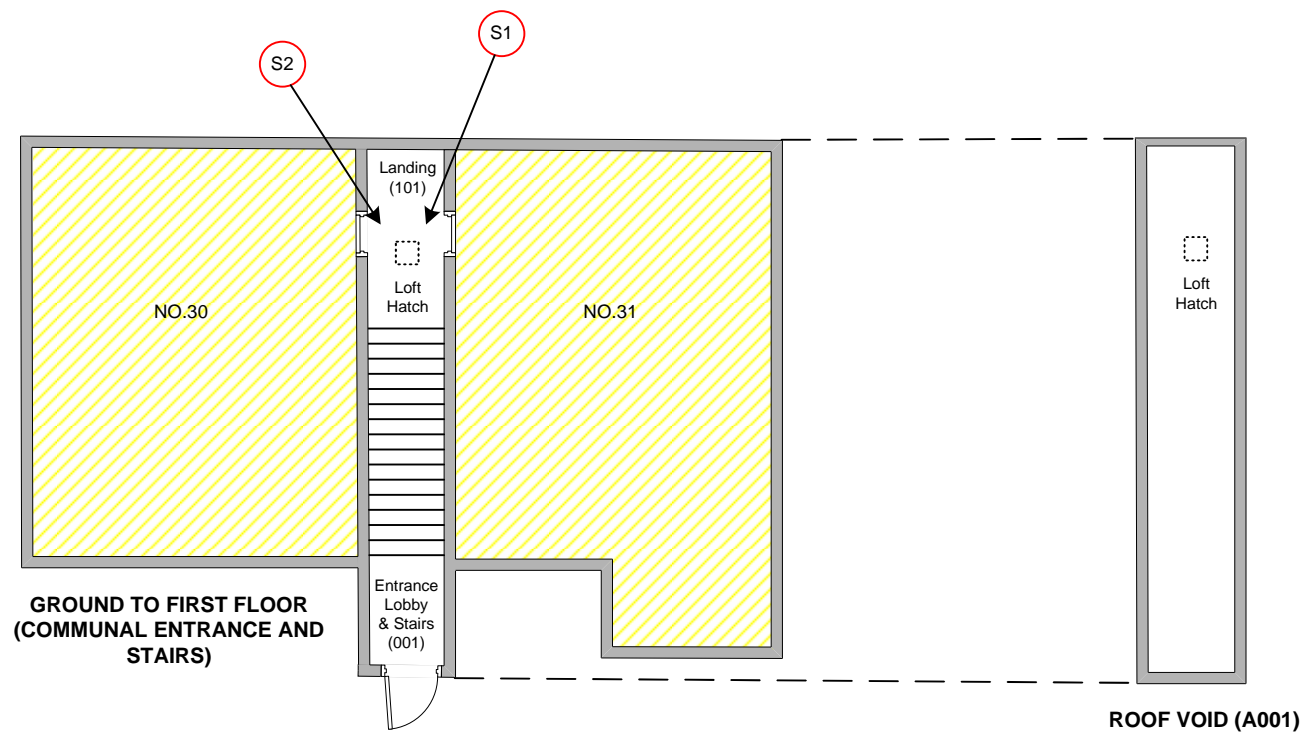
UKAS/New AFI/Statements/EA

APPENDIX 3

SKETCH / PLANS

These plans are provided to assist in the location and designation of rooms etc

The accuracy of the plans / sketches cannot be guaranteed.



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- S** = Sample Location
- Red** = Identified and Strongly Presumed Asbestos
- Blue** = No Access, Presumed Asbestos
- Yellow Hatched** = Outside Scope of Work

Client: Wales & West Housing Association
3 Alexandra Gate
Ffordd Pengam
Tremorfa
Cardiff
CF24 2UD

Project No: 37333/JL/MS

Site: Communal Areas to Flats
30 & 31, Tremynydd
CF42 5LJ

Floor: Ground to First Floor & Roof Void

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N.T.S (Not To Scale)

APPENDIX 4

GENERAL SURVEY INFORMATION

GENERAL SURVEY INFORMATION

1.0 SURVEY METHOD

- 1.1 The survey was conducted by means of visual inspection and subsequent sampling of suspect bulk materials. Environtec Ltd is accredited by UKAS for surveying, this incorporates carrying out sampling of suspect asbestos bulk materials. Where the surveyor suspected a material of containing asbestos, a sample was taken for analysis. The samples taken were chosen as being representative of the material under investigation. Therefore, where there are visually similar materials, they have been regarded as being uniform composition.

1.2 Health & Safety

1.2.1 Working at Heights

All high-level survey work was undertaken in accordance with the Working at Heights Regulations 2005 where a risk assessment is undertaken prior to the use of Step ladders where a second operative may have been required to assist in stabilising ladders, etc. In certain instances where the operative was at risk from falling a harness would be worn and / or scaffold platforms erected.

1.2.2 Entry into Confined Spaces

Entry into confined spaces was only permitted to staff holding a current confined space training certificate. All necessary equipment such as escape packs, gas monitors and intrinsically safe electrical equipment and then only after authorisation from the site/building manager was given and investigating the atmosphere for fumes / oxygen deficiency, etc. Once the responsible person was satisfied that the confined space was safe for the inspection to take place, a second operative waited outside and kept in regular contact with the surveyor. For areas of particular concern and large duct systems the surveyor was provided with a harness and rope.

1.2.3 Loft Space and Roof Structures

Surveyors would only enter roof spaces and flat-roof structures when they were considered safe to do so. Surveyors would enter loft spaces if they were boarded across the joists or could be assured to remain on the timber joists if their strength permits.

1.2.4 Inadequate Lighting

All surveyors would use torches for buildings with no natural or electrical illumination and would have full use of mobile phones in case of emergency. Surveyors would work in pairs in these circumstances.

1.2.5 Construction and Demolition Sites

When surveys or sampling was to take place on construction or demolition sites the operatives would wear hard hats, protective footwear and luminous jackets, all of which would have been provided. Surveyors would work in pairs and have had full use of mobile phones for case of emergency in these circumstances.

1.2.6 **Working on Machinery**

Working on machinery that was not guarded or that was functional was not permitted.

1.2.7 **Chemical Hazards**

Surveyors would access the premise's COSHH register and identify any chemical hazards that need the appropriate action to be taken prior to entering such areas.

1.2.8 **Biological Hazards**

Surveyors would only enter areas identified as biological hazards after donning the appropriate personal protective equipment in accordance with the client's instructions, training and warning signs when safe to access. Should other biological hazards such as pigeon excrement, rats or needles be encountered, surveyors would don the appropriate personal protective equipment; including overalls, gloves, boots and respiratory equipment.

1.2.9 **Noise Hazards**

Surveyors would don the appropriate ear defenders or plugs when entering areas that had a noise hazard in accordance with the client's instructions, training and warning signage.

1.2.10 **Sampling Safety**

All surveyors conducting sampling would don protective disposable overalls and overboots and wear suitable RPE; mostly an orinasal mask would be adequate, but higher protection may have been needed for severely contaminated buildings or higher risk materials e.g. sprayed coating.

Care would always be exercised when carrying out bulk sampling to ensure that the disturbance of the materials being sampled is minimised. When carrying out sampling it would be ensured that the area from which the sample was taken was repaired and no loose materials were spread around the area.

This would be undertaken by minimizing emission of asbestos fibres by use of a water spray or PVA/water mixture spray to damp down a panel or lagging. A polythene sheet laid under the sample point was used to collect any debris, this was wiped down with wet wipes before removing. An "H" type vacuum cleaner was used if available. All sampling tools were cleaned before moving on to the next sample, placing dirty wet wipes into a sealable sample bag, which upon filling would be double bagged and transferred to the asbestos waste bag in the laboratory.

Operatives undertaking the survey would have relevant Company identification and would undertake their duties discreetly without causing alarm or stress to occupants by unnecessary conversation or remarks.

Staff involved in taking samples of this nature would be fully acquainted with the environmental hazards and would take essential precautions for both their own protection and that of personnel in the vicinity. All samples would be taken while the area is not occupied, but explanations to personnel present what was being done would be undertaken, with as much honesty as the client and the situation demands. In an occupied building, sampling may have been undertaken during lunch breaks or after normal working hours.

Deviations from the above method may have been required where instances are such that wearing full protective clothing cannot be worn without being alarmist to occupants. It would have been suggested to the client that the sampling be conducted out of hours or alternatively recommended air monitoring been conducted whilst sampling was in progress to reassure occupants.

2.3 **Sampling Techniques for Bulk Materials**

When taking a sample care would be exercised to minimise the damage caused. Often it is possible to find a damaged area of boarding or insulation from which a sample would be removed without causing further damage. When it was necessary to make a fresh hole to take a sample this would be done with a sharp implement such as a stanley knife, bradawl, cork borer or a hand drill. The sample would be extracted and placed directly into self-seal plastic bags and double bagged. The sample reference number was allocated to each sample taken and recorded on the sample bag ensuring that the dust suppressant was sprayed within the vicinity and over the sampling surface.

The damaged material would be repaired with either polyfilla and/or fabric tape.

Labels indicating sample location were left in-situ if permitted by the client.

2.0 **SAMPLING STRATEGY**

2.1 The object of carrying out sampling was to identify the nature and extent of any visible asbestos bearing material.

All sampling was undertaken causing the minimum possible nuisance and potential risk to health of building occupants and visitors.

2.2 **Sampling Strategies to Locate Asbestos**

The strategy was based on a systematic diligent visual examination of a building, usually in conjunction with building plans supplied by the client. It was often useful to categorise the building components to be examined as a checklist, i.e.

- Doors
- Ceiling tiles/firebreaks
- Wall panels
- Heaters/heating cupboards/central heating systems
- Stairs
- Service ducts and risers/floor ducts/ceiling voids/under crofts
- External panels
- Soffits
- Roofs
- Gutters/downpipes
- Outbuildings/walkways
- Steelwork
- Boiler houses
- Gaskets
- Ventilation systems
- Lift motor rooms
- Laboratory

When accessing voids, it was essential to inspect for debris from damaged asbestos either from previous installation or careless removals. Floors would not usually contain asbestos but may well have debris of Asbestolux panels or cement sheets in existence.

Also inspections under existing non-asbestos insulation for asbestos residue from a previously inadequate asbestos removal operation would have been undertaken.

2.2.1 Visual Inspections

If the surveyor can confirm from a visual basis that the asbestos material was uniformed then it is possible to extrapolate sampling information from identical locations to keep unnecessary sampling to a minimum.

2.2.2 Panels

Samples of every single ceiling panel was evidently not required but sufficient were needed to be sure of locating all the same installations of a particular type. It was recommended that at least one sample per room be taken or every 25 m² or increase the frequency should it be required. However, samples of each type of asbestos panel occurrence would be taken throughout each floor.

2.2.3 Doors

Doors would be inspected adjacent to the door furniture and if visible, a sample of the internal lining would be taken where exposed.

2.2.4 Floor Tiles

One sample of each obvious type of vinyl and colour floor tile. Should it be deemed that all floor tiles are the same then one sample per 25 m² sections would be sufficient.

2.2.5 Gaskets

One sample of each type of gasket was recommended.

2.2.6 Bitumen Products

The variation between each type of bitumen product is not uncommon therefore, for example, one sample of each bitumastic under sink was required.

2.2.7 Textured Coating

The minimal content of asbestos in textured coating requires significantly more sampling. It was suggested that at least 2 samples of textured coating be taken per independent location.

2.2.8 Cement Products

Cement products e.g. roofs, tend to be uniform therefore for a large scale roof a maximum of 4 samples would be deemed sufficient. For small scale roofs and areas a maximum of 2 samples would be required.

2.2.9 Spray Coating

Different mixtures containing different materials may have been used in different areas and layers. Material may also have been removed, repaired or patched at various times. Samples would be taken by carefully removing pieces of approximately 5 cm², where the material appears uniform and consistent, two samples should usually be enough if taken at either end of the sprayed surface in installations exceeding 100m², one sample per 25-35 m². At least one sample would be taken from each patched area. Care would be taken to include all layers of sprayed coating through to the covered surface.

2.2.10 Lagging

The number of samples would depend on the intended treatment. If the entire boiler house has to be stripped, then it was probably only necessary to prove that one sample contains asbestos. In general one sample should be taken per 3m run of pipe with particular attention paid to different layers and functional items (valves etc). For long runs of pipe, eg > 20m, one sample per 6m item will usually be enough. If only a small part of the lagging was evidently asbestos, then it would have been necessary to inspect all branches of the pipework with particular attention to damaged/repaired lagging and extensions to the system.

Fibreglass lagging can be often found on straight portions of pipe runs, but the bends may be wound with asbestos chrysotile rope or packed with an asbestos composite insulation.

3.0 **SURVEY STRATEGY**

3.1 **Visual Inspection and Sampling**

- 3.1.1 The site survey and report has been undertaken in accordance with the latest version of **HSG 264: Asbestos: The Survey Guide** incorporating our procedures accredited by UKAS for surveying. A strategy has been established to keep to a minimum, the number of bulk/dust samples taken for analysis and hence minimise the cost of the survey. The strategy employed a combination of visual inspection and sampling of bulk materials thus:
- 3.1.2 Where the surveyor suspected a material containing asbestos, a bulk sample was taken for analysis. In areas where there were substantial quantities of visually uniform materials, then a small number of samples were taken as being representative of the whole area. Because of this strategy, the client must interpret the results such that where asbestos is detected in a material (such as board or beam cladding) then all visually similar material in the same area must be assumed to contain asbestos.
- 3.1.3 Where the surveyor reports a material as **non asbestos** by visual inspection and with no analysis of samples (e.g. recently lagged pipework covered with metal cladding) then the client must exercise caution in interpreting the results. It is **IMPORTANT** to stress that in such circumstances, it is possible that there are residues of asbestos trapped under the newly applied lagging (e.g. from poor quality stripping methods carried out at some time in the past).

It is not practicable to detect such residues until substantial disturbance of the material takes place, e.g. during major alterations, and Environtec cannot accept liability for the detection of such residues in this survey. If the client undertakes major alterations in a specific area where it is possible that residual asbestos may be found, we recommend that a further investigation of the specific area be carried out before starting any works.

- 3.1.4 Where there are large numbers of identical items distributed in numerous locations throughout the site, e.g. cement flue pipes, oven door seals etc., a single analysis will have been carried out by the surveyor and the client must assume that all identical items have the same composition as the one specified.
- 3.1.5 Where a 'NO ACCESS' is used, it indicates that the area specified was not accessible to the analyst at the time of the survey, either because of locked rooms or because to gain entry, would require an unreasonable degree of dismantling of the structure of the building. The client is advised to be alert to the possibility of there being asbestos materials in such areas.

4.0 PRIORITY RATING/RISK ASSESSMENT

- 4.1 For ease of reference of this report and easy use where asbestos bearing material has been identified a priority rating system has been implemented based on condition, which will allow the client the opportunity to plan any requirement for the remedial action and expenditure. This system operates as follows:
- 4.2 A priority rating has been assigned to each sample taken and is based on a method of summarising the surveyor's estimate of the condition of the material examined. It is included to assist the client in determining priorities when drawing up a programme of action for asbestos abatement, however, it must be stressed that priorities for action must be drawn up using the priority together with a consideration of the location of the material and any work methods and schedules which may result in disturbance of the material. To assist, a material risk assessment score has been applied to each sample based on the likelihood of asbestos fibres being released into the breathing zone of persons at risk. A single example can be used to illustrate this point; a partition consisting of asbestos insulating board containing amosite observed at the time of the survey to be in good physical condition with no breaks or abrasions would be given a priority rating of **Low**, i.e. low hazard not requiring urgent attention. If the location of the board is such that it is not subjected to impact or abrasions by normal work activities then the priority for action is also low. The priority would, of course, change to priority **High** if it is decided to carry out works such as upgrading, which would require substantial disturbance of the material.
- 4.3 To summarise, the priority assessment is also the priority for action in cases where the material remains undisturbed through normal work activities. Changes in priorities can be assessed only by the client's representative on site in the light of planned or unscheduled maintenance requirements or changes in normal working patterns as they arise.

- 4.4 The priorities are defined as follows:
- 4.5 **No priority has been assigned - for a material where no asbestos has been detected.**
- 4.6 **VERY LOW (Score 9 or lower)** - indicates a composite asbestos material which has a very low potential to release asbestos fibres in its normal occupation unless damage occurs.
- 4.7 **LOW (Score 10-12)** - indicates a more friable material that contains asbestos but is in a condition and/or location which does not give rise to a significant health risk, **PROVIDED IT REMAINS UNDISTURBED** either by routine maintenance or by personnel carrying out routine daily work activities which could cause impact or abrasion of the material. Priority **Low** is valid as a priority rating only if this proviso is maintained. Minor remedial action such as very minor encapsulation may be required in order that the material may remain in-situ. Clients are advised to be alert to any changes in work activities in areas where priority **Low** material is located. Permit to work scheme must be operated ensuring contractors, building occupants and maintenance operatives who need to know about asbestos are effectively alerted to its presence before undertaking any works in the area.
- 4.8 **MEDIUM (Score 13-15)** - indicates the material contains asbestos and is in a location and/or condition which requires some remedial action. The remedial action may be relatively simple such as applying a sealant coat to the surfaces of boards. Priority **Medium** materials may be encapsulated by appropriate remedial action but it is recommended that they be stripped or cleaned as appropriate as soon as resources become available.
- 4.9 **HIGH (Score ≥16)** - indicates materials which contain asbestos and which are in a condition and/or location which requires urgent attention. Priority **High** materials are usually not suited to any form of containment programme and should be stripped or cleaned as appropriate as soon as possible.

4.10 Material Assessment Algorithm (MA)

Each of the parameters given below are assessed during material risk assessment.

Variable	Score	Examples
Product type* (or debris from product)	1 (Low)	Composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, paints, decorative finishes, cement, textured coating etc.
	2 (Medium)	AIB, textiles, gaskets, ropes paper etc.
	3 (High)	Lagging, spray coatings, loose asbestos etc.
Surface Treatment*	0	Non-friable composite asbestos/ encapsulated cement
	1 (Low)	Enclosed sprays/ lagging/ board or bare cement/ textured coating
	2 (Medium)	Bare AIB or encapsulated lagging/ spray material/ rope
	3 (High)	Unsealed lagging/ spray material/ loose asbestos.
Extent of damage*	0 (None)	No visible damage
	1 (Low)	Few scratches/ marks, broken edges etc.
	2 (Medium)	Significant breakage of non-friable materials or several small areas of damage to friable material
	3 (High)	High damage/ visible debris.
Asbestos Type*	0	No asbestos detected.
	1	Chrysotile
	2	Amphibole asbestos excluding Crocidolite.
	3	Crocidolite.

The Material Assessment score is calculated by adding the parameters above and the potential for releasing fibres assigned as detailed below.

Material Assessment Score	Fibre Release Potential
10 or higher	High
7 – 9	Medium
5 – 6	Low
4 or lower	Very Low

4.11 Priority Assessment Algorithm (PA)

Each of the parameters given below are assessed during priority risk assessment.

Variable	Score	Examples
Vulnerability to damage ✓	0	Rare disturbance activity – Only during structural alteration.
	1	Low disturbance activity – Office type activity
	2	Periodic disturbance activity – e.g. Industrial or vehicular activity which may contact ACMs.
	3	High levels of disturbance – e.g. Fire door with A.I.B. sheet in constant use
Extent ✓	0	Small amounts or items (e.g. strings, gaskets)
	1	< 10 m ² / pipe run
	2	> 10 – 50 m ² / pipe run
	3	> 50 m ² / pipe run
Location ✓	0	External
	1	Internal
	2	Heat
	4	Air Conditioning
Number of occupants ✓	0	None
	1	1 – 3
	2	4 – 10
	3	> 10

Priority Assessment + Material Assessment Score	Total Risk Assessment (Priority Rating)
≥ 16	High
13 – 15	Medium
10 - 12	Low
9 or lower	Very Low

The total risk assessment score is calculated by adding the priority assessment and material assessment score.

- 4.12 We have assigned a priority rating in accordance with the algorithm. The priority rating risk assessment is established by adding the material assessment and priority assessment to provide a total risk assessment score.
- 4.13 The Risk Assessment Algorithm is purely guidance to establishing a priority rating which can be adapted to allow for other factors. The survey shall take into account other parameters making adjustment to the priority rating as required to ensure the priority rating is appropriate.
- 4.14 To minimise the risk of exposure to fibres and damage to decorations or fabric, not all asbestos containing materials were sampled. Some were strongly presumed or presumed to contain asbestos.

“Strongly presumed” is where the surveyor has confirmed by Laboratory Analysis the presence of asbestos or non asbestos in a material and the surveyor has used this information by extrapolating the results for the material of similar construction. Also this terminology will be used where asbestos has been known to have been commonly used in manufacturing and where access restricts the possibility of sampling eg. corrugated cement roofs.

“Presumed” asbestos is a **default situation** where there is insufficient evidence to confirm that it is asbestos free ie where there is no samples taken during a survey as requested by the client or where an area cannot be inspected or accessed. In both cases the areas must be presumed to contain asbestos unless there is strong evidence to prove otherwise.

“Presumed” or “Strongly presumed” asbestos containing materials are scored as Crocidolite (3) unless analysis of similar samples from the building shows a different asbestos type.

- 4.15 The priority assigned to a specific material to remain in-situ is representative and transient, hence, routine periodic audits must be conducted to reassess the condition on a regular basis at least annually or sooner if there is a particular concern or problem highlighted.
- 4.16 A permit to work scheme must be operated ensuring contractors, building occupants and maintenance operatives who need to know about asbestos are effectively alerted to its presence before undertaking any works in the area. **Contact Environtec Ltd for details of our comprehensive Permit to Work Scheme.**

4.17 Management Plan

A management plan should be developed based on this risk assessment. The management plan may include the following :-

- ◆ Clean up debris
- ◆ Repair
- ◆ Encapsulate
- ◆ Enclosed
- ◆ Remove
- ◆ Maintain and update log of asbestos containing materials
- ◆ Monitor condition
- ◆ Restrict access
- ◆ Label or colour code
- ◆ Inform

- ◆ Train
- ◆ Define safe systems of work
- ◆ Operate a permit to work system

To manage the risk effectively you will need to:

- ◆ Keep and maintain an up to date record of the location, condition, maintenance and removal of all asbestos materials on your premises
- ◆ Repair, seal or remove if there is a risk of exposure
- ◆ Maintain in a good state of repair and regularly monitor the condition
- ◆ Inform anyone likely to disturb asbestos of its location and condition
- ◆ Have arrangements in place so that work which disturbs asbestos complies with the Control of Asbestos Regulations (CAR)
- ◆ Review the plan at regular intervals and update if circumstances change

- 4.18 Generally, work with asbestos insulation, insulating board and spray coating **must not** be carried out without a licence from the HSE although there are exceptions for very minor works - more information is available in “***Work with materials containing asbestos – L143***”. As a general guideline, work on these materials should be carried out inside full enclosures incorporating negative pressure and decontamination facilities although minor works may be carried out in accordance with the “***Asbestos Essentials Task Manual***” (***HSG210***).
- 4.19 The removal of asbestos insulation, insulating board and spray coating is subject to a statutory 14 day notification to the Health and Safety Executive. The notification period is a condition of the removal contractor’s licence. Note, also there may be additional restrictions placed on a licence at the discretion of the HSE.
- 4.20 Following the introduction of the ***Hazardous Waste (England & Wales) Regulations 2005***, all materials with an asbestos content greater than 0.1% by weight - including asbestos cement where applicable - is now classified as a Special Waste and must be disposed of at a site licensed to accept such waste. An appropriate consignment note is also required.
- 4.21 Although not a legal requirement, it is recommended that a licensed asbestos contractor is engaged for any work with asbestos – including cement products - to ensure full compliance with all current legislation.

5.0 UKAS

- 5.1 In accordance with current legislation as of August 1999, as an employer, you must only engage laboratories to carry out air monitoring, clearance sampling and analysis who can demonstrate that they conform to ***European Standard ISO 17025*** by accreditation with a recognised accreditation body.
- 5.2 Environtec Ltd are accredited by ***UKAS (United Kingdom Accreditation Service)*** for fibre counting, clearance sampling, bulk sampling and bulk analysis (***Testing 2030***) thereby assuring our audit system, quality system, calibration and testing operations are in compliance with the relevant requirements and are regularly assessed both internally and externally. Environtec Ltd is a UKAS accredited inspection body for asbestos surveying in complying with the standard ***ISO 17020 (Inspection 197)***.

5.3 Environtec Ltd also hold a licence issued by the HSE *Health and Safety Executive No. 4970404042* enabling our company to project manage and supervise the safe removal of asbestos insulation, asbestos coating or asbestos insulation board.

5.4 Environtec Ltd has a wealth of experience and knowledge to ensure maximum standards are maintained and that the reporting to the client is of the highest quality achievable. Views and interpretations expressed within the content of this report are outside the scope of UKAS.

6.0 AIR SAMPLE ANALYSIS RESULTS

6.1 If required, air tests were taken in accordance with *HSG 248* and our UKAS accreditation for fibre counting and sampling. Air test filters were cleared using acetone/triacetin and read using phase contrast microscopy.

Environtec Ltd are participants, with current satisfactory performance in the RICE scheme (The Regular Inter-Laboratory Counting Exchange), which formally established in 1984 as the UK National Proficiency Testing Scheme for laboratories using the membrane filter method.

7.0 DISCLAIMER

7.1 This consultancy contract was completed by Environtec Ltd on the basis of a defined programme of work and terms and conditions agreed with the Client. This report was compiled with all reasonable care and attention, bearing in mind the project objectives, the agreed scope of works, prevailing site conditions and the degree of manpower and resources allocated to the project, as agreed.

7.2 Environtec Ltd cannot accept responsibility to any parties whatsoever, following the issue of this report, for any matters arising which may be considered outside of the agreed scope of works.

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

7.4 Any questions or matters arising from this report may be addressed in the first instance to the Surveyor.

8.0 CONCLUSION

8.1 General

- 8.1.1 Where asbestos materials have been positively identified to this property remedial action may be required to be completed to render them safe. Some asbestos materials may remain in-situ in their present condition to fulfil their life expectancy, providing they remain undisturbed and undamaged.
- 8.1.2 Careful consideration must be given to all maintenance and associated operations that will or are likely to disturb any asbestos bearing materials that remain in-situ.
- 8.1.3 It must be considered that whilst asbestos materials remain in-situ a primary source of contamination will exist with secondary contamination by air movement and traffic through which will continue to spread asbestos contamination over a wider extensive area with risk to health and cost implications to the client.
- 8.1.4 It must be noted that demolition works prior to refurbishment or similar may expose asbestos materials that were physically and visually impossible to locate and identify within the restraints of this survey. Caution should therefore always be adopted where there is a question of doubt.
- 8.1.5 Caution must therefore be adopted when maintenance works are conducted, should any suspect materials be revealed then the works must stop immediately and expert advice sought.
- 8.1.6 The test results set out within the appendices show the nature and condition of the asbestos present in the building. Should the building be programmed for major demolition and redevelopment works all asbestos materials positively identified must be removed under controlled conditions by a registered licensed asbestos removal contractor and disposed of as special waste, prior to the commencement of such works.

9.0 RECOMMENDATIONS

- 9.1.1 This survey report and recommendations detailed shall form part of the asbestos management plan in accordance with *regulation 4 of the (CAR 2006)*.
- 9.1.2 To comply with and ensure that the requirements of *The Control of Asbestos Regulations 2006, Health and Safety at Work Act 1974, The Management of the Health & Safety at Work Regulations 1999, Construction (Design and Management) Regulations 2007 and ACoP The Management of Asbestos in Non Domestic Premises* - It is proposed and recommended that the following are implemented and actioned:-
- 9.1.3 That access and disturbance to all areas containing loose or substantially damaged/ deteriorated asbestos materials with a priority **High** be restricted immediately.
- 9.1.4 That all asbestos materials listed under priority **High** be the subject of removal/ remedial action to be implemented immediately to render them safe. This action to include all necessary environmental decontamination and cleaning as necessary.

- 9.1.5 That those items listed under priority **Medium** which are vulnerable to damage be removed and replaced with a non-asbestos substitute or if the ACM is not vulnerable to damage then the ACM must be encapsulated within 12 months of the date of this report.
- 9.1.6 That all individual recommendations relating to ACM occurrences listed within the asbestos register are implemented within 12 months or sooner of the date of this report, depending on the individual circumstances. The prefix word “Programme for removal” shall indicate a less urgent ACM occurrence that requires remedial action to be implemented at a later date depending upon budget restraints.
- 9.1.7 That those items listed under priority **Low/Very Low** may remain in situ unless there is a high vulnerability to damage and/or disturbance as a result of routine occupational activity or maintenance/refurbishment.
- 9.1.8 That all asbestos containing materials that are to remain in place are clearly labelled with statutory warning labels. Labelling of ACMs that are in good condition and may remain in-situ is purely a recommendation. We appreciate in certain circumstances asbestos can be an emotive subject and labelling of asbestos may draw unwanted attention to the said material. Other warning systems can be applied to the ACMs for example a colour coding and/or permit to work scheme should be operated ensuring contractors, building occupants and maintenance operatives who need to know about asbestos are effectively alerted to its presence before undertaking any works in the area. Environtec Ltd can provide full details of a comprehensive permit to work scheme upon request.
- 9.1.9 Consideration should be given to future proposed refurbishment work and the asbestos removal abatement works programmed in to take advantage of that opportunity. If during refurbishment of a building it becomes necessary for asbestos materials to be worked upon or disturbed in any way there is a requirement under the **CAR 2006** to carry out a risk assessment.
- 9.1.10 That all removal, encapsulation and abatement works are undertaken and completed in compliance with a detailed specification and method statement for asbestos works.
- 9.1.11 That where asbestos materials are to remain insitu then regular, at least annual periodic audit inspections are carried out to monitor and maintain the condition of the asbestos materials such that the risks to health are reduced to the minimum possible so far as is reasonably practicable.
- 9.1.12 That those employed in management positions directly or indirectly having control of the building (dutyholder) and/or any works within these premises are made fully aware of this report and all asbestos materials identified. Those management have a responsibility to provide awareness training for all personnel, site and office based.
- 9.1.13 Those who have repair and maintenance responsibilities for the premises because of a contract or tenancy or those in control of the premises if no such contract or tenancy exists are the “duty holder”. The dutyholder shall adopt all liabilities for management of ACMs.
- 9.1.14 That all contractors and those who visit site to undertake any works be notified and made aware of this report and that asbestos materials are present prior to the undertaking of such works to enable suitable precautionary actions to maintain and reduce the risk to health.

- 9.1.15 That asbestos airborne fibre monitoring be completed to all areas where asbestos materials have been listed under priority **High or Medium** which are programmed for removal at a later date, to identify if airborne fibres are being generated under prevailing conditions. It is considered that this monitoring exercise will act as a reassurance confirmation as it is not expected that airborne fibres will be generated.

This monitoring should be maintained periodically until the said asbestos materials are made safe by removal or abatement works.

- 9.1.16 That all asbestos removal/abatement works are undertaken by a licensed asbestos removal contractor under the direct supervision of Environtec Ltd appointed by the client and that all analytical attendance and monitoring be completed by Environtec Ltd in accordance with our UKAS accreditation.
- 9.1.17 That competitive quotations/tendering procedures are employed to achieve the most economically favourable costings and programme.

10.0 CLIENT OPTIONS

- 10.1 Environtec Limited, on the basis of the survey report can assist the duty holder in compiling a detailed management plan and asbestos policy on behalf of the client which shall incorporate involve asbestos remedial works. If necessary, together with future updates to the register, asbestos awareness training together with our comprehensive popular permit to work scheme.
- 10.2 Environtec Ltd can also undertake annual inspections/re-surveys of premises on behalf of clients to assess in-situ asbestos containing materials and inspect areas originally omitted from the survey with the purpose of updating the asbestos register especially when remedial works or maintenance works take place. The register shall be issued with updates on a regular basis one copy to the client and one for the premises.
- 10.3 Where remedial works are identified, Environtec Ltd can prepare a detailed specification or method statement for the safe removal/containment and any decontamination of all asbestos identified. The specification will encompass all current legislation, extent of works and any site restrictions.
- 10.4 The works can be programmed to progress in phases in order to keep staff disturbance to a minimum. All works to be managed and monitored by Environtec Limited who will provide all necessary certification upon successful completion of the works.
- 10.5 Environtec Limited have been involved as Project Managers on asbestos projects acting as principles for clients for some years, and as such, have compiled a list of reputable Licensed Asbestos Contractors. The contractors are familiar with our Specification and are usually selected for their particular experience or location to the particular site.
- 10.6 Returned tenders will be vetted by Environtec Limited to ensure that contractors have demonstrated a thorough understanding of the proposed works and provided all necessary supporting information. From the details returned, a recommendation will be made of the most suitable tender received. The tenderers and recommendations will be submitted to the client in the form of a tender summary report.
- 10.7 Budget prices based on our knowledge and experience in the industry can be prepared if requested.

- 10.8 The client should consider undertaking asbestos surveys of other properties under their control and management to formulate and generate an asbestos risk register for their portfolio of buildings so that the asbestos can be effectively controlled and managed. This should be undertaken prior to future projects enabling the client to account for any additional costs/timescale additions necessary on such projects as well as locating previously unidentified asbestos material. Current legislation has placed a statutory obligation on the dutyholder to manage ACMs in non-domestic premises. The asbestos register will form part of the management plan. It is a requirement that all properties controlled by the dutyholder have a management plan that incorporates an asbestos register.
- 10.9 Environtec Ltd can provide a computer web-based database system so that asbestos risk registers for various buildings can be properly managed and updated accordingly incorporating current legislation.

11.0 REGULATIONS ON ASBESTOS IN BUILDINGS

11.1 General

- 11.1.1 Prior to any work involving the disturbance or removal of asbestos containing materials, points that must be noted:

In accordance with the *Approved Code of Practice, (ACoP), entitled 'Work materials containing asbestos – LI43*, all work with asbestos falls within the scope of the Code of Practice and guidance therein. In general terms, if the code applies, various provisions and regulations have to be complied with. Although failure to observe any provision of this code is not in itself an offence, that failure may be taken by a court in criminal proceedings as proof that a person has contravened a regulation to which the provision relates.

- 11.1.2 An additional *ACoP entitled The Management of Asbestos in Non-Domestic Premises (second edition November 2006) – LI27* is aimed at those who have repair and maintenance responsibilities for non-domestic premises.

11.1.3 Definitions

- a) Control Limits: The single control limit for all asbestos types is 0.1 fibres per cubic centimeter averaged over a continuous 4 hour period.

For further reference, please refer to the following Guidance Notes:-

- 1) *HSG248 – Asbestos: The analyst's guide for sampling, analysis & clearance procedures*, published by the Health and Safety Executive.

- 11.1.4 Every effort has been made to identify all asbestos materials so far, as was reasonably practical to do so within the scope of the survey and the attached report. Methods used to carry out the survey were agreed with the client prior to any works being commenced.

Survey techniques used involves trained and experienced surveyors using the combined approach with regard to visual examination and necessary bulk sampling. It is always possible after a survey that asbestos based materials of one sort or another may remain in the property or area covered by that survey, this could be due to various reasons:

- Asbestos materials existing within areas not specifically covered by this report are therefore outside the scope of the survey.

- Materials may be hidden or obscured by other items or cover finishes i.e. paint, over boarding, disguising etc. where this is the case then its detection will be impaired.
- Asbestos may well be hidden as part of the structure to a building and not visible until the structure is dismantled at a later date.
- Debris from previous asbestos removal projects may well be present in some areas; general asbestos debris does not form part of this survey however all good intentions are made for its discovery.
- Where an area has been previously stripped of asbestos i.e. plant rooms, ducts etc. and new coverings added, it must be pointed out that asbestos removal techniques have improved steadily over the years since its introduction. Most notably would be the Control of Asbestos at Work Regulations (1987) or other similar subsequent regulations laying down certain enforceable guidelines. Asbestos removal prior to this regulation would not be of today's standard and therefore debris may be present below new coverings.
- This survey will detail all areas accessed and all samples taken, where an area is not covered by this survey it will be due to No Access for one reason or another i.e. working operatives, sensitive location or just simply no access. It may have been necessary for the limits of the surveyor's authority to be confirmed prior to the survey.
- Access for the survey may be restricted for many reasons beyond our control such as height, inconvenience to others, immovable obstacles or confined space. Where electrical equipment is present and presumed in the way of the survey no access will be attempted until proof of its safe state is given. Our operatives have a duty of care under the Health and Safety at Work act (1974) for both themselves and others.
- In the building where asbestos has been located and it is clear that not all areas have been investigated, any material that is found to be suspicious and not detailed as part of the survey should be treated with caution and sampled accordingly.
- Certain materials contain asbestos to varying degrees and some may be less densely contaminated at certain locations (textured coating for example). Where this is the case the sample taken may not be representative of the whole product throughout.
- Where a survey is carried out under the guidance of the owner of the property, or his representative, then the survey will be as per his instructions and guidance at that time.
- Environtec Limited cannot accept any liability for loss, injury, damage or penalty issues due to errors or omissions within this report. Environtec Limited cannot be held responsible for any damage caused as part of this survey carried out on your behalf. Due to the nature and necessity of sampling for asbestos some damage is unavoidable and will be limited to just that necessary for the taking of the sample.

As a general guide:

- a) Asbestos materials which are sound, undamaged and not releasing dusts, should not be disturbed unless for refurbishment works and then, all necessary precautions must be taken and in accordance with the ACoP document, entitled '**Work with materials containing asbestos**' – **L143**.
- b) Those activities that are likely to produce a release of asbestos dust should be avoided as far as possible.
- c) The concentration of airborne asbestos in occupied areas should be reduced to the lowest, reasonably practicable level.

11.2 **Specific**

11.2.1 **Section 2(d) of the Health and Safety at Work Act 1974 (Chapter 37)**, places a general duty on employers to:

'So far as is reasonably practicable as regards any place of work under the employers control, the maintenance of it in a condition that is safe and without risk to health, and adequate as regards facilities and arrangement for their welfare at work'.

Section 3 of the Act places general duties on employers and the self employed persons other than their employees:

'It shall be the duty of every employer to conduct his undertaking in such a way to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected, thereby are not exposed to such risks to their health or safety'.

Section 4 places general duties on persons concerned with premises to persons other than their employees in non-domestic premises:

'... to take such measures as it is reasonably practicable, that the premises, and any plant or substance in the premises or, as the case may be, provided for use there, is or are safe and without risk to health'.

11.2.2 The **Control of Asbestos Regulations 2006 (CAR)** requires employers to prevent the exposure of employees to asbestos. If this is not reasonably practicable the law says their exposure should be controlled to the lowest possible level. Before any work with asbestos is carried out, the Regulations require employers to make an assessment of the likely exposure of employees to asbestos dust. The assessment should include a description of the precautions that are to be taken to control dust release and to protect workers and others who may be affected by that work. If you are employing a contractor to work in your building make sure that either the work will not lead to asbestos exposures or that they have carried out this assessment and identified work practices to reduce exposures.

11.2.3 The ***Construction (Design and Management) Regulations 2007*** require the client to provide the CDM co-ordinator with information about the project that is relevant to health and safety. This information might, for instance, include previous surveys of the building for asbestos. Not all projects come within the scope of these Regulations. These Regulations place duties on clients, clients' agents (where appointed), designers and contractors to ensure that the health and safety aspects of the work are taken into account, and then co-ordinated and managed effectively throughout all the stages of a construction project. This includes all stages in the life cycle of a project, from conception, design and planning through to the execution of works on site and subsequent construction, maintenance and repair.

11.2.4 These Regulations apply to the planning and execution of much construction work that involves asbestos cement. Where CDM applies, the following conditions apply:

- clients should provide information about the location, type and condition of asbestos cement;
- designers should take account of this information by altering their designs to remove or reduce the need to work with asbestos cement;
- CDM co-ordinators should ensure information about asbestos, relevant to the work in hand, is available to designers and the principal contractor;
- the principal contractor should ensure that individual contractors are aware of the relevant information, and workers should be briefed;
- anyone arranging for someone to undertake construction work should be reasonably satisfied that their appointees are competent to undertake the work safely and without risk to health;
- where work with asbestos cement is part of the construction work, anyone arranging for someone to do work should be reasonably satisfied that they are competent in work of that type;
- at the end of a project, a health and safety file should be prepared which includes relevant information about asbestos.

11.2.5 Assessment of work which exposes employees to asbestos (as detailed in regulation 6 of the ***Control of Asbestos Regulations 2006***):

The ***Control of Asbestos Regulations 2006*** place strict duties on those who have repair and maintenance responsibilities for premises, because of a contract or tenancy, to manage the risk from asbestos in those premises. Where there is no contract or tenancy the person in control will be the duty holder. There is also a duty of co-operation on other parties. The duty is supported by an ***Approved Code of Practice –The Management of Asbestos in Non-Domestic Premises - L124***.

Who has a duty to Manage asbestos?

A wide range of people potentially have obligations under this regulation, including employers and the self-employed, if they have responsibilities for maintaining or repairing non-domestic premises, and the owner of those premises, whether they are occupied or vacant. In all these cases, regulation 4 of CAR may apply, but the extent of the practical duties will be determined by contractual and other existing legal obligations towards the property.

Specific legal duties under *regulation 4 of CAR 2006*

The broad requirements on employers and others are to:

- ◆ Take reasonable steps to find materials likely to contain asbestos;
- ◆ Presume materials contain asbestos, unless there is strong evidence to suppose they do not;
- ◆ Assess the risk of the likelihood of anyone being exposed to asbestos from these materials;
- ◆ Make a written record of the location and the condition of the ACMs and presumed ACMs and keep it up to date;
- ◆ Repair or remove any material the contains or is presumed to contain asbestos, is necessary, because of the likelihood of disturbance, and its location or condition;
- ◆ Prepare a plan to manage that risk and put it into effect to ensure that;
 - Information on the location and condition of ACMs is given to people who may disturb them;
 - any material known or presumed to contain asbestos is kept in a good state of repair;
- ◆ Monitor the condition of ACMs and presumed ACMs; and
- ◆ Review and monitor the action plan and the arrangements made to put it in place;

11.2.6 Information, Instruction and Training (as detailed in Regulation 10 of CAR 2006):

Every employer shall ensure that adequate information, instruction and training is given to his employees who are liable to be exposed to asbestos so that they are aware of the risks and the precautions that should be observed.

11.2.7 Use of *Control Measures (as detailed in Regulation 12 of CAR 2006)*:

Every employer who provides personal protective equipment shall ensure that it is properly used. Every employer shall make full and proper use of any personal protective equipment and if he discovers any defect he shall report it to his employer.

11.2.8 Maintenance of ***Control Measures (as detailed in Regulation 13 of CAR 2006):***

Every employer who provides any personal protective equipment shall ensure that it is maintained in a clean and efficient state, in efficient working order and in good repair.

11.2.9 ***Provision and Cleaning of Protective Clothing (as detailed in Regulation 14 of CAR 2006):***

Every employer shall provide adequate and suitable protective clothing for his employees who are exposed to asbestos. The employer shall ensure that any protective clothing provided, is either disposed of as asbestos waste or adequately cleaned.

11.3 **Removal**

11.3.1 When it is not possible to seal an asbestos material effectively and it is likely to release dust, it may be decided to remove it completely. If it is necessary to disturb asbestos materials frequently, for example, for maintenance purposes, the cost of the precautions required may make it more cost effective to replace them. However, it should be recognised that removal often leads to higher short-term dust levels than sealing the material in place, and appropriate precautions must be taken.

Removal may involve complete removal of board or lagging for example, or simply removal of a small vulnerable area from an installation. Temporary repair, sealing or enclosure may be required to render asbestos material safe pending removal. When asbestos fire protection material is removed, it must be immediately replaced with materials having at least an equivalent fire rating.

Removal of sprayed asbestos, lagging and asbestos insulating board should generally be carried out by a Contractor licensed by the Health and Safety Executive (HSE).

Work with materials in which the asbestos fibres are firmly linked in a matrix do not require to be conducted by a licensed contractor as long as the conditions set out in Regulation 3(2) are fulfilled (Refer to paragraphs 34-39 of ACoP L127), although it is recommended that all such works are undertaken by a licensed contractor.

11.3.2 The ***Control of Asbestos Regulations 2006, entitled 'Asbestos:*** sets down a single control limit for the level of airborne asbestos fibres for all asbestos types, this being 0.1 fibres per cubic centimeter averaged over a continuous 4 hour period.

It should be noted, however, that this level refers to those who would expect to come into contact with asbestos as part of their employment. There are currently no levels set for the general public. However, in terms of non-occupation exposure, airborne fibre levels should be controlled to as low as reasonably practicable. For most practicable purposes, this effectively means less than 0.01 fibres/ml.

Should one wish to disturb this material, the above level must not be exceeded.

- 11.3.3 Any intended de-contamination/removal work should be undertaken in accordance with a detailed specification.

The specification should include for:-

- a) The continued operational requirements.
- b) The continuation of the current refurbishment works and the following legislation:-
 - 1) ***The Control of Asbestos Regulations (CAR) 2003. Approved Code of Practice's – Work with materials containing asbestos – L143 and The Management in Non-Domestic Premises – L124.***
 - 2) ***Health and Safety at Work etc Act 1974.***
 - 3) ***HSG248: Asbestos: The analysts' guide for the sampling, analysis and clearance procedures.***
 - 4) ***Construction (Design and Management) Regulations 2007.***
 - 5) ***Control of Substances Hazardous to Health Regulations 2002.***
 - 6) ***HSG247 Asbestos: The Licensed Contractors' Guide***
 - 7) ***Respiratory Protective Equipment at Work; A Practical Guide HSG53 (Third Edition).***
 - 8) ***A comprehensive guide to Managing Asbestos in Buildings HSG227.***
 - 9) ***HSG 264: Asbestos: The Survey Guide***
 - 10) ***Asbestos Essentials Task Manual HSG210 2001.***
 - 11) ***Introduction to Asbestos Essentials HSG213 2001.***
 - 12) ***The Hazardous Waste Regulations 2005***
- c) Further reading:
 - ***Working with asbestos cement HSG 189/2 1992.***
 - ***Asbestos MS13 1992.***