

**REFURBISHMENT/DEMOLITION
ASBESTOS SURVEY REPORT**

PREPARED FOR

**SOUTH AYRSHIRE COUNCIL
ON BEHALF OF
BARRHILL MEMORIAL HALL COMMUNITY ASSOCIATION**

AT



**BARRHILL COMMUNITY CENTRE,
MAIN STREET, BARRHILL.**

A/0216

26TH MARCH 2013

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Final Report Checked By:

Name: Nathan Barnett

Signature: 

Date: 09/04/2013

(ID 1 to)

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1.00 INTRODUCTION

Abate Asbestos Surveyors Ltd was appointed to carry out a Refurbishment/ Demolition Survey on behalf of South Ayrshire Council to produce a detailed report of the findings therein, all as per instruction from Amanda Gibson.

The Survey was carried out on 26th March 2013.

- 1.10 The prime objective of the Survey is to locate suspect asbestos containing materials (ACM's) as far as is reasonably practicable. Sample and analyse these materials and thereafter undertake a Risk Assessment of asbestos materials identified, thereby minimising the risk of the accidental disturbance of hazardous materials.
- 1.20 It should always be remembered that in sampling and analyses, negative results are less conclusive than positive ones. Visually similar materials change in composition for a variety of reasons, e.g. panel or boarding replaced, or materials not necessarily homogenous.

Consequently our survey and report refers to the material actually inspected by us.

- 1.30 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 undetected in the property or area covered by the 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) 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, (Artex 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.
- Abate Asbestos Surveyors Ltd cannot accept any liability for loss, injury, damage or penalty issues due to errors or omissions within this report.
- Abate Asbestos Surveyors Ltd 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 danger is unavoidable and will be limited to just that necessary for the taking of the sample.

2.00 SCOPE OF SURVEY

- 2.10 A Refurbishment/ Demolition Survey was carried out in the properties as requested by the client all as detailed in our quotation letter and attachments. The results of the survey are detailed in the spreadsheets in section 3.00.
- 2.11 At the time of our Survey the property was operational which placed some constraints on our investigations.
- 2.12 We understand that this Survey Report and Asbestos Register will form part of the asbestos management and control procedures to minimise the risk of exposure to asbestos. **The client is respectfully reminded that the Asbestos Register will require to be periodically reviewed and updated for as long as ACMs remain in the building (Refer to Appendix – Generic Section VI – Managing Asbestos)**
- 2.13 This survey and report refers only to the materials actually examined by us as outlined within the Survey Report section.
- 2.20 The survey will be undertaken in accordance with the recommendations as outlined in HSG 264 ASBESTOS: THE SURVEY GUIDE.

2.21 Sampling and Reporting Protocol.

It is considered unnecessary both in term of risk and cost to sample visually similar materials.

2.21(A) Homogeneous / Uniform Materials

One or two samples are usually taken from Homogeneous materials, such as pipe lagging, sprayed asbestos, insulation boards and asbestos cement products as these materials are readily identifiable to an experienced surveyor. Consequently other visually similar materials are then recorded by simply cross referencing these using the term "As sample S/..." under the "Sampled" column in the Survey Data Spreadsheet. Similarly in the Asbestos Register Spreadsheet the term "Strongly Presumed" is used, (abbreviated to SP), under the "Asbestos Present" column. The type of asbestos is presumed to be that of the sampled material.

Occasionally these materials may prove not to be truly homogeneous, due to manufacturing anomalies, patch repairs etc., the sample or samples may not be fully

representative of the whole. Consequently care should always be exercised for any changes to materials.

2.21(B) Lower Risk Non-Uniform Materials

Vinyl floor tiles, composite flooring and textured wall and ceiling coatings etc. may or may not contain a small percentage of asbestos. There is no visual method of making that assessment. In normal usage, including wear and tear, these materials do not normally release fibres and therefore for Asbestos Management Control Plans it is often not necessary to sample at every location – We therefore take one or two representative samples to report on these.

(i) Vinyl / composite flooring etc

When these materials are recorded at other locations and are similar to the sample in colour, texture etc., we extrapolate from the sample results and record “**N**” or “**SP**” in the register under the “Asbestos Present” column. Otherwise we shall presume the material contains asbestos by recording “**P**” on the “Asbestos Present” column.

(ii) Decorative / Textured coatings:

With these materials colour or texture are not indicative of any similarity in composition to the sample. Consequently, we cannot extrapolate from negative results and therefore we always presume the un-sampled material to contain asbestos. Recorded by “**P**” under the “Asbestos Present” column.

However the client (Duty Holder) may have specific historical information to enable them to make a less generalised judgement.

Clients are advised to have samples taken at each area when they plan to remove these materials.

2.21(c) Unable to Sample

(i) When it is not possible to sample a material for safety or access reasons we may presume the material will contain asbestos and record this by inserting a “**P**” under the “Asbestos?” column.

(ii) Fire Doors: Some fire doors may have an asbestos material within the core. Where suitable we endeavour to

examine for this, however it may not always be possible to confirm this. Consequently, care should be exercised when working on such doors.

(iii) Lifts and lift shafts: Lift shafts may be lined with an ACM and or components of the lift mechanism may contain ACM`s. Without written specific instruction we do not normally report on these elements.

2.22 Limitation of the number of samples analysed

Where we are requested to minimise costs by reducing the number of samples sent for analysis this will be recorded using the symbol "\$" in the Survey Report. We shall therefore, retain the samples not analysed on file for a maximum of 6 months.

2.30 Exclusions

- 2.31 Unless we are specifically advised, any ducts below floor level are outwith the scope of this survey. However should the surveyor note any access hatches these shall be investigated and comments included within this report. Should we encounter areas which the surveyor considers will require special provisions or precautions before accessing then this shall be clarified with the client at the time and / or recorded in the Survey Report. Examples of such would be confined spaces; structural or other perceived hazards etc.
- 2.32 Due to the nature of Asbestos Surveys and the extensive use of the material it may not always be possible to identify all asbestos materials concealed within the building. Consequently those undertaking maintenance, refurbishment or demolition works, should be advised to be vigilant and report the presence of any suspect materials and follow the edict, "Best to presume anything that looks like asbestos is asbestos", at least until the potential risk has been specifically assessed. It is an imperative to prevent work that will disturb the fabric of the building until the presence or absence of ACM's has been established (Paraphrased from clause 42 "Managing Asbestos in Buildings" - HSG 227 - HSE Publication)
- 2.33 Management Survey report only on materials readily accessible. It is our experience that particularly in shop fitting type trades, finishes are often over-plated many times with "new" finishes. The surveyor can only use his

experience and knowledge to make an assessment as far as is reasonably practicable. Also: fire doors, machinery, equipment and service ducts are not examined internally. Consequently, the principle as set out in clause 2.32 above should be followed.

2.34 Unless specifically requested by the client we shall not normally report on components or materials which contain a small percentage of asbestos fibres which would not be easily released under normal usage or when being removed. Examples of such items are bitumen pads under stainless steel sinks, bitumen damp proof courses, bitumen mastic seals, bitumen coatings on metals, reinforced plastics and resins, asbestos twine or washers used in plumbing seals etc. These invariably would be classified as being in the very low risk category and sampling may cause damage to the element possibly resulting in a greater risk hazard. Advice on the disposal of these elements should be sought from the local SEPA office and or the proposed licensed Landfill site.

2.40 Following a visual examination of the property, samples of suspect materials shall be taken when Management/Refurbishment/Demolition Surveys are undertaken.

Refer also to the Generic information in the appropriate section of the Appendix.

2.50 Type of Survey (Refer also to Appendix B (iii) and B (iv).)

2.51 The Management Survey – Sampling Survey: Suspect materials are analysed to establish if asbestos is actually present. Risk Assessment of all asbestos materials is also undertaken.

2.52 The (Demolition / Refurbishment Survey). There is no requirement to report on the condition of the asbestos other than to note areas of damaged and friable asbestos or where asbestos debris may be present. Similarly there is no requirement for Asbestos Registers.

2.60 Access Restrictions

Where we are unable to obtain access to any part of the building, this shall be recorded within the Final Report, (usually within Section 3.00 Survey Report Spreadsheets).

3.00 SURVEY REPORT

The report section which follows is presented in the form of two separate spread sheets.

Spread Sheet No. 1 (Survey Data)

This detail's the data collected on site as part of the physical survey. Each element or area has a specific ID number. Generally the columns and data are self-explanatory.

Materials visually assessed as being "suspect" are highlighted for ease of reference.

Quantities, when stated, are only to indicate the relative extent of the suspect material and are not intended for any other use.

The abbreviations used are as follows:

NSM	-	No Suspect Materials
MMMF	-	Man Made Mineral Fibres
V	-	Void or vacant at time of survey
O	-	Occupied at time of survey
ACC	-	Degree of accessibility to the suspect material
Low (L)	-	Difficult to access or requires access equipment
Medium (M)	-	Accessed with a little effort e.g. requires small step ladder.
*	-	Unable to sample material due to risk to the integrity of the component or access difficulties
†	-	Low risk item. Refer to clauses 2.21(B) & 2.34

3.20 Spread Sheet No. 2 (Results – Material Assessment – Register)

Details the results of all suspect materials recorded on spread sheet No.1 and referenced against their survey ID number. Material Assessment is undertaken for all positive results and those presumed to contain asbestos. We use the standardised approach as recommended in HSG 264, a simplified additive algorithm. Whilst we include a Material Assessment when reporting Demolition/Refurbishment Surveys there is actually no requirement for the Assessment when reporting. (Refer also to Appendix B for further information).

Materials confirmed or presumed to contain asbestos are highlighted for ease of reference.

SPREAD SHEET 2 – NOTATION

3.21. Column headed “Lab Report Ref No.”

- | | | |
|--------|---|---|
| S/.... | - | Abate unique sample number and with the unique laboratory sample number below. |
| * | - | Unable to sample material due to risk the integrity of the component or access difficulties |
| \$ | - | Sample taken but no analysed due to client’s restriction in the number of samples/analyses. |
| † | - | Very low risk item. Refer to clauses 2.21(B) & 2.34. |

3.22. Column headed "ASBESTOS Y/SP/P/N"

Y	=	Yes – Asbestos confirmed by analyses.
SP	=	Strongly Presumed – Asbestos is presumed to be present, because the material can be identified as being visually similar to other material confirmed by analyses. Refer to clause 2.31 (A).
P	=	Presumed – Where samples have not been taken the presumption is made that they contain asbestos. Refer to clause 2.21 (B) & (C).
N	=	Very low risk item. Refer to clauses 2.21(B) & 2.24.

Note: Where we presume asbestos is present in a material (P), we also presume that the type of asbestos to be Crocidolite (blue), (i.e. the most hazardous type), unless it is strongly presumed to be as similar material sampled in this building or the type of asbestos is suggested in HSG 264 for the material in question.

3.23. Column headed "FORM 0, 1, 2, 3"

This column specifies the form or product type of the asbestos containing material by attributing the appropriate algorithm score:

- 0** = Non Asbestos Material
- 1** = Asbestos Reinforced Composites: mastics, resins, vinyl tiles (Comp). Paints, decorative coatings: (DC). Asbestos Cement: (AC).
- 2** = Asbestos Insulation Board; mill-boards, low density boards and also asbestos textiles, gaskets, ropes and asbestos paper (AIB).
- 3** = Thermal insulation; sprayed asbestos, loose asbestos and asbestos mattresses (I).

3.24. Column headed "CONDITION"

This column specifies the assessment of the condition of the material by attributing the appropriate algorithm score as follows:

- | | |
|--------------------------|---|
| 0 = Very Good Condition: | No visible damage – Perfect – As new. |
| 1 = Good Condition: | Few scratches, broken edges etc. |
| 2 = Fair Condition: | Several small areas of damage. |
| 3 = Poor Condition: | De-lamination, visible asbestos fibres. |

3.25. Column headed "TREATMENT 0,1,2,3 "

This column specifies the degree of treatment afforded to the asbestos material by attributing the appropriate algorithm score:

- 0 = Composite materials, vinyl's, roofing felt and asbestos cement if the exposed face is painted or encapsulated.
- 1 = Enclosed sprays or laggings, encapsulated AIB or unsealed AC
- 2 = Unsealed AIB or encapsulated laggings or sprays
- 3 = Unsealed laggings and sprays.

3.26. Column headed "ASBESTOS TYPE 1, 2, 3 "

- 1 = Chrysotile (White) Asbestos.
- 2 = Amphibole Asbestos excluding Crocidolite.
- 3 = Crocidolite (Blue) Asbestos.

3.27. Column headed "MATERIAL ASSESSMENT SCORE"

This is the sum of scores attributed under "Form", "Condition", "Treatment" and "Type". (Note: Total score range is 2 to 12)

3.28. Column headed "MATERIAL RISK CATEGORY"

Based on the Material Assessment Score the risk is categorised as follows:

- Score of less than 5 = Very low
- Score of 5 - 6 = Low Risk
- Score of 7 - 9 = Medium Risk. (It is our opinion that remedial action should be considered when this score is achieved).
- Score of 10 - 12 = High Risk – Potential to release fibres. (It is our opinion that removal or effective remedial action is taken without undue delay).

3.29. Column headed "MINIMUM RECOMMENDED ACTION /MAXIMUM TIMESCALE"

Opinions expressed under this column and as stated in the paragraph above are based on the knowledge of the material and its condition as seen by us at time of Survey. However it should be noted that the building users or Facilities Managers are best placed to undertake the "Priority Assessment", perhaps with some further assistance from the surveyor. The Duty Holder has a responsibility to ensure that appropriate management actions are implemented. Refer also to the Appendix B for further information on Priority

Assessment and Managing Asbestos. Blank columns are provided for recording any future reviews of the asbestos containing materials.

3.30. Refer to Appendix B (v) and B (vi) for information on Priority Assessment and Managing Asbestos.

3.40. Limitation of surveyed data

Generally the survey is undertaken from ground level with only the use of surveyors step ladders. The surveyor will make a reasoned judgement on materials outwith his reach and report accordingly. Such assessments will be indicated by * under the "Sample" column in the Data Spreadsheet and under the Lab Report Reference column in the Register Spreadsheet.

3.50 SURVEY REPORT SPREADSHEETS

Follow the links below to obtain the Survey Data and Asbestos Register:

- Survey Data & Register

4.00 CONCLUSIONS AND RECOMMENDATIONS

4.10 Within the constraints of a Refurbishment/ Demolition Survey in an operational property, we are reasonably confident that all suspect material fabric finishes have been inspected and reported on herein. We did not detect any materials that would be considered as requiring immediate remedial action in the condition as seen by us.

However, in order to comply with current legislation, it is recommended that all asbestos detected within the surveyed property be removed prior to refurbishment or demolition.

4.20 It should always be borne in mind that asbestos materials might have gone undetected, having been built into the construction or concealed behind finishes etc. **It is essential to prevent work that will disturb the fabric of the building until the presence or absence of ACM's has been established (Paraphrased from clause 42 "Managing Asbestos in Buildings" – HSG 227 - HSE Publication).**

We always advise vigilance when undertaking alteration works. (Refer to Section 1 of the report).

4.30 To avoid any accidental and uncontrolled disturbance of the asbestos containing materials, best practice would suggest that all the ACM's be removed prior to demolition or major refurbishment. Irrespective of the sequence or contractual arrangements, those undertaking the demolition works should be advised to be vigilant and report any suspect materials without delay. As stated at the introduction it is best to follow the edict "*anything that looks like asbestos is asbestos and therefore hazardous, until confirmed otherwise*".

4.40 **Legislative Requirements:** Asbestos Insulation, Asbestos Coatings and Asbestos Insulation Board materials may only be removed by a contractor with a current licence from the Health & Safety Executive issued under the Asbestos (Licensing) Regulations. These works will require 14 days pre-notification to the H.S.E. These materials and all other forms of asbestos materials must be removed in full compliance

with the Control of Asbestos at Work Regulations. All ACM's should be disposed of in accordance with the Special Waste Regulations.

Regulation 4 of the Control of Asbestos Regulations (2012) specifically requires duty-holders to manage the risk from asbestos in non-domestic premises. It should be noted that common areas in blocks of flats for example or indeed lockup garages would be considered as non-domestic premises in this regard. However all duty-holders have a responsibility to reduce the risk of exposure to asbestos irrespective of the function of the building. Refer to Appendix for a schedule of Asbestos Related Legislation, Codes of Practice, Guidance Notes etc.

APPENDIX

A. PROJECT SPECIFIC

Follow the links below to obtain the Laboratory Results and Drawings:

Laboratory Results:

Drawings:

Photographs:

B. GENERIC

Follow the link below to obtain the Generic Information

Generic:



Refurbishment/Demolition Survey Data - Barhill Community Centre

Survey Number: A/0216

Site ID No	Property	Floor Level / Drawings	Location in Building	Visible Building Component	Material Being Examined	Assessment / Comment	Condition	Surface Treatment	Qty	Access	Sampled	Photo No.
1	Barhill Community Centre	G	Main Hall	Floor, Walls, Ceiling, Door, Windows, Radiator, Pipes, Pipe Lagging, Boxing, Heaters, Switchgear	All Finishes	NSM						
2	Barhill Community Centre	G	Kitchen	Walls Ceiling, Door, Fireplace, Pipes, Sink, Windows, Units	All Finishes	NSM						
3	Barhill Community Centre	G	Kitchen	Floor	Orange Lino	Suspect	Good	Nil	8m ²	High	Yes (06481)	
4	Barhill Community Centre	G	Kitchen Attic	Floor, Windows	All Finishes	NSM						
5	Barhill Community Centre	G	Kitchen Attic	Walls/Ceiling	Cement Sheet	Suspect	Fair	Nil	30m ²	Med	Yes (06480)	
6	Barhill Community Centre	G	Store	Floor, Walls, Ceiling, Door, Windows, Water Heater, Boxing	All Finishes	NSM						
7	Barhill Community Centre	G	Store	Distribution Board		No Access						
8	Barhill Community Centre	G	Mens Toilet	Floor, Walls, Ceiling, Door, Windows, Cistern, Downpipe, Toilet, Sink	All Finishes	NSM						
9	Barhill Community Centre	G	Mens Toilet Loft	Insulation, Pipes, Pipe Lagging, Water Tank	All Finishes	NSM						

Data Sheet - This Spreadsheet contains all the data collected on site prior to laboratory analyses of any samples

REFER TO REGISTER SPREADSHEET FOR DETAILS OF ASBESTOS CONTAINING MATERIALS

10	Barhill Community Centre	G	Snooker Room	Floor, Walls, Ceiling, Door, Windows, Heaters	All Finishes	NSM							
11	Barhill Community Centre	G	Snooker Room Loft	Insulation, Pipes, Pipe Lagging	All Finishes	NSM							
12	Barhill Community Centre	G	Ladies Toilet 1	Floor, Walls, Ceiling, Door, Windows, Downpipe, Toilet, Sink, Heater	All Finishes	NSM							
13	Barhill Community Centre	G	Ladies Toilet 2	Floor, Walls, Ceiling, Door, Windows, Downpipe, Toilet, Sink, Heater	All Finishes	NSM							
14	Barhill Community Centre	G	Entrance	Floor, Walls, Ceiling, Door, Heaters	All Finishes	NSM							
15	Barhill Community Centre	G	Computer Room	Floor, Walls, Ceiling, Door, Heaters, Window	All Finishes	NSM							
16	Barhill Community Centre	G	Computer Room Loft	Insulation, Pipes, Pipe Lagging	All Finishes	NSM							
17	Barhill Community Centre		External	Gutters, Soffits, Downpipes, Roof Tiles	All Finishes	NSM							



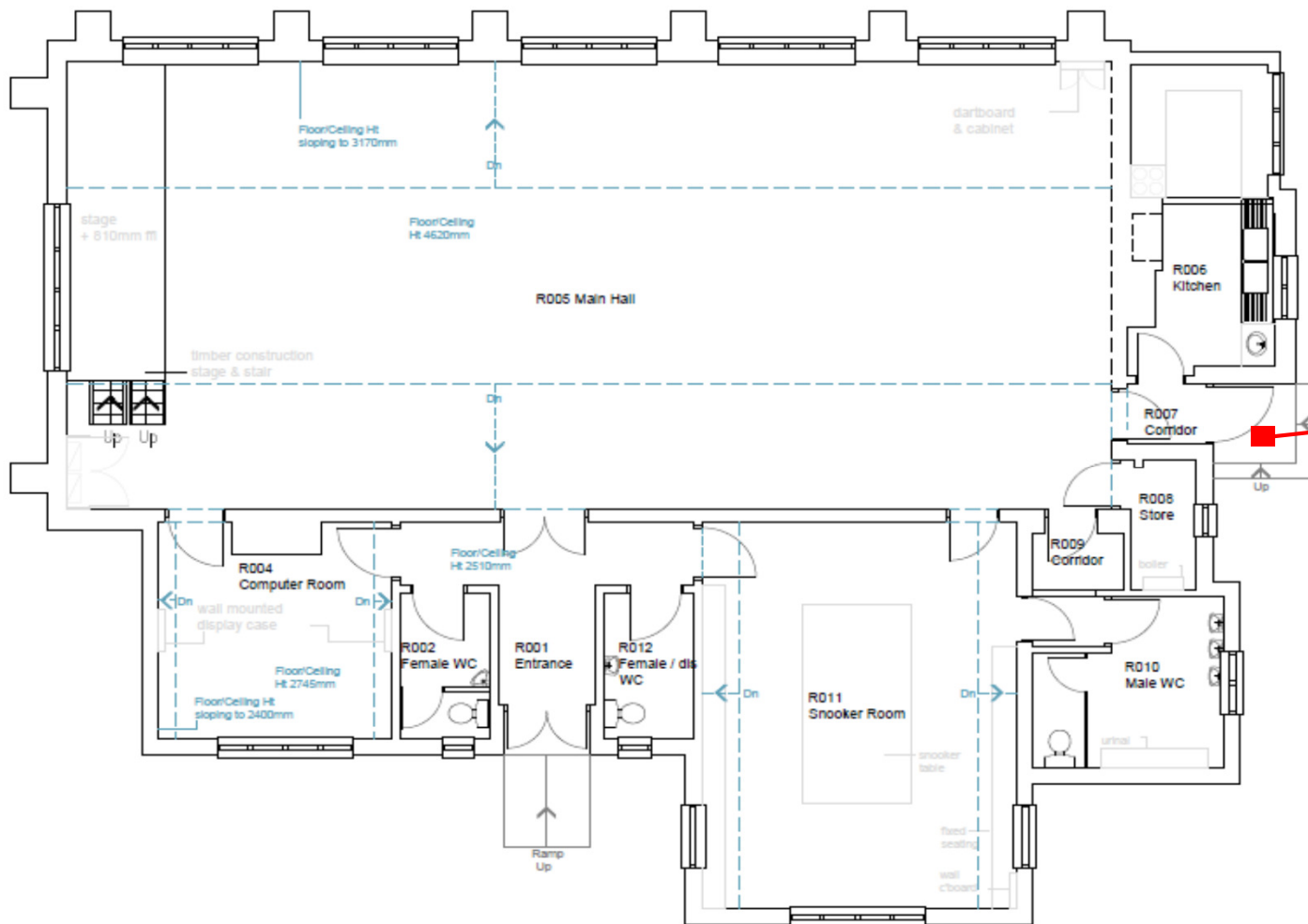
Refurbishment/Demolition - Asbestos Register & Material Assessment - Barhill Community Centre

Click here for navigation notes

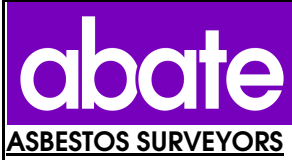
This Spreadsheet contains the results and assessment of materials found to be suspect at time of survey.

Site ID No	Property	Floor Level / Drawings	Location in Building	Visible Building Component	Material Examined	Qty	Photo	Lab Ref No.	Asbestos Present	Access	Form 0,1,2,3	Condition 0,1,2,3	Treatment 0,1,2,3	Asbestos Type 1,2,3	Material Assessment Score	Material Risk Category	Minimum Recommended Action / Maximum Timescale
3	Barhill Community Centre	G	Kitchen	Floor	Orange Lino	8m ²		[06481]	N								
5	Barhill Community Centre	G	Kitchen Attic	Walls/Ceiling	Cement Sheet	30m ²		[06480]	Y	Med	1	2	1	1	5	Low	Label & Manage Inspect 6 monthly
7	Barhill Community Centre	G	Store	Distribution Board	NO ACCESS										0		

The purpose of this Survey is to positively identify any ACMs on the fabric finishes etc., as far as reasonably practicable.
Refer also to Clauses 1.30, 5.30
This should be treated as a Controlled Document.



SEE ID 5



Survey No.:	A/0216	Paper:	A4
Site Address:	Barrhill Community Centre, Main Street, Barrhill, KA26 OPP.	Date:	26/03/2013
		Scale:	NTS



06480

KITCHEN ATTIC WALLS – CEMENT SHEET



06481

KITCHEN – ORANGE LINO

BACKGROUND INFORMATION

Asbestos in various forms was widespread and commonly used as a construction material due primarily to its varied and valued properties. i.e. tensile strength, non- combustible, low thermal conductivity, resistance to chemical attack etc. However it was often used merely as a relatively available substitute during building boom periods when more traditional building materials were in short supply. (e.g. used in lieu of plasterboard). Consequently, the survey of buildings for asbestos requires first and foremost a sound knowledge of building technology coupled with the expertise to undertake sampling in a safe manner.

Asbestos may be found, to varying degrees, in buildings completed or refurbished prior to 1999. The presence of asbestos will significantly influence proposed refurbishment or maintenance works, both in terms of costs and disruption. If not properly identified at the outset the "Duty Holder" may be in contravention of the Health & Safety at Work Act. To comply with their legal responsibilities, they should ensure that an asbestos register is prepared for all their properties and that this is reviewed and updated as alterations occur. The Asbestos Register should therefore be referred to before alteration or demolition works are instructed.

The presence of asbestos in buildings may be considered a liability, making the property less marketable. Very often this negative affect in monetary terms will be greater than the cost of removal.

It should be remembered that an asbestos survey may not necessarily always identify all asbestos materials concealed within the construction of the building. Consequently those undertaking refurbishment or demolition works should be advised to be vigilant and report the presence of any suspect materials, and follow the edict, "*best to presume anything that looks like asbestos is asbestos*", at least until the potential risk has been specifically assessed.

Should either demolition or total / comprehensive refurbishment be contemplated it is advisable to have a "Refurbishment/Demolition" (Formerly Type 3 Survey) undertaken to determine if hazardous materials are present within the construction of the building.

DEFINITION OF ASBESTOS

Asbestos is a generic term for fibrous forms of naturally occurring minerals.

Types of Asbestos

Chrysotile (White Asbestos).
Amosite (Brown Asbestos).
Crocidolite (Blue Asbestos).
Fibrous Anthophyllite.
Fibrous Tremolite.
Fibrous Actinolite.

The inhalation of these asbestos fibres has been linked with Mesothelioma, Lung Cancer and with Asbestosis. Although the latter is related only to prolonged exposure.

Forms of Asbestos

Asbestos Cement:

A manufactured material composed of a mixture of asbestos and cement. The percentage of asbestos is relatively low.

Dry density of asbestos cement is greater than 1000kg/m³.

Asbestos Insulation Board:

Manufactured board material composed of asbestos fibres mixed with a bonding matrix.

Dry density greater than 500kg / m³ and usually below 1000kg / m³.

Asbestos Coating:

A surface coating containing asbestos applied to a variety of substrates.

Asbestos Insulation:

Defined as any material containing asbestos except asbestos cement, asbestos insulation board or asbestos coating.

Dry density usually less than 500kg / m³.

Asbestos Compounds:

Asbestos fibres added to vinyls, bitumens, plastics etc. to enhance tensile strength. e.g. Flooring compounds, flooring tiles etc. Generally these products contain a low percentage of asbestos and consequently are considered a low risk hazard. (Consider as similar to Asbestos Cement, though the binding matrix is not cementitious in nature).

ASBESTOS SURVEYS

The “type of survey” will be dictated by its purpose and the clients requirements. These will be clearly defined at Section 2.00 – Scope of Survey.

Any asbestos survey has three main elements.

1. Identify and record the location, extent and form (i.e. board, coating etc.) of any asbestos or suspect materials.
2. Inspect, assess and record the condition, accessibility and surface treatment of any asbestos or suspect materials. Less important for pre-demolition and major refurbishment surveys. See below Refurbishment/Demolition Surveys.
3. Determine and record the asbestos type (i.e. Crocidolite, Chrysotile etc.) of suspect materials by sampling and laboratory analyses. Suspect materials may be presumed to contain asbestos, but the report should be qualified accordingly.

There are three different types of survey.

Management Survey (Formerly Type 2- Sampling Survey)

- The objective and elements of the Sampling Survey are the same as the Presumptive Survey except that laboratory analyses of samples will determine if asbestos is actually present or not.
- Where asbestos is confirmed, other similar materials may be presumed or strongly presumed to contain asbestos also.
- Negative laboratory analyses merely confirm that asbestos was not detected in the sample and further sampling may be required.
- Sampling may be undertaken simultaneously with the survey or perhaps later when the building is less occupied.
- The sampling survey will cause minor disruption and minimal damage to fabric finishes.

Refurbishment/ Demolition Survey (Formerly Type 3- Pre-Demolition/ Major Refurbishment Survey)

- As the name suggests this is required before major works are undertaken in a building **or any part of a building**.
- The object is to locate, describe and quantify all ACM's.
- It will be necessary to gain access to all areas even where access is difficult and it may be necessary to undertake some destructive dismantling to examine behind decorative finishes etc.
- This type of survey should form the basis of the Tender Document for the removal of all of the ACM's which should be scheduled to commence ahead of other works. Consequently the Condition of the asbestos is less important other than as a guide to those planning the asbestos removal works. ACM's in poor and friable condition and asbestos debris should always be recorded so that property owners may take appropriate action.

It is important that clients fully appreciate the difference in the three types of Surveys and instruct the type appropriate to their needs at that time. Their requirements may vary from building to building or even within one building.

Example to illustrate this: *Consider a building which consists of three areas.*

- | | |
|--|--------------------|
| 1. Modern I.T. Office –
<i>Refurbished in 1985 and IT cabling in place.</i> | Presumptive Survey |
| 2. Stores and Warehouse –
<i>Very little change in the last 30 years.
Well worn but functional.</i> | Sampling Survey |

3. Boilerhouse

*Old oil boilers in constant need of repair.
Will be replaced “shortly”.*

Sampling Survey and Demolition /Refurbishment. (Sampling Survey required so that Risk Assessment / Condition and Register is produced just in case “shortly” becomes “later”).

It should be remembered that no matter how thorough the survey is it may not always be possible to identify all asbestos, therefore those undertaking refurbishment works should always be advised to be vigilant and follow the edict. *“Best to presume anything that looks like asbestos is asbestos and therefore potentially hazardous, until proved otherwise.*

SAMPLING STRATEGY

Bulk sampling may be carried out simultaneously with the survey or carried out later as a separate sampling exercise. Often for small surveys it is convenient to take samples, while surveying, for larger buildings sampling may be carried out as a separated exercise when the building is empty. After a visual examination, samples of about 3 – 5cm² area and through the entire depth of the ACM should normally be taken with the aim of collecting one or more samples which are representative of the whole material. Sampling should not be carried out where there is an electrical hazard or if it will damage the critical integrity of the product, e.g. a roof, gutter, pipe etc.

Sampling Strategies

The sampling strategy should be clearly identified and clarified with the client at the proposal / quotation stage. In general for homogeneous manufactured products containing asbestos it can be assumed that the asbestos is uniformly distributed throughout the material and one or two samples will suffice, e.g. boards, sheets, cement pipes, textiles, ropes, friction products, plastics and vinyls, mastics, sealant, bitumen roofing felt and gaskets.

Insulation and spray materials are generally less homogeneous as they were applied on site and their composition depends on the availability of supply. Subsequent repairs and patching may add to the variability and increase the number of samples required.

Remember a positive result confirms the presence of asbestos in the area. Whereas a negative result only confirms that the sample did not contain asbestos. Substantial over-spray contamination and debris may have been produced and should be noted.

Often a single sample may be all that is required to confirm the suspicion that a homogeneous material is asbestos and to make a presumption that it applies to other material of the same type. However, for non-homogeneous materials and for some presumed non-asbestos materials, additional sampling may often be needed, to reduce the possibility of false negatives which may lead to uncontrolled exposures.

The sampling frequency should be as intimated in HSG 264 and as agreed with the client.

The two types of asbestos surveys as defined in HSG 264 are as follows:

- Management Survey (Formerly Type 2): Sampling Survey
- Refurbishment/Demolition (Formerly Type 3): Intrusive / Disruptive Survey / Pre-demolition / Major Refurbishment Survey

SAMPLING AND ANALYSIS

If a “**Management survey**” is commissioned, samples of suspect materials are taken for laboratory analyses to establish if asbestos is present or not and if so to determine the type. Such samples shall be analysed by an independent UKAS accredited laboratory.

Copies of all laboratory analyses are enclosed in the appendix.

To minimise the cost of laboratory analyses only one representative sample of visually similar material in an area is taken for analyses. The survey Report and the Asbestos Register will indicate where comments and opinions are based on extrapolated results. It should be remembered that negative results merely confirm that asbestos was not present in the actual sample. Further samples of such suspect samples may be required.

Samples shall be taken through the full depth of the suspect material, placed in a polythene sample bag, sealed and labelled. Cross contamination will be prevented.

Samples are always taken to cause the least release of fibres as is reasonably practicable by the use of sharp instruments, water spray or shadow vacuum technique. Location where sample are taken shall be sealed with adhesive tape. The risk to both the surveyor and other building occupants shall, by these precautions, be the lowest reasonably practicable.

Excessive sampling of known asbestos containing materials should be avoided both in terms of health and safety and cost. The term “Strongly presumed” is used where the surveyor considers it unnecessary to collect and analyse a further sample.

METHOD OF RISK ASSESSMENT

(The risk from the asbestos containing materials is only required to be assessed if Management Surveys are undertaken . As stated in HSG 264 for Refurbishment/Demolition Surveys (Formerly Type 3) no assessment is necessary as the asbestos should be removed prior to demolition or refurbishment).

A standardised and structured assessment based on the algorithms as detailed in HSG 264– “Asbestos: The Survey guide”, has been adopted by us.

Refer also to HSE publications “The Management of Asbestos in Non-domestic Premises” (L127) and “A Comprehensive Guide to Managing Asbestos in Premises” (HSG 227)

Material Assessment

During the course of the survey, the surveyor shall record the following factors and allocate the appropriate score from HSG 264 appendix 4 Algorithm.

- The form the material takes - i.e. asbestos cement, roofing felt, insulation board, insulation etc.
Score 1 to 3.
- Extent of damage or – deterioration * i.e. good condition to severely damaged or debris.
Score 0 to 3.
- Surface Treatment – * e.g. composite materials to unsealed insulation.
Score 0 to 3.
- Asbestos Type – i.e. Chrysotile, Amphibole Asbestos, Crocidolite.
Score 1, 2 and 3 respectively.

Consequently total scores may range from 2 to 12 points, (*e.g. Asbestos cement (1) in good condition (0) with a painted surface (0) and contains Chrysotile (1) equals 2 points and Pipe Insulation (3), Severely damaged (3), unsealed (3) and contains Crocidolite(3) equals 12 points*).

Material Assessment

Materials Assessment Scores are categorised as follows.

- >9 – High Risk, with potential to release fibres.
- 7-9 – Medium risk.
- 5-6 – Low Risk.
- <5 – Very Low Risk.

The appropriate Material Assessment Score is recorded in the Asbestos Register. The factors indicated with an asterisk above, i.e. Extent of Damage and Surface Treatment should be regularly reviewed and if necessary the total score adjusted accordingly.

Priority Assessment .

The Material Assessment merely assesses the material without reference to other factors such as accessibility, vulnerability, likelihood of disturbance and the number of people that may be at risk. These additional factors must be taken into account when determining the priority rating for Management and Control Actions. This is referred to as “Priority Assessment”. The Priority Assessment is undertaken by the building user or Facilities Manager as they are best placed to make these judgements, (perhaps with the assistance of the surveyor). It will also be necessary to regularly review the Priority Assessment to monitor changes in work practices, condition of materials etc.

There are four headings under which the Priority Assessment factors can be grouped.

1. Normal Occupant Activity.

- (a) Main Type of Activity – i.e. Rare disturbance activity to regular disturbance activity.
Score 0 to 3.
- (b) Secondary Activity – i.e. Rare disturbance activity to regular disturbance activity.
Score 0 to 3.

2. Likelihood of Disturbance

- (a) Location – i.e. From outdoors to confined space.
Score 0 to 3.
- (b) Accessibility – i.e. Usually inaccessible (e.g. ceiling void) to regularly disturbed (e.g. Access hatch cover).
Score 0 to 3.

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- (c) Quantity – i.e. From small / insignificant (e.g. string gaskets) to large quantity (e.g. >30m or >50m²).
Score 0 to 3.

3 Human Exposure Potential

- (a) Number of occupants – i.e. Nil to >10.
Score 0 to 3
- (b) Frequency of Use – i.e. Infrequent to daily.
Score 0 to 3.
- (c) Average time in use – i.e. <1 hour to > 6 hours.
Score 0 to 3.

4 Maintenance Activities

- (a) Type of activity – i.e. Minor, (e.g. Physical contact only), to high level of disturbance (e.g. removing ceiling tiles).
Score 0 to 3.
- (b) Frequency of Activity – i.e. Unlikely to > 1 per month.
Score 0 to 3.

The total Priority Assessment score is recorded in the Asbestos Register. However as stated earlier these should be reviewed regularly.

By reference to both the Material Assessment and the Priority Assessment the Building or Facilities Manager should determine the most appropriate “Management and Control Actions”. The Survey Report and the Asbestos Register may offer recommendations for Control Actions based on the limited information available during the survey.

The Employer, Building or Facilities Manager may also wish to take account of other factors which may influence the choice or timescale of control actions; for example.

- Age of Occupants. (Young children are more at risk).
- Public Relations.
- Planned Refurbishment Works.

MANAGING ASBESTOS (Regulation 4 CAWR)

Managing the Risk means making sure that, as far as is reasonably practicable, no-one can come to any harm from asbestos on the premises.

Where asbestos containing materials have been identified and Material and Priority Assessments have been determined it will be necessary to implement an Asbestos Management Plan. This will entail “Management Actions” and “Control Actions”.

It is a statutory requirement for employers to have an Asbestos Management Plan to control the risk and this should be in writing.

Management Actions may include the following elements.

- Maintain and update the Asbestos Register.
- Monitor the condition of all ACM’s or suspect materials.
- Restrict access.
- Affix warning labels.
- Inform all those likely to come into contact with or otherwise be affected by the presence of ACM’s, including the emergency services..
- Train personnel particularly relating to asbestos awareness.
- Specify safe systems of work.
- Operate a Permit to Work System.

(Some or all of the above may be a statutory requirement).

Control Actions may include one or more of the following.

- Clean up debris
- Repair damage
- Encapsulate
- Enclose
- Remove
- All followed by Certificate of Re-occupation if necessary

Whilst control actions may have been recommended at time of survey the Building or Facilities Manager must implement the Management Actions and periodically review both the Material and Priority Assessments and implement any Control Actions required.

Asbestos Containing Materials should always be removed prior to the commencement of major refurbishment or demolition works

After any ACM is removed the Register should be updated accordingly.

LEGISLATION

The following List includes Legislation, Regulations, Codes of practice and Guidance Notes relating directly or indirectly to asbestos. (Current issues should always be used)

Legislation

THE HEALTH AND SAFETY AT WORK ETC. ACT 1974

- Asbestos (Licensing) Regulations
- Control of asbestos at Work Regulations.
- Control of asbestos in the Air Regulations.
- Construction (Design and Management) Regulations
- Reporting of Injuries, Diseases and Dangerous Occurrence Regulations.
- Management of Health and Safety at Work Regulations.
- Workplace (Health, Safety and welfare) Regulations.
- Personal Protective Equipment at Work Regulations.
- Provision and Use of Work equipment Regulations.
- Carriage of Dangerous Goods (Classification, Packaging and Labelling) and Use of Transportable pressure Receptacles Regulations.
- Carriage of Dangerous Goods by Road Regulations.
- Carriage of Dangerous Goods by Rail Regulations.
- Asbestos (Prohibitions) Regulations.
- The Health and safety (Emissions into the Atmosphere) Regulation.
- Control of Substances hazardous to Health Regulations.

CONTROL OF POLLUTION ACT

- Special Waste Regulations.

ENVIRONMENTAL PROTECTION ACT

- Environmental Protection (Duty of Care) Regulations.
- Waste Management Licensing Regulations.
- Controlled Waste Regulations.
- Controlled Waste Regulations of Carriers and Seizure of Vehicles Regulations.

APPROVED CODES OF PRACTICE

- The management of asbestos in non-domestic premises (L127)
- Work with asbestos which does not normally require a licence (L27)
- Work with asbestos insulation, asbestos coating and asbestos insulation board (L28)
- A Guide to the Asbestos (Licensing) Regulations.
- Waste Management. The Duty of Care. A code of Practice.
- Respiratory Protective Equipment, a practical guide for users.
- Respiratory Protective Equipment, Legislative requirements and lists of HSE approved standards and type approved equipment.
- Selecting respiratory protective equipment for work with asbestos, INDG264

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HEALTH AND SAFETY EXECUTIVE GUIDANCE NOTES

ENVIRONMENTAL HYGIENE SERIES

- EH 10: Asbestos exposure limits and measurement of airborne dust concentrations.
- EH47: The provision, use and maintenance of hygiene facilities for work with asbestos insulation and coatings.
- EH50: Training operatives and supervisors for work with asbestos insulation and coatings.
- EH51: Enclosures provided for work with asbestos insulation, coatings and insulation board.
- EH57: The problems of asbestos removal at high temperatures .

METHODS FOR DETERMINATION OF HAZARDOUS SUBSTANCES SERIES

- HSG 264 Asbestos: The Survey Guide.
- MDHS 39/4: Asbestos fibres in air, sampling and evaluation by Phase Contrast Microscopy (PCM) under the Control of Asbestos at Work Regulations.
- MDHS 77: Asbestos in bulk materials, sampling and identification by polarised light microscopy (PLM).

HEALTH & SAFETY GUIDANCE SERIES

- HSG 227: Managing Asbestos in Premises.
- HSG 189/1: Controlled asbestos stripping techniques for work requiring a licence.
- HSG 189/2 : Working with asbestos cement.
- HSG 53: The selection use and maintenance of respiratory protective equipment.
- HSG150: Health & Safety in the Construction Industry.
- INDG223: Managing Asbestos in Work Place Buildings.