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## **DRAFT TECHNICAL REPORT P3335**

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### **EXTERNAL ROOF BURNSIDE POULTRY UNIT**

### **LITTLE CLINTERTY FARM BLACKBURN**

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### **TYPE 2 SURVEY FOR THE PRESENCE OF ASBESTOS BASED MATERIALS**

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*Prepared For*

**Mr. Graham Buchan  
328 Morrison Drive**

**ABERDEEN**

**AB10 7EN**

*Prepared By*

**Ethos Environmental Ltd**

**Lauries House  
Altens Lorry Park  
Hareness Road  
ABERDEEN  
AB12 3LE**

**Tel: 01224 898189**

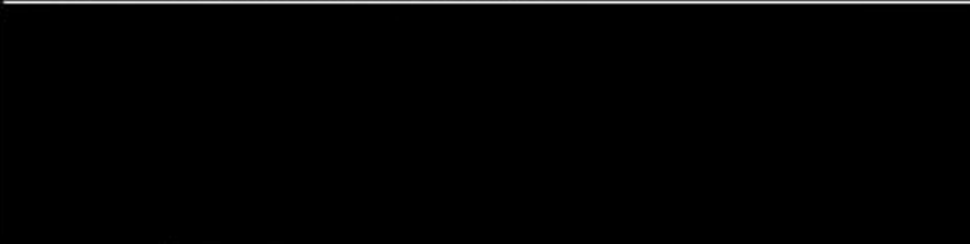

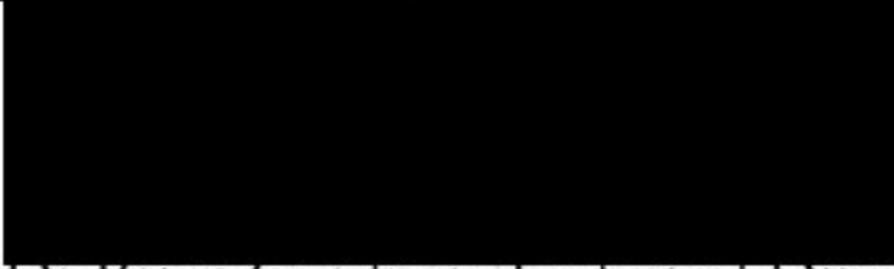
**Fax: 01224 875697**

**E-mail: [kploeger@ask-ethos.co.uk](mailto:kploeger@ask-ethos.co.uk)**

**Web site: [www.ask-ethos.co.uk](http://www.ask-ethos.co.uk)**

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Please note that the UKAS Accreditation marks on the front cover of this report refer only to services for building surveying and sampling of the suspected asbestos bulk materials. This includes the recommendations detailed herein. It should be noted that the Risk Assessment Algorithm used in this survey is out with the scope of Ethos Environmental Ltd's inspection body accreditation.

<b>Technical Report Ref:</b>	P3335
<b>Report Type:</b>	Asbestos Inspection Survey
<b>Premises Surveyed and Address:</b>	Burnside Poultry Unit Little Clinterty Farm Blackburn
<b>Report Status</b>	Draft report
<b>Report Version</b>	1.0
<b>Client Organisation:</b>	Graham Buchan
<b>Client Contact Name:</b>	Graham Buchan
<b>Survey Date</b>	5 <sup>th</sup> November 2007
<b>Report Issue Date:</b>	17 <sup>th</sup> December 2007
<b>Report Author (Signature, name &amp; title):</b>	 Kitty Ploeger, Consultant
<b>Report Reviewer (Signature, name &amp; title):</b>	 Katherine Horsell, Consultant
<b>Technical Director (Signature, name &amp; title):</b>	 Dr Brian Gardner, Technical Director
<b>Ethos Office Address:</b>	Ethos Environmental Lauries House Altens Lorry Park Hareness Road Aberdeen AB12 3LE

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## 1.0 INTRODUCTION

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At the request of Mr Graham Buchan, Proprietor of Burnside Poultry Unit, Little Clinterty Farm, Blackburn an inspection of the buildings' asbestos cement roof has been undertaken at the following premises:

Burnside Poultry Unit  
Little Clinterty Farm  
Blackburn

The scope of the exercise was to establish the condition of the asbestos containing cement roof. The roof has been inspected with a boom lift (cherry picker) to establish the condition of the roof panels in 24 separate areas.

The client did not provide plans of the site. Surveyor derived plans are included in Appendix A4.

The survey was carried out by: Ms. Kitty Ploeger (Lead surveyor) and Ms Katherine Horsell (Assistant Surveyor) of Ethos Environmental Ltd, on the 5<sup>th</sup> November 2007.

## 2.0 USE OF THIS REPORT

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2.1 This report should be read in its entirety, including all sections, appendices, certification, plans and photographs (where applicable).

2.2 There are a significant number of report caveats, qualifications and service constraints relating to:

- Client instructions/brief
- Client information provided
- Scope of the survey
- The method of work for Type 2 asbestos building surveying
- Representative surveying and sampling strategies
- Client intentions for the building

These are necessarily associated with asbestos building surveying, and are required under our UKAS accreditation and/or professional indemnity insurance cover.

2.3 The client should satisfy themselves as to the adequacy of this survey report within the caveats and exemptions detailed at appendix 2, and the following items.

2.4 The specific areas detailed below could not be accessed for the reasons given, and therefore no conclusion can be drawn with regard to the likely presence or absence of asbestos in these areas, and it should be assumed that ACMs may be present in each area. If any doubt exists as to description of areas or room elements the client should contact the company at the earliest opportunity:

- **The remainder of the building has not been surveyed for asbestos containing materials.**

2.5 The client should satisfy themselves that they have provided - in advance of the survey - the surveying organisation with all information available in terms of previous surveys, history of the building, previous asbestos removal details, site and layout plans and details of hidden voids, solums, hidden access hatches/points etc

2.6 The client's attention is drawn specifically to the distinctions between type 1, 2 and 3 building surveys as discussed in appendix 2. Specifically it is stressed that a type 2 survey should not be relied upon to confirm the presence/absence of asbestos in buildings prior to refurbishment, demolition or any works liable to disturb non-surface elements of the building fabric as these may not have been included within the scope of a type 2 survey. Where such work is proposed, a type 3 survey is required.

2.7 It should not be assumed that Ethos Environmental Ltd is party to full information relating to the client's intentions for the building at the time of the survey commission or completion. Ethos Environmental Ltd understands that the client's requirements/project intentions are as follows: The creation of an asbestos register and management plan.

2.8 The client should satisfy themselves that the scope and extent of the survey reported here addresses all parts of any proposed scope of works which may cause disturbance. It is also stressed that the responsibility of the surveying organisation extends to the undertaking (and demonstrating of same) that reasonable steps have been taken to carry out a full and comprehensive survey in accordance with the survey type (e.g. 1, 2 or 3) specified.

2.9 The client should review the material risk assessment (see appendix 1) prepared for each ACM identified in light of their understanding of the nature of the building and its use by occupants and satisfy themselves that the risks presented by ACMs on-site are adequately risk-assessed.

### 3.0 SURVEY FINDINGS

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#### 3.1 General Building/Site Description

The building is a single storey; brick built building, with a corrugated asbestos cement roof. The internals of the building consist mainly of brick and plasterboard walls. The ceilings are clad internally with chipboard wood panels. Doors and window frames are wooden and the floor is concrete.

#### 3.2 Summary of Asbestos-containing materials (ACMs)

The main survey findings are summarised in Table 1 below. Refer to Table 2 for a summary of the asbestos presence for each individual room. The criteria for assuming an item contains asbestos is detailed in Appendix 1 (section A1.1)

**Table 1. Main Areas/Building Elements containing asbestos**

Area/Element <sup>1</sup>	Description and Surveyor Criteria
External – Roof material	The panels on the roof were found to contain <b>Chrysotile</b> (white asbestos). The material was unsealed, in fair to poor condition and in an area of low occupancy at the present time
External – Debris surrounding the shed	Debris within the soil surrounding the building was found to contain <b>Chrysotile</b> (white asbestos). The material was unsealed, in poor condition and in an area of low occupancy at the present time. The density of this material indicates that the material can be classed as Asbestos Insulating Board (AIB).

Note 1: Area descriptions are surveyor derived

### 3.3 All areas surveyed

Table 2 details all areas of the building within the scope of the survey. Please refer to the plan in appendix A4 for room locations. Section 2.4 summarises the areas not accessed, along with reasons for lack of access.

**Table 2. Summary of asbestos-containing materials in each area**

Area <sup>1</sup>	Asbestos present in area? <sup>2</sup>	ACM Description
<b>External</b>		
Section 1	Yes	3/ This material can be classed as asbestos containing cement material <b>(AC)</b> . (cert A13761, sample 47139)
Section 2	Yes	4/ This material can be classed as asbestos containing cement material <b>(AC)</b> . (cert A13761, sample 47140)
Section 3	Yes	2/ This material can be classed as asbestos containing cement material <b>(AC)</b> . (cert A13761, sample 47138)
Section 4	Yes	1/ This material can be classed as asbestos containing cement material <b>(AC)</b> . (cert A13761, sample 47137)
Section 5	Yes	5/ This material can be classed as Asbestos Insulating Board material <b>(AIB)</b> . (cert A13761, sample 47141)
Section 6	Yes	6/ This material can be classed as asbestos containing cement material <b>(AC)</b> . (cert A13761, sample 47142)
Section 7	<i>Presumed</i>	<i>As 1/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47137)</i>
Section 8	<i>Presumed</i>	<i>As 1/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47137)</i>
Section 9	Yes	7/ This material can be classed as Asbestos Insulating Board material <b>(AIB)</b> . (cert A13761, sample 47143)
Section 10	Yes	9/ This material can be classed as asbestos containing cement material <b>(AC)</b> . (cert A13761, sample 47145)
Section 11	<i>Presumed</i>	<i>As 1/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47137)</i>
Section 12	Yes	8/ This material can be classed as asbestos containing cement material <b>(AC)</b> . (cert A13761, sample 47144)
Section 13	<i>Presumed</i>	<i>As 1/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47137)</i>
Section 14	<i>Presumed</i>	<i>As 1/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47137)</i>
Section 15	Yes	10/ This material can be classed as asbestos containing cement material <b>(AC)</b> . (cert A13761, sample 47146)
Section 16	<i>Presumed</i>	<i>As 7/ This material can be classed as Asbestos Insulating Board material (AIB). Presumed as (cert A13761, sample 47143)</i>

Note 1: Area descriptions are surveyor derived

Note 2: Type 2 survey method (MDHS100)

Continue. /Table 2. Summary of asbestos-containing materials in each area

Area <sup>1</sup>	Asbestos present in area? <sup>2</sup>	ACM Description
<b>External</b>		
Section 17	<i>Presumed</i>	<i>As 7/ This material can be classed as Asbestos Insulating Board material (AIB). Presumed as (cert A13761, sample 47143)</i>
Section 18	<i>Presumed</i>	<i>As 10/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47146)</i>
Section 19	<i>Presumed</i>	<i>As 7/ This material can be classed as Asbestos Insulating Board material (AIB). Presumed as (cert A13761, sample 47143)</i>
Section 20	Yes	11/ This material can be classed as asbestos containing cement material (AC). (cert A13761, sample 47147)
Section 21	<i>Presumed</i>	<i>As 11/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47147)</i>
Section 22	<i>Presumed</i>	<i>As 11/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47147)</i>
Section 23	<i>Presumed</i>	<i>As 11/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47147)</i>
Section 24	<i>Presumed</i>	<i>As 11/ This material can be classed as asbestos containing cement material (AC). Presumed as (cert A13761, sample 47147)</i>
Surrounding area	Yes	12/ This material can be classed as Asbestos Insulating Board material (AIB). (cert A13761, sample 47201)

Note 1: Area descriptions are surveyor derived

Note 2: Type 2 survey method (MDHS100)



**Table 4. Condition of the material**

Description of item & location <sup>1</sup>	Condition of the material
<b>Section 1</b>	60% of the material is in poor condition with visible layering and cracks in the sheets. 40% is in fair to medium condition with layering of the sheets
<b>Section 2</b>	50% of the material is in poor condition with visible layering and cracks in the sheets. 50% is in fair to medium condition with layering of the sheets.
<b>Section 3</b>	10% of the material is in poor condition with visible layering and cracks in the sheets. 90% is in fair to medium condition with layering of the sheets.
<b>Section 4</b>	100% of the material is in fair to medium condition with layering of the sheets.
<b>Section 5 Asbestos Insulating Board</b>	50% of this section has been replaced with new corrugated sheets. 50% of the material is in fair to medium condition with layering of the sheets.
<b>Section 6</b>	100% of the material is in poor condition with visible layering and cracks in the sheets.
<b>Section 7</b>	90% of this section has been replaced with new corrugated sheets. 10% of the material is in fair to medium condition.
<b>Section 8</b>	90% of this section has been replaced with new corrugated sheets. 10% of the material is in fair to medium condition.
<b>Section 9 Asbestos Insulating Board</b>	100% of the material is in poor condition with visible layering and cracks in the sheets.
<b>Section 10</b>	100% of the material is in fair to medium condition with layering of the sheets.
<b>Section 11</b>	90% of this section has been replaced with new corrugated sheets. 10% of the material is in fair to medium condition.
<b>Section 12</b>	100% of the material is in poor condition with visible layering and cracks in the material.
<b>Section 13</b>	100% of the material is in fair to medium condition with layering of the sheets.
<b>Section 14</b>	100% of the material is in fair to medium condition with layering of the sheets.
<b>Section 15</b>	100% of the material is in poor condition with visible layering and cracks in the material.
<b>Section 16</b>	100% of the material is in poor condition with visible layering and cracks in the material.
<b>Section 17</b>	20% of the material is in poor condition with visible layering and cracks in the material. 80% of the material is in fair to medium condition.
<b>Section 18</b>	100% of the material is in poor condition with visible layering and cracks in the material.
<b>Section 19</b>	100% of the material is in poor condition with visible layering and cracks in the material.

Note 1: Area descriptions are surveyor derived

Note 2: Type 2 survey method (MDHS100)

Cont. / Table 4. Condition of the material

Description of item & location <sup>1</sup>	Condition of the material
<b>Section 20</b>	60% of the material is in poor condition with visible layering and cracks in the material. 40% of the material is in fair to medium condition.
<b>Section 21</b>	60% of the material is in poor condition with visible layering and cracks in the material. 40% of the material is in fair to medium condition.
<b>Section 22</b>	60% of the material is in poor condition with visible layering and cracks in the material. 40% of the material is in fair to medium condition.
<b>Section 23</b>	60% of the material is in poor condition with visible layering and cracks in the material. 40% of the material is in fair to medium condition.
<b>Section 24</b>	60% of the material is in poor condition with visible layering and cracks in the material. 40% of the material is in fair to medium condition.

Note 1: Area descriptions are surveyor derived

Note 2: Type 2 survey method (MDHS100)

## 4.0 RISK MANAGEMENT

Table 5 (below) summarises the risk management requirements and recommendations.

**Table 5. Risk Management**

Description of item & location <sup>1</sup>	Comment
<p>Surrounding Area</p> <p><b>Debris in soil</b></p>	<p>Asbestos debris was found within the soil surrounding the building. This material is classed as Asbestos Insulating Board (AIB) and shows visible asbestos fibres.</p> <p>This material poses a <b>medium-high</b> risk with regards to the release of fibres to any occupants working within the area. (risk rating 64)</p> <p>It is strongly recommended that this asbestos containing material is removed from the area in the short term <b>(3 months)</b>. To remove the material, 5-6 inches of top soil should be removed reaching 2-3 feet away from the building. After 3 feet, fractions of asbestos cement debris can be lifted and disposed of as asbestos containing material.</p> <p><b>Work on this type of material will invoke the <i>Asbestos Licensing Regulations</i> and requires the use of a licensed asbestos removal contractor working in accordance with the <i>Control of Asbestos Regulations 2006</i>.</b></p> <p>It should be noted that this material must be treated as asbestos containing waste.</p>
<p><b>Poor condition material</b> (layering and cracks are present within the panels, visible asbestos fibres are present)</p>	<p>This material poses a <b>medium</b> risk with regards to the release of fibres to any occupants working within the area. (risk rating 52)</p> <p>In section 5 and section 9 this material was found to be Asbestos Insulating Board (AIB). It should be presumed that the material in poor condition is classed as AIB material. It is strongly recommended that these asbestos containing materials are removed from the area in the short term <b>(3-6 months)</b>.</p> <p><b>Work on this type of material will invoke the <i>Asbestos Licensing Regulations</i> and requires the use of a licensed asbestos removal contractor working in accordance with the <i>Control of Asbestos Regulations 2006</i>.</b></p> <p>It should be noted that this material must be treated as asbestos containing waste.</p>

Note 1: Area descriptions are surveyor derived

Note 2: Type 2 survey method (MDHS100)

**Table 5. Risk Management**

Description of item & location <sup>1</sup>	Comment
<p><b>Fair to medium condition material</b> (layering is present within the panels, visible asbestos fibres are present)</p>	<p>This material poses a <b>medium</b> risk with regards to the release of fibres to any occupants working within the area. (risk rating 48)</p> <p>The material can be classed as asbestos cement. It should be presumed that the material in fair to medium condition is classed as asbestos cement material. It is strongly recommended that these asbestos containing materials are removed from the area in the short to medium term <b>(6-12 months)</b>.</p> <p>Work on this type of material will not invoke the <i>Asbestos Licensing Regulations</i> and does not require the use of a licensed asbestos removal contractor. However the individuals working with this type of material should be suitably trained to work with asbestos and work in accordance with the <i>Control of Asbestos Regulations 2006</i>.</p> <p>It should be noted that this material must be treated as asbestos containing waste.</p>

Note 1: Area descriptions are surveyor derived

Note 2: Type 2 survey method (MDHS100)

#### 4.1 General Advice

The extent of defective (AIB) roof panels can only be established if each individual panel is sampled and analysed. Therefore the information collected is based on the surveyors' experience and presumptions. The roof is generally in fair to poor condition. The protective layer has been washed off and visible asbestos fibres are present. The cement sheets in place will continue to absorb water and disintegrate.

The roof material on section 5 and section 9 are classed as Asbestos Insulating Board (AIB), which in wet weather conditions will further disintegrate and is likely to cause further water damage to the internal structure of the building. It is strongly recommended that these panels are replaced at the soonest possible opportunity.

All panels that were found in fair and poor condition show visible asbestos fibres. In wet weather conditions it is likely that asbestos fibres will be released from the materials matrix.

The roof sheets that are classed as fair condition material are starting to disintegrate (i.e. layering) and will need to be replaced in the near future.

## APPENDIX A1. METHODOLOGY

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### A1.1 Surveying

An in-house UKAS-accredited method in accordance with HSE Guidance Note MDHS 100 was used. In each instance the conclusion as to asbestos presence/absence may be based on:

- Specific sampling  
Sampling of the actual item/element in the area indicated, confirming that asbestos is/is not present
- General sampling  
Sampling of a visually identical item in another area of the same building confirming that asbestos is/is not present
- Strong** presumption of asbestos presence  
In the absence of sampling, visual inspection indicating that the surveyor is confident that the item does contain asbestos
- Presumption of asbestos presence  
In the absence of sampling, visual inspection indicating that the surveyor cannot assume that the material does not contain asbestos, i.e. that the item should be assumed to contain asbestos
- Presumption of asbestos absence  
In the absence of sampling, visual inspection of certain obvious materials - which have never been known to contain asbestos [e.g. brick, glass, wood] - indicating that the surveyor can assume that the material does not contain asbestos.

### A1.2 Sampling

Where sampling has been used, this has been by means of an in-house UKAS-accredited method in accordance with HSE Guidance Notes MDHS 100 and HSG248.

### A1.3 Analysis

All analysis was undertaken by in-house UKAS-accredited method in accordance with HSE Guidance Note HSG248

#### **A1.4 Risk Assessment**

A risk assessment is undertaken on all ACMs identified. This risk assessment is a material risk assessment only, undertaken in accordance with MDHS100. The assessment relates only to the risk presented by the material in-situ: no allowance is made for other factors which the client is assumed to have a clearer knowledge of, and which may significantly change the risk, such as occupancy of room/area where ACM is present (numbers of persons and duration), likelihood that the ACM will be disturbed, and nature of any such disturbance.

The client is therefore advised to review the material risk assessment conclusions in light of their understanding of the nature of the building and its use by occupants.

#### A1.4.1 Material Risk Assessment Scoring System

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

The risk assessment score for each of the four factors is added up. The lowest score possible is 2, the highest is 12.

#### A1.4.2 Priority Assessment Parameters

Assessment Parameter	Score	Examples of Score Variables
<b>Normal Occupant Activity</b>		
Main Type of Activity	0	Rare disturbance (e.g. infrequently used storeroom)
	1	Low disturbance activities (e.g. office type activity)
	2	Periodic disturbance (e.g. industrial or vehicular activity which may contact ACMs)
	3	High levels of disturbance (e.g. fire door with an AIB sheet in constant use)
Secondary Activity	0	Rare disturbance (e.g. infrequently used storeroom)
	1	Low disturbance activities (e.g. office type activity)
	2	Periodic disturbance (e.g. industrial or vehicular activity which may contact ACMs)
	3	High levels of disturbance (e.g. fire door with an AIB sheet in constant use)
<b>Likelihood of Disturbance</b>		
Location	0	Outdoors
	1	Large rooms or well ventilated areas
	2	Rooms up to 100m <sup>2</sup>
	3	Confined spaces
Accessibility	0	Usually inaccessible or unlikely to be disturbed
	1	Occasionally likely to be disturbed
	2	Easily disturbed
	3	Routinely disturbed
Extent Amount	0	Small amounts or items (e.g. strings or gaskets)
	1	> 10 m <sup>2</sup> of material or 10 m pipe run
	2	> 10 ≤ 50 m <sup>2</sup> or > 10 ≤ 50 m pipe run
	3	> 50 m <sup>2</sup> or > 50m pipe run
<b>Human Exposure Potential</b>		
Number of Occupants	0	None
	1	1 - 3
	2	4 - 10
	3	> 10
Frequency of Use	0	Infrequent
	1	Monthly
	2	Weekly
	3	Daily
Average Time Each Use	0	< 1 hour
	1	> 1 - < 3 hours
	2	> 3 - < 6 hours
	3	> 6 hours



**Continued. /**

Assessment Parameter	Score	Examples of Score Variables
<b>Maintenance Activities</b>		
Type of Maintenance Activity	0	Minor disturbance (possible contact when gaining access)
	1	Low disturbance (e.g. changing light bulbs in AIB ceiling)
	2	Medium disturbance (e.g. lifting one or two AIB ceiling tiles to access a valve)
	3	High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for re-cabling)
Frequency of Maintenance	0	ACM unlikely to be disturbed for maintenance
	1	≤ 1 per year
	2	> 1 per year
	3	> 1 per month

### **A1.4.3 Condition Classifications**

The conditions of any asbestos-containing materials identified in the survey are classified as follows:

#### **Good**

The asbestos-based material is in sound condition and shows no signs of deterioration.

#### **Fair**

The asbestos based material, although sound is (a) sealed but showing slight signs of surface deterioration such as hairline cracks, water stains and minor blemishes; or (b), is unsealed but in otherwise good condition.

#### **Poor**

The asbestos based material is badly water stained; broken, badly cracked or fibrous materials are exposed.

### **A1.4.4 Priority Factors**

In addition to assessment of material condition, the locations of suspect asbestos materials relative to personnel, and parameters likely to influence deterioration were taken into account when assessing the risk of exposure and providing recommendation options. An additional factor is the likelihood of further damage (accidental or otherwise).

On the basis of material condition and priority classifications, the exposure risks presented by the asbestos-containing materials are categorised as detailed below:

#### **High Risk (75 to 100)**

Materials in this category may be in poor condition and present a strong potential to expose personnel to airborne asbestos fibres. This material type should be dealt with in the short term, i.e. typically less than 3 months. In the shorter term, access to areas containing these materials should be restricted and tasks which might disturb such materials should only be carried out under controlled conditions. Remedial action will normally entail removal of material classed in this manner.

No areas were found which required access to be restricted in the short-term. If this is not reasonably practicable, such materials remaining should be inspected for deterioration on a 3-monthly basis.

#### **Medium-High Risk (60-74)**

These materials may be in poor condition although the human exposure potential is lower, i.e. less people occupy the area for less time. The material should be dealt with in the short term, i.e. typically 3 months. Access to the area may need to be restricted.

### **Medium Risk (35 - 59)**

Suspect asbestos-based materials classed in this category are in fair condition and will not normally present a significant risk of exposing personnel to airborne asbestos fibres. However, the material may deteriorate over a period of time or may be located in a position where impact damage may occur. These materials should be dealt with in the medium term (3 - 6 months). Remedial action could involve removal, or encapsulation works with subsequent regular inspection of condition. Medium risk materials remaining should be inspected for deterioration on a biannual basis.

### **Low-medium risk (20-34)**

These materials may be in good to fair condition although the human exposure potential may be a little higher than the low risk material, i.e. more people occupy the area for more time although the condition of the material is good. The material should be dealt with within 6-12 months.

### **Low Risk (0 - 19)**

These materials are in good condition and do not present any significant risks, with regard to airborne asbestos fibre exposure. It will not be necessary to remove or seal these materials. However, the condition of the material should be inspected for deterioration and damage.

Low risk materials remaining should be inspected for deterioration every year.

## Risk Assessment Algorithm Raw Data

Sample Number/Material	Material Assessment				Occupant Activity		Likelihood of Disturbance			Human Exposure Potential			Maintenance Activity		Total Risk Rating (out of 40)	% Rating
	Product Type	Extent of damage	Surface Treatment	Asbestos Type	Normal Occupant Activity	Secondary Occupant Activity	Location	Accessibility	Extent	No. of Occupants	Freq. of Use	Average Time Each Use	Type	Frequency		
<b>FAIR</b>	1	3	1	1	1	2	0	2	3	1	3	1	1	0	<b>20</b>	<b>48</b>
<b>POOR</b>	2	3	2	1	1	2	0	2	3	1	3	1	1	0	<b>22</b>	<b>52</b>
<b>DEBRIS</b>	2	3	2	1	2	3	0	2	3	1	3	1	2	2	<b>27</b>	<b>64</b>

**APPENDIX A2. SURVEY SCOPE, QUALIFICATIONS AND SERVICE CONSTRAINTS**

**A2.1 Type 2 Survey Scope**

A2.1.1 It should not be assumed that Ethos Environmental Ltd is party to full information relating to the client’s intentions for the building at the time of the survey commission or completion.

A2.1.2 The client should satisfy themselves that they have provided - in advance of the survey - the surveying organisation with all information available in terms of previous surveys, history of the building, previous asbestos removal details, site and layout plans and details of hidden voids, solums, hidden access hatches/points etc.

A2.1.3 The client’s attention is drawn specifically to the distinctions between type 1, 2 and 3 building surveys:

Survey Type	Survey scope	Method?	Requirement	Risk Algorithm
<b>Type 1</b>	Survey of all areas of the building excluding building elements, voids etc. hidden within/behind other building fabric. Only appropriate where a Type 2 (sampling) survey is not possible for specific reasons.	Survey based on surveyor inspection & presumptions: no sampling permitted	Regulation 4 of Control of Asbestos Regulations 2006	Yes
<b>Type 2</b>	Survey of all areas of the building excluding building elements, voids etc. hidden within/behind other building fabric.	Survey based on surveyor inspection & presumptions, <u>and</u> sampling	Regulation 4 of Control of Asbestos Regulations 2006	Yes
<b>Type 3</b>	Survey of all areas of the building including building elements, voids etc. hidden within/behind other building fabric. Appropriate for buildings due for demolition or refurbishment or other works liable to disturb the building fabric	Survey based on surveyor inspection & presumptions, intrusions/penetrations and sampling	Control of Asbestos Regulations 2006	No

A2.1.4 A Type 2 survey involves assessing all visible surfaces of the building fabric and all readily accessible elements. Specifically it is stressed that a type 2 survey should not be relied upon to confirm the presence/absence of asbestos in buildings prior to refurbishment, demolition or any works liable to disturb non-surface elements of the building fabric as these items may not have been included within the scope of a type 2 survey. Where such work is proposed, a type 3 survey is required.

A2.1.5 A Type 2 asbestos survey scope does not permit intrusions within elements (eg behind walls, under floorboards) of the building fabric.

A2.1.6 Surveys are necessarily representative. Given the ways in which asbestos materials were utilised in buildings, a full and comprehensive Type 2 survey cannot warrant that all the locations of asbestos in a building have been identified. As such, it is prudent where major building disturbance works are proposed that a Type 3 survey is commissioned, and that site health and safety management arrangements includes for emergency procedures in the event of suspect asbestos materials being uncovered during demolition.

A2.1.7 The client should satisfy themselves that the scope and extent of the survey reported here meets their requirements. It is also stressed that the responsibility of the surveying organisation extends to the undertaking (and demonstrating of same) that reasonable steps have been taken to carry out a full and comprehensive survey.

A2.1.8 Whilst great care has been taken to ensure that all ACMs have been located and identified, no survey can guarantee that all asbestos present in an area has been uncovered. The following specific caveats and qualifications are required under the company's professional indemnity cover and should be taken into consideration when interpreting the findings of this report:

- Lift shafts, plant room equipment or similar which would require the attendance of a specialist engineer have not been accessed.
- Electrical switchgear has not been opened.
- Access cannot be gained to areas (eg ceiling voids) with access hatches (or similar) at height above ground more than 3.0 m unless the client can provide a safe means of access.
- Surface materials which are presumed to contain asbestos (eg asbestos insulation boarding) will not be disturbed in order to access areas behind (eg behind asbestos insulation wall boarding, above asbestos ceiling tiles). Such areas may therefore have to be assumed to contain asbestos or be separately surveyed.
- Areas such as ceiling voids will receive a limited inspection from the access point from ladders to 1.5m working height but will not be accessed unless the client can provide assurance as to the safety of the flooring in the area, either prior to the survey or on-site.
- Internal elements at height greater than 5.0m above ground will not normally be accessible for sampling unless the client was requested in advance by the company to provide details of such areas on-site and either was not able to, or indicated erroneously (in either instance this facility will not have been priced for at the proposal stage for provision by Ethos), and is otherwise not able to provide a safe working facility for this on-site for our surveyor with minimal time delay on-site.
- External elements at height greater than 4.0m above ground will not normally be accessible for sampling unless the client was requested in advance by the company to provide details of such areas on-site and either was not able to, or indicated erroneously (in either instance this facility will not have been priced for at the proposal stage for provision by Ethos), and is otherwise not able to provide a safe working facility for this on-site for our surveyor with minimal time delay on-site.
- Concealed spaces that may exist within the fabric of the premises, where the extent of these is not evident due to inaccessibility or insufficient knowledge of the structure at the time of the survey, have not been reported on.
- No responsibility is accepted for the presence of asbestos containing materials in voids (under-floor, wall, ceiling, or roof) other than those opened during the survey. Ethos Environmental Ltd is not responsible for accessing such areas if the location of the access hatch/door etc is not reasonably visible, or has not been indicated to the surveyor by the client in advance of the survey.
- Sampling and/or intrusive penetrations have not been taken where the act of sampling would endanger the Surveyor.
- Sampling and/or intrusive penetrations have not been taken where the act of sampling would affect the functional integrity of the item concerned, e.g fuses within electrical distribution switch gear, certain gaskets, fire doors, anti-vibration gaiters etc.

- A limited inspection only has been carried out on pipe work concealed by overlying non-asbestos insulation. Inspection of pipe work has been restricted primarily to the insulation visible. The presence of underlying debris on pipe work, which is not readily visible or would require the removal and replacement of overlying non-asbestos insulation, has been considered outwith the scope of this survey.
- Samples were taken only where deemed necessary. Where a suspected material appeared to be repeatedly used within an area (e.g. insulation boards, sprayed insulation, asbestos cement products), a representative number of samples only will have been collected in most situations.
- Samples have not been taken where specifically prohibited or prevented by the Client, occupant or their representative.
- Any quantities stated within this survey report are based upon our Surveyors' estimates and should not be used for contractual purposes.
- Contamination of other nearby surfaces which may have occurred during application or removal of asbestos - such that the original ACM is effectively removed - may not be detected during the survey.
- The use of asbestos in rawl plugs (used prior to plastic) the location of which is hidden by a wall coating is extremely difficult to identify and may not be confirmed by any survey type (1, 2 or 3).
- Electrical fuse boxes may contain asbestos. These are not normally accessed as part of the survey, unless the client can certify it is isolated in person during the on-site survey.
- Fire doors may contain a layer of asbestos materials. The presence of this is difficult to confirm without causing significant damage. Sampling is not normally undertaken in these circumstances, unless the client specifically requests this in advance.
- Items of plant and equipment will not be accessed unless the client can certify that they are isolated during the on-site survey. Even then, intrusive investigations are limited unless the client has specifically indicated that the item is redundant and damage is acceptable.
- Textured coatings are highly inhomogeneous and may vary significantly with regard to their asbestos composition/absence. As such it is prudent to assume for buildings constructed before about 1985 that these materials contain asbestos, or to tailor the sampling strategy specifically to the immediate location of any proposed disturbance activities (where the client feels they have a good understanding of the location of these activities).

## **A2.2 General Service Constraints**

A2.2.1 This report and the survey carried out in connection with the report (together the “Services”) were undertaken by Ethos Environmental Ltd for the client in accordance with the terms of a contract between Ethos Environmental Ltd and the client.

A2.2.2 The services were performed by Ethos Environmental Ltd with the skill and care ordinarily exercised by a reasonable environmental consultant authorised under the company’s UKAS-accredited asbestos building surveying service for asbestos surveying, at the time the services were performed. Further, and in particular, the services were performed taking into account the limits of the scope of works required by the client, the timescale involved and the resources - including financial and manpower resources - agreed between Ethos Environmental Ltd and the client.

A2.2.3 Other than that expressly detailed above, Ethos Environmental Ltd provides no other representation or warranty whether express or implied in relation to the services.

A2.2.4 Unless otherwise agreed in advance, the services were performed by Ethos Environmental Ltd exclusively for the purposes of the client. Ethos Environmental Ltd is not aware of any interest of or any reliance by any party other than the client in or on the Services. Unless expressly provided in writing, Ethos Environmental Ltd does not authorise, consent or condone any party other than the client relying upon the services. Should this report or any part of the report, or otherwise details of the services, or any part of the services, be made known to any such party, and such party relies thereon, that party does so wholly at its own and sole risk and Ethos Environmental Ltd disclaims any liability to such parties. Any such party would be well advised to seek independent advice from a competent UKAS-accredited asbestos consulting laboratory and/or lawyer.

A2.2.5 It is Ethos Environmental Ltd’s understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid, and any further use of or reliance upon the report in those circumstances by the client without Ethos Environmental Ltd’s review and advice shall be at the client’s sole and own risk. Should Ethos Environmental Ltd be requested to review the report after the date hereof, Ethos Environmental Ltd shall be entitled to additional payment at the then existing rates or such other such terms as agreed between Ethos Environmental Ltd and the client.



A2.2.6 Under the *Control of Asbestos Regulations 2006*, the duty-holder requires to implement an asbestos management system, one part of which is the undertaking of an asbestos building survey. All MDHS 100 asbestos building survey types (1, 2 and 3) necessarily involve a significant degree of subjective assumption by the surveyor, as to:

- the likelihood of asbestos being present within an element,
- an appropriate sampling strategy/frequency;
- the representativeness of a sample obtained for a particular element
- The extent to which another element in the building can be considered to be the same as one already addressed.

The client should satisfy themselves as to the suitability of the survey report in terms of its scope, areas accessed and findings. Where the client has cause to question any aspect of the report, Ethos Environmental Ltd will not be held liable for any costs (financial or in kind, direct or indirect) incurred by the client or third parties, where:

- A. Ethos Environmental Ltd has not been given the opportunity to review the report, and offer a remedial response within a reasonable timescale subsequent to the client raising concerns; and,
- B. These costs were incurred before this response/review by Ethos Environmental Ltd.

A2.2.7 The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could, render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of Ethos Environmental Ltd. In the absence of such advice, reliance on the report in the future shall be at the client's own and sole risk. Should Ethos Environmental Ltd be requested to review the report in the future, Ethos Environmental Ltd shall be entitled to additional payment at the then existing rate or such other terms as may be agreed in advance between Ethos Environmental Ltd and the client

A2.2.8 The observations and conclusions described in this report are based solely upon the services which were provided pursuant to the agreement between the client and Ethos Environmental Ltd. Ethos Environmental Ltd has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and Ethos Environmental Ltd. Ethos Environmental Ltd is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the services.

A2.2.9 For the avoidance of doubt, the scope of this survey type (MDHS100 - Type 1, 2 or 3) and the specific buildings/areas accessed should be reviewed by the client in conjunction with the specific caveats relating to normal access expectations for each survey type.

A2.2.10 Whilst our site lead surveyor will usually indicate to the client (while on-site) what areas (which could normally be expected to be accessed) could in fact not be accessed (e.g. locked rooms), unless the client can provide a site escort at all times during the survey, Ethos Environmental Ltd cannot be held responsible for communicating this information to the client

when on-site, or otherwise, prior to completion of the report. In these circumstances, Ethos Environmental Ltd will also not be responsible for returning to site to survey areas which could not be accessed originally, where it would be reasonable to expect that the client would have arranged access and/or a site contact to liaise with whilst on-site.

A2.2.11 Whilst our site lead surveyor will usually indicate to the client (while on-site) what areas (which could normally be expected to be accessed) could in fact not be accessed due to safety concerns, unless the client can provide a site escort during the survey, Ethos Environmental Ltd cannot be held responsible for communicating this information to the client when on-site, or otherwise prior to completion of the report (when it will be reported). In these circumstances, Ethos Environmental Ltd will also not be responsible for returning to site to survey areas which could not be safely accessed originally, where it would be reasonable to expect that the client would have ensured safe access and a safe working environment and/or a site contact to liaise with whilst on-site.

A2.2.12 Ethos Environmental Ltd reserves the right to not undertake sampling in specific areas which are occupied. While the site surveyor will endeavour to inform the client (while on-site) of this, unless the client can provide a site escort at all times during the survey, Ethos Environmental Ltd cannot be held responsible for communicating this information to the client when on-site, or otherwise prior to completion of the report. In these circumstances, Ethos Environmental Ltd will also not be responsible for returning to site to obtain samples from areas where this could not - in the opinion of the surveyor - be safely done originally, where it would be reasonable to expect that the client could have arranged to remove occupants prior to the survey or would provide a site contact to liaise with whilst on-site.

A2.2.13 The services are based upon Ethos Environmental Ltd's observations of the building(s), and as detailed in any site plan/building diagram or other documentation provided by the client. The services are clearly limited by the accuracy of the documentation provided by the client. Ethos Environmental Ltd was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties during the performance of the services.

A2.2.14 Unless agreed in writing with the client prior to commencement of the survey, site plans, building drawings or schematics of any description will not necessarily be included in the report. Ethos Environmental Ltd retains the right to use such materials in the report in specific situations where (in the opinion of the surveyor) their inclusion will assist the client in identifying the location of an ACM. Any site drawings provided in this report are not meant to be accurate plans, but are used to assist the client in establishing the general locations of ACMs

A2.2.15 Unless agreed in writing with the client prior to commencement of the survey, photographs will not necessarily be included in the report. Ethos Environmental Ltd retains the right to use photographs in the report for specific situations where (in the opinion of the surveyor) their inclusion will assist with reporting to the client either the nature of the element itself (eg extent, condition), or its actual location

A2.2.16 This report provides information on all materials which have been found to - or are assumed to - contain asbestos. The report does not necessarily discuss elements of the building fabric which have been found to - or are assumed to - not contain asbestos

**APPENDIX A3. CERTIFICATE OF ANALYSIS (3 PAGES)**

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## **Ethos Environmental Ltd**

### **Standard Terms of Business**

1. The quotation of our fees and expenses for this commission is provided in the proposal. It is for a fixed sum and remains valid for three months from the date of submission unless otherwise stated. In the case of commissions covering a period greater than three months we reserve the right to apply an increased level of fees after each three month period to take account of inflation. Work in addition to our proposal will be notified in advance to the client and will be charged at these agreed rates.

2. Please note that our payment terms require settlement of outstanding accounts within 30 days of the date of dispatch of the invoice. If you fail to pay on the due date any amount which is payable, without prejudice to any other rights you may have, that amount shall bear interest at 2% per month from the due date until the payment is made in full.

In the event that you fail to pay an invoice within 60 days of the due date, then we reserve the right to suspend our services until the outstanding amount, together with any interest accrued, has been received. We accept no liability for any loss, damage or consequential loss, however suffered, by virtue of the suspension of our services.

3. All our consultants and associate staff are employed under contract, which ensures that confidential information given to us is respected and is not made available to third parties.

4. It is a condition of the engagement in any commission that neither the client, nor any company associated with the client, will offer employment to any of our consultants concerned in this commission, without prior agreement of Ethos Environmental Limited.

5. All recommendations and forecasts whether in the proposal or in subsequent reports are made in good faith on the basis of information given and their achievement depends among other things on the effective co-operation of the client's staff. The client shall satisfy himself that the information received from the client's delegates, upon which our survey, assessment or investigation report is based, are representative and appropriate. In consequence, no statement in any letter, proposal or report is to be deemed a representation, undertaking, warranty or contractual obligation. Ethos Environmental Limited will not be liable to the client for any direct, indirect or consequential losses including (but not limited to) loss of revenue, profits or claims by third parties.

6. Our services may be terminated on either side by one month's notice in writing except that we reserve the right to terminate our services without notice where the client fails to meet payments as they fall due, or where the client commits any act of bankruptcy, goes into liquidation or suffers the appointment of a receiver.