

Report	No.:	J102322
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Nature of Work: **Demolition Survey**

Issue Date: 31/07/2018

Client Name: WYG Engineering Ltd Geneva Building, Lake View Drive, Sherwood Business Park, Annesley, Nottingham, NG15 0ED

Kenrick Building, Former City North Campus, Birmingham City Site Address: University, Perry Barr, B42 2US



Order Placed By:	Reg 13(1)
Site Contact:	Reg 13(1)
Date(s) of Work:	05/07/2018
Technical Manager:	Reg 13(1) (Asbestos)
Assistant Surveyor(s):	Not Applicable
Lead Surveyor: Reg 13(1)	Authorised Signatory: Reg 13(1)
Reg 13(1)	Reg 13(1) Asbestos

Asbestos Consultant

Reg 13(1)

Asbestos

Technical Manager

*Non-accredited tests are 31 study 2018 this report.

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Page 1 of 34 Registered Office: Bradley Environmental Consultants Limited, 20 Stourbridge Road, Halesowen, West Midlands, B63 3US. Registered in England No. 02573757 Demolition Survey (with MA - LOD) Template Version 36



Contents

1.0 Introduction & Scope of Work

- 1.1 Aims & Objectives
- 1.2 Caveats, Restrictions & Inaccessible Areas
- 1.3 Pre-agreed Caveats
- 1.4 Surveyor Imposed Caveats
- 1.5 UKAS Accreditation
- 1.6 'Licensable' Abatement
- 1.7 Extent of ACM Identified
- 1.8 Presumption or Identification of ACMs

2.0 Recommendations

3.0 Executive Summary

- 3.1 Asbestos Containing Materials (ACMs) ranked by Risk
- 3.2 Non-Asbestos Materials

4.0 Item Register & Management Report

- 5.0 Annotated Building Plans
- 6.0 Room Description Report
- 7.0 Room Access Report
- 8.0 Bulk Analysis Results
- 9.0 Intrusion Photographs

10.0 Risk Assessment Algorithms

- 10.1 Material Assessment
- 10.2 Likelihood of Disturbance Assessment
- 10.3 Overall Risk Category



1.0 Introduction & Scope of Work

A demolition survey in line with HSG264 Asbestos: The Survey Guide was carried out internally and externally to the outbuildings adjacent to Kenrick building.

1.1 Aims & Objectives

The purpose of the survey was to locate, as far as reasonably practicable, the presence and extent of all suspect ACMs prior to demolition.

This survey was conducted for the specific project(s) stated above. Additional or alternative tasks over and above that mentioned will require a supplementary investigation to identify further ACMs that could potentially be disturbed by the task(s) at hand.

1.2 Caveats, Restrictions & Inaccessible Areas

The value and usefulness of a survey can be seriously undermined where either the client or the surveyor imposes restrictions on the survey scope (HSG264).

If any rooms were not accessed during the inspection, they will be indicated on the building plans (in yellow block) in section 5.

Where a room was accessed but specific elements within the room could not be inspected, caveats and their justification will be detailed in section 7.

It is strongly recommended that the client reviews the (general) caveats noted in sections 1.3 and/or 1.4 below, as well as the (room-specific) caveats cited in sections 5 and 7 as soon as possible upon receipt of the report. If the extent of access is less than required, the client should advise the Technical Management Team to arrange additional inspection work as necessary.

1.3 Pre-agreed Caveats:

No access was made to determine the presence or absence of ACMs in either the floor slabs or building foundations.

Please note that, although a thorough and methodical survey strategy was adopted, it is possible that further ACMs may be present, and are unreported in this survey. HSG264 Asbestos: the survey guide states that "It is now recognised that even with 'complete' access demolition surveys, all ACMs may not be identified and this only becomes apparent during demolition itself."



1.4 Surveyor Imposed Caveats:

N/A

1.5 UKAS Accreditation

Bradley Environmental are accredited by UKAS to both ISO17025 (testing) and ISO17020 (inspections). Please note that the following are outside the scope of UKAS Accreditation:

- Opinions & interpretations;
- Likelihood of disturbance risk assessment;
- Recommendations;
- The sample references cited in section 8.0.

1.6 'Licensable' Abatement

Where an asbestos-containing material is stated as being licensable within section 4 of this report, this is merely a qualified opinion and may not in practice be an absolute fact.

1.7 Extent of ACM Identified

Please note that the extents cited within this report are an approximation only and should not be used for the purposes of quoting asbestos removal works.

1.8 Presumption or Identification of ACMs

Where suspect materials have been located during this investigation, their asbestos content (or otherwise) will have been determined as follows:

A sample of the material will have been taken by the surveyor during the survey. This sample will then have been **analysed using polarised light microscopy** (PLM) to determine its asbestos content.

A material's asbestos content will have been *strongly presumed* where a visual inspection by the lead surveyor indicates the material is visually similar to other items present within the building which have been confirmed to contain asbestos (or otherwise) using PLM.

A material's asbestos content will have been *presumed* where it cannot be accessed or inspected.



2.0 Recommendations

Please note that where a management survey was carried out, individual recommendations related to safe management of each ACM has been cited by the surveyor in section 4.0.

Where a refurbishment or demolition survey was carried out, the recommendation for each item has been defaulted to 'program removal' in line with Regulation 7 of CAR2012.



3.0 **Executive Summary**

As required by HSG264 Asbestos: The survey guide, the following sections contain an executive summary of the survey findings.



3.1 Executive Summary of Asbestos Containing Materials (ACMs) by Risk

The following pages show an executive summary of the ACMs located during these works ranked in order of risk (i.e. the highest risk item will be at the top of the page).

Executive Summary Report of Asbestos Containing Materials (ACMs) By Risk

Sample No.:	Floor Level:	Block Name:	Location:	Item:	Asbestos Content:	Determination Method:	Extent:	Risk Category:	Recommendations:
There were no results									
found.									



3.2 Executive Summary of Non-Asbestos Material

The following pages show a summary of non-asbestos materials located during these works.

Executive Summary Report of Non-Asbestos Containing Materials

Sample No.:	Floor Level:	Block Name:	Location:	Item:	Asbestos Content:	Determination Method:	Extent:	Risk Category:	Recommendations:
DU001944	Ground Floor	Commercial	01 - Outside store	Bitumen damp proof course	No Asbestos Detected	Analysis of sample using PLM	120 linear metres	EO	Not applicable
DU001946	Ground Floor	Commercial	02 - Store	Corrugated cement	No Asbestos Detected	Analysis of sample using PLM	4 m²	EO	Not applicable
As DU001946	Ground Floor	Commercial	03 - Store	Corrugated cement	No Asbestos Detected	Strongly presumed	5 m²	EO	Not applicable
DU001947	E - External	Commercial	04 - External of 01	Corrugated cement roof covering	No Asbestos Detected	Analysis of sample using PLM	30 m²	E0	Not applicable
DU001948	E - External	Commercial	05 - External of compound	Insulating board	No Asbestos Detected	Analysis of sample using PLM	150 m²	EO	Not applicable
DU001949	E - External	Commercial	05 - External of compound	Insulating board debris	No Asbestos Detected	Analysis of sample using PLM	30 m²	EO	Not applicable



4.0 Item Register & Management Report

The following pages show a register of all suspect materials located during this investigation, which includes a photographic record of each item along with individual risk assessment scores.

The section entitled 'Portal Ref No' relates to a corresponding number assigned to each sample for the purpose of identification within the TEAMS online Portal.

Location:	01 - Outside store	Block:	Commercial	_	Floor Level: Gro	und Floor	
Sample No.:	DU001944	Portal Ref No.:	4	05/07/2018 09:4	2:10	PTT I	
Item:	Bitumen damp proof course	Bitumen damp proof course					
Asbestos Content:		Result Based on:					
No Asbestos Detected		Analysis of sample using PLM					
Sample Analysed By:	Reg 13(1)	Extent:	120 linear metres				
Comments: To rear of ve	ertical timber battens to walls, battens ev	ery 400mm					

Material Assessment Total Score: 0		Likelihood of Dis	sturbance Assessment Total Score: 0	Management Assessment
				Licensable:
Product Type:	0 Not Applicable	Location:	0 Not Applicable	No
				Recommendations:
Condition:	0 Not Applicable	Accessibility:	0 Not Applicable	Not Applicable
				Reinspection Interval
Surface Treatment:	0 Not Applicable			Not Applicable
Asbestos Type:	0 Not Applicable	Extent Score:	0 Not Applicable	Overall Risk Category:
				20

Location:	02 - Store	Block:	Commercial		Floor Level: Ground Floor
Sample No.:	DU001946	Portal Ref No.:	8	05/07/2018 09:50	57
Item:	Corrugated cement				
Asbestos Content:		Result Based on:			
No Asbestos Detected		Analysis of sample	using PLM		
Sample Analysed By:	Reg 13(1)	Extent:	4 m²		
Comments: Sampled int	ernally			11	

Material Assessment Total Score: 0		Likelihood of Dis	sturbance Assessment Total Score: 0	Management Assessment
				Licensable:
Product Type:	0 Not Applicable	Location:	0 Not Applicable	No
				Recommendations:
Condition:	0 Not Applicable	Accessibility:	0 Not Applicable	
				Poinspection Interval:
Surface Treatment:	0 Not Applicable			Not Applicable
Asbestos Type:	0 Not Applicable	Extent Score:	0 Not Applicable	Overall Risk Category:
				E0

Location:	03 - Store	Block:	Commercial		Floor Level: Ground Floor
Sample No.:	As DU001946	Portal Ref No.:	9	05/07/2018 09:52	.48
Item:	Corrugated cement				
Asbestos Content:		Result Based on:			Muller (
No Asbestos Detected		Strongly presumed		and the second second	
Sample Analysed By:	Not applicable	Extent:	5 m²	the second second	
Comments: Sampled int	ernally				

Material Assessment Te	otal Score: 0	Likelihood of Dis	sturbance Assessment Total Score: 0	Management Assessment
				Licensable:
Product Type:	0 Not Applicable	Location:	0 Not Applicable	No
				Recommendations:
Condition:	0 Not Applicable	Accessibility:	0 Not Applicable	Not Applicable
				Reinspection Interval:
Surface Treatment:	0 Not Applicable			Not Applicable
Asbestos Type:	0 Not Applicable	Extent Score:	0 Not Applicable	Overall Risk Category:
				20

Location:	04 - External of 01	Block:	Commercial	Floor Level: E - External
Sample No.:	DU001947	Portal Ref No.:	10 05/07/201	310:04:58
Item:	Corrugated cement roof covering		3	
Asbestos Content:		Result Based on:		
No Asbestos Detected		Analysis of sample	using PLM	
Sample Analysed By:	Reg 13(1)	Extent:	30 m ²	
Comments:				

Material Assessment Total Score: 0		Likelihood of Dis	sturbance Assessment Total Score: 0	Management Assessment
				Licensable:
Product Type:	0 Not Applicable	Location:	0 Not Applicable	No
				Recommendations:
Condition:	0 Not Applicable	Accessibility:	0 Not Applicable	Not Applicable
				Reinspection Interval:
Surface Treatment:	0 Not Applicable			Not Applicable
Asbestos Type:	0 Not Applicable	Extent Score:	0 Not Applicable	Overall Risk Category:
				LU

Location:	05 - External of compound	Block:	Commercial		Floor Level: E - External
Sample No.:	DU001948	Portal Ref No.:	11	05/07/2018 10:08	33
Item:	Insulating board			1	
Asbestos Content:		Result Based on:		11	
No Asbestos Detected		Analysis of sample using PLM		1/	
Sample Analysed By:	Reg 13(1)	Extent:	150 m²	1	
Comments: To underside	e of walkway above or balcony				

Material Assessment Total Score: 0		Likelihood of Dis	sturbance Assessment Total Score: 0	Management Assessment
				Licensable:
Product Type:	0 Not Applicable	Location:	0 Not Applicable	Yes
				Recommendations:
Condition:	0 Not Applicable	Accessibility:	0 Not Applicable	Not Applicable
				Reinspection Interval:
Surface Treatment:	0 Not Applicable			Not Applicable
Asbestos Type:	0 Not Applicable	Extent Score:	0 Not Applicable	Overall Risk Category:
				20

Location:	05 - External of compound	Block:	Commercial Floor I		Floor Level: E - External
Sample No.:	DU001949	Portal Ref No.:	12	05/07/2018 10:09	41
Item:	Insulating board debris			C MA	
Asbestos Content:		Result Based on:			
No Asbestos Detected		Analysis of sample using PLM		770899	
Sample Analysed By:	Reg 13(1)	Extent:	30 m ²		
Comments: Various loca					
					the states
				F	

Material Assessment Total Score: 0		Likelihood of Di	sturbance Assessment Total Score: 0	Management Assessment
	1			Licensable:
Product Type:	0 Not Applicable	Location:	0 Not Applicable	Yes
				Recommendations:
Condition:	0 Not Applicable	Accessibility:	0 Not Applicable	Not Applicable
				Deinensetien Interval
Surface Treatment:	0 Not Applicable			Not Applicable
Asbestos Type:	0 Not Applicable	Extent Score:	0 Not Applicable	Overall Risk Category:
				EU

5.0 Annotated Building Plans

Diagrams included:

Plan(s) drawn by Bradley Environmental Consultants Ltd.

J102322/01 - Ground Floor Plan - Item Location(s) J102322/02 - Ground Floor Plan - Intrusion Location(s)









6.0 Room Description Report

Please note that this section of the survey report documents the general building materials recorded on a room by room basis by the surveyor while undertaking the inspection in line with our ISO17020 UKAS Accreditation. It has not been designed to use as a register for asbestos materials. Please refer to the asbestos register and/or summary section of this report for details of the ACMs located during this investigation.

Room Description Report

Block:	Room:	Floor Level:	Ceiling:	Walls:	Floor:	Other:
Commercial	01 - Outside store	Ground Floor	Plasterboard to corrugated cement	Ply wood lining to polystyrene to blockwork	Concrete	Bitumen damp proof to rear of timber battens to walls, modern electrics, plastic conduit
Commercial	02 - Store	Ground Floor	Corrugated cement	Block and brick	Concrete	Modern electrics, plastic conduit, timber header plates
Commercial	03 - Store	Ground Floor	Corrugated cement	Block and brick	Concrete	Modern electrics, plastic conduit, timber header plates
Commercial	04 - External of 01	E - External	Corrugated cement roof covering	Brickwork	Not Applicable	Timber fascias, plastic rainwater goods
Commercial	05 - External of compound	E - External	Insulating board	Brickwork	Concrete, paving stones	Concrete pillars, timber window openings, insulating board debris to floor, modern electrics



7.0 Room Access Report

Room Access Report

Kenrick Building, Perry Barr

Report Number: J102322

Block:	Room:	Floor Level:	Surveyed:	Areas Not Accessed:	Reason For No Access:
Commercial	01 - Outside store	Ground Floor	Accessed	None	Not Applicable
Commercial	02 - Store	Ground Floor	Accessed	None	Not Applicable
Commercial	03 - Store	Ground Floor	Accessed	None	Not Applicable
Commercial	04 - External of 01	E - External	Accessed	None	Not Applicable
Commercial	05 - External of compound	E - External	Accessed	None	Not Applicable



8.0 Bulk Analysis Results



CERTIFICATE OF ANALYSIS

Asbestos Fibre Identification in Bulk Sample

Client Address:	WYG Engineering Ltd Geneva Building Lake View Drive Sherwood Business Park Annesley Nottingham NG15 0ED	Site Address:	Kenrick Building Former City North Campus Birmingham City University Perry Barr B42 2US
Samples Received:	05/07/2018	Issue Date:	06/07/2018
Order Placed By:	Reg 13(1)	Sampled By:	Reg
Analysed on:	06/07/2018	Authorised Signatory:	Reg 13(1)

Job Title:

Laboratory Analyst

C	Opinions and interpretations including the sample reference are outside the scope of UKAS accreditation					
Report No.:	J102322	_				
Lab Ref.:	Site Ref:	Room:	Sample Reference:	Analysis Result:	Analyst:	
DU001944	-	01 - Outside store	Bitumen damp proof course	No Asbestos Detected	Reg	
DU001946	-	02 - Store	Corrugated cement	No Asbestos Detected	Reg	
DU001947	-	04 - External of 01	Corrugated cement roof covering	No Asbestos Detected	Reg	
DU001948	-	05 - External of compound	Insulating board	No Asbestos Detected	Reg	

TEST NOTES: The test method is as described in the in-house method (Appendix 7, Quality Manual), based on HSG248. "Crocidolite", "Amosite" and "Chrysotile" are more commonly known as "blue", "brown" and "white" asbestos respectively. "Actinolite","Anthophylite" and "Tremolite" are other rarer forms of asbestos. Bradley Environmental Consultants Limited is not responsible for sampling errors where the sample is provided by yourselves. Materials that have been referred to as Asbestos Insulating Board or Asbestos Cement are based on their asbestos content and visual appearance alone (these opinions are not covered by our UKAS accreditation), water absorption tests have not been carried out unless otherwise stated. The report should not be reproduced except in full, without written approval of the laboratory.

Analysed at:

Head Office: 20 Stourbridge Road, Halesowen, West Midlands B63 3US Tel: 0121 550 0224 Fax: 0121 550 0641 Email: <u>sales@bradley-enviro.co.uk</u>





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C	Opinions and interpretations including the sample reference are outside the scope of UKAS accreditation					
Report No.:	Report No.: J102322					
Lab Ref.:	Site Ref:	Room:	Sample Reference:	Analysis Result:	Analyst:	
DU001949	-	05 - External of compound	Insulating board debris	No Asbestos Detected	Reg	

TEST NOTES: The test method is as described in the in-house method (Appendix 7, Quality Manual), based on HSG248. "Crocidolite", "Amosite" and "Chrysotile" are more commonly known as "blue", "brown" and "white" asbestos respectively. "Actinolite", "Anthophylite" and "Tremolite" are other rarer forms of asbestos. Bradley Environmental Consultants Limited is not responsible for sampling errors where the sample is provided by yourselves. Materials that have been referred to as Asbestos Insulating Board or Asbestos Cement are based on their asbestos content and visual appearance alone (these opinions are not covered by our UKAS accreditation), water absorption tests have not been carried out unless otherwise stated. The report should not be reproduced except in full, without written approval of the laboratory.

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9.0 Intrusion Photographs

Please note that the intrusion numbers in this section may not run consecutively.



Intrusion 01 - Ply wood lining to polystyrene to block

Intrusion 02 - Plasterboard to corrugate cement





Intrusion 03 - Ply lining to polystyrene to block





10.0 Risk Assessment Algorithms

Once an asbestos item has been identified, Regulation 4 of CAR2012 requires that a risk assessment be undertaken on the material. The risk assessment contained within this report is based on the **material assessment algorithm**, as defined in HSG264, and the **likelihood of disturbance algorithm** which is *part* of the priority assessment as defined in HSG227.

The score for each assessment is added together to provide an **overall risk rating** based on the material's ability to release airborne fibre *and* the risk of it being disturbed. This overall risk category is shown in section 10.3.

10.1 Material Assessment

The material assessment algorithm provides a numerical indication of the ability of an ACM to release airborne asbestos fibre, if disturbed. A risk category score of between 2 and 12 is assigned to each ACM as shown below:

- < 5 Very low hazard
- 5 & 6 Low hazard
- 7 9 Medium hazard
- > 9 High hazard

The table below shows how the individual material assessment scores are calculated:

	SCORE 0	SCORE 1	SCORE 2	SCORE 3
Product type		Composite materials, reinforced plastics, felts, textured coating and asbestos cement (AC) products	Low density boards (i.e. AIB), gaskets, textiles	Sprays, insulation, loose asbestos, mattresses and packing
Extent of damage/ deterioration	Good condition: no visible damage	Low damage: a few scratches or damaged edges	Medium damage: significant breakage of materials or several small areas of damage revealing loose fibres	High damage or delamination of materials, sprays and insulation. Visible asbestos debris
Surface treatment	Composite materials, reinforced plastics, textured coating, felts etc	Painted, encapsulated AIB & AC. Enclosed AIB, AC, sprays & lagging, Unencapsulated AC	Unencapsulated AIB. Encapsulated sprays and insulation	Unencapsulated sprays and insulation
Asbestos type		Chrysotile	Amphibole asbestos excluding crocidolite	Crocidolite



10.2 Likelihood of Disturbance Assessment

The likelihood of disturbance algorithm provides a numerical value which helps assess how likely an ACM is to be disturbed.

The following table has been extracted from HSG227 (A comprehensive guide to Managing Asbestos in premises):

SAMPLE VARIABLE	SCORE	EXAMPLES OF SCORES
LOCATION	0	Outdoors
	1	Large rooms or well ventilated areas
	2	Rooms up to 100 sq. m
	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 (i.e. strings, gaskets etc)
	1	<10 sq m or < 10 linear metre pipe run
	2	>10 - <50 sq m or >10m - <50 linear metre pipe run
	3	>50 sq m or >50 linear metre pipe run



10.3 Overall Risk Category

It is recommended that where practicable to do so, the Dutyholder aims to reduce the risk associated with all ACMs to a grade C (low) or D (very low).

Risk Category	Risk	Score Range	Comments and Recommendations
A	High	16+	It is very likely that crumbly loose asbestos may be disturbed releasing a significant quantity of fibres.
			Plans for urgent remedial work, including possible removal, are required and access to the area should be limited to adequately trained personnel.
В	Medium	11-15	Fibres may be released if the material is further damaged or disturbed.
			A programme of remedial work (which may include removal) should be planned. Until then, some emergency repairs may be required.
			The material's condition should be monitored periodically.
С	Low	7-10	Little likelihood of fibres being released under normal conditions, either because of the location of the materials or because the type of material present will only release very low levels of fibres.
			Immediate work is not needed and any removal can be planned with a suitable timescale. The material should be inspected and assessed at suitable intervals (at least annually).
D	Very Low	<7	Little likelihood that fibres will be released. The material will only need removal if serious damage/deterioration is detected in the future.
			The material should be inspected and assessed at suitable intervals (at least annually).
E	No asbestos detected	0	No asbestos detected



DISCLAIMER

Bradley Environmental Consultants Ltd have undertaken surveying, sampling and analysis following in-house documented methods, which involve systematic access, inspection and reporting. It is not possible to guarantee that all asbestos will be located within a specified site and we accept no financial or other responsibility for remedial works or disruption to programmes which may occur as a result of asbestos materials being located which are *outside the scope of this survey*.

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Bradley Environmental - Additional Services

Since 1991, Bradley Environmental Consultants have provided a full range of asbestos management services to a wide range of clients including local authorities, hospital trusts and large commercial businesses. A summary of the asbestos related services we are able to offer include the following:

- Management asbestos surveys;
- Refurbishment & demolition asbestos surveys;
- Preparation of Asbestos Management Plans;
- Labelling programmes;
- · Cost-effective remedial advice;
- Preparation of removal specifications;
- Evaluation & selection of licensed asbestos removal contractors;
- Preparation of tender documentation;
- Assessment and critical evaluation of method statements;
- Air monitoring during asbestos removal projects;
- Issuing certificates of re-occupation following asbestos removal works;
- Annual re-inspection of ACMs to update the asbestos register.

If you would like any further information regarding your survey, the implementation of a suitable management plan, or any other asbestos-related issue, please do not hesitate to contact us.

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Wakefield: (Northern Office)	01924 274 777	Reg 13(1)
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St Asaph: (North Wales Office)	01745 585 587	Reg 13(1)