



Armco
Asbestos Surveys

TECHNICAL REPORT

**Occupational Hygiene
Health & Safety**

Armco Asbestos Consultants Ltd

Bury Business Centre

Kay Street

Bury

BL9 6BU

Tel 0161 763 3727 Email: info@armco.org.uk

PROPERTY ADDRESS: Baron St Loco Works, Baron St, Bury BL9 0TY



REPORT TYPE: Asbestos Refurbishment/Demolition Survey

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WORK CONDUCTED BY: Andrew Hirst

Manchester
0161 763 3727

Birmingham
0121 296 7687

Leeds
0113 457 1234

Edinburgh
0131 285 1434

Liverpool
0151 363 2610

London
0203 793 3078



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SECTION 1

INTRODUCTION

1.1 Executive Summary

No Access Areas

All areas were accessed.

The following Asbestos containing materials (ACM's) were found.

East Lancs Locomotive Works, Baron St, Bury BL9					
Reference Number Sample Number	Location	Material Type Quantity	Asbestos Type	Priority Risk Score	Comments / Recommendations
147664 Strongly Presumed001	External Roof & Externals R001 Box Section Guttering	Cement Product 40lin m	Crocidolite	4	No Action Required Add to asbestos register and Monitor.
147670 Strongly Presumed002	External Roof & Externals R001 Skylights	Woven Product 180lin m	Chrysotile	4	No Action Required Add to asbestos register and Monitor - If this material needs to be removed it will need to be carried out by a licensed contractor.
147680 Strongly Presumed003	Ground Floor Workshop R002 Electrical Box	Woven Product 6No	Chrysotile	4	No Action Required Add to asbestos register and Monitor - If this material needs to be removed it will need to be carried out by a licensed contractor.
147679 S003	Ground Floor Workshop R002 wall	Cement Product small amountsm ²	Chrysotile	3	Remove Add to asbestos register and Monitor.
147717 S007	Ground Floor Fitters Office R009 Ceiling	Cement Product 6m ²	Chrysotile	2	No Action Required Add to asbestos register and Monitor.
147759 S004	Ground Floor Workshop R002 Cement down pipe	Cement Product 15lin m	Chrysotile	2	No Action Required Add to asbestos register and Monitor.

1.2 Report Format

We were asked by East Lancs Railway to carry out a Refurbishment/Demolition (HSG264) Asbestos Survey of Baron St Loco Works, Baron St, Bury BL9 0TY.

The survey was carried out on 10/10/2017.

All individually referenced samples were analysed by a UKAS Accredited laboratory where they are cross-referenced with survey details and catalogued for storage. Analysis is carried out by qualified analysts in accordance with **ISO17025** [*Asbestos in bulk materials: Sampling and identification by polarised light microscopy (PLM)*; (June 1994)]. Product 'make-up' is reported in both asbestos free and asbestos containing products. For asbestos containing products the estimated percentage of asbestos, type (amosite, chrysotile, crocidolite) and binder is reported. The results are reported in the form of certificates of analysis held in **Section 5** of this report. Non-asbestos materials are reported based on visual assessment if analysis results in no asbestos detected (NAD).

Photography has been carried out to assist in the location of sample sites. Only those samples identified, strongly presumed or presumed as containing asbestos are documented photographically in **Section 3** of this report. It should be noted that photographs do not always show sample point. **Section 3** also serves as a recording system for the risk assessment.

1.3 Asbestos Materials in Buildings

- 1.3.1 Sprayed coatings applied in the UK were typically a mixture of hydrated asbestos cement containing up to 85% asbestos, mainly Amosite, but Crocidolite and mixtures have been used. Primarily used for anti-condensation and acoustic control and fire protection to structural steelwork.

It is a friable material and is likely to release fibers, especially *if* disturbed during repair and maintenance work. As it ages the binding medium of sprayed asbestos may degrade with the consequent release of more fibers.

- 1.3.2 Thermal insulation to boilers, vessels, pipe-work, Valves, pumps etc. also known as lagging. Lagging may have a protective covering of cloth, tape, paper, metal or a surface coating of cement. All types of asbestos may be found in lagging and the content can vary between 15 to 100% asbestos. The likelihood of fiber release depends upon its composition, friability and state of repair, but it is particularly susceptible to damage and disturbance through maintenance work or the action of water leaks.

- 1.3.3 Asbestos insulating boards usually contain between 15 to 40% Amosite (brown) asbestos, although boards may be found to contain other types of asbestos and in other quantities. Insulating boards were developed in the 1950s to provide an economical, lightweight, fire resisting insulating material. As insulation board is semi-compressed it is more likely to release fibers as a result of damage or abrasion. Work on asbestos insulation board can give rise to high levels of asbestos fiber.

- 1.3.4 Asbestos cement products generally contain 10 to 15% of asbestos fiber bound in a matrix of Portland cement or autoclaved calcium silicate. All three types of asbestos have been used in the manufacture of asbestos cement. The asbestos fibers in asbestos cement are usually firmly bound in the cement matrix and will be released only if the material is mechanically damaged or as it deteriorates with age.

- 1.3.5 Ropes, yarns and cloths are usually high in asbestos content, approaching 100% and all three types of asbestos have been used in their manufacture. They were used as packing, caulking or gasket materials where thermal or fire protection was required. The risk of fiber release depends upon the structure of the material; bonded gasket material is unlikely to release asbestos but an unbonded woven material may release fibers when in use especially if damaged or frayed.

- 1.3.6 Millboard, paper and paper products are usually high in asbestos content, approaching 100%, and all three types of asbestos have been used in their manufacture. They were used for insulation of electrical equipment and for thermal insulation, asbestos paper has been used as fire proofing to wood fiber panels. These materials are not well bonded and will release asbestos fibers if subject to abrasion and wear.
- 1.3.7 Bitumen felts and coatings may contain asbestos either bound in the bitumen matrix or as an asbestos paper liner. These materials are not likely to present a hazard during normal installation or use, but should be removed and disposed of carefully at the end of their useful life.
- 1.3.8 Reinforced plastics and floor tiles may contain asbestos either bound in the matrix or as an asbestos paper liner. These materials are not likely to present a hazard during normal installation or use, but should be removed and disposed of carefully at the end of their useful life.
- 1.3.9 Textured coatings and paints may contain small amounts of asbestos i.e. Aertex. Non-wet table materials containing asbestos should not be removed without taking special precautions. Mastics, sealants, putties and adhesives may contain small amounts of asbestos. The only possible risk is from sanding of the hardened material, when appropriate precautions should be taken (full condition removal).

1.4 Legislation & Codes of Practise

All work with asbestos containing materials is controlled under the Control of Asbestos Regulations 2012). The object of these regulations, which are made under the Health and Safety at Work etc. Act 1974, is to minimise worker's exposure to asbestos fibre within the work place.

This is further addressed under the Management of Health & Safety at Work Regulations 1999, which place a duty on employers to assess all significant risks posed as part of their undertaking, including their buildings, and to take suitable steps to reduce these risks. Hence, if asbestos is present in the workplace, it is the responsibility of the employer to ensure, firstly, that he knows where it is, and secondly, that it is maintained in a safe and proper manner so as not to pose a threat to the health of his/her workforce.

Approved Codes of Practices' and a number of guidance notes have been produced by the Health and Safety Executive so that building managers, employers, employees and contractors can achieve compliance with the requirements of the regulations.

The substantial majority of projects which involve work with asbestos spray coating, thermal insulation materials and asbestos insulating boards, require the contractor or persons carrying out the works to be licensed under The Control of Asbestos Regulations 2012, now covered in the Approved Code of Practice and Guidance L143 (Work with materials containing asbestos: Control of Asbestos Regulations 2012).

There is no legal requirement to remove any asbestos material, which continues to perform the function for which it is installed. However, it is recommended that any material in poor condition should be removed or sealed appropriately.

The principal statutory and regulatory requirements are:-

Asbestos Specific Legislation

- a) The Control of Asbestos Regulations (2012)

Approved Codes of Practice and Guidance Documents

- a) The Control of Asbestos Regulations 2012. Approved Code of Practice 'Work with Containing asbestos' L143.
- b) The Management of asbestos in non-domestic premises Approved Code of Practice L127
- c) HSG 227 A comprehensive guide to managing asbestos in premises
- d) Department of Environment Waste Management Paper No. 18 'Asbestos Waste. Memorandum on arising and disposal, including a Code of Practice'
- e) HSG 248 Asbestos: The analysts guide for sampling, analysis and clearance testing Appendix 1 WHO counting method 1997)
- f) HSG 247 'The licensed contractors Guide'
- g) EH57 'The problems of asbestos removal at high temperatures' (1992)
- h) HS (G) 53 'Respiratory protective equipment: a practical guide for users'
- i) Monograph - 'Respiratory Protective Equipment: Legislative requirements and lists of HSE Standards and type approved equipment'
- j) HSG 189/2 'Working with asbestos cement' (1999)
- k) HSG264 Asbestos 'The Survey Guide'

General Statutory Requirements

- a) The Health and Safety at Work etc. Act (1974)
- b) The Management of Health and Safety at Work (1999)
- c) The Hazardous Waste Regulations (England & Wales 2005)
- d) The Special Waste Amendment (Scotland) Regulations 2004
- e) The Carriage of Dangerous Goods (classification, packaging and labelling) and use of Transportable Pressure Receptacles Regulations (1996)
- f) The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations (2004)
- g) The Personal Protective Equipment at Work Regulations (1992) as amended
- h) The Workplace (Health, Safety and Welfare) Regulations (1992)
- i) Construction (Design and Management) Regulations (2007)
- j) Environmental Protection Act Part 1 (1990), (Duty of Care)
- k) Control of Substances Hazardous to Health (COSHH) 2004

1.5 Methods of Bulk Sample Analysis

All samples will be analysed by UKAS Accredited laboratory.

Analysis of the samples will be carried out using methods as described in the Testing Laboratory Document. All techniques used will be in strict accordance with ISO 17025, titled "Asbestos in Bulk Materials". A polarized light microscope (PLM) will be used for sample identification.

Identification of asbestos fibre will be based on the following analytical procedure:

A preliminary visual examination of the whole of the bulk sample is made to assess the sample type and the required sample treatment (if any). Where possible, a representative sub-sample treatment may be taken at this stage. Sample treatment is undertaken (if required) to release or isolate fibres. A detailed and thorough search under the microscope is made to classify the fibre types present.

Representative fibres are mounted in appropriate RI liquids on microscope slides;

The different fibrous components are identified using PLM.

1.6 Health & Safety Statement

All sampling will be undertaken with care to ensure that possible nuisance and potential risk to health of site visitors are reduced to minimum levels. The surveyor has five years site surveying experience

As required under the Control of Asbestos Regulations 2012, dust release in sampling must be reduced to as low a level as is reasonably practicable, an assessment in respect of likely dust release will dictate the need for precautionary measures. These may include:

- ▢ Use of personal protective equipment.
- ▢ Isolation of the sampling area.
- ▢ Wetting of material to suppress dust release.
- ▢ Appropriate cleaning process.

After sampling any broken material with potential to cause, airborne dust will be sealed, and any remaining dust or debris will be removed by wet wiping or by using an approved 'Type H' vacuum cleaner.

Immediately after collection, samples will be double sealed in suitable containers, which will not release dust when subsequently handled.

Any disposable material used in sampling, or dust created while sampling, will be treated as contaminated by asbestos.

Sampling will not impair the structural integrity of the building or plant.

Air monitoring may be appropriate in certain sampling situations for reassurance purposes.

All high-level location sampling that requires the use of an extension ladder will only be undertaken when the ladder base has been securely fixed either by ties or by additional staff.

1.7 Types of Survey Method

Refurbishment and Development:

Full Access Sampling and Identification Survey

This type of survey will be conducted prior to any major refurbishment or Demolition works and will continue from type two. This will require full access to all areas, fixtures and fittings could be damaged and it is best taken out when the premises are unoccupied. Again, the survey will be conducted by means of visual inspection and subsequent sampling of suspect bulk materials. Where the surveyor suspects a material to contain asbestos, a sample will be taken for analysis. The samples taken will be chosen as being representative of the material under investigation. Therefore, visually similar areas should be regarded as being of uniform composition.

Samples will be taken using a sharp knife, a cork borer or hand drill and will be collected in self-seal plastic bags. The sample reference number will be recorded on the sample bag. Where appropriate, a label will be left on the site adjacent to the sample location. This label indicates the sample number for cross-reference with the report.

Photographs will be taken at every sampling location to confirm site details.

The object of carrying out sampling is to identify the nature and extent of any visible asbestos-bearing material and where necessary air testing may be carried out to determine airborne respirable fibre levels.

If an area cannot be accessed, then it is presumed to contain asbestos.

SECTION 2

SURVEY

2.1 Survey Remit

To conduct a standard sampling, identification, and assessment survey of the property in order to ascertain the presence of any unknown ACMs. Sampling of suspected ACMs was to be undertaken simultaneously with the survey. If a material is sampled and found to contain asbestos (or previous available analysis) assumptions may be made as to the asbestos content of similar homogenous materials. The survey was to be as intrusive as possible without causing harm or damage to the decoration and demeanour of the property.

2.2 Survey Objective

- ▢ to carry out a survey to ascertain the presence of asbestos based materials
- ▢ to provide a basis for an asbestos register/ management system for Baron St Loco Works, Baron St, Bury BL9 0TY.
- ▢ to highlight areas of concern and specifically those requiring urgent attention
- ▢ to include a risk assessment for each individual sample or inspection item
- ▢ to remove random sections of existing insulation for examination throughout the survey
- ▢ The survey will, as far as practicable, locate and record any presumed or known ACMs in the building - the location, extent, product type, asbestos type, accessibility, condition and surface treatment were recorded at survey and that information is contained in this report.

2.3 Limitations

We have made every effort to locate all known and suspected ACMs, however, we cannot guarantee that all ACMs have been located. The fabric of the building may well conceal the location of some ACMs. Some ACMs may well be discovered during maintenance, refurbishment work or demolition. Asbestos residue to pipework or plant insulated with non-asbestos products remains a possibility.

It should be noted that all fire doors, shutters and electrical switch boxes within the building might contain asbestos materials. Similarly, any old electrical installations or appliances will probably contain asbestos textiles as flash guards and insulation.

2.4 Description of Site

Single storey large workshop

2.5 Background Information

This is a Refurbishment/Demolition Survey (HSG264).

This report will provide with the basis *to comply* with all current and impending legislation concerning asbestos containing materials.

A Refurbishment/Demolition (HSG264) Asbestos Survey was carried out under limited occupation conditions

2.6 Access

All areas were accessed.

2.7 Findings – Asbestos

East Lancs Locomotive Works, Baron St, Bury BL9								
Reference Number Sample Number	Location	Material Type & Quantity	Asbestos Type	Extent of Damage / Deterioration	Surface Treatment	Accessibility	Material Risk Score	Priority Risk Score
147664 Strongly Presumed00 1	External Roof & Externals R001 Box Section Guttering	Cement Product 40lin m	Crocidolite	0	0	0	4	4
147670 Strongly Presumed00 2	External Roof & Externals R001 Skylights	Woven Product 180lin m	Chrysotile	0	1	0	4	4
147679 S003	Ground Floor Workshop R002 wall	Cement Product small amounts ^{m²}	Chrysotile	1	0	0	3	3
147680 Strongly Presumed00 3	Ground Floor Workshop R002 Electrical Box	Woven Product 6No	Chrysotile	0	1	0	4	4
147717 S007	Ground Floor Fitters Office R009 Ceiling	Cement Product 6m²	Chrysotile	0	0	0	2	2
147759 S004	Ground Floor Workshop R002 Cement down pipe	Cement Product 15lin m	Chrysotile	0	0	0	2	2

Material Scores above 10 have high potential to release fibres

2.8 Findings – None Asbestos

East Lancs Locomotive Works, Baron St, Bury BL9				
Floor Level	Room Number	Location	Item / Materials	Photo
Ground Floor	R002		Walls: Brick Roof: Timber Floor: Concrete Window Frames : Metal Rainwater goods : No Suspect Material	
Ground Floor	R002	Workshop - Down pipe	Down pipe / Cement Product (S005 - No Asbestos Detected)	
Ground Floor	R002	Workshop - Electrical box	Electrical box / PVC / Reinforced Plastics (S002 - No Asbestos Detected)	
Ground Floor	R003		Floor : Concrete Walls: Brick Stud walls : Timber Ceiling : Timber Rainwater goods : No Suspect Material Electrical Equipment : No Suspect Material	

***If in doubt as to the presence of asbestos in materials not covered in this report.
Such materials should be treated as asbestos until further investigation is carried out.***

2.8 Findings – None Asbestos

Ground Floor	R003	Machine Shop - Window Fames	Window Fames / Bituminous Product (S006 - No Asbestos Detected)	
Ground Floor	R004		Floor : Concrete Walls: Brick Floor Covering : Quarry / ceramic tiled Ceiling : Concrete	
Ground Floor	R005		Floor : Concrete Walls: Brick Floor Covering : Quarry / ceramic tiled Ceiling : Concrete	
Ground Floor	R006		Floor : Timber Walls: Timber Floor Covering : Linoleum covered Ceiling : Timber	
Ground Floor	R007		Floor : Timber Walls: Timber Floor Covering : Linoleum covered Ceiling : Timber	

***If in doubt as to the presence of asbestos in materials not covered in this report.
Such materials should be treated as asbestos until further investigation is carried out.***

2.8 Findings – None Asbestos

Ground Floor	R008		Floor : Timber Walls: Timber Floor Covering : Carpetted / carpet tiled Ceiling : Timber	
Ground Floor	R009		Floor : Concrete Walls: Brick	
Ground Floor	R010		Floor : Timber Walls: Brick Stud walls : Timber Ceiling : Timber	
Ground Floor	R011		Floor : Concrete Walls: Brick Floor Covering : Quarry / ceramic tiled Ceiling : Timber Fixtures : No Suspect Material	
Ground Floor	R012		Floor : Concrete Walls: Brick	
Ground Floor	R012	Men's Toilet - Ceiling	Ceiling / Cement Product (S008 - No Asbestos Detected)	

***If in doubt as to the presence of asbestos in materials not covered in this report.
Such materials should be treated as asbestos until further investigation is carried out.***

2.8 Findings – None Asbestos

Ground Floor	R013		Floor : Concrete Floor Covering : Quarry / ceramic tiled Walls: Brick Ceiling : Timber	
Ground Floor	R014		Floor : Timber Walls: Brick Ceiling : Timber	
Ground Floor	R015		Floor : Timber Stairs : Timber Walls: Brick Ceiling : Timber	
1st Floor	R016		Floor : Timber Walls : Brick Sarking Material : No Suspect Material Trusses : Timber	
1st Floor	R016	Store - Sink Unit	Sink Unit / Bituminous Product (S009 - No Asbestos Detected)	

***If in doubt as to the presence of asbestos in materials not covered in this report.
Such materials should be treated as asbestos until further investigation is carried out.***

2.8 Findings – None Asbestos

1st Floor	R017		Floor : Timber Walls : Brick Sarking Material : No Suspect Material Trusses : Timber	
External	R001		Walls: Brick Roof: No Suspect Material Rainwater Goods: No Suspect Material Window Frames : Metal	
External	R001	Roof & Externals - Flat Roof	Flat Roof / Bituminous Product (S001 - No Asbestos Detected)	

***If in doubt as to the presence of asbestos in materials not covered in this report.
 Such materials should be treated as asbestos until further investigation is carried out.***

2.9 Summary & Recommendations

It is important that ACM's are sealed, labelled and actively managed as a minimum as this is the thrust of the new regulations to be imposed (Control of Asbestos Regulations 2012).

If refurbishment is required, then great care must be taken when 'soft stripping' the area. A risk assessment should be drawn up which provides an adequate procedure of what to do in the event of locating unknown/suspicious materials.

If any further ACM's are discovered during refurbishment, removal and remedial works should be carried out by a licensed contractor under fully controlled conditions.

If any ACM's are to be left in the building a 'management system' should be developed that allows for the following;

- ▢ regular inspection of the materials – pre-planned and documented
- ▢ a site contact with responsibility for the system and named in the register
- ▢ staff or contractors must be aware of ACM's in their relevant work areas
- ▢ what to do in the event of locating damaged (or deteriorating) asbestos products
- ▢ a permit to work system

Areas of the building that were not accessed may contain other suspect materials. It is important that any major refurbishment, or any areas outlined for use that were previously unused, should proceed with caution. Hidden materials may still be present and any planning should account for this fact.

This survey is intended to form the basis for an asbestos register to be kept updated as various remedial works are carried out. This will ensure the register remains current, relevant and complies with all current relevant legislation concerning asbestos.

For further information or explanation, please contact the surveyor, Neil Hardy, on 0161 763 3727.

Date: 14/11/2017



Neil Hardy
Managing Director

SECTION 3

RISK ASSESSMENT SHEETS & SAMPLE LOCATION PHOTOGRAPHS

3.1 Risk Assessment Format

Each ACM, identified, known (previous analysis) strongly presumed (similar identified ACM) or presumed (knowledge based or default) is recorded on the individual risk assessment sheet. The risk sheet comprises 5 parts;

- | | | |
|---|----------------------------|---|
|  | Photograph | secondary identifier to be used in conjunction with the area plan |
|  | ACM | information on asbestos type, content, quantity and location |
|  | Material Assessment | the algorithm determines the risk associated with the material i.e. the propensity of airborne fibre release for the specific fibre type |
|  | Priority Assessment | the priority assessment bar refines the risk data associated with the material. The algorithm takes into account various human factors i.e. is the ACM likely to be damaged or disturbed by human activity and is exposure likely |
|  | Action | details minimum control measures or actions |

3.2 Material Assessment

Presumed or strongly presumed ACMs will be scored as crocidolite unless analysis of similar samples from the same building show a different asbestos type or if there is a reasoned argument that another type of asbestos was almost always used. Non-asbestos materials are not scored.

The algorithm is based on four variables. Values are assigned for each of the four parameters giving a material risk score (MRS). The higher the risk score, the greater the propensity for fibre release. The MRS will be between 2 and 12:

High Risk Materials – MRS >9

- A. Medium Risk – MRS 7-9 Inc.
- B. Low Risk – MRS 5-6 Inc.
- C. Very Low Risk – <4

The following table details the scoring system used for the material assessment:

Sample Variable	Score	Basis of Risk Score
ACM Type or ACM Type Debris	1	Encapsulated materials: Asbestos reinforced composites (plastics & resins), bitumen, mastics, roofing felts, vinyl floor tiles, semi-rigid paints, decorative finishes, textured coatings
	1	Asbestos cement products (chrysotile only): profiled sheets, semi-compressed flat sheet, fully compressed flat sheet, pre-formed moulded and extruded products.
	2	Asbestos boards, papers and textiles: insulating board, mill boards, other low density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper, cardboard and felt, asbestos cement products (crocidolite, amosite containing).
	3	Insulation & sprayed coating: pipe and plant lagging, pre-formed pipe and plant lagging, loose fill, acoustic, thermal, fire protection and anti-condensation sprayed coatings.
Damage & Deterioration - Condition	0	Good: No visible damage
	1	Minor damage: the item is generally in good condition although there may be scratched and impact marked surfaces, broken edges, damage around screws <i>etc.</i>
	2	Medium damage: significant breakage or the item has sustained damage to several areas revealing loose asbestos fibres.
	3	High damage: the item has sustained damage over many areas, visible asbestos debris, and falling debris. Visible asbestos debris, which may be as a result of previous work and unconnected with any current asbestos installation, is assigned 3 risk points.
Surface Treatment	0	Sealed: the ACM is well encapsulated by cloth/paint, paint, <i>etc.</i>
	1	Sealed/minor damage: the item is generally well sealed although some minor damage has caused a break in the seal. Asbestos cement products are assigned a score of 1.
	2	Poor seal: the item has sustained damage to the seal or is generally inadequately sealed. No part of the item is sealed or encapsulated; disrepair/other has rendered any seals ineffective.
	3	No seal: No part of the item is sealed or encapsulated; disrepair/other has rendered any seals ineffective.
Asbestos Type	1	Chrysotile only
	2	Amphibole asbestos excluding crocidolite
	3	Crocidolite, presumed or strongly presumed (with no evidence to the contrary)

3.3 Priority Assessment

The priority assessment algorithm incorporates the MRS and produces a more refined priority risk score (PRS) which takes into account various human factors such as occupancy, maintenance activity and the likelihood of damage or disturbance i.e. what is the likelihood of human exposure to airborne asbestos fibre. An ACM with a high MRS may, in some circumstances pose less of a risk than an ACM with low MRS

The algorithm is based on five variables. The MRS is carried over and values are assigned for four of the five parameters giving a total risk score. The higher the risk score, the greater the propensity for fibre release. The PRS will be between 2 and 24:

- A. material risk score, 2-12
- B. **Category A** - high risk of human exposure to airborne asbestos fibre –
PRS >17
- C. **Category B** - medium risk of human exposure to airborne asbestos fibre –
PRS 14-17 Inc.
- D. **Category C** - low risk of human exposure to airborne asbestos fibre –
PRS 9-13 Inc.
- E. **Category D** - very low risk of human exposure to airborne asbestos fibre – PRS <9

The following table details the scoring system used for the priority assessment:

Sample Variable	Score	Basis of Risk Score
Area Activity	0	Rare ACM disturbance or area activity: the ACM is located in an area of infrequent use (e.g. sub-floor void, roof space). Access for emergency work only.
	1	Low ACM disturbance or area activity: low usage of frequent access e.g. office type activity.
	2	Medium ACM disturbance or area activity: medium usage area of frequent access resulting in periodic disturbance e.g. busy offices, thoroughfares, storerooms, industrial or vehicular activity
	3	High ACM disturbance or area activity: area usage is extremely likely to cause ACM disturbance.
Accessibility	0	Inaccessible: usually inaccessible or unlikely to be disturbed e.g. roofing, pipe lagging in sub-floor void.
	1	Low accessibility: the likelihood of accidental disturbance is unlikely due to the ACM location e.g. high level pipework, ceiling tiles ('out of reach' items)
	2	Medium accessibility: likelihood of accidental disturbance during normal area activity e.g. wall panels, partitioning etc. in office
	3	High accessibility: the ACM is disturbed on a regular basis e.g. fire door, panelling to escalator, plant or machinery damage to panelling.
Frequency of Use	0	Infrequent
	1	Monthly
	2	Weekly
	3	Daily
Maintenance Activity	0	Unlikely: maintenance activity is unlikely to disturb ACM
	1	Low: Low disturbance (e.g. changing light bulbs in AIB ceiling) activities, or maintenance <1 per year
	2	Medium: medium disturbance (e.g. lifting one or two AIB ceiling tiles), or maintenance >1 per year
	3	High: high or regular maintenance activities will result in disturbance, or maintenance >1 per month

3.4 Risk Categories

Each ACM will be awarded a risk category (A, B, C or D) based on the total risk score. This provides a priority rating. For example, a category a rated ACM is a high risk item and should be actioned prior to B, C, or D items. Similarly, an A rated ACM with a 24 PRS should be actioned before an A rated ACM with an 18 PRS.

3.4.1 Category A - PRS >17 – High Risk ACM, Immediate/Urgent Action

Category A invokes immediate action. This could be in the form of sealing or locking the area (followed by further actions) or emergency removal or encapsulation. The category an item is likely to cause, or is presently exposing persons to airborne asbestos fibre in the ACM location area, adjacent or connected areas or other areas within the building. In some cases it may be necessary to carry out air sampling in order to clarify the exposure level. If the area is sealed or locked, or a delay in action occurs, a management plan should be implemented and appropriate signage and warning labels should be posted.

3.4.2 Category B - PRS 14-17 Inc. – Medium Risk ACM, Planned Remedial Action

Category B items are potentially hazardous and generally warrant some form of planned remedial action. This could be in the form of a planned asbestos removal programme (in a specified timescale) after emergency encapsulation, environmental clean, repair or enclosure. A management plan should be implemented and appropriate signage and warning labels should be posted. The condition and risk status of the ACM will need to be monitored on a regular basis.

3.4.3 Category C - PRS 9-13 Inc. – Low Risk ACM, Inspection & Labelling

A Category C item does not pose an imminent risk and the likelihood of fibre release is low under the existing conditions. A management plan should be implemented and warning labels should be posted. The condition and risk status of the ACM will need to be monitored on a regular basis, generally a six monthly inspection cycle.

3.4.4 Category D - PRS <9 – Minor Risk ACM, Inspection & Labelling

Although the risk is minor with little likelihood of fibre release or exposure under the existing conditions, a management plan should be implemented and warning labels should be posted. The condition and risk status of the ACM will need to be monitored on an annual basis.

3.5 Risk Assessment Sheets

Job Number	B-15727
Sample Number	Strongly Presumed 001
Sampled By	Andrew Hirst

Ref Number	147664
Date Sampled	10/10/2017



ACM		
Asbestos Type Description:	Crocidolite	Comments High level cement glittering too high to sample.
Material Type	Cement Product	
Quantity:	40lin m	
Room Number:	R001	
Room Description:	Roof & Externals	
Item:	Box Section Guttering	
Floor Level:	East Lancs Locomotive Works, Baron St, Bury BL9, External	

MATERIAL ASSESSMENT					
Risk Item	Product Type	Damage/Deterioration	Surface Treatment	Asbestos Type	MRS
Risk Points	1	0	0	3	4
Risk Scale	1,2,3	0,1,2,3	0,1,2,3	1,2,3	1-12

PRIORITY ASSESSMENT					
Risk Item	Material Risk Score	Area Activity	Accessibility	Frequency of Use	Maintenance Activity
Risk Points	4	0	0	0	0
Risk Scale	-	0,1,2,3	0,1,2,3	0,1,2,3	0,1,2,3
Priority Risk Score	4		Risk Category =	D	

ACTION		
Action Types	No action required	Comments / Recommendations Add to asbestos register and Monitor.
Inspection Cycle	12 monthly	
Removal Priority	Low	
Remedial Action	No Action Required	

3.5 Risk Assessment Sheets

Job Number	B-15727
Sample Number	Strongly Presumed 002
Sampled By	Andrew Hirst

Ref Number	147670
Date Sampled	10/10/2017



ACM		
Asbestos Type Description:	Chrysotile	Comments Presumed woven insulation to high level skylights not accessed due to height
Material Type	Woven Product	
Quantity:	180lin m	
Room Number:	R001	
Room Description:	Roof & Externals	
Item:	Skylights	
Floor Level:	East Lancs Locomotive Works, Baron St, Bury BL9, External	

MATERIAL ASSESSMENT					
Risk Item	Product Type	Damage/Deterioration	Surface Treatment	Asbestos Type	MRS
Risk Points	2	0	1	1	4
Risk Scale	1,2,3	0,1,2,3	0,1,2,3	1,2,3	1-12

PRIORITY ASSESSMENT					
Risk Item	Material Risk Score	Area Activity	Accessibility	Frequency of Use	Maintenance Activity
Risk Points	4	0	0	0	0
Risk Scale	-	0,1,2,3	0,1,2,3	0,1,2,3	0,1,2,3
Priority Risk Score	4	Risk Category = D			

ACTION		
Action Types	No action required	Comments / Recommendations Add to asbestos register and Monitor - If this material needs to be removed it will need to be carried out by a licensed contractor.
Inspection Cycle	12 monthly	
Removal Priority	Low	
Remedial Action	No Action Required	

3.5 Risk Assessment Sheets

Job Number	B-15727
Sample Number	S003
Sampled By	Andrew Hirst

Ref Number	147679
Date Sampled	10/10/2017



ACM		
Asbestos Type Description:	Chrysotile	Comments
Material Type	Cement Product	Cement residues to timber stud work.
Quantity:	small amounts m ²	
Room Number:	R002	
Room Description:	Workshop	
Item:	wall	
Floor Level:	East Lancs Locomotive Works, Baron St, Bury BL9, Ground Floor	

MATERIAL ASSESSMENT					
Risk Item	Product Type	Damage/Deterioration	Surface Treatment	Asbestos Type	MRS
Risk Points	1	1	0	1	3
Risk Scale	1,2,3	0,1,2,3	0,1,2,3	1,2,3	1-12

PRIORITY ASSESSMENT					
Risk Item	Material Risk Score	Area Activity	Accessibility	Frequency of Use	Maintenance Activity
Risk Points	3	0	0	0	0
Risk Scale	-	0,1,2,3	0,1,2,3	0,1,2,3	0,1,2,3
Priority Risk Score	3		Risk Category =	D	

ACTION		
Action Types	Planned Remedial Action	Comments / Recommendations
Inspection Cycle	12 monthly	Add to asbestos register and Monitor.
Removal Priority	Low	
Remedial Action	Remove	

3.5 Risk Assessment Sheets

Job Number	B-15727
Sample Number	Strongly Presumed 003
Sampled By	Andrew Hirst

Ref Number	147680
Date Sampled	10/10/2017



ACM		
Asbestos Type Description:	Chrysotile	Comments
Material Type	Woven Product	presumed woven insulation within electrical boxes located around the workshop.
Quantity:	6No	
Room Number:	R002	
Room Description:	Workshop	
Item:	Electrical Box	
Floor Level:	East Lancs Locomotive Works, Baron St, Bury BL9, Ground Floor	

MATERIAL ASSESSMENT					
Risk Item	Product Type	Damage/Deterioration	Surface Treatment	Asbestos Type	MRS
Risk Points	2	0	1	1	4
Risk Scale	1,2,3	0,1,2,3	0,1,2,3	1,2,3	1-12

PRIORITY ASSESSMENT					
Risk Item	Material Risk Score	Area Activity	Accessibility	Frequency of Use	Maintenance Activity
Risk Points	4	0	0	0	0
Risk Scale	-	0,1,2,3	0,1,2,3	0,1,2,3	0,1,2,3
Priority Risk Score	4	Risk Category = D			

ACTION		
Action Types	No action required	Comments / Recommendations
Inspection Cycle	12 monthly	Add to asbestos register and Monitor - If this material needs to be removed it will need to be carried out by a licensed contractor.
Removal Priority	Low	
Remedial Action	No Action Required	

3.5 Risk Assessment Sheets

Job Number	B-15727
Sample Number	S007
Sampled By	Andrew Hirst

Ref Number	147717
Date Sampled	10/10/2017



ACM		
Asbestos Type Description:	Chrysotile	Comments
Material Type	Cement Product	Cement ceiling.
Quantity:	6m ²	
Room Number:	R009	
Room Description:	Fitters Office	
Item:	Ceiling	
Floor Level:	East Lancs Locomotive Works, Baron St, Bury BL9, Ground Floor	

MATERIAL ASSESSMENT					
Risk Item	Product Type	Damage/Deterioration	Surface Treatment	Asbestos Type	MRS
Risk Points	1	0	0	1	2
Risk Scale	1,2,3	0,1,2,3	0,1,2,3	1,2,3	1-12

PRIORITY ASSESSMENT					
Risk Item	Material Risk Score	Area Activity	Accessibility	Frequency of Use	Maintenance Activity
Risk Points	2	0	0	0	0
Risk Scale	-	0,1,2,3	0,1,2,3	0,1,2,3	0,1,2,3
Priority Risk Score	2		Risk Category =	D	

ACTION		
Action Types	No action required	Comments / Recommendations
Inspection Cycle	12 monthly	Add to asbestos register and Monitor.
Removal Priority	Low	
Remedial Action	No Action Required	

3.5 Risk Assessment Sheets

Job Number	B-15727
Sample Number	S004
Sampled By	Andrew Hirst

Ref Number	147759
Date Sampled	10/10/2017



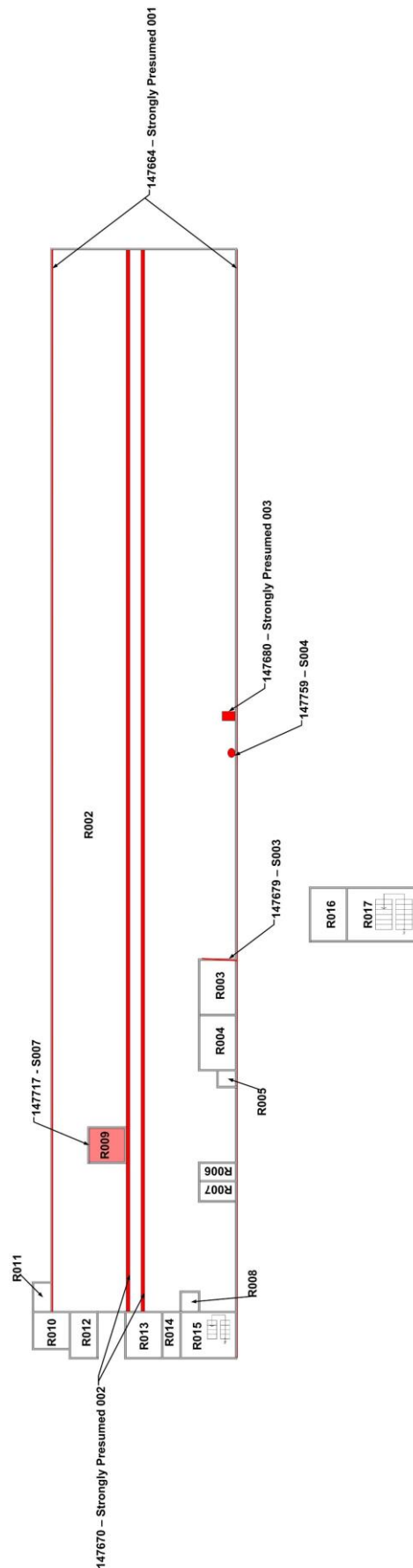
ACM					
Asbestos Type Description:		Chrysotile		Comments	
Material Type		Cement Product		3x cement down pipe.	
Quantity:		15lin m			
Room Number:		R002			
Room Description:		Workshop			
Item:		Cement down pipe			
Floor Level:		East Lancs Locomotive Works, Baron St, Bury BL9, Ground Floor			
MATERIAL ASSESSMENT					
Risk Item	Product Type	Damage/Deterioration	Surface Treatment	Asbestos Type	MRS
Risk Points	1	0	0	1	2
Risk Scale	1,2,3	0,1,2,3	0,1,2,3	1,2,3	1-12

PRIORITY ASSESSMENT					
Risk Item	Material Risk Score	Area Activity	Accessibility	Frequency of Use	Maintenance Activity
Risk Points	2	0	0	0	0
Risk Scale	-	0,1,2,3	0,1,2,3	0,1,2,3	0,1,2,3
Priority Risk Score	2	Risk Category = D			

ACTION		
Action Types	No action required	Comments / Recommendations
Inspection Cycle	12 monthly	
Removal Priority	Low	
Remedial Action	No Action Required	

SECTION 4

PLANS





SECTION 5

5.1 Certificate of Analysis



Armco Asbestos Consultants
Unit 29
Bury Business Centre
Kay Street
Bury
BL9 6BU

CERTIFICATE OF ASBESTOS ANALYSIS

NS Ref. : 1711141
Date Received : 13.11.17
Site Address : East Lancs Locomotive Works, Baron St, Bury BL9 0TY
Samples Analysed By : Paul Lee
Date Analysis Completed : 13.11.17
Date Reported : 13.11.17
Samples Taken By : Andrew Hirst
Client Ref (if required) : B-15727

Client Ref	Location	Description	Lab Ref	Asbestos Identification
S001	Flat Roof - Roof & Externals	Bituminous Product	1711141-1	No Asbestos Detected
S002	Electrical box - Workshop	PVC / Reinforced Plastics	1711141-2	No Asbestos Detected
S003	wall - Workshop	Cement Product	1711141-3	Chrysotile
S004	Cement down pipe - Workshop	Cement Product	1711141-4	Chrysotile
S005	Down pipe - Workshop	Cement Product	1711141-5	No Asbestos Detected
S006	Window Frames - Machine Shop	Bituminous Product	1711141-6	No Asbestos Detected
S007	Ceiling - Fitters Office	Cement Product	1711141-7	Chrysotile
S008	Ceiling - Men's Toilet	Cement Product	1711141-8	No Asbestos Detected
S009	Sink Unit - Store	Bituminous Product	1711141-9	No Asbestos Detected

The laboratory cannot be responsible for inaccurate or unrepresentative sampling. All sample descriptions and locations are provided by the client, the laboratory cannot be held responsible for inaccurate information

Analysis for asbestos in bulk materials using dispersion staining was carried out in accordance with our documented in-house method NSTM4 which is based on the methodology set out in HSG 248

For and on behalf of
North Star Environmental Ltd

P. Lee
Laboratory Manager

K. Burns
Technical Manager

This certificate shall not be reproduced, except in full, without prior written approval by North Star Environmental Ltd
It should be noted that opinions and interpretations detailed herein are outside the scope of UKAS accreditation held.
North Star Environmental Ltd, Suite A1, 1st Floor, Beech House, Oaklands Office Park, Hooton Road, Hooton, CH66 7NZ
Tel No: 0151 538 3141, Fax: 0151 331 3541, Email: info@northstarentvironmental.co.uk

Company No. 7948744

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Armco Asbestos Consultants accepts no responsibility for samples collected and/or provided by persons other than their own staff.

5.2 Terms and Abbreviations

AF	-	Asbestos Free
AIB	-	Asbestos Insulation Board
ACM	-	Asbestos Containing Material
ACS	-	Asbestos Cement Sheet
CAF	-	Compressed Asbestos Fibre
MMMF	-	Man Made Mineral Fibre
MRS	-	Material Risk Score
NAD	-	No asbestos detected
NFC	-	No Fibrous Content
P	-	Presumed
PRS	-	Priority Risk Score
SP	-	Strongly presumed
Asbestos Textiles	-	Woven or spun chrysotile
Amosite	-	Brown asbestos
Beater Sheet	-	Asbestos paper
Chrysotile	-	White asbestos
Crocidolite	-	Blue asbestos
Forte	-	Wax suppressed chrysotile
Lagging	-	Thermal insulation
Superflux	-	Non-asbestos fire retardant board
Turn all	-	Bonded high density sheet
TBC	-	To be confirmed
ASAP	-	As soon as possible

SECTION 6

QUALITY ASSURANCE & DISCLAIMER

6.1 Quality Assurance Statement

The survey was carried out in accordance with Armco Asbestos Consultants quality and technical procedures, and conformed to the requirements of The Institute of Occupational Hygiene guidance document for asbestos surveys.

The survey was carried out by an experienced survey team, who inspect all accessible parts of the building, and look for any installation, which, potentially, could contain asbestos.

Any suspect materials were sampled and subsequently analysed in accordance with MDHS 77 - 'Asbestos in bulk materials'. This method identifies the asbestos types present and their percentage content.

Samples are taken using low - disturbance techniques, whereby a small amount of material (approx. 1 cm³) will be taken, after firstly wetting the sample location with a polyvinyl acetate (PVA) solution spray. This minimises the release of asbestos fibres during the process. Air monitoring carried out during sampling work of this type has shown airborne fibre concentrations to stay below the clearance indicator level of 0.010 fibres per millilitre of air.

Sampled materials are immediately placed in sealable, airtight sample bags and appropriately labelled. Sample points will be suitably filled / sealed using PVA spray, 'Polyfilla' or adhesive tape.

The surveyors do not disturb any suspected asbestos installation in any other way than to take a representative sample. This measure shall minimise the risk of asbestos fibre release, but shall prevent access above/behind a suspected asbestos installation. It is possible, therefore, that further asbestos material could be present behind an existing asbestos installation.

All relevant sample point data is recorded and shown in the final report e.g. condition, extent of material, etc.

It should be noted that the findings of the survey are discussed across the report in its entirety. Readers should note the contents in all sections of the report and should not rely purely on the information given in individual sections of the report.

6.2 Disclaimer

Every reasonable effort has been made to ensure that the information contained in this report is as accurate, and as comprehensive as was practicable at the time of preparation. It is not reasonably practicable to categorically state whether an area is free of all asbestos containing materials.

Armco Asbestos Consultants cannot therefore accept liability for loss: injury: damage: or penalty caused by omissions or errors contained in this report. The report does not waive the responsibility of the building owner, contractor etc.; to ascertain for himself as to the composition of materials which may be disturbed or with which he may work.

Certain asbestos products contain asbestos fibres that are so well bound into the matrix of the parent material, that they do not readily generate respirable asbestos fibres under reasonably foreseeable circumstances. Examples of such materials include sealing mastics: rubber gaskets: and damp proof membranes. All such materials have therefore been deliberately excluded from the report.

Certain 'Aertex' type coatings and decorative plasters may contain very small quantities of asbestos. In situ, these coatings are often composed of different batches of product or may have been repaired/patched at different times. It is therefore possible that any 'Aertex' samples taken may not be representative of the entire coating.

It is possible that unidentified asbestos residues resulting from earlier asbestos removal works may be present in relatively inaccessible locations. These include: behind column claddings, attached to earlier ceiling tile grids or suspension systems or covered with new or continuous panelling or certain areas of pipework covered with non-asbestos insulation products.

Duct covers below carpets or inset within wood block floors etc. we're not raised, any unreasonable degree of dismantling of the structure of the building, were not investigated.

Access to roof areas was not undertaken (unless outlined). Areas deemed too high to reach from stepladders or otherwise considered unsafe were not inspected.

Access to electrical and process equipment was not possible due to safety and technical considerations. Such items may therefore contain unidentified asbestos materials or components.