



REFURBISHMENT ASBESTOS SURVEY

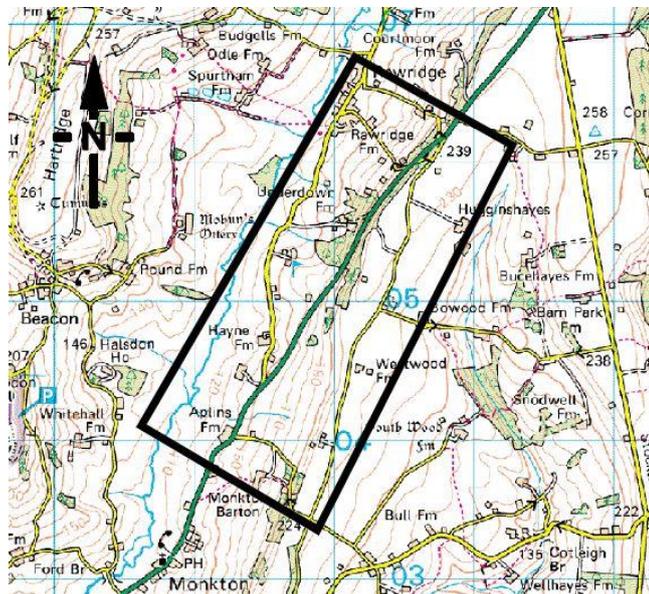
27th July 2015

For



AREA 2 CONTRACT – Drainage Refurbishment Survey

**A30 Rawridge
MP: 239/9 – 241/1
N/B and S/B**



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EXECUTIVE SUMMARY

Within the scope of the refurbishment asbestos survey undertaken of the asset known as A30 Rawridge, the following known asbestos-containing materials were identified:

No asbestos materials were positively identified within the specified areas

The presumed asbestos-containing materials are:

No presumed asbestos materials were identified within the specified areas

The scope of work was a refurbishment survey to the drainage including man holes, catch pits and gullies within the specified marker posts.

This survey must be upgraded to a Refurbishment / Demolition survey prior to any intrusive maintenance, refurbishment or demolition being undertaken outside the scope of any intrusion applied in the survey.

The following specific areas in the scope of the survey were not accessed

All areas within the scope of the survey were fully investigated.

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1.0 INTRODUCTION

1.1 General Objectives, Specification, Date of Survey:

The objective of this report is to provide a comprehensive record of the type, extent and condition of any asbestos containing products identified within the refurbishment survey as per IAN63/05 Revision 3 and HSG 264 (Second Edition). The report shall make recommendations which will form part of the future management of any remaining asbestos containing materials identified. The report also contains those elements of the asset known or presumed not to contain ACM.

ACM's (whether proven or presumed) will not be labelled.

Survey Date: 27/07/2015

1.2 Property / Asset Description:

The drainage assets surveyed were located on the A30 (Rawridge) between Marker posts 239/9 – 241/1.

1.3 Scope of Survey:

Carry out a refurbishment asbestos survey in accordance with HSG 264 (Second Edition) and IAN63/05 Revision 3. Comment and report on all accessible areas recording both ACM's and non or assumed ACM's in both written and drawn formats. The survey is restricted to the selected areas as identified by the plans within this report.

1.4 Agreed Variations to Specification or Method of Sampling:

The overall risk assessment score and subsequent management action for identified asbestos materials was based on a material assessment and the surveyors' judgement at the time of the survey only as outlined in IAN63/5 Rev 3. Under the IAN 63/5 Rev 3 no sampling point stickers were used.

1.5 Non-accessed areas

A non-accessed area is an area that was within the scope of the survey that for documented reasons could not be accessed (see section 2.1 for areas specific to this survey).

Where the area is a non-accessed void/inspection chamber etc. with no visual assessment possible a default presumption of ACMs with a material assessment maximum score of 12 will be applied.

Where areas are visible but not directly accessible for close inspection i.e: a high level bearing shelf appropriate presumptions will be made on the basis of ACMs likely to be present there i.e.: cement drainage pipes, cement shuttering etc.

1.6 ACM/non-ACM Categories

For ACM risk register compilation IAN 63/5 Rev 3 splits component materials of structures and highways into three distinct categories, as follows.

(i) Known ACMs

These are ACMs that have been confirmed analytically by sampling or are clearly stated as such on supplied information i.e.: stated on supplied plans and other documentation as ACMs or a known product type that contains ACMs.

(ii) Presumed ACMs

These are material where no contradictory information is available and are default presumed to contain ACMs i.e.: unidentified service ducts in bridge decks, unidentified waterproofing layers etc. Appropriate presumptions with appropriate material assessment scores will be made for materials that are visible on site but are not accessible to sample.

(iii) Presumed Non ACM`s and confirmed non ACM`s after testing

These are items which are either:

- a) Known non-ACMs such as metal railings, in situ- concrete, PVC drainage pipes etc.
- b) A product identified from the supplied information that has been confirmed as a non-asbestos material that has been verified by either extensive sampling of the exact product type or verification correspondence is available from the supplier in the form of letters/e mails stating categorically that the product does not contain asbestos. Lucion Environmental Ltd maintain an extensive database of product information and correspondence with manufactures for this purpose. If there is any doubt regards the ACM status of the product type, the item will be classified as a presumed item.

1.7 Intrusion Specific Notes Applicable to Refurbishment Surveys

Where a refurbishment level survey has been undertaken it will be specific to the agreed scope i.e.: coring of the deck to investigate waterproofing, localised investigations of expansion joints. If this has been done in conjunction with a management survey for the rest of the structure those items identified will be stated as such on the risk register.

1.8 Available Information Inspected Pre Survey (Desktop):

The following drawings / documents were reviewed as part of the desktop study:

Client: Skanska Area 2 Instruction No: Sk2013/SC/003843		Structure built circa: Unknown Site: A30 Rawridge			Desktop Date: 15/09/2015		
Lucion Job No: 88184		Surveyor Name: ██████████					
Drawing No/ Document No	Rev/ Issue No	Description of Material Noted			ACM's named on drawing	ACM's presumed	No ACM's
-	-	No plans were provided to sufficiently complete a desktop survey			-	-	-

Note: Where no supplied information is available from the client or the information provided is deemed unreliable appropriate presumptions will be made for ACMs present according the structural type.

2.0 SURVEY RESULTS

2.1 Detailed Results of Survey, Sampling and Testing:

Access:

Access to the site was arranged through Marcus McEvoy

Surveyor:

Ashley White of Lucion Environmental Ltd carried out the survey and compiled the report.

Survey date:

The survey was undertaken on 27th July 2015.

Survey Conditions:

The survey was undertaken on a clear, dry and warm night.

Risk Assessment:

Prior to starting work on site a site specific risk assessment was carried out.

Survey Results:

No asbestos materials were identified within the areas specified.

Drawings:

Refer to Appendix 4.1 for drawings / sketches of the structure indicating the results noted above. The drawings illustrate the locations of ACM's confirmed by testing (red), or presumed to be ACM's (amber). Confirmed non asbestos by testing or product information are illustrated by (Green).

These drawings should be read in conjunction with the Asbestos Risk Register.

2.2 Material assessment Scores:

Refer to section 3 for assessment scores and all other relevant and associated details and photographs.

2.3 Analysis Certificates:

No samples taken during this survey.

3.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS

MATERIAL ASSESSMENT ALGORITHM KEY

POTENTIAL FOR ASBESTOS FIBRE RELEASE (Taken from HSG 264)			
Product type (or debris from product)	Score	Asbestos type	Score
Asbestos-reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement etc).	1	Chrysotile (White)	1
Asbestos insulating board, mill boards, other low density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt.	2	Amphibole asbestos excluding crocidolite	2
Thermal insulation (e.g. pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing.	3	Crocidolite (Blue)	3*
Extent of damage / deterioration	Score	Surface treatment	Score
Good condition: no visible damage	0	Composite materials containing asbestos: reinforced plastics, resins, vinyl tiles.	0
Low damage: a few scratches or surface marks; broken edges on boards, tiles etc.	1	Enclosed sprays and lagging, AIB (with exposed face painted or encapsulated), asbestos cement sheets etc.	1
Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibre.	2	Unsealed AIB, or encapsulated lagging and sprays.	2
High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris.	3	Unsealed lagging and sprays.	3

*** Presumed or strongly presumed asbestos containing materials are scored as Crocidolite unless product information dictates otherwise**

Ref 01: Manholes located at MP239/9 – 241/1 – No sample taken

Property	A30 Rawridge MP 239/9 – 241/1		
Date of Survey	27/07/2015	Surveyor	Ashley White

Remarks / Recommended Action: The manholes located between marker posts 239/9 and 241/1 were of the same construction with a concrete carrier drain running through them and a concrete and brick construction surrounding them. No asbestos was located within any of the Manholes.

Area	Location	Component	Accessibility	Quantity	
Manholes	Verge	Concrete, Brick and Metal	Medium	N/A	
Material Assessment Algorithm		Sample Ref:		No Sample Taken	
Product Type	N/A	Asbestos Type	N/A	Asbestos?	No
Damage/Deterioration	N/A	Surface Treatment	N/A	Product Type	N/A
Overall Assessment Score	0	Potential for fibre release	N/A	Analysis	N/A



Photo 01 - Manhole



Photo 02 – Concrete Carrier Pipe



Photo 03 – Concrete Carrier Pipe

Ref 02: Gullies located at MP239/9 – 241/1 – No sample taken

Property	A30 Rawridge MP 239/9 – 241/1		
Date of Survey	27/07/2015	Surveyor	Ashley White

Remarks / Recommended Action: The gullies located between marker posts 239/9 and 241/1 were of the same construction with a concrete outlet pipe below a PVC outlet pipe. No asbestos was located within any of the Gullies.

Area	Location	Component	Accessibility	Quantity	
Gullies	Verge	Concrete, PVC, Brick and Metal	Easy	N/A	
Material Assessment Algorithm		Sample Ref:		No Sample Taken	
Product Type	N/A	Asbestos Type	N/A	Asbestos?	No
Damage/Deterioration	N/A	Surface Treatment	N/A	Material Type	N/A
Overall Assessment Score	0	Potential for fibre release	N/A	Analysis	N/A



Photo 04 - Gully



Photo 05 – PVC Pipe



Photo 06 – Concrete Pipe

Ref 03: Catchpits located at MP239/9 – 241/1 – No sample taken

Property	A30 Rawridge MP 239/9 – 241/1		
Date of Survey	27/07/2015	Surveyor	Ashley White

Remarks / Recommended Action: The Catchpits located between marker posts 239/9 and 241/1 were of the same construction with a PVC inlet pipe leading from the Gully and a concrete outlet pipe with a PVC cap leading to the carrier drain within the manhole. No asbestos was located within any of the Catchpits.

Area	Location	Component	Accessibility	Quantity	
Catchpit	Verge	Concrete, PVC, Brick and Metal	Medium	N/A	
Material Assessment Algorithm		Sample Ref:		No Sample Taken	
Product Type	N/A	Asbestos Type	N/A	Asbestos?	No
Damage/Deterioration	N/A	Surface Treatment	N/A	Material Type	N/A
Overall Assessment Score	0	Potential for fibre release	N/A	Analysis	N/A



Photo 07 - Catchpit



Photo 08 – PVC inlet



Photo 09 – Concrete Outlet leading to Manhole

4.0 APPENDICES

APPENDIX 4

4.1 Drawings and Sketches

The drawings illustrate the locations of ACM's confirmed by testing (red), or presumed to be ACM's (amber). Known non-asbestos by testing or product information are illustrated by (Green).

Relevant elements are illustrated and colour coded on the drawings.

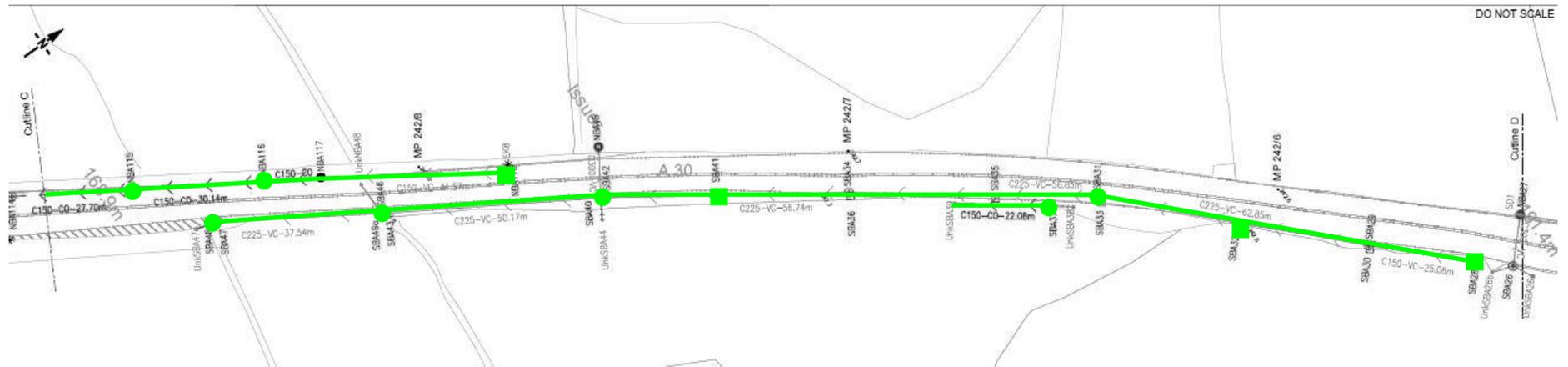
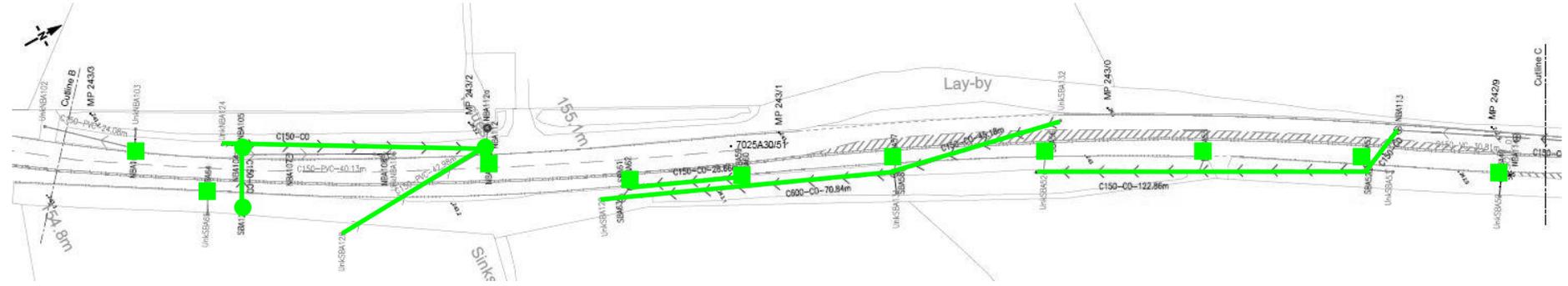
- Red –** ACM's confirmed by testing or product information
- Amber –** Presumed to be ACM's.
- Green –** Items confirmed non asbestos by analysis or product information.

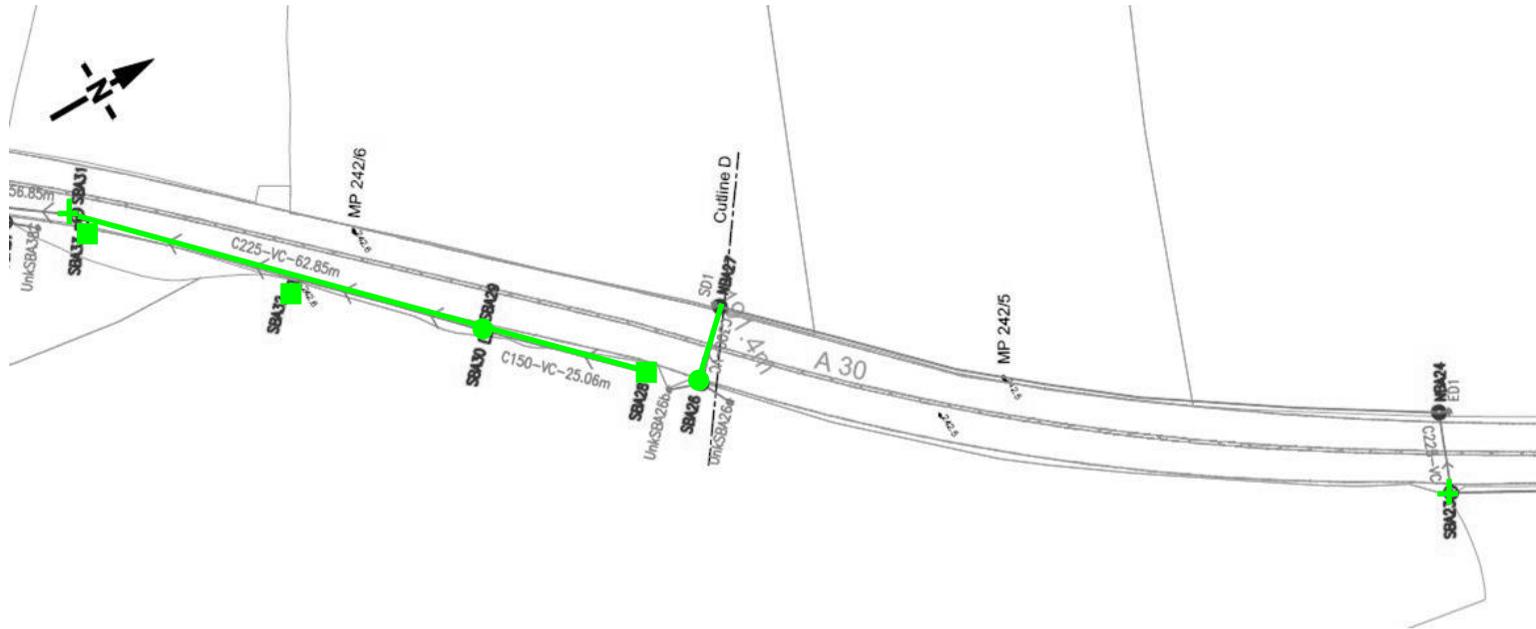
Key

	Concrete pipe		Gully
	Outlet		Catchpit
	Inlet		Manhole

DO NOT SCALE









APPENDIX 4

4.2 Analysts Certificate

No samples were taken during this survey.

4.3 Information Required for Input into SMIS

Appraisal Review Fields		
Date of This Review	Date of Survey	28/07/2015
Appraisal Type	Enter the most appropriate 1) Area Scheme Related 2) Major Projects 3) Part of Initial MA/MAC Area Annual Target 4) Third Party	Area Scheme Related
Date of Next Review	Normally 2 years from last review unless the condition (borderline) of ACMs or accidental damage requires a shorter period.	2017
Asbestos Status	Enter the most appropriate 1) ACM Confirmed 2) Presume ACM Present Until Confirmed Otherwise 3) No ACM Present	No ACM Present
Conducted By	Name of Surveyor	██████████
Condition	Enter the most appropriate 1) Good, no remedial action required 2) Borderline, to be reviewed in x months 3) Poor, remedial action required.	Good, no remedial action required

AAP Record Fields		
Title	Title of Survey Report	Drainage Survey
Reference	Order Number	Sk2013/SC/003843
Version	Version 1, 2 etc. Usually "Initial"	Initial
Date	Date of Report	15/09/2015
Reason	Type in the most appropriate choice from: (usually 1 or 3) 1) Initial AAP by Area Provider (annual target) 2) Initial AAP by others (e.g. TPI generated) 3) Area scheme generated AAP 4) Review of AAP by Area Provider 5) Review of AAP by others (e.g. TPI generated)	Area scheme generated AAP

Constraints on Access for Survey or Inspection		
Comments of Constraint	Recommendations or advice for anyone visiting the structure.	N/A

Remedial Action Fields (1)		
Type	Choose the most appropriate <ul style="list-style-type: none">• Protect• Replace• Remove	N/A
Recommend Action Date		N/A
Comments	Description of any works needed.	N/A

APPENDIX 4.4 Quality Control Statement

Quality of service is primary objective of Lucion Environmental Ltd and those it employs.
Lucion Environmental Ltd is a UKAS Accredited Inspection Body No 0263
All bulk analysis is undertaken by UKAS Accredited Testing Bodies.
All participating surveyors have P402 certificates as a minimum qualification and meet Lucion Environmental Ltd requirements for asbestos surveys and sampling.
The Quality Manager is responsible for controlling the asbestos surveys and reporting under the direction of Patrick Morton Director for Lucion Environmental Ltd.

Survey report compiled by

NAME



SIGNED

DESIGNATION Asbestos Surveyor

DATE 15/09/2015

Lead Surveyor Authorisation:

NAME



SIGNED

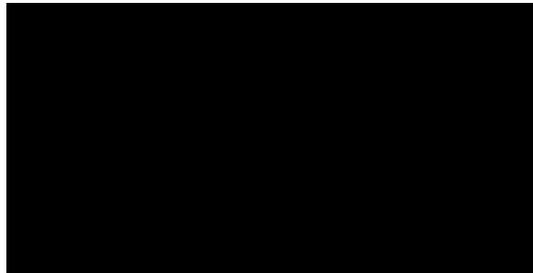
DESIGNATION



DATE 15/09/2015

The following Lucion Environmental Ltd member of staff has Quality Checked this report:

NAME



SIGNED

DESIGNATION Quality Manager

DATE 15/09/2015

APPENDIX 4.5 ASBESTOS RISK REGISTER

ASSET NAME				A30 Rawridge							ASBESTOS RISK REGISTER	
ASSET DESCRIPTION AND REFERENCE				Drainage Survey								
Section	Location Building name Element name	Component Name / Description	Other reference	Survey Type Management (M), Refurbishment (R) Demolition (D)	Sample Ref	Positive test for ACM (For Section 1)	Material Assessment Score (HSG 264 refers)	Rating for disturbance during maintenance Low, Medium, High	Actions necessary – A, B, C or D	Photo ref	Grounds for presumed ACM (Section 2)	Grounds for presumed non-ACM (Section 3)
Section 1 known ACM's	No items were positively identified during the survey											
Section 2 Presumed ACM's	No items were positively identified during the survey											
Section 3 Presumed Non ACM's and confirmed non ACM's after testing	A30 Rawridge 239/9 – 241/1 / Manholes	Concrete, Brick and Metal	-	R	-	N/A	-	N/A	A	01 02 03		Item is a known non asbestos material
	A30 Rawridge Rawridge 239/9 – 241/1 / Gullies	Concrete, Brick, PVC and Metal	-	R	-	N/A	-	N/A	A	04 05 06		Item is a known non asbestos material
	A30 Rawridge Rawridge 239/9 – 241/1 / Catch pits	Concrete, Brick, PVC and Metal	-	R	-	N/A	-	N/A	A	07 08 09		Item is a known non asbestos material

APPENDIX 4.6 HSG 264 Generic Assessment Method & Actions

The risk from asbestos shall be based on a visual assessment of the material and a judgement on the use of the location, based on the following criteria in HSG 264:

- Product Type
- Asbestos Type
- Damage / Deterioration
- Surface Treatment

Using the material assessment algorithm from HSG 264, reproduced on the next page, the potential for fibre release, if disturbed, shall be assessed as follows:

Assessment score	Potential for fibre release
10+	High Potential
7-9	Medium Potential
5-6	Low Potential
<4	Very Low Potential

Actions shown on the register are those necessary as a result of the risk assessment process. They indicate the level of remedial work necessary which must be carried out to ensure that all persons are not accidentally exposed to airborne asbestos fibres which could be inhaled.

ACTION LEVEL A: Indicates those materials or assessed elements which are known not to contain asbestos as a result of a direct test, or presumed to be non ACM or constitute material.

ACTION LEVEL B: Indicates Asbestos Containing Materials (ACM's) which as a result of the survey and assessment process have a low score and can be left in place and managed. This will also include materials which are not investigated because they are hidden, buried and not likely to be disturbed during most work activities.

ACTION LEVEL C: Indicates known ACM's which as the result of assessment are in a condition which requires repair, sealing, covering or other means of encapsulation to prevent fibre release. When work has been carried out these elements should be re-graded to action level A or B within the register.

ACTION LEVEL D: Indicates known ACM's which as a result of assessment are in a condition such that the material should be removed and replaced with not ACM.

Recommended Actions

- a) Management of existing asbestos. If the asbestos is in good condition and well sealed it may be left in place and an appropriate management control system set up. This may include:
- A log which is maintained and kept up-to-date
 - Information, instruction and training of staff
 - Regular inspection and maintenance
 - Labelling of asbestos likely to be disturbed during maintenance
 - A permit to work system

- b) Sealing, repair or encapsulation. If it is likely that any asbestos-based materials may release fibres, particularly where the material is damaged or is likely to be disturbed or abraded then the material must be treated.

Sealing involves the application of a coating (paint, polymeric, cement etc,) which must firmly bond to the asbestos material.

Repair involves filling of cracks, patching, encapsulation or cladding with sheet materials

- c) Removal. Where there is a risk that fibres may be released and it is not practical to seal or repair the area then asbestos material must be removed by an approved contractor.

These are not mutually exclusive as, for example, management of existing asbestos will be required where asbestos is left in place or before it is removed.

The material assessment should identify the high-risk materials, that is, those which will most readily release airborne fibres if disturbed. It does not automatically follow that those materials assigned the highest rating in the material assessment will be the materials that should be given priority for remedial action. Priority must be determined by carrying out a risk assessment which will take into account factors such as:

- The location of the material
- Its extent
- The use to which the location is put
- The occupancy of the area
- The activities carried on in the area
- The likelihood/frequency with which maintenance activities are likely to take place.

Recommendations for action on known or presumed asbestos containing materials shall be based on the material assessment and the judgement of the surveyor who shall take into account the above factors as known at the time of presenting the report.

Consultation with the Clients Representative will be necessary in respect of the potential activity/disturbance for the asset.

Outline guidance on the selection of the most appropriate option is given in the table below, although the surveyor must ultimately base recommendations on his or her risk assessment, the assessment score of the product and the results of consultation with the Clients Representative.

Assessment Score	Product	Low chance of disturbance	Normal	High chance of disturbance	Planned Refurb./ Demolition
<4	All				
5-6	Asbestos-reinforced composites				
	Asbestos insulating board other low density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt.				
	Thermal insulation (e.g. pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing.				
7-9	Asbestos-reinforced composites				
	Asbestos insulating board other low density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt.				
	Thermal insulation (e.g. pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing.				
10+	Asbestos-reinforced composites				
	Asbestos insulating board other low density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt.				
	Thermal insulation (e.g. pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing.				

M = manage S = seal and then manage R = remove

END