Mercers, Harlow, CM19 5PN

Roof Condition Appraisal Report

Harlow Property Services,

Harlow District Council

stace

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1. Introduction

We have been asked by Harlow Property Services, Harlow District Council to inspect and report on the condition of the roofing systems across the estate of Mercers, Harlow, CM19.

The remit of our inspections and survey is to evaluate the current condition of the roof and verify the extent of any repairs required or otherwise determine if the roofs are serviceable.

As part of the investigations, intrusive surveys to localised areas of the roof and cladding elements were undertaken, with safe access being arranged by Harlow District Council, with additional support of a local Contractor.

The initial survey was undertaken on Tuesday 20th September by Amir Akiva and Vipul Raichura. The initial inspection was limited to a visual inspection of external areas. A further intrusive survey was carried out on Monday 19th December 2022 by Amir Akiva, with the support of a local Contractor. During this inspection, some roof tiles were removed to isolated areas of the main roof and a section of vertical cladding. This intrusive inspection was limited to an area above two communal staircases and two areas of mono pitch roof.

Where isolated tiles were lifted, we were able to review and assume the overall condition of the roof, providing a clearer understanding of the roof build-up, including timber truss rafters, underlay and battens.

2. General Description

The property is of a cavity construction, with masonry external walls. As part of the construction there are areas of walls which are clad vertically in cement based asbestos tiles and isolated areas of shiplap cladding, provided in the recessed bays of the mansard roof.

It is believed that the original windows and doors have been replaced and now consist of uPVC double glazed window units and Juliet balcony doors at second floor level. The individual flat entrance doors are understood to be a composite door, although are of different styles and colours.

The roofs across the estate are mainly consisting of truss mansard style roofs, with cement based asbestos tiles, although there are areas of roof which are mono pitch roofs.

There are isolated areas of flat roofing, which are covered in felt. These flat roofing locations are directly above stairwells, and directly abut and meet the pitched roofs. Rainwater goods are of PVC construction and consist of gutters and downpipes from the uppermost pitch and lower pitch section of the mansards. There are also internal outlets and downpipes provided to the flat roof sections.

There are external walkways, providing access to several flats, which are of a cantilevered concrete construction.

We understand that the estate and properties at Mercers, were built in the 1970’s, although we have no confirmed information on the construction date or any available record drawings.

3. Summary of Findings

3.1 PITCHED ROOFS

3.1.1 General

The main roof areas consist of pitched roofs, with cement based asbestos tiles. The pitched roofs do not incorporate any overhanging eaves detail.

3.1.2 Asbestos Cement Tiles

We have been supplied with the asbestos management survey reports for the estate, which includes assessment and comments on the risks associated with the asbestos containing cement tiles. Although, there is a general recommendation to 'Manage' the asbestos containing tiles, it's important to note that a number of these tiles have been damaged and dislodged, leading to increased risks of water ingress but also of airborne fibres. Refer to Appendix C for the complete asbestos management survey report provided.

As noted, the cement based asbestos tiles are generally in a poor condition as evidenced by Photograph No.01 – No.5. It appears that many of these tiles have become brittle and have deteriorated, leading to cracking and dislodgement of tiles observed.

We also note significant moss and lichen growth to these roof areas, refer to Photograph No.01 – No.05. This can more easily occur when the surface of the cement tiles starts to delaminate accelerating the build-up of moss which will further slowdown surface water run-off. The moss can also lead to blocked gutters which will reduce and slow rainwater dispersal, increasing the risk of wind driven rain penetrating under lapped tile courses or moisture being drawn under the tiles by capillary action and the moss build up and congested of gutters and down pipes could lead to gutters over flowing. This could lead to issues of water tracking back into the cavity, as evidenced by water ingress issues to a ground floor flat.

While the properties of the cement-based tile would have originally been largely effective in resisting water/moisture, its properties in this regard would have diminished over time. As such, we expect the uptake of moisture and freezing action is more prominent as the roof has aged.

The tiles are of age, and we anticipate are part of the original building construction, estimated to have been built in the 1970's. We must point out that many tiles have been replaced with a more modern, non-asbestos tile. This can be seen in Photograph No.04, No.7 & No.08, where a large proportion of low-level tiles have been replaced. We cannot confirm when this was carried out, although suspect due to early and premature failure of the original roof tiles and carried out in piecemeal fashion.

3.1.3 Roof Cap Flashing

To the top of the mono-pitched roofs, there are roof cap flashings installed. We observed that the cap flashings are heavily corroded, as shown in Photograph No.06. Corrosive staining can be seen below this capping. We have not confirmed what the pressed sheet metal capping material is, although noted it is heavily corroded in places.

The cap flashing is poorly installed, with the cappings but jointed together, with a small section of capping over the junction. The overlaid capping piece of the butt joint is approximately 100mm wide, which is insufficient for deflecting water away from the capping and will permit water to enter the roof void and the cladded wall sections. We overserve that this issue could be contributing to water entry into the cavity, although this was not verified.

Regardless of the poor overlap, the capping details are in very poor condition and will need to be replaced throughout the estate.

3.1.4 Roof Build Up

During our inspection, Harlow District Council was conducting other repairs on site. Therefore, access was provided to two flat roofs and a handful of non-asbestos containing tiles was lifted in both locations, to review the condition of the flat roof to pitched roof detail.

Once lifted, we observed that a series of horizontal roof battens installed, in particular a row of three horizontal battens is installed along the sarking detail, where it meets the felt flat roof. As shown in Photograph No.07, there are no cross battens installed on this roof, therefore preventing water to flow across the felt surface and any water that may have percolated the tiles is becoming trapped at this location where the felt is not perforated. Timber decay was noted to the horizonal battens in this location which verifies that water is penetrating the underside of the tiles, refer to Photograph No.07 & No.09. It is also understood that water laying on the flat roof is tracking its way back towards the pitched roof, adding to the issues

The exposed sarking detail revealed deterioration to the roof underlay, where it has become brittle and is damaged, with cracking and holes, refer to Photograph No.8. Excessive moisture can also be seen in this location, refer to Photograph No.09. We also observed in the area exposed, that the underlay has not been properly lapped, with a butt joint observed, refer to Photograph No.10.

The presence and integrity of any underlying felt underlay becomes more important as this acts as a secondary barrier to water ingress and wind driven rain.

We further noted that an isolated area of loose rolled insulation material has been placed between battens, refer to Photograph No.11. It is unclear why this has been installed, although suspect it may be related to persons attempting to prevent roof tiles chattering in the wind. Roof chatter can be caused by wind and is common on lightweight tiled roofs.

As noted above, a number many tiles have been replaced with a more modern, non-asbestos tile and particularly at low level, where the pitched and flat roofs intersect. As shown in Photograph No.07, it appears that an additional breathable membrane underlay has been installed, likely to supplement the previously failed felt underlay material when partial replacement tiles were re-laid.

3.1.5 Rainwater Goods

We observed a damaged and dislodged tile, which had fallen into the gutter, as well as debris blocking the gutter, refer to Photograph No.05. This particular issue is causing water ingress into the cavity where it can percolate down between the brick leaf's, where it meets the obstruction

caused by the cavity tray and can then be seen emanating from above and around opening of the ground floor flat below.

The rainwater gutter in this location also does not seem to have a sufficient fall towards the downpipe to the right-hand side. This issue is compounded by the congested gutter and will be exacerbating the problem further, allowing rainwater to overflow, possibly allowing it to enter the cavity if this has not been closed off correctly at the roof plate level.

The issues noted above are compounded by a lack of overhanging eaves to the pitched roof and it is suspected that there is no cavity closer installed to the top of the wall.

Generally, the rainwater goods appear to be of age and ~~appear to be~~ brittle and at risk of cracking. It's anticipated that these rainwater goods are original and part of the original 1970's construction.

There was an isolated location of guttering which appeared to be leaking during our inspection, to the central courtyard area, although considered to be repairable.

3.1.6 Ventilation

During our inspection, we observed that in isolated areas, roof vents have been installed, refer to Photograph No.04. It is not clear why isolated areas have roof vents, although we suspect that excessive moisture conditions within this particular roof void was addressed as a repair method.

The pitched roofs are of a cold roof construction, with insulation at joist level only. As the roofs generally lack a clear and effective ventilation system, and use a traditional bituminous underlay, the roof is at risk of condensation in the roof space.

The NHBC guidance is that unventilated cold roofs which have insulation placed over a horizontal ceiling should have a vapour-permeable underlay used. If the roofs are to be replaced, a suitable underlay and roof system is to be designed in accordance with good design and practice.

3.2 FLAT ROOFS

3.2.1 General

The flat roof areas consist of felt coverings, with a plywood substrate. It is understood from discussing with a maintenance Contractor on site, that the flat roofs have been overlaid directly over an older flat roof covering. This presents a potential issue for existing moisture becoming trapped and remaining between layers of covering.

The drainage to the flat roofs consists of domed roof outlets and internal downpipes, which appeared to be in reasonable condition. However, drainage surveys were not carried out to confirm the same.

3.2.2 Upstand Details

The flat roof areas have upstanding details, which provide a direct junction to the vertical wall cladding.

An area of cladding, where replaced previously with an artificial slate was lifted at the base of the wall, which revealed the upstanding level, refer to Photograph No.12 & No.13. As shown, there I a tear to the underlay in this location, which is at the junction of the upstanding section.

A further area was inspected, refer Photograph No.14. In this location, the upstanding detail was of a shallow height and not the minimum 150mm height, to be expected.

3.3 WALL CLADDING AREAS

3.3.1 General

Refer to Photograph No.12 – No.13, showing the wall cladding arrangement, including the battens and membrane, in two locations inspected.

Both areas revealed continuous horizontal battens, which did not have a suitable means of drainage, such as staggered batten arrangement, drainage battens or cross battens. Therefore, water entering behind the cladding may track into the voids below and track under the roofing finishes.

As several tiles have been replaced in these locations, it is suspected that the battens may have been replaced more recently. This may be because of failure of the tiles or water ingress issues or both. Further issues of water ingress points are noted already, in respect of the cap flashings.

We did note however that the cladding has a suitable arrangement of corner soakers to an external corner that was inspected.

3.4 CAVITY TRAYS

The external walls are a typical brick and block cavity construction, with a masonry external leaf. Although separately reported on, we point out that above openings to windows and doors, there are no weep holes. The failure to provide these weep holes above openings in a cavity wall allows water, which enters to become trapped and causing subsequent internal issues with water ingress and damage.

Intrusive investigations were carried out in one location, refer to Photograph No. 15. This investigation confirmed the use of a bitumen based DPC, as a cavity tray, refer to Photograph 16. While this form of bitumen DPC used is considered acceptable, the cavity tray is constructed without a stop end formed, refer to Photograph No. 17.

Therefore, water that could and has been entering the cavity, cannot be correctly directed away from the window opening into the adjacent open cavity and it cannot discharge through weep holes as none are provided in the external brickwork. There also remains the risk that the installed tray could sag and thus could retain wind driven rain or if the felt has become perforated or deteriorated due to age that this could direct water direct to the top of the window head or window reveals.

In this case, we must point out that assuming all cavity trays across the estate are formed in the same arrangement, all window openings in other flats could be vulnerable to issues of water ingress. For this reason, due allowance for investigation of all windows and replacement of cavity trays are deemed to be required.

We also noted in the area inspected that the upstanding section of the cavity tray is torn, refer to Photograph No. 16. While we expect that a bitumen DPC can withstand thermal movement, it appears to have failed as it has become brittle with age or had been incorrectly and poorly installed. The cavity tray was noted to be torn in its entire visible depth, as demonstrated in Photograph No.18.

We recommend that this apparent and inherent defective detailing and or age-related deterioration of the DPC forming the cavity tray, is checked with a further two intrusive window head inspections, at randomly chosen sample locations. This will confirm the extent of these works and provide an understanding of the wider estate issues. However, due allowance to replace all cavity trays has been suggested from our limited inspections.

4. Recommendations

The following list of remedial works are suggested to be undertaken to Mercers, Harlow, to address the ongoing issues with the roofs, in particular the pitched roofs and noted in summary format:

- Full scaffold and safe access required for the below works.
- Strip back all pitched roofs and dispose.
- Remove and replaced asbestos cement flues to roof.
- Identify any redundant flues present and remove.
- Strip back all vertical wall cladding tiled areas and dispose.
- Allow for safe disposal of asbestos cement tiles under statutory requirements.
- Install new pitched roof coverings (artificial Slate or similar), including underlay, battens, flashings, and tiles.
- Allow to extend eaves detail.
- As required, retrofit suitable cavity closers.
- Replace all rainwater goods, laid to correct falls.
- Install new all cladding system, with new cross batten arrangement, including breathable membrane and ventilation.
- Strip back existing flat roofs.
- Form new kerb details between roof junctions, including necessary flashings, soakers, and the like.
- Install new flat roof coverings on completion.
- **OPTION WORKS**: Replace all cavity trays across the estate and install new weep vents.

We suggest that works are detailed and specified into a set of formal tender documentation, to obtain competitive costs from Contractors.

5. Conclusion

The roofs across the estate are generally in poor condition, with several damaged, slipped or cracked tiles which are of an asbestos cement material. The roof has also undergone several repairs, where cement tiles have been replaced with a more modern synthetic slate tile installed as well as retrospective roof vents, in isolation. The cap flashings at the top of the mono-pitch roofs are failing and are heavily corroded with insufficient lap joints. This will be permitting water to enter at ridge level to the roof and wall cladding.

The ongoing tile failure and presence of asbestos containing material, suggest that the roofs should be replaced in their entirety.

The junction between the mono-pitch roof and the flat roof are poor and therefore will be redesigned to provide a new kerb detail, with flashings and soakers to ensure weathertightness and performance. Similarly, the upstanding details to the flat roof are not of sufficient height, providing risk of water entering the roof void and/or under the flat roof coverings.

Issues of water penetration through the cavity have been noted to cause significant damp problems in a particular ground floor flat. This has predominantly been caused by a blocked gutter, which appear to be incorrectly sloped at one end. Although, the window heads across the estate lack weep holes which would otherwise allow water entering the cavity to escape. This is made worse by a poorly installed and non-functioning cavity tray.

We therefore have suggested that all cavity trays are replaced, with a suitable tray having stop ends, with new weep vents above openings.

Appendix A – Photographic Schedule

Photo 01 Mono-Pitch Roof

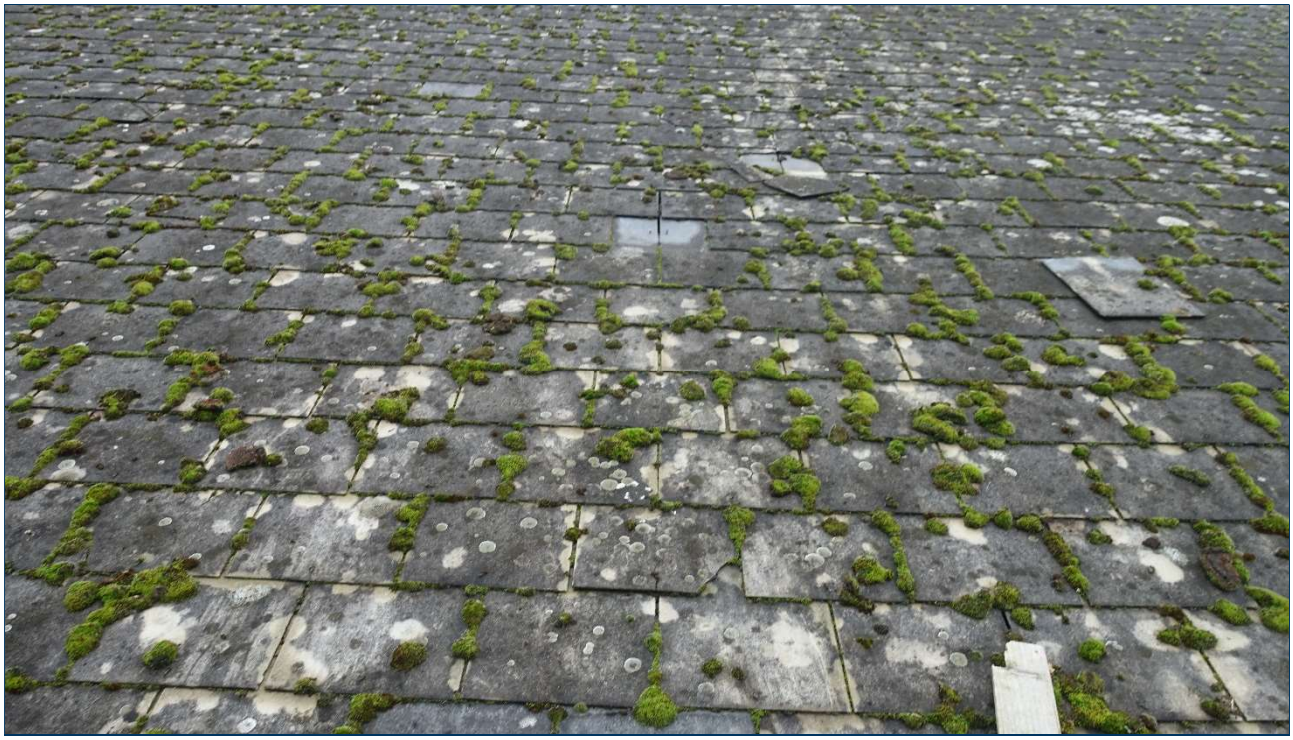

Photo 02 Mono-Pitch Roof

Photo 03 Mono-Pitch Roof

Photo 04 Mono-Pitch Roof

Photo 05 Mono-Pitch Roof – Debris / Tile in Gutter

Photo 06 Adjacent Mono-Pitch Roof – Cap Flashings

Photo 07 Flat Roof to Pitched Roof Detail

Photo 08 Mono-Pitch Roof – Damage to Underlay

Photo 09 Mono-Pitch Roof – Damage to Underlay & Saturated / Decayed Battens

Photo 10 Mono-Pitch Roof – Underlay Butt Joint

Photo 11 Mono-Pitch Roof – Insulation Installed

Photo 12 Vertical Wall Cladding – Area No.1 Exposed

Photo 13 Vertical Wall Cladding – Area No.1 Exposed

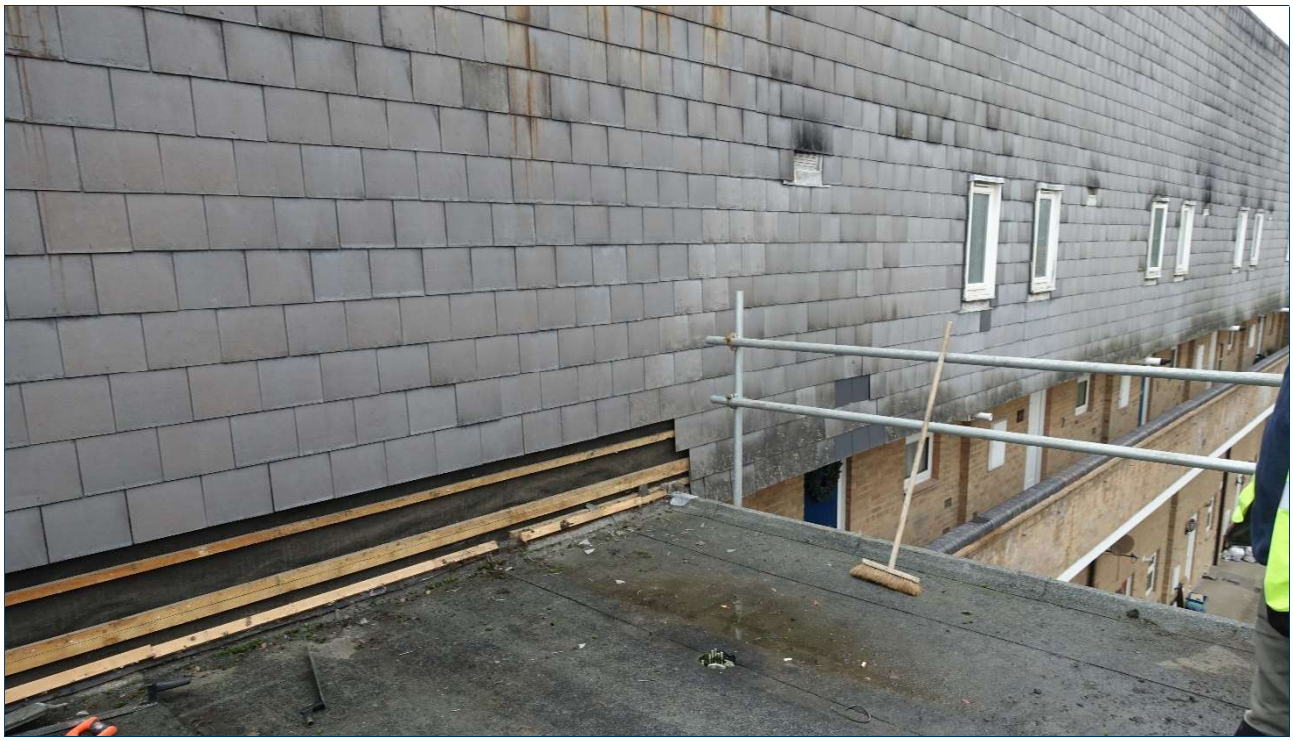

Photo 14 Vertical Wall Cladding – Area No.2 Exposed

Photo 15 Rear Elevation (Arrow Indicating Intrusive Inspection Location)

Photo 16 Window Head Detail – Bitumen Type DPC Cavity Tray

Photo 17 Window Head Detail – Bitumen Type DPC Cavity Tray without Stop End

Photo 18 Window Head Detail – Bitumen Type DPC Cavity Tray

Appendix B – Asbestos Management Survey Report

ASBESTOS MANAGEMENT SURVEY REPORT

For

HARLOW COUNCIL

Of

Block 4, 1-54 Mercers, Harlow, Essex

PR26735-17457C

Produced by ESG Asbestos Ltd,
a wholly owned subsidiary of ESG

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EXECUTIVE SUMMARY & RECOMMENDATIONS

A Management asbestos survey was carried out at Block 4, 1-54 Mercers, Harlow, Essex.

Asbestos was found in one sample. There was 1 presumed or strongly presumed material identified.

Table 1 Summary of ACM's

Sample Reference	Risk Score	Building	Area Description	Material	Material Risk	Priority Risk	Action	Timescale for Action
AWS - 001	5	0001	External - 001- External	Cement based tiles to walls	4	1	Manage	12 months
001	5	0001	External - 001- External	Cement based tiles to walls	4	1	Manage	12 months

FULL SURVEY REPORT

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SECTION 1 INTRODUCTION

1.1 ESG Asbestos Limited was instructed by Dan Maylin of Harlow Council, to carry out a Management asbestos survey of Block 4, 1-54 Mercers, Harlow, Essex in accordance with HSE document HSG 264 and in-house approved documented method SCI/ASB/001.

1.2 The scope of the works was to carry out an Asbestos Management Survey on the premises as instructed by the Customer as follows: Management to all communal areas
The scope of works as amended on site is as follows:

1.3 The following areas were not accessed during the survey following initial discussions with the customer: None prior to start

1.4 The extent and type of the asbestos containing materials on site was to be summarised in a written report including a detailed site register, survey report sheets and plans.

1.5 The title to this report is vested in the Customer named but title to copyright is retained. The Contracts (Rights of Third Parties) Act 1999 does not apply to the contract with the Customer and the provisions of the said Act are hereby excluded.

1.6 The inspection report shall not be reproduced except in full without the approval of the inspection body and the Customer.

1.7 ESG Asbestos Ltd is accredited by UKAS as a Type C Inspection Body for surveying for asbestos in premises. Opinions, interpretations and priority risk assessments are outside the scope of accreditation.

1.8 Fibrous materials may exist within the property which is not ACMs. Where, in the judgment of the surveyor, the material is clearly not asbestos then the surveyor will record the findings in the Construction Register. However the material will have been inspected unless it was in an area of no access or is specifically excluded from the report.

SECTION 2 SITE DESCRIPTION

2.1 The site consisted of Flat Block of brick masonry construction with pitched roof .

Table 2.1: Summary of buildings surveyed and survey type at Block 4, 1-54 Mercers, Harlow, Essex.

Property Ref / UPRN	Building Description	Survey Type
219146	Flat Block of brick masonry construction with pitched roof	Management

SECTION 3 SPECIFIC NOTES

3.1 The scope and terms of works were as agreed during the tender process with the Customer, including a discussion on areas of possible no-access (see section 1.2 and 1.3). We confirm that in preparing this report that we have exercised all reasonable skill and care bearing in mind the project objectives, the agreed scope of works and prevailing site conditions.

3.2 Asbestos containing materials (ACMs) concealed behind other asbestos containing materials may not have been located during the survey due to the potential for fibre release. It should be assumed that further asbestos containing materials may be present until proven otherwise.

3.3 Water absorption tests have not been carried out on board or cement materials and thus such materials which have been referred to within this report as asbestos insulating board (AIB) or asbestos cement are done so based solely upon their physical appearance and using the technicians judgement. A water absorption measurement test, as detailed in paragraph 17 of L143 *Work with Materials Containing Asbestos* ACOP, is required to determine whether a material is legally classified as asbestos cement or not. Asbestos cement in a dry state absorbs less than 30% water by weight.

3.4 A Management Survey report should not be used as the basis for an asbestos removal specification. A Refurbishment or Demolition survey report may be used as a basis for a specification. Note that all dimensions referred to in this report are approximate and should not be used for the calculation of priced measures. For Management surveys, the recommendations indicated on the asbestos register are overridden if the building is due for demolition or major structural alteration. Where materials are suspected to be present and consist of or contain asbestos, contractors should (prior to commencing refurbishment works) first confirm the existence of such materials under controlled conditions such as a Refurbishment or Demolition survey and in accordance with Control of Asbestos Regulations Regulation 5 and the Construction (Design and Management) Regulations.

3.5 All reasonable efforts were made to identify the presence of materials containing asbestos within the areas of the building. It is known that asbestos materials are frequently concealed within the fabric of buildings or within sealed building voids accordingly it is not possible to regard the findings of any survey as being definitive. The nature of the survey was a non-destructive inspection at key locations of accessible voids and areas.

SECTION 4 SURVEY AND SAMPLING METHODOLOGY

4.1 Management Survey

4.1.1 The purpose of this survey was to locate as far as reasonably practicable, the presence and extent of any suspect ACMs in the building and assess their condition, with representative samples being collected and analysed for the presence of asbestos. Samples from each type of suspect ACM found were collected and analysed to confirm or refute the surveyor's judgement. If the material sampled was found to contain asbestos, other similar homogeneous materials used in the same way in the building have been strongly presumed to contain asbestos.

4.1.2 The survey was carried out in accordance with HSG 264, ESG's internal procedure SCI/ASB/001 and the specific requirements of the Customer.

4.2 Abbreviations used in the text

AWS Associated with sample (Visually consistent with. Also referred to a Strongly Presumed sample)

ACM Asbestos Containing Material

NSR No sample required (Area has been inspected and no suspicious samples identified)

NA No Access (Access not reasonably practicable)

P Presumed to contain asbestos. Sample required to confirm absence or presence of asbestos in item

CAR Control of Asbestos Regulations (2012)

X All samples prefixed with an X were not taken by ESG Asbestos, however the data was provided by the client for inclusion within the report and the integrity of the data has been reviewed by ESGA Ltd in accordance with our internal procedures.

SECTION 5 BULK SAMPLE ANALYSIS METHODOLOGY

5.1 Bulk sample analysis was carried out in accordance with ESG Asbestos Limited's internal procedure SCI/ASB/007, based on the Health and Safety Executive publication HSG 248.

5.2 ESG Asbestos is a UKAS-accredited testing body No. 1089, ensuring compliance with the requirements of BS EN ISO/IEC 17025:2005 General criteria for the operation of various types of bodies performing testing.

SECTION 6 RISK ASSESSMENT

6.1 Risk Assessment Methodology & Interpretation

6.1.1 Each location of asbestos has a risk assessment which is composed of two elements:

- Material Risk Assessment
- Priority Risk Assessment

6.1.2 The table below identifies the differences between the two elements, their purpose and the guidance to which it relates and which ESG Asbestos Limited adhere.

Table 6.1: Summary of Risk Assessment

Risk Assessment Type	Purpose	Guidance and Algorithm used by ESG Asbestos Limited
Material Risk Assessment	Identification of the type and condition of the ACM and the ease with which it will release fibres if disturbed	• HSG 264 – 'Asbestos – The survey guide.' – Appendix 4. • In house procedure SCI/ASB/001, based on the above
Priority Risk Assessment	Identification of the likelihood of disturbance	• HSG 227 – 'A comprehensive guide to managing asbestos in premises' • In house procedure SCI/ASB/001, based on the above

6.1.3 The combined Material and Priority Risk Assessment scores provide a Total Risk Score for the asbestos material and may be used to determine the appropriate management procedure.

6.1.4 The Priority and Material Assessments were made based upon the conditions of the materials and their application at the time of survey/inspection, and as such ESG cannot accept liability for assessments provided when changes in condition and/or use have occurred subsequent to the survey. The duty holder should be aware that if the use of the building changes, then the assessment should be reviewed by a responsible person as part of the ongoing management plan, and this is the responsibility of the duty holder to manage.

Table 6.2 Material Risk Assessment Algorithm

Sample variable	Score	Example of scores
Product type (or debris from product)	1	Asbestos reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, asbestos cement)
	2	AIB, millboards, textiles, gaskets, ropes and asbestos paper
	3	Thermal Insulation (e.g. pipe and boiler lagging), sprayed asbestos
Extent of damage /deterioration	0	Good condition, no visible damage
	1	Low damage, a few scratches, broken edges on board, tiles etc.
	2	Medium damage; significant breakage of materials or several small areas of damage revealing loose asbestos fibres
	3	High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris
Surface treatment	0	Composite materials: reinforced plastics, resins, vinyl tiles
	1	Enclosed sprays and lagging, AIB (with exposed face painted or encapsulated) asbestos cement sheets etc.
	2	Unsealed AIB, or encapsulated lagging and sprays
	3	Unsealed lagging and sprays
Asbestos type	0	No Asbestos Detected
	1	Chrysotile
	2	Amphibole excluding Crocidolite
	3	Crocidolite

Score	Potential to release asbestos fibres
10 or more	High
7-9	Medium
5-6	Low
4 or less	Very low

Table 6.3 Priority Risk Assessment Algorithm

Assessment Factor	Score	Examples of score variables
1. Normal Occupant Activity		
Main type of activity in area	0	Rare disturbance activity, e.g. little used store room)
	1	Low disturbance activities, (e.g. office type activity)
	2	Periodic disturbance (e.g. industrial or vehicular activity which may contact ACMs)
	3	High levels of disturbance, (e.g. Fire door with AIB sheet in constant use)
2. Likelihood of Disturbance		
a) Location	0	Outdoors
	1	Large rooms or well ventilated areas
	2	Rooms up to $100m^2$
	3	Confined spaces
b) Accessibility	0	Usually inaccessible or unlikely to be disturbed
	1	Occasionally likely to be disturbed
	2	Easily disturbed
	3	Routinely disturbed
c) Extent/Amount	0	Small amounts or items (e.g. strings, gaskets)
	1	$\leq 10m^2$ or $\leq 10m$ pipe run
	2	$>10m^2$ to $\leq 50m^2$ or >10m to $\leq 50m$ pipe run
	3	$>50m^2$ or >50m pipe run
Average Score = a + b + c / 3		
3. Human Exposure Potential		
a) Number of occupants	0	None
	1	1 to 3
	2	4 to 10
	3	>10
b) Frequency of use of area	0	Infrequent
	1	Monthly
	2	Weekly
	3	Daily
c) Average time area in use	0	<1 hour
	1	>1 to <3 hours
	2	>3 to <6 hours
	3	>6 hours
Average Score = a + b + c / 3		
4. Maintenance Activity		
a) Type of maintenance activity	0	Minor disturbance (e.g. possibility of contact when gaining access)
	1	Low disturbance (e.g. changing light bulbs in AIB ceiling)
	2	Medium disturbance (e.g. lifting one or two AIB ceiling tiles to access a valve)
	3	High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for re-cabling)
b) Frequency of maintenance activity	0	ACM unlikely to be disturbed for maintenance
	1	<1 per year
	2	>1 per year
	3	>1 per month
Average Score = a + b / 2		
Total Priority Assessment Score =1 + 2 + 3 + 4		

Appendix A

SITE REGISTER(S)

SITE REGISTER

Survey Report Ref: **PR26735-17457C-0001**

Site Address: **Block 4, 1-54 Mercers, Harlow, Essex**

Building Address: **Flat Block 1-54 Mercers, Harlow, Essex**

Building Reference / UPRN: **219146**

Client: **Harlow Council**

Date of Inspection **12/04/2016**

ASBESTOS REGISTER

Area No	Area Description	Material Description	Approx size of item	Sample or Associate Sample Reference	Material Risk					Priority Risk						Recommended Actions & Timescales
					Asbestos Type	Product Type	Extent of Damage	Surface Treatment	**Material Risk Rating**	Normal Occupant Activity	Likelihood of Disturbance	Human Exposure Potential	Maintenance Activity	**Priority Risk Rating**	**Overall Risk Score**	
001	External - External	Cement based tiles to walls	250 m²	AWS 001	1	1	1	1	**4**	0	1	0	0	**1**	**5**	Manage - 12 months
001	External - External	Cement based tiles to walls	100 m²	001	1	1	1	1	**4**	0	1	0	0	**1**	**5**	Manage - 12 months
002	First Floor - First floor access	Insulation board soffit	15 m²	002	0				**0**					**0**	**0**	No Action

KEY: All scores are subjective only and are based on information available at the time of the assessment. Inspections may be samples or associated samples (AWS). Comments and observations are outside the scope of UKAS accreditation. All information within this register must be read in conjunction with all other sections of the report. Please refer to Section 6.4 for information regarding Priority Risk Scores

Asbestos Type	Product Type	Extent of Damage	Areas of No / Limited Access	
0 = No asbestos detected in sample	0 = No asbestos detected in sample	0 = No visible damage	FS = Fixed Seating SD = Service Ducts FV = Floor Voids FD = Floor Ducts SB = Structural Boxing SV = Structural Voids DL = Dry Lining or Boxing FC = Fixed Ceilings UC=Under Fitted Floor Covering CV=Ceiling Voids	PV=Partition Wall Void SC=Above Suspended Ceiling LA=Loft / Attic EE=Electrical Equip. HE=Heating Equipment FP=Fixed Panelling DF=Within Door Frame WF=Within Window Frame HL=High Level PE = Plant / Equipment (includes lift machinery)
1 = Chrysotile (white) asbestos	1 = Plastics, mastics, felts, vinyl floor tiles, paints, dec. finishes, cement etc.	1 = Few scratches / marks, broken edges etc		
2 = Amosite (brown) asbestos	2 = AIB, textiles, gaskets, rope, paper etc;	2 = Sig breakage / many small areas of damage to friable material		
3 = Crocidolite (blue) asbestos	3 = lagging, spray coatings, loose asbestos etc	3 = High damage / visible debris		

SITE REGISTER

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Building Reference / UPRN: **219146**

Client: **Harlow Council**

Date of Inspection **12/04/2016**

CONSTRUCTION REGISTER

Area No	Area Description	Floor	Walls	Ceiling	Other
001	External - External	Concrete	Brick Masonry	Tile pitched roof	Plastic rain water goods. Upvc windows and doors.
002	First Floor - First floor access	Concrete	Brick Masonry	Insulation board soffit	Plastic rain water goods. Upvc windows and doors.

Appendix B

MATERIAL ASSESSMENT SHEETS

MATERIAL ASSESSMENT SHEET

SITE / AREA / INSPECTION DETAILS

Client:	Harlow Council	**Area No:**	001
		Floor:	External
Site Address:	Block 4, 1-54 Mercers, Harlow, Essex	**Area Description:**	External
Building:	219146	**Material Description:**	Cement based tiles to walls
Building Address:	Flat Block 1-54 Mercers, Harlow, Essex	**Survey Report Reference:**	PR26735-17457C-0001

ASSESSMENT		Sample No:	AWS - 001
Material Risk:	**4**	Position:	External
Asbestos Type:	1 - Chrysotile	Approx Size of Item:	250 m²
Product Type:	1 - Asbestos composites, decorative finishes, AC		
Extent of Damage:	1 - Low damage	**COMMENTS AND RECOMMENDATIONS:**	
Surface Treatment:	1 - Enclosed sprays and lagging, AIB, AC sheets etc	Timescale for Recommendation : 12 months	
Priority Risk:	**1**		
Normal Occupant Activity:	0 - Rare Disturbance	Recommendation:	Manage
Likelihood of Disturbance:	1 - Low Likelihood of Disturbance	Comments:	
Human Exposure Potential:	0 - Very Low Human Exposure Potential		
Maintenance Activity :	0 - Minor Risk Maintenance Activity	**Total Risk Score:**	**5**

MATERIAL ASSESSMENT SHEET

SITE / AREA / INSPECTION DETAILS

Client:	Harlow Council	**Area No:**	001
		Floor:	External
Site Address:	Block 4, 1-54 Mercers, Harlow, Essex	**Area Description:**	External
Building:	219146	**Material Description:**	Cement based tiles to walls
Building Address:	Flat Block 1-54 Mercers, Harlow, Essex	**Survey Report Reference:**	PR26735-17457C-0001

ASSESSMENT

Material Risk:	**4**
Asbestos Type:	1 - Chrysotile
Product Type:	1 - Asbestos composites, decorative finishes, AC
Extent of Damage:	1 - Low damage
Surface Treatment:	1 - Enclosed sprays and lagging, AIB, AC sheets etc
Priority Risk:	**1**
Normal Occupant Activity:	0 - Rare Disturbance
Likelihood of Disturbance:	1 - Low Likelihood of Disturbance
Human Exposure Potential:	0 - Very Low Human Exposure Potential
Maintenance Activity :	0 - Minor Risk Maintenance Activity

Sample No:	001
Position:	External
Approx Size of Item:	100 m²

COMMENTS AND RECOMMENDATIONS:

Timescale for Recommendation : 12 months

Recommendation: Manage

Comments:

Total Risk Score: **5**

MATERIAL ASSESSMENT SHEET

SITE / AREA / INSPECTION DETAILS

Client:	Harlow Council	**Area No:**	002
		Floor:	First
Site Address:	Block 4, 1-54 Mercers, Harlow, Essex	**Area Description:**	First floor access
Building:	219146	**Material Description:**	Insulation board soffit
Building Address:	Flat Block 1-54 Mercers, Harlow, Essex	**Survey Report Reference:**	PR26735-17457C-0001

ASSESSMENT

Material Risk:	**0**
Asbestos Type:	0 - No asbestos detected
Product Type:	
Extent of Damage:	
Surface Treatment:	
Priority Risk:	**0**
Normal Occupant Activity:	
Likelihood of Disturbance:	
Human Exposure Potential:	
Maintenance Activity :	

Sample No:	002
Position:	Internal
Approx Size of Item:	15 m²

COMMENTS AND RECOMMENDATIONS:

Timescale for Recommendation : No action

Recommendation: No further action required

Comments:

Total Risk Score: **0**

Appendix C

DRAWINGS

Client	Harlow Council
Site Address	Block 4, 1 -54 Mercers, Harlow, Essex, CM
Survey Reference	PR26735 – 17457C
Date of Survey/Inspection	13/04/2016
Surveyors	Sam Cox

Not to Scale

Key:

As With Sample = AWS
Sample Presumed = P

Inspection Reference Location

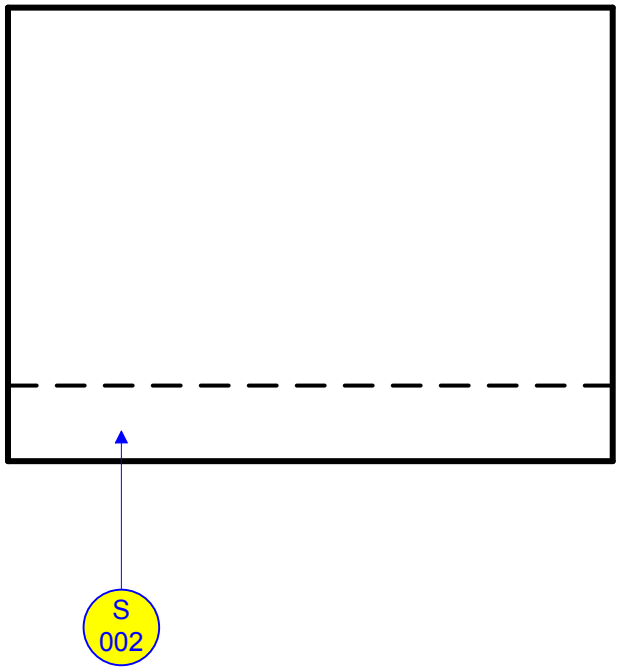
Asbestos Present

Inaccessible Areas

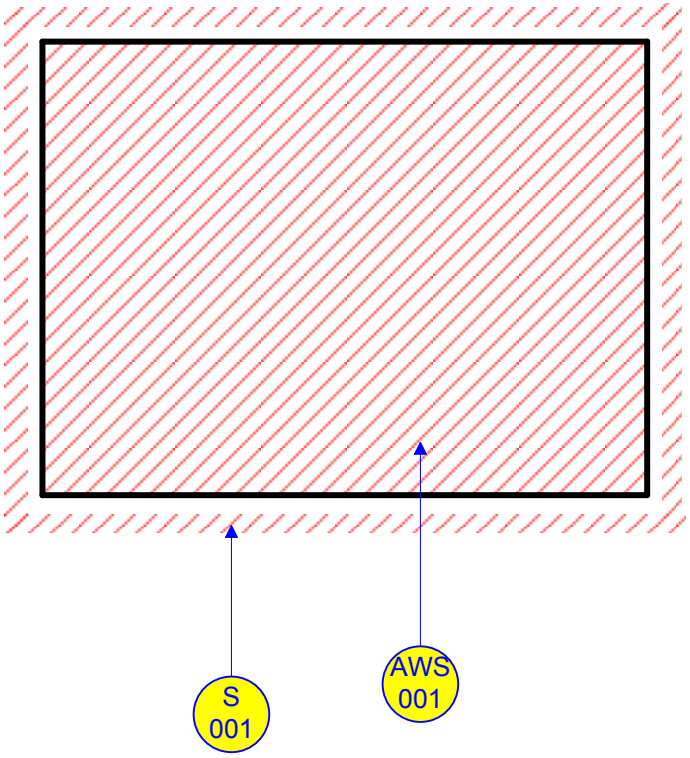
Beyond Remit of Survey

First Floor

002 – First Floor Access



001 - External



Appendix D

LABORATORY TEST CERTIFICATE(S)

CERTIFICATE FOR IDENTIFICATION OF ASBESTOS FIBRES

ESG Asbestos Limited
Unit 20, The Falcon Business Centre,
Ashton Road,
Harold Wood,
Romford.
RM3 8UR

Telephone: 01708 330760
E-mail: ecs.romford@esg.co.uk

Client	Harlow Council	Delivered/Collected	Collected
Address	Civic Centre, The Water Gardens, Harlow, Essex, CM20 1WG	Analysis Report No	R105130
Attention	Dan Maylin	Report Date	06/May/2016
Site Address	Block 4, 1-54 Mercers, Harlow, Essex	Site Ref No	PR26735-17457C
Date Sample Taken	12/04/2016	Page No	1 of 1
Date Sample Received	06/05/2016	No of Samples	2
Date of Analysis	06/05/2016		

ESG Asbestos SAMPLE No	CLIENT SAMPLE No	SAMPLE LOCATION & DESCRIPTION*	FIBRE TYPE DETECTED	ANALYSIS No
001		External Floor - External 001 - Cement based tiles to walls	CHRYSOTILE	PR26735-17457C-0001-001
002		First floor access 002 - Insulation board soffit	NADIS	PR26735-17457C-0001-002

KEY: NADIS - No Asbestos Detected in Sample.
All samples will be retained for a minimum of 6 Months.

Analysed by:	Name:	Amie Conradine Gibson	Authorised signatory:	Name:	**FRANCIS CLIFFORD**
	Position:	Lab Analyst		Position:	**Analyst**

BULK005-VER 14 23-JAN 2015

Samples of material referenced above have been examined using our internal procedure SCI/ASB/007, based on HSE's HSG248, Asbestos: The Analysts guide for sampling, analysis and clearance procedures. If samples have been DELIVERED, the site address and actual sample location is as given by the client at the time of delivery. ESG Asbestos Limited is not responsible for the accuracy or competence of the sampling by third parties, and can therefore not be held responsible for any interpretation of the results shown. The inspection report shall not be reproduced except in full without the approval of the inspection body and the client. *Please note that the sample description, material type and comments/observations are opinions and therefore not within the scope of UKAS accreditation.

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Appendix E

DEFINITIONS AND GUIDANCE NOTES

Your Survey Recommendations

A.1 Recommendations are made based upon each items assessed potential for fibre release as recommended by the guidance published by the Health and Safety Executive.

A.2 Definition of terms for actions detailed within this report:

i. Add to inspection:	Provision of a policy of 12 monthly inspections together with procedures, including but not exclusively limited to action should deterioration be observed, as well as training for staff and persons possibly coming into contact with the material.
ii. Manage:	Provision of a policy of regular inspection together with procedures, whilst continually monitoring the condition of the material for further deterioration.
iii. Manage & Label:	Process and provision for the fixing of labels - standard 'red A' label as per Schedule 2 of the Control of Asbestos Regulations (CAR), to the surface of the material to warn of the hazard.
iv. Control/Restrict access:	Material in a condition and position that is likely to cause fibre release should it be disturbed. Immediate action to implement procedure to restrict access to area via physical controls.
v. Repair:	Addition of a seal to the material to prevent the further deterioration and breakdown of the material. This action should also be carried out with labelling.
vi. Encapsulate:	Provision of paint type coating to effect a continuous seal to surface of the material and thereby prevent fibre release.
vii. Remove:	Complete removal of the material under controlled conditions so as to comply with CAR.

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