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**REFURBISHMENT ASBESTOS SURVEY
FINCHLEY ROAD
SPECIFIC AREAS**

Prepared for: **Mr Andrew Hashemi**
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0. Executive Summary

Reason for Survey: In order to comply with the Control of Asbestos Regulations 2012, the client Mr Andrew Hashemi, London Underground CPD, requested a refurbishment survey be carried out of Finchley Road, Specific Areas.

Location: Finchley Road, Specific Areas

Date of Survey: 14th April 2015

Lead Surveyor: [REDACTED]

0.1 Summary of Asbestos Containing Materials

- UPS/ Connect, 0/662
 - Materials within combination fuse switch boxes presumed to contain Chrysotile asbestos, Figure 1
- 0/081
 - Materials within combination fuse switch box presumed to contain Chrysotile asbestos, Figure 2

1. Introduction

4-RAIL Services were requested by Mr Andrew Hashemi, London Underground CPD, to undertake an asbestos survey of Finchley Road, Specific Areas.

A Refurbishment survey of asbestos containing materials was undertaken in the following areas:

- SER 0/712
- UPS/Connect 0/662
- 0/081

The survey was undertaken during engineering hours on 14th / 15th April 2015. The lead surveyor was [REDACTED]

1.1 Legal Requirements

The Control of Asbestos Regulations, 2012 (CAR) apply to the vast majority of work involving asbestos. Three Approved Codes of Practice (ACOP's) offer practical guidance.

2. Sampling Strategy

- 2.1 Sampling for asbestos containing materials was carried out in accordance with the procedures described in HSE Document HSG264 *Asbestos, The Survey Guide* and 4-RAIL Services Ltd in-house procedure 4R-E200.
- 2.2 Each material suspected of containing asbestos was sampled and returned to the laboratory for analysis. The location where the sample was taken was labelled, and plans provided by the Client prior to the survey, were marked with the sampling location and approximate extent of asbestos.
- 2.3 Electrical equipment was not surveyed since it was considered live. However, assumptions may have been made as to possible asbestos containing materials within electrical units based on the experience of the surveyor. There is always the possibility that further asbestos containing materials may be present within live electrical equipment.
- 2.4 When materials are sampled as asbestos, no further attempt is made to identify materials below those sampled since investigation would lead to unnecessary disturbance of the hazardous material.
- 2.5 Where rooms were surveyed, walls were identified as follows : the first wall on the left on entrance into a room was identified as Wall 1, the next separate wall in a clockwise direction, was identified as Wall 2, and so on, with the final Wall number being that where the entrance door was located.

3. Limitations of Surveying

A Refurbishment/Demolition survey is used to locate and describe, as far as reasonably practicable, all ACMs in a building or area, and may involve destructive inspection, as necessary, to gain access to all areas due for demolition, including those that may be difficult to reach. The quality of the intrusive survey is dependant upon the building or area being unoccupied and upon safe access.

Every effort will have been made to access all areas, but nonetheless there may be locations where asbestos remains undetected, such as within pipework. Further examples of locations where asbestos may remain undetected are listed in Appendix 1.

4. Analysis of Samples

- 4.1 Samples taken were analysed in-house in accordance with HSE Document HSG 248 *Asbestos: The analysts' guide for sampling, analysis and clearance procedures* and 4-RAIL Services Ltd in-house procedure 4R-E220. 4-RAIL Services is accredited by the United Kingdom Accreditation Service (UKAS) for testing of asbestos in bulk materials (UKAS Testing Body 1931).
- 4.2 Samples will be retained for a period of six months unless otherwise requested by the Client.
- 4.3 Analysed samples will be disposed of by a licensed waste carrier in accordance with Hazardous Waste Regulations 2005 (Registration Number NAG680).

5. Material Assessment

Each sample identified as containing asbestos was awarded a material assessment score based on the following variables:

- Product Type;
- Current Condition;
- Surface Treatment; and
- Asbestos Type.

Appendix 2 classifies the material assessment variables.

6. Accessibility

Each material is given an accessibility rating.

7. Results

A total of 3 samples were taken for analysis. No samples were found to contain asbestos. An additional 3 samples were considered to be identical to materials sampled previously. There were 2 materials presumed to contain asbestos.

Figures 1 & 2 show materials presumed of containing asbestos, together with their material assessment and accessibility ratings.

Appendix 3 contains the site survey sheets detailing all areas surveyed and results of analysis for all samples taken.

Appendix 4 contains station plans indicating the areas surveyed.

8. Conclusion

8.1 UPS/ Connect, 0/662

Materials within combination fuse switch boxes presumed to contain Chrysotile asbestos, Figure 1

8.2 0/081

Materials within combination fuse switch box presumed to contain Chrysotile asbestos, Figure 2

9. Recommendations

- 9.1 Maintain the condition of the materials presumed to contain asbestos to prevent fibre release by implementing a full risk assessment and programme for re-inspection at periodic intervals. As discussed in Section 5 & 6. Material Assessment & Accessibility, the Client is advised to review and thus amend as required prior to the inclusion of actions within an asbestos management plan.
- 9.2 Work towards compiling more detailed information relating to asbestos components within the specific electrical equipment on site. Where electrical isolation has not been provided to allow internal inspections of such equipment, these items will require confirmation prior to any refurbishment/modernisation/demolition works commencing.
- 9.3 Confirm the asbestos content of presumed of materials before undertaking any refurbishment/modernisation/demolition works, or assume that they contain asbestos.
- 9.4 Undertake work involving asbestos containing materials in a controlled manner in accordance with the Control of Asbestos Regulations 2012. The licensing regulations do not apply to materials in which the asbestos fibres are firmly linked in a matrix, but nevertheless, all work must comply with HSE Approved Code of Practise L143 Work with asbestos containing materials. In accordance with London Underground policy, a licensed asbestos removal contractor must be used.
- 9.5 Asbestos materials are defined as hazardous waste under the *Hazardous Waste Regulations 2005*. A requirement of these regulations is that premises producing more than 200kg of hazardous waste are notified to the Environment Agency. This can be done on the Environment Agency website : <https://www.environment-agency.gov.uk/apps/hazwaste/registrationwelcome.jsp>, and will be a requirement prior to the disposal of removed asbestos waste by a licensed carrier.

FIGURE 1: PRESUMED ASBESTOS IN MATERIALS WITHIN COMBINATION FUSE SWITCH BOXES IN UPS/ CONNECT, 0/662 - DESCRIPTION & RESULT OF ASSESSMENT (SAMPLE REF. P1 (1))



Sample Number	P1 (1)
Location	UPS/ Connect, 0/662
Material Description	Materials within combination fuse switch boxes
Material Comment	To wall 3
Quantity	4 no.
Product Type	-
Current Condition	-
Surface Treatment	-
Asbestos Type	Presumed Chrysotile
Material Assessment Rating	-
Accessibility	-
Further Comment	Not applicable

FIGURE 2: PRESUMED ASBESTOS IN MATERIALS WITHIN COMBINATION FUSE SWITCH BOX IN 0/081 - DESCRIPTION & RESULT OF ASSESSMENT (SAMPLE REF. P1 (2))



Sample Number	P1 (2)
Location	0/081
Material Description	Materials within combination fuse switch box
Material Comment	To wall 2
Quantity	1 no.
Product Type	-
Current Condition	-
Surface Treatment	-
Asbestos Type	Presumed Chrysotile
Material Assessment Rating	-
Accessibility	-
Further Comment	Not applicable

Appendix 1 : Other Areas of Potential Asbestos

Every possible effort is made by all surveyors to ensure the contents of each survey report are as comprehensive as possible. However, there may be occasions when asbestos containing materials are overlooked due to their location within the building structure or due to restricted access.

1. Electrical Boxes

Visual assessments will be made if possible, but a full survey inclusive of sampling can only be undertaken if electrical equipment is isolated.

2. Trunking Gaskets

Generally, gaskets located in trunking are not visible unless the trunking is dismantled.

3. External Areas

Unless specifically requested as part of a survey, inaccessible external areas are not surveyed due to safe access being required.

4. Fire Breaks

While every effort is made to identify the full depth of materials used to construct fire breaks, there may, on occasion, be layers of asbestos containing materials beneath non-asbestos materials that remain undetected.

5. Ductwork

Ductwork that passes through the structure of buildings is not fully surveyed. This would require specialist equipment to access such small areas, and would then only maybe result in materials being identified as suspected asbestos, due to limitations of sampling.

6. Evidence of Poorly Undertaken Removal Works

While every effort is made to identify asbestos residue and/or debris present following a poorly undertaken previous removal, it may not be possible to identify residue and/or debris if no evidence of a previous removal job is present.

7. Encapsulated Debris

If for example, during asbestos removal, small amounts of asbestos containing material could not be removed from some areas due to insufficient access, the residual asbestos would have been encapsulated. It therefore would be very difficult to locate.

8. Machinery

For safety reasons, mechanical machinery can only be surveyed if isolated.

9. Columns

Asbestos located within columns may not become evident until refurbishment or demolition. Location would require a targeted intrusive survey which would result in severe damage to the columns.

10. Flange Gaskets

Flange gaskets generally remain obscured from view until pipework is taken apart.

11. Fire Doors

Some fire doors have asbestos containing materials within their structure. Investigation into this would reduce the fire rating of the doors, and hence they are not fully surveyed unless specifically requested.

12. Representative Sampling

When considering large areas, a representative number of samples are taken. There is always a possibility that a material that may resemble all other materials which have not been found to contain asbestos, may contain asbestos.

Refurbishment Asbestos Survey - Finchley Road - Specific Areas

Appendix 2: Material Assessment & Accessibility Variables

PARAMETER	DESCRIPTION	RATING	EXAMPLES
Product Type	Asbestos reinforced composites	1	Plastics, resins, mastics, roofing felt, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement.
	Medium density insulating materials	2	Asbestos insulating boards, mill boards, other low density insulation boards, asbestos textiles, gaskets, ropes or woven textiles, asbestos paper and felt.
	High density insulating materials	3	Thermal insulation e.g. pipe and boiler lagging, sprayed asbestos, loose asbestos, asbestos mattresses and packing.
Current Condition	Good condition	0	No visible damage.
	Slight damage	1	A few scratches or surface marks, broken edges on boards, tiles, etc.
	Moderate damage	2	Significant breakage or several small areas of damage revealing loose fibres.
	Extensive damage	3	High levels of damage. Visible asbestos debris.
Surface Treatment	Asbestos reinforced composites	0	Plastics, resins, mastics, roofing felt, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement, bituminous Cellactite.
	Encapsulated medium density materials	1	Encapsulated asbestos insulation board (AIB).
	Unencapsulated medium density or encapsulated highly friable materials	2	Untreated AIB, encapsulated lagging/spray.
	Unencapsulated highly friable materials	3	Untreated lagging/spray.
Asbestos Type	Chrysotile	1	Cable insulation, fuse backing material
	Amphibole excluding crocidolite	2	Ceiling Tiles, Soffits
	Containing Crocidolite *	3	Cable Insulation
Accessibility	Very Low	0	Usually inaccessible areas
	Low	1	High level areas, difficult to access
	Medium	2	Mid level areas, with varying degrees of possible access
	High	3	Low level areas, easy to access

* Presumed or strongly presumed asbestos containing materials are recorded as Crocidolite unless there is reasoned argument to suggest otherwise.

Four parameters (product type, current condition, surface treatment & asbestos type) are **added** to arrive at an overall **material assessment factor** between 2 and 12. Accessibility is not required to be used in this calculation.

Material Assessment Score	10+	High potential for release fibre
	7-9	Medium potential for fibre release
	5-6	Low potential for fibre release
	<4	Very low potential for fibre release

Appendix 3: Survey Site Sheets

SURVEY DATE	LEAD SURVEYOR	ANALYST	ANALYSIS DATE
14 th / 15 th April 2015 (Engineering Hours)	Name: [REDACTED]	Name: [REDACTED]	16 th April 2015
	Signed: [REDACTED]	Signed: [REDACTED]	

Refurbishment Asbestos Survey - Finchley Road - Specific Areas

Ref No.	Area Surveyed		Material Description	Quantity (m ²)	Product Type	Current Condition	Surface Treatment	Accessibility	Asbestos Type	Comments and Recommendations	Figure
	Location	Room/ Plant No									
	SER	0/712	Quarry tiles	-	-	-	-	-	-	To floor	-
	SER	0/712	Render on solid	-	-	-	-	-	-	To walls 1, 2, 3 and ceiling	-
	SER	0/712	Blockwork	-	-	-	-	-	-	To wall 4	-
	SER	0/712	Timber doors	-	-	-	-	-	-	To walls 2 and 4	-
	SER	0/712	Modern electrical equipment	-	-	-	-	-	-	Throughout	-
	SER	0/712	Plastic cables	-	-	-	-	-	-	Throughout	-
	SER	0/712	Metal cable management system/ conduits/ trunking	-	-	-	-	-	-	Throughout	-
141704/140415/01	SER	0/712	Ventilation grates	<3 no.	-	-	-	-	0	To low level wall 1	-
	SER	0/712	Metal ventilation grates	-	-	-	-	-	-	To high level wall 1	-
	SER	0/712	Metal framework	-	-	-	-	-	-	Throughout	-
141704/140415/02	SER	0/712	Concrete cable ducts	<1m ²	-	-	-	-	0	To wall 2	-
	SER	0/712	Firestopping	-	-	-	-	-	-	To wall 2	-
	SER	0/712	Modern A/C units	-	-	-	-	-	-	To walls	-

Material Description	Product Type	Current Condition	Surface Treatment	Accessibility	Asbestos Type
W = Wall PW = Partition wall C= Ceiling F = Floor FC = False ceiling AFC = Above false ceiling CA = Cable	1.Composite 2.Medium density 3.Highly friable	0.Good condition 1.Slight damage 2.Moderate damage 3.Extensive damage	0.Composite 1.Encapsulated medium density 2.Unencapsulated medium density or treated highly friable 3.Untreated highly friable	0.Very Low 1.Low 2.Medium 3.High	P = presumed SP = strongly presumed K = known 0.Non-asbestos 1.Chrysotile 2.Amphibole excluding Crocidolite 3.Crocidolite

Refurbishment Asbestos Survey - Finchley Road - Specific Areas

Ref No.	Area Surveyed		Material Description	Quantity (m ²)	Product Type	Current Condition	Surface Treatment	Accessibility	Asbestos Type	Comments and Recommendations	Figure
	Location	Room/ Plant No									
	SER	0/712	Modern firestopping and mastics	-	-	-	-	-	-	Throughout	-
141704/140415/03	SER	0/712	Brown composite panel	1m ²	-	-	-	-	0	To wall 2	-
	UPS/ Connect	0/662	Quarry tiles	-	-	-	-	-	-	To floor	-
	UPS/ Connect	0/662	Render on solid	-	-	-	-	-	-	To walls 1, 3, 4 and ceiling	-
	UPS/ Connect	0/662	Timber doors	-	-	-	-	-	-	To walls 2 and 4	-
	UPS/ Connect	0/662	Modern electrical equipment	-	-	-	-	-	-	Throughout	-
	UPS/ Connect	0/662	Plastic cables	-	-	-	-	-	-	Throughout	-
	UPS/ Connect	0/662	Metal cable management system/ conduits/ trunking	-	-	-	-	-	-	Throughout	-
As 141704/140415/01	UPS/ Connect	0/662	Ventilation grates	~ 3 no.	-	-	-	-	0	To wall 1	-
	UPS/ Connect	0/662	Metal pipes, some with foam	-	-	-	-	-	-	Throughout	-
	UPS/ Connect	0/662	Modern A/C units	-	-	-	-	-	-	To walls 2 and 4	-
P1 (1)	UPS/ Connect	0/662	Materials within combination fuse switch boxes	4 no.	-	-	-	-	P1	To wall 3	Figure 1
	UPS/ Connect	0/662	Modern firestopping and mastics	-	-	-	-	-	-	Throughout	-

Material Description	Product Type	Current Condition	Surface Treatment	Accessibility	Asbestos Type
W = Wall PW = Partition wall C= Ceiling F = Floor FC = False ceiling AFC = Above false ceiling CA = Cable	1.Composite 2.Medium density 3.Highly friable	0.Good condition 1.Slight damage 2.Moderate damage 3.Extensive damage	0.Composite 1.Encapsulated medium density 2.Unencapsulated medium density or treated highly friable 3.Untreated highly friable	0.Very Low 1.Low 2.Medium 3.High	P = presumed SP = strongly presumed K = known 0.Non-asbestos 1.Chrysotile 2.Amphibole excluding Crocidolite 3.Crocidolite

Refurbishment Asbestos Survey - Finchley Road - Specific Areas

Ref No.	Area Surveyed		Material Description	Quantity (m ²)	Product Type	Current Condition	Surface Treatment	Accessibility	Asbestos Type	Comments and Recommendations	Figure
	Location	Room/ Plant No									
	UPS/ Connect	0/662	Plastic cable ducts	-	-	-	-	-	-	Throughout	-
As 141704/140415/03	UPS/ Connect	0/662	Brown composite panel	<1m ²	-	-	-	-	0	To wall 4	-
	-	0/081	Quarry tiles	-	-	-	-	-	-	To floor	-
	-	0/081	Render on solid	-	-	-	-	-	-	To walls and ceiling	-
	-	0/081	Timber doors	2 no.	-	-	-	-	-	To walls 2 and 4	-
As 141704/140415/01	-	0/081	Ventilation ducts	2 no.	-	-	-	-	0	To wall 1	-
P1 (2)	-	0/081	Materials within combination fuse switch box	1 no.	-	-	-	-	P1	To wall 2	Figure 2
	-	0/081	Modern electrical equipment	-	-	-	-	-	-	Throughout	-
	-	0/081	Metal conduits and cable management system	-	-	-	-	-	-	Throughout	-
	-	0/081	Plastic cables	-	-	-	-	-	-	Throughout	-
	-	0/081	Concrete cable ducts	-	-	-	-	-	-	To wall 3	-
	-	0/081	Modern firestopping and mastics	-	-	-	-	-	-	Throughout	-

Material Description	Product Type	Current Condition	Surface Treatment	Accessibility	Asbestos Type
W = Wall PW = Partition wall C= Ceiling F = Floor FC = False ceiling AFC = Above false ceiling CA = Cable	1.Composite 2.Medium density 3.Highly friable	0.Good condition 1.Slight damage 2.Moderate damage 3.Extensive damage	0.Composite 1.Encapsulated medium density 2.Unencapsulated medium density or treated highly friable 3.Untreated highly friable	0.Very Low 1.Low 2.Medium 3.High	P = presumed SP = strongly presumed K = known 0.Non-asbestos 1.Chrysotile 2.Amphibole excluding Crocidolite 3.Crocidolite

Appendix 4: Site Plans

KEY



Asbestos identified in sample taken



Extent of asbestos



No asbestos detected in sample taken

Refurbishment Asbestos Survey - Finchley Road - Specific Areas

Finchley Road
SER Layout

