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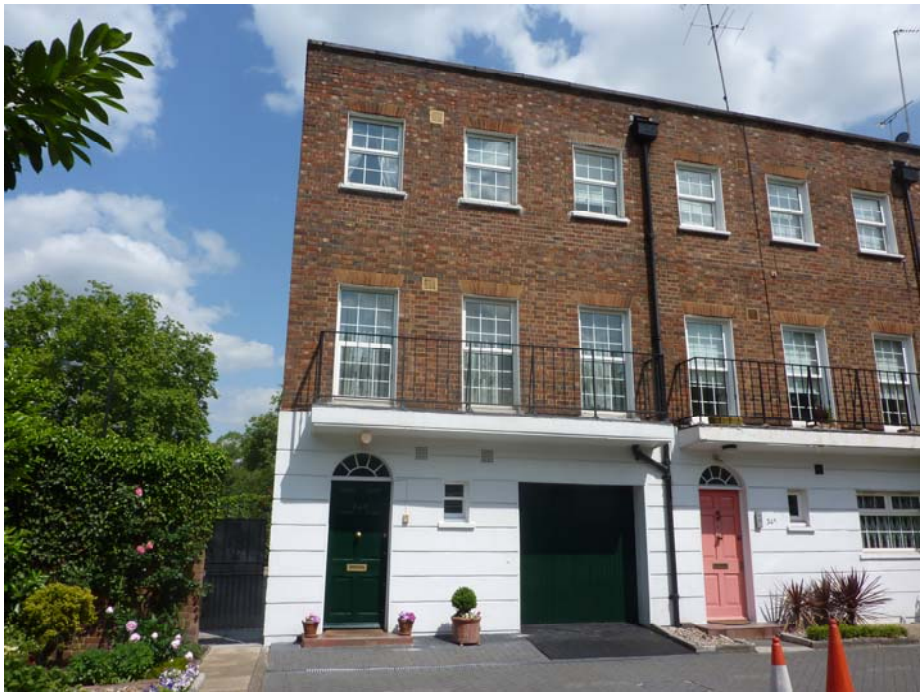


ASBESTOS MATERIALS SURVEY
Refurbishment / Demolition Survey

HSG264 (Second edition), Date of publication: 2012
ISBN: 9780717665020

34B Abbey Road
London

NW8 AX

On Behalf of:

Cousins Wojciechowski

Architects

28 Margaret Street

London, W1W 8RZ

Report Certificate

Site Address:
34B Abbey Road
London

NW8 9AX

Date of Issue: 07/06/12

Reassessment of Risk due: N/A

Client Name:

Cousins Wojciechowski

28 Margaret Street

London W1W 8RZ

Survey Date: 04/06/12
Report Date: 07/06/12
Project Ref: AEC1206/07/1

Project Surveyor(s): Michael O'Donoghue MSc, BSc, CChem, FRSH

Asbestos qualifications: S301 + oral, P402, P405 (Certified Competent Person)

Signature:.. ……**Authorised Signatory of Archway Environmental Consultants**

Contents

Executive summary

Archway Environmental have carried out a refurbishment asbestos survey as defined in HSG264 for asbestos containing materials (ACMs) of 34B Abbey Road, London, NW8 9AX.

The objective of the survey is to locate and identify any ACMs that may be present within the premises only, assess their condition and provide a assessment and recommendation for the management or removal of the ACMs. A refurbishment asbestos survey is an intrusive inspection. In the event that any major refurbishment is to be carried out or demolition then a demolition survey for ACMs is required under the CDM regulations 2007 and the Control of Asbestos Regulations 2012.

The aim of this survey is to locate ACM's within the premises.

34B Abbey Road, London, NW8 9AX Private residential building.

Summary of ACMs & recommendations:

NO suspect materials were found.

We have not taken samples because of the above statement.

1.0 Introduction

1.1 Legislation

The Health and Safety at Work Act 1974 requires that employers have regard for the health and safety at work of not only their employees, but also so far as is reasonably practicable any person who may be affected by the work being carried out.

The Management of Health and Safety at Work Regulations 1999 (2) require employers to assess health and safety risks to employees and other persons who may be affected and to identify appropriate measures to minimise those risks. These Regulations are in addition to the duties laid down under Health and Safety of Work Act 1974. A ‘competent person’ should be appointed to prepare a risk assessment.

The Construction (Design and Management) Regulations 2007 make for provision for dealing with asbestos during refurbishment.

The latest legislation is the Control of Asbestos Regulations 2012. Regulation 4 of CAR 2012, which came into force April 2012, updating previous asbestos regulations to take account of the European Commission's view that the UK had not fully implemented the EU Directive on exposure to asbestos (Directive 2009/148/EC) and reinforced the duty of the duty holder to manage asbestos in non-domestic premises. A duty holder is a person(s) with repair and maintenance responsibilities for the premises and under Regulation 4 that person(s) is required to carry out a suitable and sufficient assessment to determine whether asbestos is or is liable to be present in the premises.

If asbestos is present or may be present the duty holder (as accepted by the guidance of the HSE) must specify in a written plan the parts of the premises affected and also how the risk from the presence of asbestos is managed. The written plan should be revised and reviewed at regular intervals. Management of the risk requires that information about the location and condition of the asbestos or suspect asbestos in the premises contained in the written plan should be made available to anyone likely to disturb it. Management of the risk requires monitoring of the condition of the asbestos containing material or suspect material. Management of the risk further requires the proper maintenance of such material or its safe removal where necessary.

1.2 Survey Instructions, Building Description and History, Visit Date

Archway Environmental Consultants has carried out survey of 34B Abbey Road, London, NW8 for asbestos-containing materials (ACMs) commissioned by Cousins Wojceichowski, Architects, 28 Margaret Street, London W1W 8RZ in accordance with the client’s instructions.

The purpose of the survey is to form an Asbestos Register to enable the management /removal of identified asbestos and to enable the pre-planning of major building works which may involve asbestos removal action.

34B Abbey Road, London, NW8 is a Private residence.

The premises are currently unoccupied.

Our representatives visited the sites on 04/06/12 when an inspection as comprehensive as possible and as allowed by access was carried out to ascertain the existence of asbestos. Samples were taken from a number of locations as discussed with the client. Where access for sampling purposes was not possible an assessment protocol may be made on a visual only.

1.3 Previous Survey Reports

There were no previous reports available for inspection for the properties.

2.0 Scope of the Survey

We surveyed the following areas: All known area were accessed.
Refurbishment survey.

The survey was limited to those areas that were accessible at the time of the survey. Any areas that could not be inspected are listed within the register. If the register identifies areas that were not accessible for inspection, the Health and Safety Executive Guidance Note HSG264 stipulates that these areas should be presumed to contain asbestos until inspection and sampling shows otherwise.

> Archway Environmental Consultants cannot guarantee that all of the asbestos has been surveyed and reported, particularly within the fabric of the building or within concealed voids with no access points.

2.1 Aims

The aim of the asbestos survey is to form a Register of the locations of materials containing asbestos throughout the areas examined as allowed by access and indicate condition, asbestos type and content. Appropriate comments and recommendations to be included.

OBJECTIVES

1. To carry out a survey to determine the presence of asbestos based materials
2. Investigate the nature and condition of located asbestos materials
3. Produce a report detailing identified areas of asbestos together with a draft risk assessment.
4. Provide a basis for an asbestos register to comply with the Asbestos Management Regulations.
5. Initiate asbestos removal works prior to commencement of future projects so that other workers are not exposed to dangerous asbestos fibres.
6. To highlight the requirement for urgent work in areas where this survey has found asbestos materials and it is considered remedial action.
7. To create an awareness that other asbestos materials may be present but not found and which should be added to the register when identified.
8. To ensure that asbestos found is professionally managed and the associated risk is regularly assessed by a Certified Competent Person (CCP).
9. The report is updated at least annually by a CCP unless where otherwise stated on the risk assessment report.

2.2 Type of survey carried out

There are two types of surveys as defined by HSG264:

1. **Management Survey:**

A management survey is the Standard survey. Its purpose is to locate as far as reasonably practicable the presence & extent of any suspect ACMs in the building which could be damaged or disturbed during normal occupancy, including foreseeable maintenance & installation and to assess their condition.

Management surveys will often involve minor intrusive work & disturbance. The extent of intrusion will vary between premises & depend on what is reasonably practicable for individual properties i.e. it will depend on factors such as the type of building, the nature of construction, accessibility etc. A management survey should include an assessment of the condition of the various ACMs & their ability to release fibres into the air if they are disturbed in some way. This material assessment will give a good initial guide to managing the ACMs as it will identify materials that will most readily release airborne fibres if they are disturbed.

The survey will usually involve sampling & analysis to confirm the presence or absence of ACMs. However a Management Survey can involve presuming the presence or absence of ACMs. A management survey can use a combination of sampling & presuming ACMs or indeed just presuming. Any materials presumed to contain asbestos must have their condition assessed.

Surveyors should always endeavour to positively identify ACMs. A sufficient number of samples should be taken to confirm the location & extent of ACMs. It is legitimate to reduce the number of samples where materials can be strongly be presumed to contain asbestos. However the default presumption option should be avoided where possible as it can make managing ACMs more difficult for the duty holder. Default presumption should be only used in circumstance where it is requested by the client and/or where access genuinely cannot be gained.

When sampling is carried out as part of a management survey, samples from each type of suspect ACM should be collected & analysed. If the material is found to contain asbestos, other similar materials used in the same way in the building can be strongly be presumed to contain asbestos. Less homogeneous materials will require greater number of samples. The sample number should be sufficient to establish whether asbestos is present in a particular material or not. Sampling may be carried out simultaneously with the survey, or as in the case of some larger surveys be carried out as a separate exercise.

All areas should be accessed & inspected as far as reasonably practicable part of the survey. Areas should include under floor coverings, above false ceilings, inside risers, service ducts lift shafts etc. Surveying may also involve some minor intrusive work, such as accessing behind facia panels & other surfaces or superficial materials. The extent of intrusion will depend on the degree of disturbance that is or will be necessary for foreseeable maintenance & related activities including the installation of new equipment/cabling. Surveyors should come prepared to access such areas (i.e. with correct equipment). Management surveys are only likely to include the use of simple tools such as screwdrivers & chisels. Any areas not accessed must be presumed to contain asbestos. The areas not accessed & presumed to contain asbestos must be clearly stated in the survey report & be managed on the basis i.e. maintenance or disturbance works must not be carried out in these areas until further checks are made.

2. **Refurbishment/Demolition survey:**

A refurbishment & demolition survey is needed before any demolition or refurbishment works are carried out. This type of survey is used to locate & describe as far as reasonably practicable, all ACMs in the area where the refurbishment works will take place or in the whole building is demolition is planned. The survey will be fully intrusive & involve destructive inspections, as necessary to gain access to all areas, including those which may be difficult to reach. A refurbishment/demolition survey may also be required in other circumstances e.g. when more intrusive maintenance or repair work will be carried out or for plant removal or dismantling.

There is a specific regulation in CAR 2012 (Regulation 7) for all ACMs to be removed as far as reasonably practicable before major refurbishment or demolition.

The survey carried out at 34B Abbey Road, London, NW8 was a refurbishment / demolition survey in line with our original quotation to the client.

2.3 Sampling Strategy and Restrictions

When samples are taken consideration is taken as to the appearance, texture and function of a material and that it may contain asbestos. Materials of a similar type were only occasionally sampled and it was assumed that other identical looking surfaces were of a similar composition.
The survey has been limited by the extent of the intrusions permitted by the Client.

In certain instances we will not carry out formal analysis for identification because the surveyor has sufficient experience to identify the product and will use the terms presumed and strongly presumed.

In the event that future building or maintenance work involves the uncovering of earlier inaccessible areas, not included in this report, caution must be exercised with suspicious or unrecognisable materials that may contain asbestos (e.g. pipe lagging, insulation boarding). Caution should be exercised especially by grit blasters working on previously “cleaned” beams in relation to dislodging hidden asbestos. Also under floor heating pipes may not be examined or traced without digging out the floor structure.

Any person undertaking work within the surveyed areas should be made aware of asbestos identified in this report. They should be advised of the possibility that asbestos materials may exist in areas that were inaccessible to the survey team and therefore are not included in the survey report.

If unidentified suspect materials are found during refurbishment, demolition, or routine maintenance activities the Management should stop all work immediately and have the material analysed by a competent laboratory.

A warning sign should also be displayed for a period until a full assessment can be made together with recommendations on Control methods. The Register should be up-dated accordingly. Any damage that is caused or found must be reported as soon as possible into the Asbestos Register.

For results found to be positive the asbestos register must be updated. A risk assessment must be undertaken by a Competent Person ensuring that no person is endangered under the Asbestos Management Regulations.

2.4 Register of No Access Gained

Any areas that could not be inspected are listed within the register.

All areas were inspected.

2.5 Inspection Methods and Procedures

Inspection Methods

1 Carefully check all spaces in the building(s) to be inspected where safe access is granted in a systematic manner.
Devise a methodical order applicable to the site and inspect walls, partitions, ceilings, floors, beams, ducts, risers, plant and equipment.

2 Identify the suspected asbestos containing building materials. All materials not readily identifiable as non-asbestos should be considered suspect until the results of sampling prove otherwise.

3 Group these materials into homogeneous sampling areas, uniform in texture, colour, and which in all other respect appear identical. Materials which appear to have been installed at different times or if there is any other reason to suspect that materials may be different then the materials must be allocated to different sampling areas.

4 Identification of suspect materials and selection of homogeneous sampling areas are by their very nature subjective processes. If there is any doubt the material must be considered suspect or allocated a separate sampling area as appropriate.

Inspection Procedures

1 Determination of the number of samples to be taken is accordance with Annex 2 of the current edition of the Department of the Environment, Transport and the Regions publication, “Asbestos and Man Made Fibre Materials in Buildings”.

2 Determination of the locations from where samples will be taken is dependent upon the nature of the materials but should be chosen so far as is possible the sample will be representative of the area and that personal bias is avoided.

3 Samples will then be collected using the techniques set out in the company sampling/procedure manual.

4 All information will be recorded on sample report forms, which details the location, condition, accessibility, product type and extent of the material from where the sample was taken together with the unique reference number and results of analysis; asbestos type and approximate descriptive content.

5 How the information is recorded on site will ultimately reflect in the register. Location of all materials sampled will be recorded on annotated plans to avoid confusion encountered by using descriptive text. The annotation will include the product type, condition, location and extent of the material.

6 A material assessment algorithm will be applied to assess the propensity for fibre release of each sample taken. The assessment is based on four factors: product type; extent of damage or deterioration of the ACM; surface treatment of the ACM and the type of asbestos. The algorithm and definitions are given elsewhere. Use of the algorithm produces uniformity between surveyors and of sites surveyed leading to a more precise product.

Whilst on site, we will make every effort to establish the full extent of the asbestos materials within the limits defined for survey. However where access has been limited by presence of either “hazards”, refusal of access or there are parts present of which we have no knowledge, we will not be able to inspect these parts and thus cannot report on any asbestos that may be present in such parts. They will have to be presumed to contain asbestos by the client until otherwise inspected and should be noted by the client in the register.

3.0 Asbestos Survey

3.1 Method of Reporting

Table format indicating for each sampled suspect ACM:

Product type; location; extent; asbestos type; accessibility; damage or deterioration; surface treatment. Friability of a material is the probability that its condition will release airborne fibres.

In the report, the use of the terms ‘presumed’, ‘strongly presumed’ and ‘identified’ is defined as follows:

Presumed – insufficient evidence to confirm that the material is not asbestos

Strongly Presumed – surveyor identifies fibres in the material; or other similar material has been analysed as ACM; or asbestos was common in the manufacture of that type of material at the time of installation.

Identified – material has been sampled then analysed and confirmed as asbestos

All positive identifications are reported, however not all negative results are reported unless it is considered useful to report in the circumstances, that is where a non asbestos product may be confused with asbestos.

Non-asbestos materials may however be recorded if they are likely to be mistaken to be asbestos containing in the future (e.g. MMMF encapsulated thermal pipe lagging).

3.2 Summary listing of asbestos found

This survey has revealed the presence of asbestos containing material in the building(s) inspected. A careful examination as allowed by access has enabled us to produce the following results.

A Summary of the Asbestos Materials by Product Type,

A Register of Suspect Containing Asbestos Materials, and

A Register of Suspect Containing Asbestos Materials

As shown in Section 4.0

These lists cannot be taken as all asbestos occurrences in the building(s), due to the nature of construction methods; asbestos may be present behind other materials, which could not be accessed during the survey. Asbestos debris or residue may exist on previously stripped surfaces, which have been re-lagged or recoated.

In the event of refurbishment or demolition, a refurbishment/demolition survey should be carried out to access all areas that would not be available during a Management survey.

4.0 – Asbestos Register and Data Sheets for Asbestos Materials

Register of areas surveyed and Asbestos Containing Materials

Client: *Cousins Wojceichowski* ***Survey Date:***
Site:

References	Location	Material Details	Next Review Date

This section has been left blank because no suspect samples were taken from the site.

Asbestos Materials Data Sheets

Client: Cousins Wojceichowski **Date:**

Site:

This section has been left blank because no suspect samples were taken from the site.

5.0 Material Assessment

This assessment assesses the likelihood of fibre release of the asbestos containing material in accordance with HSG 264. Only those materials presumed to contain or containing asbestos are included. This rating is a subjective view given by the surveyor based on a visual assessment at the time of the survey.

Four factors have to be assessed by the surveyor in order to complete the material assessment algorithm and they are described below.

Product Type

This takes into account the structural rigidity of the material, and also the likely fibre content as a percentage. The score ranges from 1 to 3, with the various different categories as below:

1 Asbestos-reinforced composites; plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement.

2 Asbestos insulating board, millboards, other low-density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felts.

3 Thermal insulation (e.g. pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packaging.

Extent of Damage/Deterioration

Damage can lead to increased fibre release, and the score range is from 0 to 3:

0 Good Condition: no visible damage.

1 Low damage: a few scratches or surface marks, broken edges on boards, tiles etc.

2 Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres.

3 High damage or delaminating of materials, sprays and thermal insulation. Visible asbestos debris.

Surface treatment

Sealing and encapsulation can stop fibres from being released and provide good protection. The categories range from 0 to 3:

0 Composite materials containing asbestos: 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

The different types of asbestos offer different exposure risks, categories range from 1 to 3:

1 Chrysotile.

2 Amphibole asbestos excluding Crocidolite.

3 Crocidolite.

Result = Material Assessment Algorithm

These figures are added together to give a score between 2 and 12, with differing categories of release potential:

The following risk bands are a management aid tool for the management and control of asbestos on the site. The numbers generated are determined from the Material assessments only.

Category A: 10 – 12 inclusive
Asbestos Containing Materials (ACMs) in this category have a high release potential, and so must be carefully considered in all situations. The material is considered at present high risk.

Category B: 7 – 9 inclusive
Asbestos Containing Materials (ACMs) in this category have a medium release potential, and so must also be carefully considered in their situations. The material is considered at present medium risk.

Category C: 5 – 6 inclusive
Asbestos Containing Materials (ACMs) in this category have a low release potential, however they are still hazardous if not regarded carefully. The material is considered at present low risk and the condition of the material is currently in good stable condition, but will require regular monitoring because the material may suffer deterioration through age/ accidental damage.

Category D: 2 – 4 inclusive
Asbestos Containing Materials (ACMs) in this category have a very low release potential, however they are still hazardous in situations where they are likely to be damaged in any way. The material is considered at present a minor risk and it is currently in a good stable condition the risk of fibre release is considered to be very low if undisturbed.

Materials determined not to contain asbestos do not have a material assessment.

NB Asbestos cement is usually of low friability except when in very poor condition. Asbestos insulation board (AiB) when damaged or inadequately encapsulated can be extremely friable. Asbestos insulation can vary greatly in its friability. Asbestos spray coatings, if not adequately encapsulated are extremely hazardous and pose the highest risk.

6.0 Risk Assessment and Management Plans

6.1 Risk Assessment

The material assessment identifies 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 score in the material assessment will be the materials that should be given priority for a remedial action**.**

Management 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; and
- The likelihood / frequency with which maintenance activities are likely to take place.

The risk assessment can only be carried out with the detailed knowledge of all of the above. Although we as surveyor's have some of the information which will contribute to the risk assessment, and may assist as part of an assessment team, it is the Duty Holder under the Control of Asbestos Regulations 2012 who is required to make the risk assessment, using the information given in the survey and their detailed knowledge of the activities carried out within the premises.

The risk assessment will form the basis of the management plan.

The purpose of the risk assessment is to:

- Manage the risk of exposure to hazards at work
- Identify the hazards
- Evaluate the extent of the risk
- Control the risk and
- Meet the requirements of the law

Understanding 'hazards' and 'risk'

A hazard is something with the potential to cause harm, and risk is the likelihood that the hazard will cause harm. The extent of the risk is the potential number of people who may be harmed by the hazard and in the specific case of asbestos materials through direct or incidental airborne fibre exposure.

When preparing a risk assessment on asbestos materials in buildings, initially the first step is to identify the whereabouts and then the condition of any asbestos through an initial Material Assessment (Section 5) and then a more detailed Priority Risk Assessment, to prioritise the relative risk posed by the ACMs which have been located in the inspection so that an effective Management plan can be produced.

1 The material assessment only uses the results of the asbestos survey to establish the relative ability of various types of ACMs to release fibres into the air should it be disturbed. The type of fibre is also taken into account. This assessment can be carried out as an integral part of the survey, as it requires no knowledge of the building use. A simple four parameter algorithm is used to order the relative risk of the different types of ACMs found into four risk categories: HIGH, MEDIUM, LOW, VERY LOW.

2 The priority assessment uses the relative risk scores from the material assessment algorithm but also takes into account various other human risk factors, to modify the priority assigned by the material assessment. This can only be done effectively with additional input from the Manager of the premises.
A variety of parameters may be considered individually for each site and their effects, by using numbers, scored to assign a relative priority for a control action.

By looking at the two major factors - severity and likelihood, a system of weighting can be used to determine and rate the risk. The purpose of risk rating is to indicate the priority to be assigned to each risk. Thus:

A High risk may trigger immediate action
A Medium risk could lead to action to be programmed over the immediate future
A Low risk could mean no planned action other than to advise staff so that they may take care

6.2 Disturbance Assessment / Human Risk Factors

To calculate the likely risk of the material being disturbed, we recommend you use the following parameters and values for each asbestos occurrence, and then multiply each result by the corresponding material assessment result.

	0	1	2	3
Abrasion	None	Low	Periodic	Constant
Human Exposure	None	Monthly	Weekly	Daily
Expected Maintenance activity	None	Low	Medium	High

The values are added to give the assessment for each material.

Sheets are provided in Section 11.0 for this assessment.

Results

0-2: Very low disturbance risk
2-5: Low disturbance Risk
5-6: Medium disturbance risk
7-9: High disturbance risk

6.2.1 Disturbance Risk Assessment

Disturbance Risk assessment = Material assessment x Disturbance assessment

Sheets are provided in Section 11.0 for this assessment.

6.2.2 Risk Assessment

The Current Risk Assessment that has been adopted in this Section of the Survey Report, concentrates solely on the likelihood of fibre release from asbestos based materials into the breathing

zone of persons at risk. This is the single most important factor in assessing the likelihood of that person being exposed to fibre concentrations injurious to their health.

To arrive at a risk category, the following categories are each given a numerical score:

Position: 0 – External 1 – Internal 2 – Heat / Airflow	**Condition**: 0 – Good 2 – Fair / Minor Damage 4 – Poor	**Access**: 0 – Low 1 – Medium 2 – High
Friability: 0 – Low 1 – Medium 4 – High	**Treatment**: 0 – Sealed 2 – Partially Sealed 4 – Unsealed	**Content**: 1 – Trace 2 – Significant 3 – Substantial
Analysis Result: 0 – Serpentine (Chrysotile) 2 – Amphibole (Other Asbestos)		

The scores for each factor are added to give a risk value. Each risk category contains a range of values. The following Risk Bands are a management aid tool for the management and control of asbestos on site.

Priority Rating Recommendations and Comments

17+: Category A: Materials within this category warrant urgent action. Materials with such a high rating indicate that persons may currently be exposed to significant asbestos fibre contamination. This exposure will vary according to local conditions, for example the use of a heating system or the nature of airflow and movement around a damaged ceiling. Due to potential for exposure, materials, which fall into this category, should be treated as a matter of urgency. In most circumstances, immediate plans for removal of the asbestos concerned should be implemented, or at least the rapid sealing of the affected materials and labelling with appropriate warning labels to prevent the spread of asbestos.

13-16: Category B: Situations within this category warrant urgent consideration, in that any change in one of the contributory factors may result in an unacceptable risk to health. It is therefore necessary for the asbestos to be treated within a specified time scale. These items should be programmed for eventual removal within a period of nine months or sooner. Approved warning labels should be placed to prevent accidental damage.

8-12: Category C: Situations in this category do not pose an imminent risk and the likelihood of exposure was perceived to be low at the time of the survey. It would be appropriate for materials within this category to be monitored as deterioration may occur over time. It is recommended that the maximum period for action should be agreed and the material subsequently inspected on a six-month basis to reassess the risk of fibre release, the item may be re-prioritised to Risk Band B. A warning label should be attached to the item.

Less than 8: Category D: Situations within this category are low priority. They do not pose an imminent risk and the likelihood of exposure was perceived to be low at the time of the survey. These items may be left in situation for a long period provided no disturbances are anticipated. The situation should be monitored to ascertain any change in risk on a periodic basis to be agreed. These materials require annual inspections and eventually their priority will change to a higher risk band.

6.3 Management Plans

This Register must be consulted prior to any kind of building works by a senior member of the Management.

All supervisory maintenance staff should be informed of the existence of this survey report.

The Register of Suspect Asbestos Materials should be made available to anyone whose work may disturb asbestos. If further advice is required regarding this report or how to remove asbestos materials Archway Environmental should be contacted. This register may be used as part of an Employers duty of care, required by the Health and Safety at Work Act 1974, to assess the risks of asbestos.

The regular inspection of all located asbestos in this report is recommended as part of the duty to manage asbestos

It is recommended that suspect areas not mentioned in this report or noted on the drawings should be treated with caution when work is to be carried out involving them.

In the event that major future work reveals hitherto unknown asbestos it is important that the Asbestos Register is updated.

The Register must be viewed as a live document and as such must be maintained so that the information is up-to-date and as accurate as possible,

6.4 Managing the Risk from Asbestos

CAR 2012 places a duty on employers before carrying out any work with asbestos to make an adequate assessment of any exposure to asbestos of his employees and to prepare a suitable written plan of work detailing how the work is to be carried out.

Asbestos materials likely to be disturbed should be labelled with the official asbestos warning label and the identified asbestos containing materials in the Register inspected annually to examine the integrity of the materials.

When asbestos fire protection materials are removed they must be immediately replaced with an equivalent fire performance product.

It will be necessary to:

- ★ Keep and maintain an up to date log of the location, condition, maintenance and removal of all asbestos containing materials on the premises.
- ★ Repair, seal or remove, if there is a risk of exposure due to its condition or location.
- ★ Maintain in a good state of repair.
- ★ Inform anyone who is likely to disturb it about the location and condition of the material.
- ★ Have arrangements and procedures in place, so that work which may disturb the materials complies with the CAR 2012.
- ★ Review the plan at regular intervals.

6.5 Recommendations for the Management of the site.

These action recommendations should be made based upon each items' assessed potential for fibre release as indicated by the guidance published by the Department of the Environment and the Health and Safety Executive, and with regard to the safety of asbestos in buildings.

1. **Removal** of those items vulnerable to damage or in such poor condition that removal is the only practicable option or where refurbishment or demolition works are planned, such that these works will impinge on the asbestos materials present and render such removal necessary.

2. **Enclosure or encapsulation** (together with repair where necessary) where the material is in poor condition / vulnerable to damage such that these works are necessary.

3. **Management** of the asbestos materials present where these are not in poor condition / vulnerable to damage by labeling / registering / periodic inspection as necessary. Such management should be undertaken to comply with the employer's duty of care, required by the Health and Safety at Work Act 1974 and Control of Asbestos Regulations 2012.

6.6 Terminology, Definition of terms

Enclosure: Provision of physical barrier to provide mechanical protection to prevent it being disturbed / damaged.

Encapsulation: Provision of coating to affect a continuous seal to the surface of the material and thereby prevent fibre release. Where encapsulation is considered as a temporary preventative measure the following should be considered: assess whether the asbestos is adhering to its substrate firmly and no likelihood of water penetration from the substrate after encapsulation. Otherwise the additional weight of absorbed water will cause the asbestos to delaminate.

Labelling Standard 'red A' label as per Schedule 2 of CAR 2012 Labelling is recommended as a warning device for those surfaces where it is considered that damage may easily occur and hence exposure likely to persons not carrying out direct work on or near the material. It may also be used in circumstances where a material which is asbestos can be thought to be non asbestos by employees.

Registering Entering of details, including nature, location, extent of material in a Register which is brought to the attention of all persons who might plan or undertake works in the building.

Periodic inspection Inspection of the material at regular (defined) intervals to verify that its condition has not deteriorated such as to necessitate enclosure / encapsulation /removal. Re-inspection of identified materials is necessary to assess any further deterioration in the integrity of the materials. It is recommended that the re-inspections are undertaken at least annually but for certain items six monthly inspections are more appropriate. The survey MUST be upgraded to conform to the Management of Asbestos Regulations.

Repair Addition of a seal to the material to prevent the further deterioration and breakdown of the material. Labelling should also be carried out.

Removal Complete removal of the material under controlled conditions so as to comply with CAR 2012.

Manage Provision of a policy of regular (periodic) inspection 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.

6.7 Recommendations for the removal of asbestos.

The removal of licensable/notifiable asbestos containing material, such as Asbestos Insulating Board, Sprayed asbestos or asbestos containing lagging, must be carried out by a licensed Contractor (Asbestos Licensing Amendment Regulations 1998) under controlled conditions. All removal works should be carried out in accordance with current Regulations and Approved Codes of Practice (ACoPs) including amendments. The removal of such asbestos requires a detailed a plan of works and a risk assessment prepared by the licensed removal contractor & available on site for inspection. The Method Statement will describe the removal of asbestos within built enclosures and removal by other recognised methods. All waste generated by the works is to be disposed of as asbestos waste, and movement of which must be notified to the Environment Agency, in accordance with the special Waste Regulations 1996.

Licensed asbestos contractors, under the terms of their license, have to notify the relevant authority of their intention to remove notifiable asbestos containing material which requires a license to remove. Notification of such works is normally subject to a 14-day period, except for unusual circumstances when the enforcing authority may grant a waiver if there is immediate risk to health, i.e. an accident.

Works on or the removal of any non licensable/non-notifiable asbestos containing materials such as asbestos cement, asbestos textured coatings such as Artex, or asbestos floor tiles should be carried out by a competently trained operative. The remover will need to be competent in the prevention of the spread of asbestos, use appropriate RPE & PPE, have adequate tools for cleaning such as a H-Type vacuum and use appropriate removal techniques so that exposure to air borne asbestos fibres is reduced to the lowest level possible. The Health and Safety Executive guidance note HSG 189/2 Working with Asbestos Cement outline basic precautions that should be used to prevent fibre release during works, such as wetting of the materials before removal and preventing unauthorised persons from entering the work area. Prior to carrying out this work a Contractor is required to prepare a risk assessment.

Although there is no requirement for these works to be undertaken by a licensed asbestos removal contractor, in practice it is unlikely that an unlicensed contractor will possess the necessary expertise to undertake such works as competently and comply with duties laid down by CAR 2012.

It is further recommended that all asbestos works should be inspected and tested by an independent UKAS accredited company, appointed by the client.

It must be realised that some asbestos installations may be present which may only be discovered when areas are demolished.

7.0 Special Notes

Any person undertaking work, which may disturb asbestos within the building, should be made aware of this report. Other persons who may be affected by this work being carried out should be informed.

Archway Environmental Consultants may issue an addendum to this report if further additional samples are taken from a location where a query has been raised.

Archway Environmental Consultants endeavour to inspect all normally accessible areas found on site. We do not accept any responsibility for the discovery of any asbestos materials found at a later date that could not be identified at the time of the survey due to no access or the material being obscured or hidden in a way that it would not have been practicable to detect within the normal scope of the survey. It must always remain a possibility that unidentified asbestos may be found during any alteration works. We do not report all negative occurrences.

This report should not contain any typographical errors however in the event that an error has occurred, please return the report and we will amend the error.

If the client feels that a technical matter reported invalidates any of the findings of this report please return the original report immediately and the query concerned will be investigated.

Should any future refurbishment or demolition work be carried out all asbestos containing materials that are liable to be disturbed or damaged should be removed by a Licensed Asbestos Removal Contractor under controlled conditions prior to commencement of such works. This is a legal requirement.

7.1 Limitations to Asbestos Survey - INCLUDE BUT NOT EXHAUSTIVE TO:

- Spaces containing live transformer and substation equipment.
- Interiors of water tanks
- Cable trenches
- Confined spaces and concealed spaces which may exist within or underneath the fabric of the property, where the extent or presence of these is not evident due to the inaccessibility or insufficient knowledge or information supplied as to the structure
- Any part or space the opening of which would cause unacceptable damage to the decoration of fixtures or fittings.
- Any part or space, the opening up of which involves the moving of substantial items of furniture, equipment, goods or large quantities of documents.
- Sealed or inaccessible loft and roof spaces.
- Areas inaccessible due to the lack of ladders or gangways.
- Areas which have been bricked up or blocked off i.e. service carrying ducts that are inaccessible or hidden from view.
- Sealed voids located in either ceilings or under floors either known or unknown.
- Previous refurbishment work which alters the layout of the building and conceals previously visible asbestos.
- Carpeted floors making inspection to floor surfaces and any floor ducts that may exist difficult.
- Areas that were locked with keys at time of survey.
- Items of bitumen, plastic or resin which may contain asbestos. These items fall outside the scope of the approved code of practice for work with asbestos insulation, asbestos coating and asbestos insulation board.
- Any part requiring specialist access equipment other than stepladders. No provision is made for specialist access equipment unless otherwise stated.

The property has not been examined for buried asbestos waste.

Samples will not be taken where the act of sampling would endanger the surveyor or compromise the functional integrity of the item concerned. For example flash guards to fuse carriers within live electrical boxes, panels within fire doors, gaskets associated with heating, glazing or power plants.

7.2 Sub-Contractors employed for elements of survey

The following sub-contractors have been used: N/A in this case

Clearwater Environmental – Certificate of Analysis, (UKAS 4219)
Park House
Cambridge Road
Harlow CM20 2EU

7.3 Recommendations:

For samples indicating No Asbestos Detected - no action required.

High-risk materials - require regular inspection.

Minor risk materials - require annual inspection

8.0 General Notes on Asbestos Containing Materials in Premises

Asbestos is a fibrous mineral which is unaffected by heat or chemicals and does not conduct electricity. These properties led to it being widely used in buildings in a range of applications. However, asbestos fibres once airborne may be inhaled or swallowed possibly causing serious health problems.

The three main types of asbestos are: -

Crocidolite – straight fibres (amphibole)
Amosite – straight fibres (amphibole)
Chrysotile – curly fibres (serpentine)

A brief overview of the common uses of asbestos in premises: -

Loose Insulation

This type of product is usually 100% asbestos apart from the bag or mattress within which it may be contained. It could be found loose as insulation in a loft or as fire packing around cables between floors. It could also be found packed into mattresses as thermal insulation around industrial boilers or packed into bags being used as acoustic insulation under floors and in walls. Loose insulation has a very high risk of fibre release and even if contained in a bag or mattress these outer coverings may be easily damaged or deteriorate.

Asbestos Lagging

Thermal insulation to boilers, vessels, pipework, valves, pumps. It 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 asbestos content will vary between 15 to 100%. The likelihood of fibre release depends upon its composition, friability and state of repair, but it is particularly susceptible to damage and disturbance through maintenance work or due to water leaks. Asbestos thermal insulation was used until the 1970's.

Sprayed Coatings

Mainly used for anti-condensation, thermal or acoustic insulation or fire protection. Found on structural steelwork and reinforced concrete beams and on the underside of roofs. Sprayed coatings could have up to 85% asbestos content mixed with a Portland cement binder. Sprayed coatings are a friable material especially if unsealed and there is a high risk of fibre release if the material is disturbed or damaged. As it ages the binding medium of sprayed asbestos may degrade with the consequent release of fibres. Sprayed coatings were applied until 1974.

Asbestos Insulating Board (AIB)

This board was developed in the 1950's to provide fire protection, thermal and acoustic insulation in a general building board. It contains between 15 and 40% asbestos in calcium silicate. Asbestos insulation board was manufactured until 1980. Due to its semi-compressed nature it can be readily broken and there is therefore a high risk of fibre release as a result of damage or abrasion.

Millboard, paper and paper products

These 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 fireproofing to wood fibre panels. These materials are not well bonded and will release fibres if subject to abrasion and wear.

Asbestos Cement products

Asbestos cement products usually contain 10-15% asbestos in a binder of Portland cement or autoclaved calcium silicate. Profiled sheets of asbestos cement are found as roofing; semi compressed asbestos cement sheets are used as partitioning, decorative panels, soffits, fire surrounds, etc.; fully compressed sheets are used for tiles, slates, etc. It was used until 1999.

The hardness and structure of asbestos cement sheet and its relatively low asbestos content mean it is less likely to generate dust than many other products. However, under some circumstances, operations such as removal, machining or breaking of asbestos cement, particularly when it is weathered, will cause fibre release.

Bitumen Felts and Coatings

These products contain Chrysotile or asbestos paper bound in a bitumen matrix and they were used until 1992. These materials are not likely to present a hazard and are not liable to release asbestos fibres into the atmosphere unless vigorously abraded or subject to intense heat/fire. If the material has to be removed then it must be treated as a special waste.

Ropes, Yarns and cloths

These materials are usually high in asbestos content up to 100% and all three types of asbestos have been used in the manufacture. They were used as packing, caulking or gasket materials where thermal or fire protection was required. Abrading or cutting this material will release fibres.

Textured coatings

Decorative coating found on ceilings and walls e.g. ‘artex’. Contains between 3 and 5% Chrysotile asbestos and was used until 1984. Fibres will be released if the coating is sanded down or scraped.

Flooring

Floor tiles or flooring material containing up to 25% asbestos in the matrix or 100% asbestos paper backing to PVC floors. Fibre release is unlikely during normal usage. However, fibres will be released if the material is cut and there will be substantial release if the flooring residue or paper backing is sanded.

Reinforced plastics

These products contain up to 10% asbestos. Reinforced PVC was used in paneling and cladding, whilst reinforced plastics were used in toilet cisterns, seats, banisters, etc. Fibre release will occur if this type of product is cut.

Mastics, sealants, putties and adhesives

Risk of fibre release from these materials is very low under normal circumstances. Sanding should be avoided.

Asbestos Materials in Building

Materials that may be encountered:

Material	Uses/where found	Composition
Asbestos cement	Roof and wall cladding systems, guttering, down pipes, cold water cisterns, floors + other	10-15% chrysotile until 1999 Pre 1970 some crocidolite is possible Pre 1980 amosite is possible
Asbestos Insulating Board (no longer made)	For fire and condensation protection also thermal and acoustic insulation in industrial wall and roof linings, internal partitions, duct and pipe covers, suspended ceilings. (Trade names such as Asbestolux, Turner asbestos, Marinite)	15-40% asbestos
Textured paints & plasters	Interior and exterior decoration (Artex)	3-5% chrysotile up to 1984
PVC Tiles	Floor covering	7% chrysotile
Asbestos reinforced PVC	Cladding and panels	1-10% chrysotile
Sprayed coatings	Fire protection for structural steelwork, thermal and acoustic insulation and condensation control	55-85% asbestos, any type up to 1974
Rigid lightweight sectional insulation:		
1) Caposite	Pipe insulation	85% amosite
2) Caposil Calcium silicate insulation	Pipe insulation	8-30% amosite
3) 85% Magnesia	Pipe insulation	15% amosite
Other lagging materials	Pipe insulation	6-85% asbestos
Millboard and paper	Insulation of electrical equipment, thermal insulation and fire-proof facing in wood fibre board	37-97% asbestos
Cloth	Thermal insulation and lagging; fire resistant products e.g. curtains, blankets	Up to 100% asbestos
Yarns, ropes	Jointing and packing materials, lagging on pipes	Up to 100% asbestos
Gaskets and washers	Domestic hot water boilers; industrial and chemical plant	Approx. 90% asbestos
Strings	Sealing hot water radiators	Up to 100% asbestos

9.0 Legal Statement

This consultancy contract was compiled by Archway Environmental Consultants on the basis of a defined programme of works terms and conditions as agreed with the client. This report was compiled with all reasonable care and attention, bearing in mind the project objectives, the agreed scope of works, prevailing site conditions and the degree of manpower and resources allocated to the project as agreed. Archway Environmental Consultants cannot accept responsibility to any parties whatsoever, following the issue of this report, for any matters arising that may be considered outside of the agreed scope of works. This report is issued in confidence to the client and Archway Environmental Consultants cannot accept any responsibility to any third parties to whom this report may be circulated, in part or in full, and any such parties rely on the contents of the report solely at their own risk. Given the way that asbestos containing materials have been used in concealed and composite structures during the constructions of buildings, asbestos may only be detected during the course of subsequent demolition. Care should be exercised in all times during the demolition of cavity walls and removal of floorboards, in case concealed pipe services are present. Whilst every effort has been made to identify the asbestos materials contained within the premises, Archway Environmental Consultants will not accept any responsibility for any future asbestos materials discovered but not identified within this report. If suspect materials are found, the management should stop all work immediately and have the material analysed by a competent laboratory. A warning sign should also be displayed until a full assessment has been made by a UKAS accredited air-monitoring company, together with recommendations on control methods.

Any questions or matters arising from this project may be addressed in the first instance to the project manager.

<u>Disclaimer</u>

The information contained in this document relates solely to the item(s) submitted and described herein. This report shall only be reproduced in full and with the permission of the issuing office.

Archway Environmental Consultants takes no responsibility for:

The client's interpretation of the report nor responsibility for any consequences or acts arising from this, neither can we take responsibility for delays of asbestos entries onto the Register which are subsequently found at a later date.

It is the client's responsibility to keep and maintain the asbestos register up to date.

This survey must not be used exclusively for costing purposes for the removal of asbestos because of the statement made in the introduction.

Any changes can only be made on the original client's report which has to be sent back to us. Any copies of this report which may be in circulation to other parties without our permission cannot be changed.

9.0a CAVEAT

Every effort has been made to identify all asbestos materials so far as was reasonably practical to do so within the scope of the survey and the attached report. Methods used to carry out the survey were agreed with the client prior to any works being commenced.

Survey techniques used involves trained and experienced surveyors using the combined approach with regard to visual examination and necessary bulk sampling. It is always possible after a survey that asbestos based materials of one sort or another may remain in the property or area covered by that survey, this could be due to various reasons:

- **Archway Environmental Consultants** CANNOT ACCEPT ANY LIABILITY FOR LOSS, INJURY, DAMAGE OR PENALTY ISSUES DUE TO ERRORS OR OMISSIONS WITHIN THIS REPORT.
- **Archway Environmental Consultants** cannot be held responsible for any damage caused as part of this survey carried out on your behalf. Due to the nature and necessity of sampling for asbestos some damage is unavoidable and it will be limited to just that necessary for the taking of the sample.

10.0 – Photographic Record and Sample Record

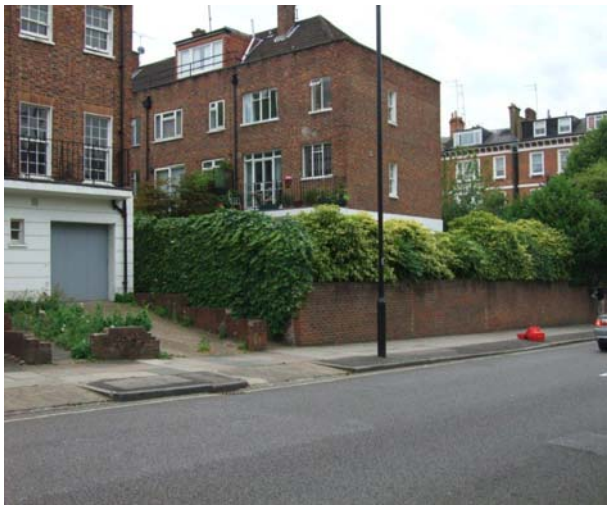


Photo ref: 1
Floor: External rear
Room:
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:

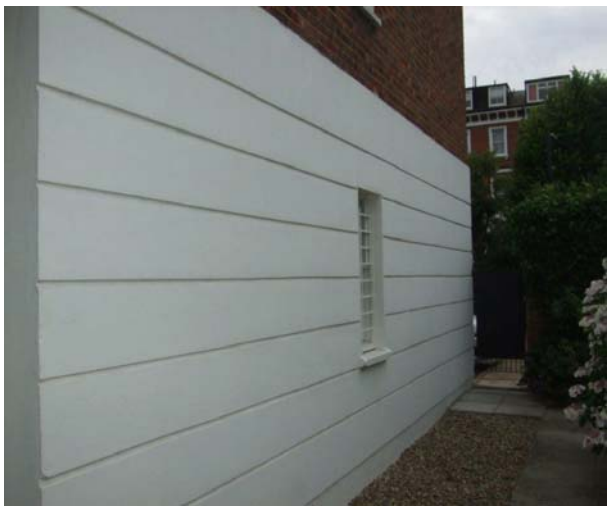


Photo ref: 2
Floor: View of rendered wall rear garden
Room:
Position:
Product: No visible suspects
Material Assessment: N/A
Risk Category:

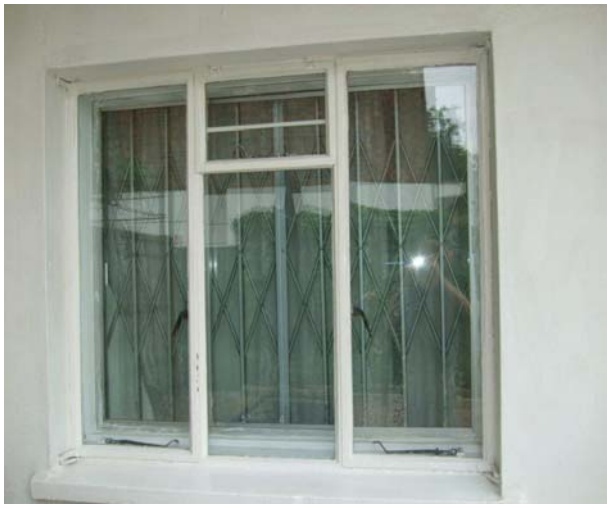


Photo ref: 3
Floor: rear window
Room:
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:

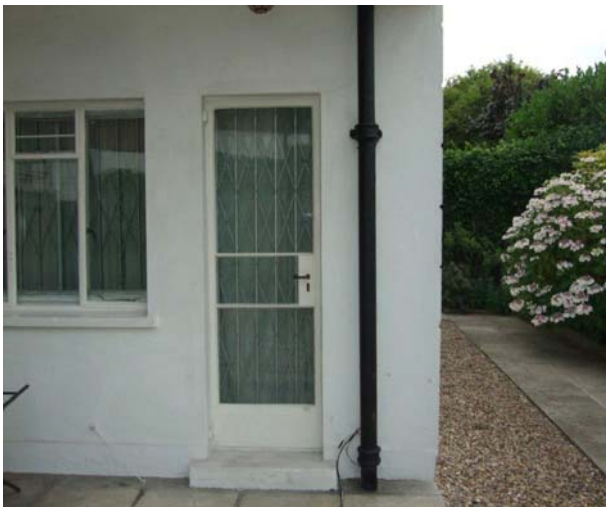


Photo ref: 4
Floor: rear door area
Room:
Position:
Product:

Material Assessment:
Risk Category:

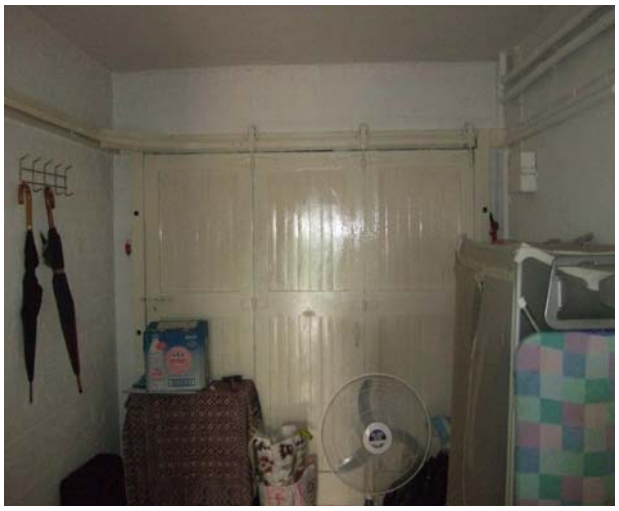
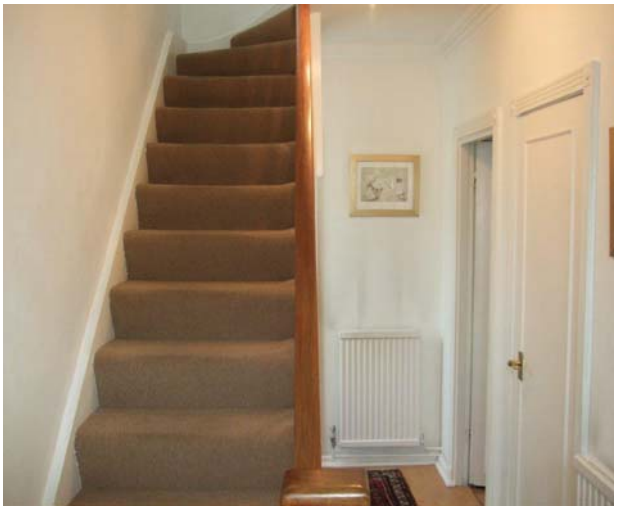


Photo ref: 5
Floor: ground
Room: Garage
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:



Register ref:
Photo ref: 6
Floor: Stairs / entrance
Room:
Position:
Product: No visible suspects

Material Assessment:
Risk Category:

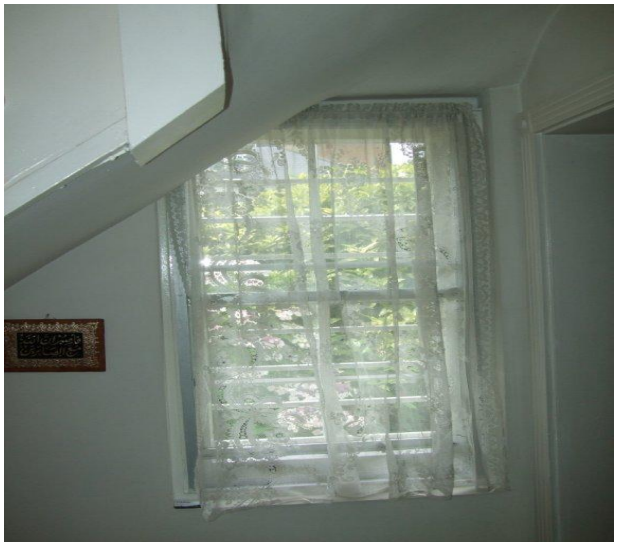


Photo ref: 7
Floor: Ground
Room:
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:

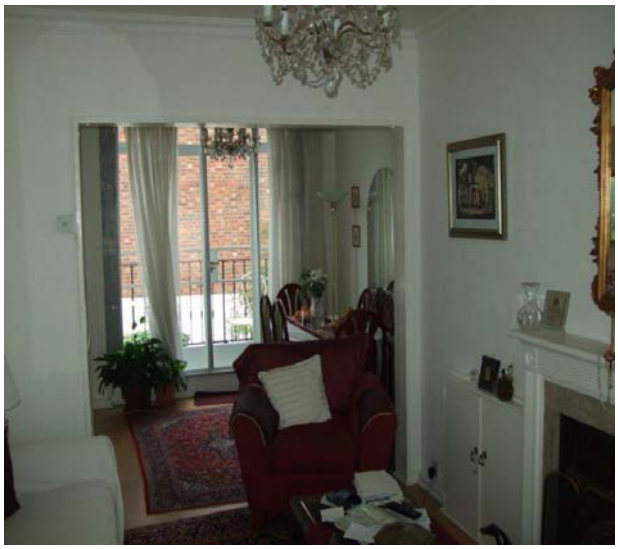


Photo ref: 8
Floor: 1st
Room: Living room
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:

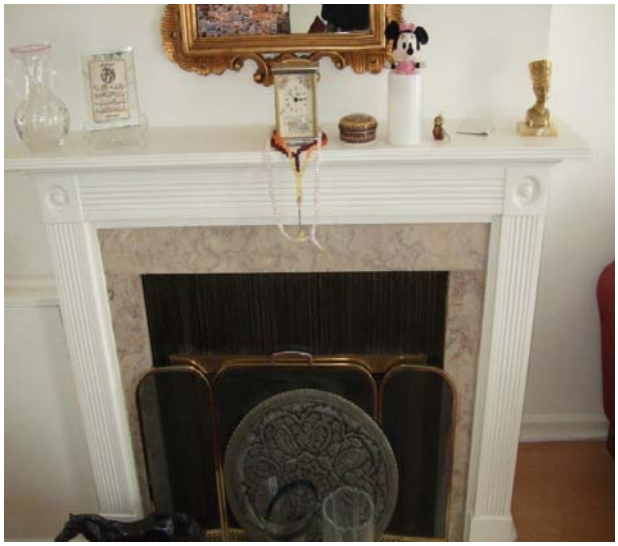


Photo ref: 9
Floor: 1st
Room: living room
Position: fireplace
Product: No visible suspects

Material Assessment: N/A
Risk Category:

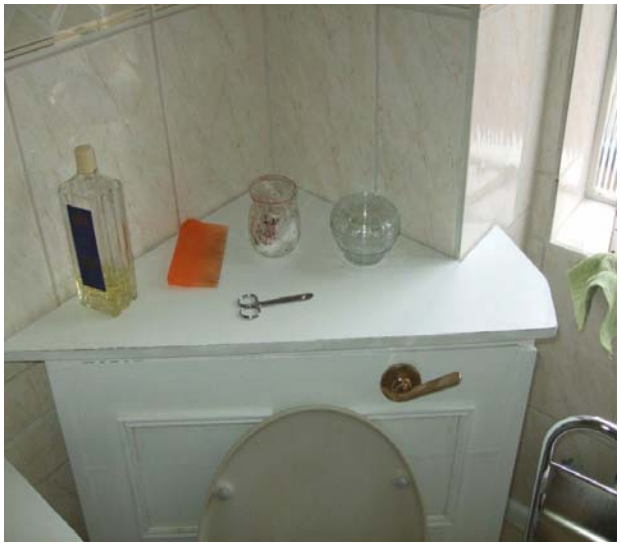


Photo ref: 10
Floor: 2nd
Room: Bathroom
Position:
Product: No visible suspects

Material Assessment:
Risk Category:

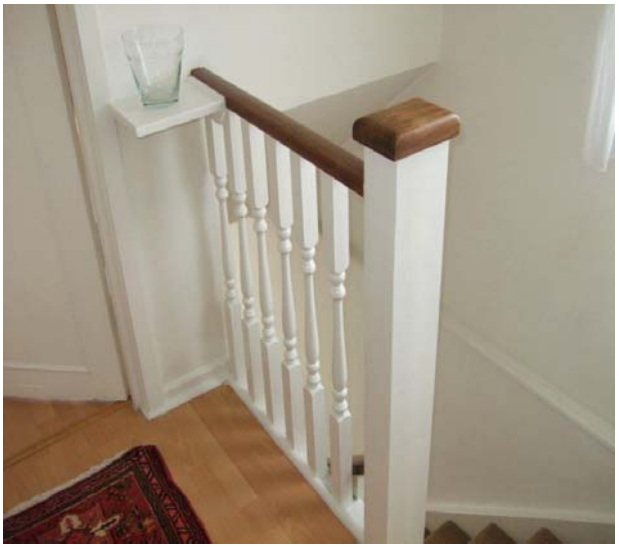


Photo ref: 11
Floor: 2nd
Room: Balustrade
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:

Photo ref: 12
Floor: loft
Room:
Position: Party wall and roof
Product: No visible suspects

Material Assessment: N/A
Risk Category:

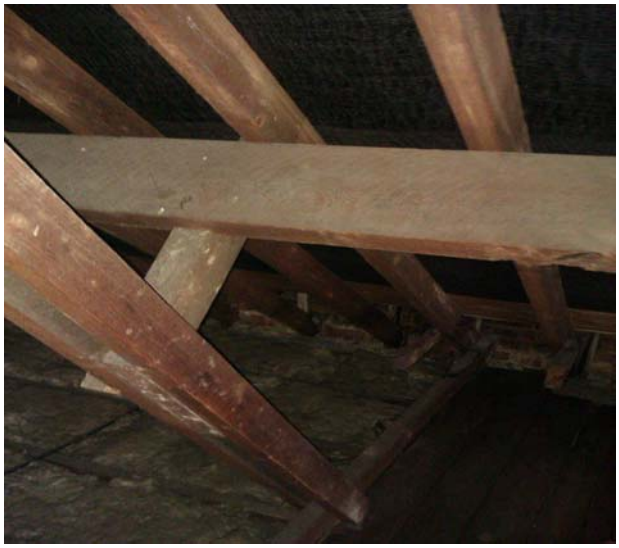


Photo ref: 13
Floor: roof structure
Room:
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:

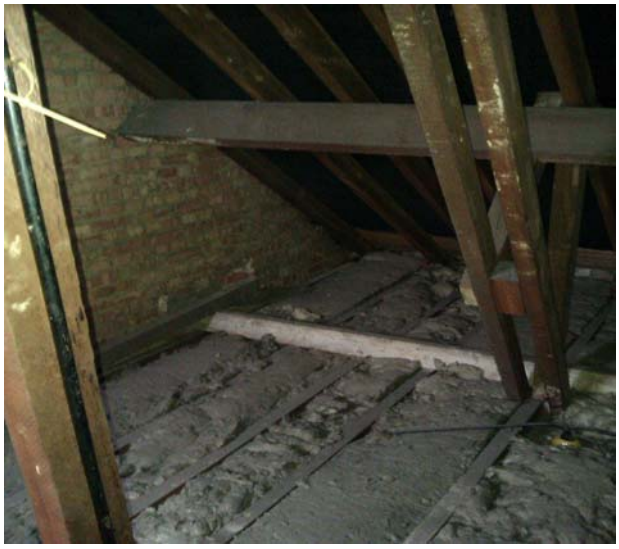


Photo ref: 14
Floor: roof structure
Room:
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:

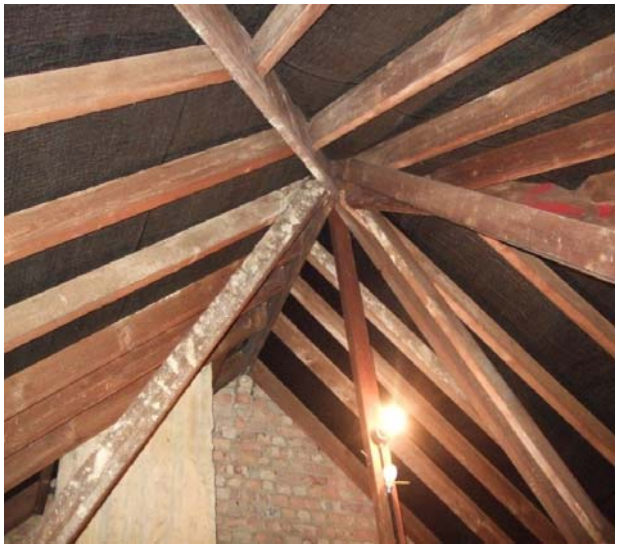


Photo ref: 15
Floor: roof structure
Room:
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:

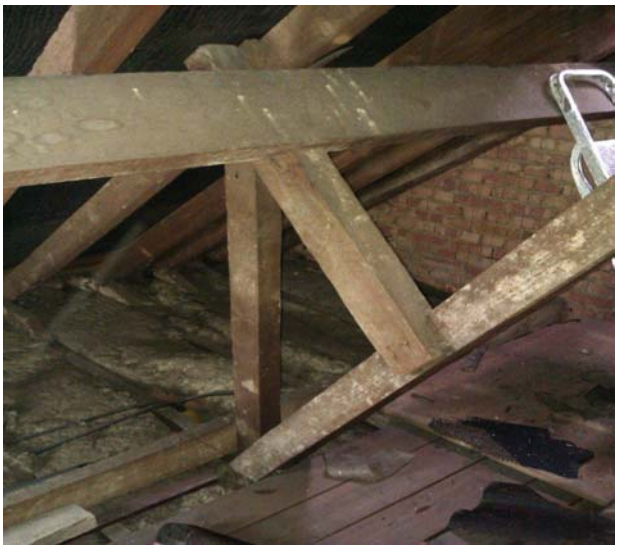


Photo ref: 16
Floor: roof structure
Room:
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category: 0

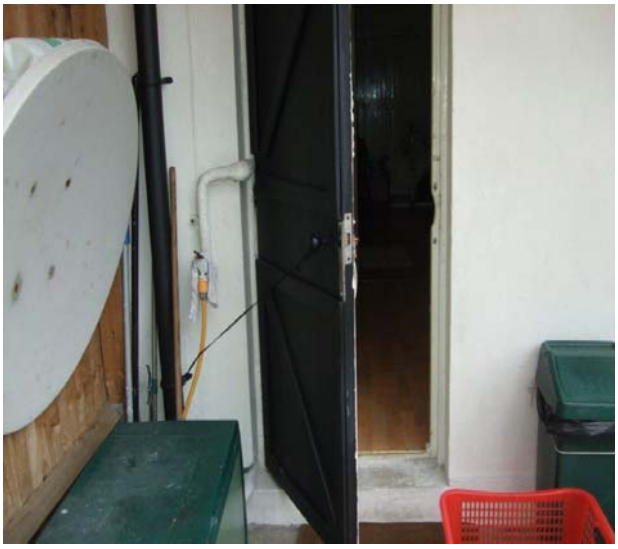


Photo ref: 17
Floor: Ground
Room: Rear door area
Position:
Product: No visible suspects

Material Assessment: N/A
Risk Category:

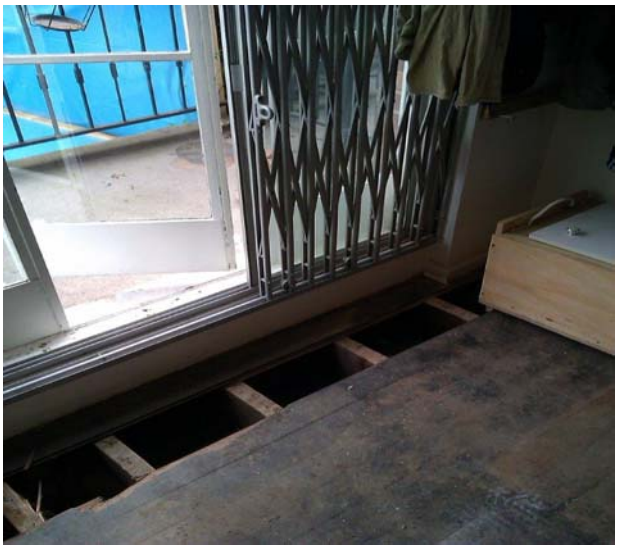


Photo ref: 18
Floor: 1st
Room: dining room
Position: Void under floor
Product: No visible suspects

Material Assessment: N/A
Risk Category:

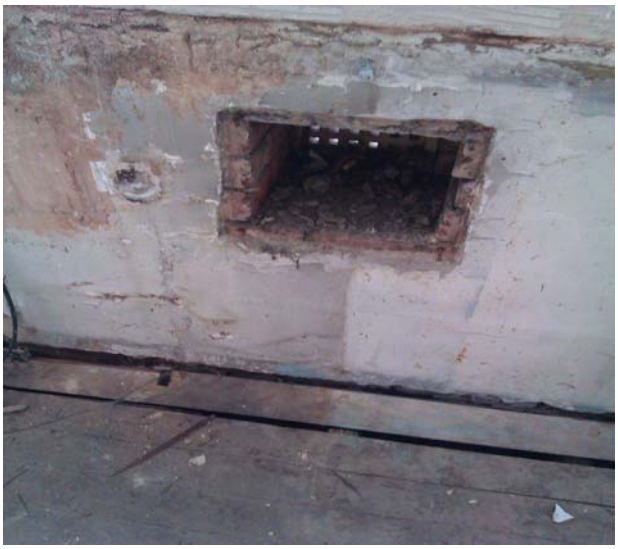


Photo ref: 19
Floor: 1st
Room:
Position: Kitchen/external wall
Product: No visible suspects

Material Assessment: N/A
Risk Category: