

RSPH Level 3 Certificate in Asbestos Surveying
(HSG 264-Management / Refurbishment / Demolition Surveys)

February 2013

15 Guided Learning Hours
3 Prior Learning Hours

Description

The *Control of Asbestos Regulations* impose duties on every person who has, by virtue of a contract or tenancy, an obligation in relation to the maintenance or repair of non domestic premises to manage the risk from asbestos. Duty holders will need to be able to identify, assess and manage any asbestos containing materials on their premises. There is thus a need for surveyors and similar specialists to have the knowledge to inspect buildings and premises for asbestos and to advise on how to manage any asbestos found. Possession of this qualification by staff will help organisations and companies meet the accreditation criteria for ISO17020 (inspection bodies) and ISO17024 (certification bodies) of UKAS.

The qualification consists of four units:

Unit One: Asbestos Types, Uses, Health Effects and Legislation

Unit Two: Asbestos Surveying & Management of Asbestos in Buildings

Unit Three: Bulk Sampling of Asbestos

Unit Four: Use of Decontamination Units and H type vacuum cleaners during Asbestos Surveys

Unit One: Asbestos Types, Uses, Health Effects & Legislation

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Know the health risks, uses and properties of asbestos, by being able to:**
 - 1.1 State the properties and characteristics of different types of asbestos.
 - 1.2 Review the types and uses of asbestos containing products.
 - 1.3 Review the risks to health from asbestos exposures
 - 1.4 Review the control limits for asbestos
2. **Review legislation relating to asbestos, by being able to:**
 - 2.1 Summarise appropriate legislation relating to the control and use of asbestos.

Content:

1. Know the health risks, uses and properties of asbestos

1.1 Asbestos types, properties and characteristics of the different types of asbestos: (crocidolite ((blue asbestos)), chrysotile ((white asbestos)) amosite ((brown asbestos)), actinolite, anthophyllite and tremolite), to include fibre size and shape, biopersistence, friability and solubility, effects on fibres due to fire damage.

1.2 Types, uses and products: asbestos contents, extent of use, reasons behind use, different fibre properties and resistances, materials asbestos was used with: sprayed coatings; lagging; insulating boards; ropes and yarns; cloth; millboard, paper and paper products; asbestos bitumen products; asbestos cement products; flooring; textured coatings and paints; mastics, sealants, putties and adhesives; reinforced plastics; plugging compounds; domestic appliances, plant and machinery, asbestos contamination in other products.

1.3 Risk to health: asbestos related diseases: mesothelioma; asbestosis; lung cancer; risk of developing disease, including risks from low level exposures; induction or latency periods; levels of exposure to asbestos fibres including the significance of control limits within the operation of CAR 2012.

1.4 Control limits for asbestos: purpose of, and reasons for, asbestos control limits and clearance indicator levels.

2.0 Review legislation relating to asbestos

2.1 Legislation: main points of the following Acts and Regulations that are relevant to asbestos **or any superseding legislation;** Health and Safety at Work etc. Act 1974, Control of Pollution Act 1974, Water Act 1989, Consumer Safety Act 1978, Management of Health and Safety at Work Regulations 1999, Control of Substances Hazardous to Health Regulations and amendments, Control of Asbestos Regulations 2006, Construction (Design and Management) Regulations, Waste Management Licensing Regulations 1994, Hazardous Waste (England & Wales) Regulations 2005, The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004; duties of employers in control of workplaces; legal status of Approved Codes of Practice, HSE regulations and guidance notes.

Unit Two: Asbestos Surveying & Management of Asbestos in Buildings

Summary of Outcomes

To achieve this unit a candidate must:

1. **Review the processes and procedures to be used prior to undertaking a survey, *by being able to:***
 - 1.1 Outline the different types of survey relating to asbestos.
 - 1.2 Describe method statements / risk assessments for surveying
 - 1.3 Outline data collection methods
 - 1.4 Overview of survey planning.
 - 1.5 Overview of desk-top study.

2. **Outline procedures for carrying out asbestos surveys, *by being able to:***
 - 2.1 Survey buildings for the presence of asbestos.
 - 2.2 Perform material assessment.

3. **Report on the survey findings, *by being able to:***
 - 3.1 Outline the requirements of a report.
 - 3.2 Prioritise material for remedial action.
 - 3.3 Suggest possible course(s) of action.

4. **Assess factors affecting the presence and location of asbestos in a building, *by being able to:***
 - 4.1 Determine the age of a building from its method of construction.
 - 4.2 Describe how construction techniques affect asbestos usage.
 - 4.3 Explain methods of fire protection within a building.
 - 4.4 Outline the effect of building services on the distribution and spread of asbestos.

5. **Explain procedures for the management of risk from asbestos in buildings, *by being able to:***
 - 5.1 State the requirement of duty holders to manage and reduce the risks from asbestos.
 - 5.2 Describe methods for preventing or reducing exposure to asbestos.

Content:

1. Processes and procedures

1.1 Surveys relating to asbestos: Clearly state different survey requirements for presumptive, sampling, management, refurbishment or demolition surveys; benefits and limitations of each survey type; appropriateness of each survey type for different scenarios e.g. targeted refurbishment surveys, demolition surveys and also for assisting the demolition process. Additional requirements for Refurbishment or Demolition surveys in terms of possibly requiring enclosures for access, decontamination facilities.

1.2 Method statements / risk assessments: purpose and role of method statements and risk assessments; risk assessments prior to the survey to include: different building types, working at heights, working in confined spaces, working on operable machinery or plant, hazards (electrical, chemical, biological, fire and noise), lone working and vehicle movements; methods for reducing risk; safe systems of work; use of personal protective equipment and decontamination requirements.

1.3 Data collection: survey strategies; survey plans; sampling strategies; methods for reporting and presenting data.

1.4 Overview of survey planning: explain the need for exchange of information between the client (dutyholder) and surveyor to ensure that the survey meets the dutyholder's requirements.

1.5 Overview of Desk-top study: identify information needed to be collected by the surveyor, including plans or drawings to be provided by dutyholder, identification of surveyor on site, site hazard information, emergency procedures, Preliminary site meeting and walk-through, Survey plan.

2. Surveying for asbestos and assessments

2.1 Survey of buildings for the presence of asbestos: use of building plans; consideration of the age of the building and refurbishments; likely location of asbestos-containing materials; identification of building structures and components which may contain asbestos such as barge boards, chimney cowls, ducts, eaves, fascias, fire dampers, flue terminals and risers, gables, plenums, soffits and stud partitions; identification of asbestos-containing material; potential for fibre release due to type of material and its properties, type of asbestos, condition and location of material. Emphasis on the need for surveys to be conducted in a structured, systematic and thorough manner.

2.2 Material assessment: use of algorithms, decision trees and flow diagrams; advantages and disadvantages of assessment processes. Decisions on whether a material risk assessment is needed for a Refurbishment or Demolition Survey.

2.3 Priority assessment scoring according to HSG 227: Need for additional information from client

3. Survey report

3.1 Requirements of a report: report format to include descriptions of the areas included in the survey, description of any areas not included in the survey, the identification of the asbestos location, extent of asbestos (such as area, length, thickness, volume), type of asbestos product, type of asbestos, accessibility (if appropriate), damage or deterioration (if appropriate), surface treatment of asbestos containing material (if appropriate), assessment of potential for asbestos fibre release. Inclusion of a properly marked up drawing or plan of the surveyed area(s) – to CAD standard if possible.

3.2 Prioritise material for remedial action: distinguish between asbestos containing materials that require immediate attention and those that do not; rank material for action by consideration of material assessment scores, location and extent of material, use and occupancy of location; importance of ISO17025 accreditation; units of measurement; assessment of risk due to release of asbestos fibres by use of algorithms, decision trees and flow diagrams. Include references to Management Prioritisation algorithm - as in HSG 227 (or suitable equivalent) & strictly this assessment should be the responsibility of the dutyholder, but in many cases, the surveyor is delegated to do it, (provided adequate information can be provided by the dutyholder).

3.3 Possible courses of action: advise on options for dealing with asbestos containing material, such as manage in situ and re-inspect, repair, encapsulate, enclose, remove; reference to requirements for management plan; guidance on reasonable report caveats.

4. Factors affecting the presence and likelihood of spread of asbestos in a building

4.1 Age of a building: estimation of a building's age from its construction; likelihood of asbestos being present and amount of asbestos present due to age of material likely to contain asbestos, estimates of total amounts of crocidolite, chrysotile and amosite used in the UK for building during different periods, and estimates of amount of asbestos remaining in buildings.

4.2 Construction techniques: Construction techniques in common use at the time of the original construction; take into account the possibility of later maintenance, refurbishment and any extension works. Include

system built structures (CLASP buildings, etc.). Correct names for typical building structure components and architectural spaces.

4.3 Fire protection: types of fire protection used within buildings according to age of building; compartmentalisation of buildings and other methods to prevent spread of fire; materials used in fire protection and reasons for its use; location and amount of asbestos used in fire protection. Use of ACMs as random packing and shuttering
Possibility of debris from installation of sprayed coatings or insulation, or damage to fire breaks.

4.4 Building services: key services used in buildings; operation of these services; use of asbestos in building services; potential of services to spread asbestos fibres.

5.0 **Management of risk**

5.1 Requirements of employers: duties of employers to assess and manage the risks from asbestos on premises; requirements of a management plan; purpose of an asbestos survey with regard to the management plan process.

5.2 Preventing or reducing exposure: maintenance of asbestos containing material in good condition; action to prevent disturbance of asbestos containing material; remedial action required for damaged asbestos-containing material; typical asbestos exposure levels produced by remedial action; requirements to notify HSE; main points of and compliance with HSE guidance notes; use of specialist contractors or trained staff.

Unit Three: Bulk Sampling of Asbestos

Summary of Outcomes

To achieve this unit a candidate must:

1. **Prepare to take asbestos samples, by being able to:**
 - 1.1 Discuss pre-assessment of whether an area is suitable to enter.
 - 1.2 Outline RPE and PPE requirements for sampling of materials
 - 1.3 Prepare the sampling area.

2. **Undertake sampling utilising correct sampling techniques, by being able to:**
 - 2.1 Explain the requirements for the collection of samples for analysis
 - 2.2 Undertake sampling utilising correct sampling techniques and equipment for two different material types.
 - 2.3 Perform post sampling duties of sealing the material sampled, cleaning of area, disposal of contaminated items correctly and labelling the sampling point.
 - 2.4 Overview of documentation and records for surveys.

Content:

1. Surveying Risks

1.1 Discuss pre-assessment of whether an area is suitable to enter: Include reference to pre-assessment of whether an area is suitable to enter. If it is deemed to be excessively contaminated with debris, surveyors should not enter. Then describe appropriate procedures to isolate area and refer to project manager and/or client. Include reference to: Entry into ceiling voids, risers, floor ducts, hatches, loft spaces, confined spaces, Sampling of partitions, etc as part of Refurbishment or Demolition Survey.

1.2 RPE & PPE requirements and standards: different RPE and PPE types available, minimum requirements of RPE and PPE to be used when sampling; methods for disposal of used RPE and PPE; requirements and procedures for mask inspections.

1.3 Sample area preparation: set up of sampling area; door signage; protection of floor and other areas below collection point; sealing of area; arrangement of tools and equipment required for sampling.

2. **Sampling Techniques**

2.1 Requirements for the collection of samples for analysis: precautions to take during sampling; methods for collection of samples from different asbestos-containing materials; recording and labelling of samples; air-monitoring, its benefits and limitations; main points of and compliance with HSE guidance; use of trained staff or contractors.

2.2 Sampling Technique: Carry out sampling of at least **TWO** different types of asbestos containing material from: cement, insulating board, floor tiles, bituminous products (eg roofing felt, damp proof courses, mastics, glues and thermoplastic floor tiles), laggings (preformed/friable), sprayed and loose fill insulation, textiles and gaskets, hard set lagging, decorative plaster/textured coatings/paints, vinyl floor tiles; correct labelling and bagging of samples. Materials to be sampled must include **at least one** higher risk material such as thermal insulation. Practice (and assessment) materials must be non-asbestos equivalents. Sampling techniques must include a core sample.

2.3 Post sampling duties: clean area and ensure the sample location has been sealed and labelled, correct cleaning methods of tools used; disposal of contaminated items.

2.4 Overview of documentation and records for surveys: Including need for documentation for sampling, including material risk assessment, marking up of plans, photographic records.

Unit Four: Use of Decontamination Units and H type vacuum cleaners during Asbestos Surveys

Summary of Outcomes

To achieve this unit a candidate must:

- 1. Understand decontamination requirements and use of related equipment, *by being able to:***
 - 1.1 Set up, use and maintain decontamination units.
 - 1.2 Set up, use and maintain H type vacuum cleaners.

Content:

1. Decontamination Units and Equipment

1.1 Set up, maintenance and use of decontamination units: occasions when a decontamination unit (DCU) must be utilised as part of a survey; procedures for setting up DCUs; tests for ensuring correct use of DCU (including DOP, gas test, previous 4 stage clearance, PAT Test, earthing rods); procedures for use of DCU and correct decontamination to include primary, transit and full decontamination and disposal of contaminated RPE & PPE.

1.2 Set up, maintenance and use of H type vacuums cleaners: occasions when H type vacuum cleaners must be utilised as part of a survey; procedures for setting up and checking use of vacuum cleaners, to include checks for DOP, PAT Test and service requirements; procedures and requirements for bag changes.

Assessment:

Attainment of the Learning Outcomes for Units 1, 2 and part of 3 will be assessed by an examination consisting of 40 short-answer questions to be answered in ninety minutes. The examination paper will be divided into two sections, one section per unit. A candidate who is able (**deemed**) to satisfy the learning outcomes **must achieve** a score of at least 60% for **EACH** unit in the examination.

Attainment of the Learning Outcomes for parts of Units 3 and 4 will also be assessed by a practical examination which will include tasks for each of the assessment criteria for these units.

In order to be awarded the certificate candidates must achieve the learning outcomes for all units.

Guidance:

Recommended Reading & Additional Reading	Qualification				
	Analyst	Surveyor	Project Manager	Dutyholder	Bulk Analysis
Asbestos - The Analyst's Guide for Sampling, Analysis and Clearance Procedures (HSG248) HSE 2005	✓	✓	✓	✓	✓
HSG 247 Asbestos: The Licensed Contractors Guide HSE 2006	✓		✓	✓	
Asbestos and Man-Made Mineral Fibres In Buildings. Practical Guidance Thomas Telford 1999		✓			
Asbestos Essentials - Task Manual Task guidance sheets for the building, maintenance and allied trades. (HSG 210) HSE 2012	✓		✓	✓	
Introduction to Asbestos Essentials comprehensive guidance on working with asbestos in the building maintenance and allied trades. (HSG 213) HSE 2001	✓		✓	✓	
HSG 264 Asbestos: The Survey Guide HSE 2012		✓		✓	
HSG 189/2 Working with asbestos cement HSE 1999	✓		✓	✓	
Work with Materials containing Asbestos, Approved Code of Practice (L143) HSE 2006	✓	✓	✓	✓	✓
HSG 53 The selection use and maintenance of respiratory protective equipment HSE 1998	✓	✓	✓		
MDHS 59 Man made mineral fibre by phase contrast light microscopy HSE 1988	✓				
Lab 30 – Application of ISO/IEC 17025 for Asbestos Sampling and Testing Edition 2 2008			✓		
RG8 - Accreditation of Bodies Surveying for Asbestos in Premises Edition 2 2008	✓				
Asbestos for Surveyors (W. Sanderson) Estate Gazettes 2 nd edition (2007)		✓			
A Comprehensive Guide to Managing Asbestos in remises (HSG 227) HSE 2002		✓		✓	
Asbestos: RICS Guidance Note: Implications for members and their clients. RICS Books 2003				✓	
The Management of Asbestos in Non-Domestic Premises (L127) HSE 2006		✓		✓	
Managing health and safety in construction; Construction (Design and Management) Regulations 2007; ACOP & Guidance, (L144) HSE 2007			✓	✓	
How Are You Managing? - Dealing with the Risks of Asbestos in Buildings (DVD)		✓		✓	
Managing Asbestos in Buildings: A Brief Guide. INDG223 HSE 2012		✓		✓	
Hazardous waste regulations	✓		✓	✓	

Note that many of the HSE publications are available as free downloads from the HSE web-site at <http://www.hse.gov.uk/pubns/books/index-catalogue.htm>

The following web-sites also have useful information:

Asbestos Testing and Consultancy Association www.atac.org.uk

Asbestos Removal Contractors Association www.arca.org.uk

Health and Safety Executive www.hse.gov.uk

Royal Institution of Chartered Surveyors www.rics.org.uk

Special Needs:

Centres that have candidates with special needs should consult The Society's *Regulations and Guidance for Candidates with Special Assessment Needs*, this is available from The Society and The Society's web site (www.rsph.org).

Recommended Qualifications and Experience of Tutors:

The Society would expect that tutors have teaching experience and a qualification in a relevant subject area, but recognises that experienced teachers can often compensate for a lack of initial subject knowledge, or experienced practitioners for a lack of teaching experience.

The Society recommends that centres utilise a team of tutors in the delivery of this qualification, and that at least one tutor has suitable practical experience in the conduct of asbestos surveys and/or building surveys within the previous five years.

Centres should be registered with The Society.

Any enquiries about this qualification should be made to:

The Qualifications Department
Royal Society for Public Health
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