

**The British Occupational Hygiene Society
Faculty of Occupational Hygiene**

PROFICIENCY MODULE SYLLABUS

**P402: Buildings Surveys and Bulk Sampling for Asbestos
(including Risk Assessment and Risk Management Strategies)**

Aim: To provide background and practical knowledge in the surveying of buildings for asbestos and to provide general guidance on management procedures necessary to minimise exposure to any identified asbestos.

Prior Knowledge: Candidates for this course are expected to be aware of the contents of HSG 264 (Asbestos: The Survey Guide) and have a minimum of six months prior experience of carrying out asbestos surveys.

| Content: | Topic | Time Allocation |
|-----------------|--|------------------------|
| | 1 Introduction and Legislative Requirements | 5% |
| | 2 Asbestos in Buildings | 45% |
| | 3 Bulk Sampling | 15% |
| | 4 Practical Work | 35% |

Note: Reference is made in this syllabus to HSE guidance or other documentation. This may not be the most up-to-date relevant publications from HSE/other sources and is intended as guidance for candidates only.

1 Introduction and Legislative Requirements (5%)

Introduce the requirements for management of asbestos in buildings under the Management of Health and Safety at Work Regulations 1999, the Control of Asbestos Regulations 2006 and the Construction (Design and Management) Regulations 2007.

Educational Objectives The student must have a clear understanding of the legislation relating to asbestos.

2 Asbestos in Buildings (45%)

2.1 Types and Uses of Asbestos in Buildings

- Use the HSE (1) and/or the DETR (2) as a primary source of information on products and their locations in buildings
- Explain the physical and chemical properties of asbestos which have determined the use to which it has been put by industry
- Discuss the three types of asbestos which have found significant commercial use (amosite, chrysotile and crocidolite) in relation to sprayed and thermal insulation, insulating boards, coatings, cement products and other reinforced products (eg. vinyl tiles, roofing felts) commonly used in building construction
- Describe the full range of health effects ranging from the benign (pleural plaques) to the terminal (mesothelioma) in the light of results from epidemiological studies carried out on asbestos workers. Review influential publications. Cover dose-response relationships, the effects of smoking whilst working with asbestos and the risks to health from low-level exposure
- Discuss the uses and composition of other asbestos products likely to be used or found inside buildings on plant, machinery or domestic appliances (eg. textiles, friction materials, seals, gaskets etc)
- Describe the use and occurrence of the other types of asbestos particularly as possible contaminants in other minerals

2.2 *Surveys of Asbestos Containing Materials in Buildings*

- Discuss the types of survey which can be carried out following relevant HSE guidance (1)
- Discuss how to plan, organise and conduct surveys. The importance of the survey plan, what information should be collected and included within the plan and the requirement to involve the client in this process
- Discuss what parameters need to be assessed and recorded during the survey. i.e. location, product type, accessibility, condition, surface treatment, materials which could be confused as containing as asbestos
- Discuss typical errors and how to present results and record location of asbestos containing materials, including the use of caveats and the requirement for these to be site specific and not generic
- Discuss the level of access required for each type of survey and the potential for a phased approach for demolition/refurbishment surveys
- Discuss the quality control measures which the client will be expected to implement following receipt of survey reports
- Discuss the various Safety precautions required during survey work including an initial risk assessment and PPE requirements (3).

2.3 *Risk Assessment of Asbestos Containing Materials in Buildings*

- Using HSE guidance (1) (5) (6) examine the purpose and strategies for risk assessment of asbestos containing materials in buildings and the compilation of asbestos registers. Outline the types and sources of information required and discuss the uses to which this information is put
- Describe the different assessments that are required and how these help determine control actions. Outline possible control actions. Describe common errors in the survey and risk assessment process.

2.4 *Management of Asbestos Containing Materials in Buildings*

- Using HSE guidance (1) (5) (6) (7) discuss the steps necessary to manage identified asbestos in buildings i.e. location survey, asbestos register, risk assessment, written plan of control actions
- Outline the ongoing management actions necessary to minimise exposure to identified asbestos in buildings i.e. maintain register, monitor condition, label, restrict access, inform, train, define and use safe systems of work, operate a permit to work system.

Educational Objectives The student must be able to describe the uses of asbestos in buildings and the public health risk these might pose. The student must understand the principles of and requirements for asbestos surveys, risk assessment and risk management strategies and their role in reducing health risks.

3 **Bulk Sampling (15%)**

- Using HSE guidance (1) outline the numerous reasons for bulk sampling ranging from the collection of one small sample for identification purposes through to a complete asbestos audit of a building in order to compile an asbestos register
- Discuss the quality and quantity of information required to enable valid conclusions to be reached and relevant recommendations to be made
- Discuss sampling strategies for all types of asbestos containing materials i.e. spray coatings, pipe insulation, insulating board, ceiling tiles, cement materials
- Describe fully the techniques used and precautions required when collecting bulk samples. Make reference to HSE (1), (8) guidance on sampling.

Educational Objectives The student must have a detailed knowledge of the approved methods for sampling of bulk asbestos.

4 Practical Work (35%)

Practical work must be carried out to provide the student with all practical knowledge in carrying out building surveys to identify the presence of asbestos and any bulk sampling that may be required. The practical must also consider the level of intrusion required for each type of survey.

It is advised that the practical in this case could be covered using a slide, video or live based practical which shows all the different survey situations eg. office, boiler house, school, hospital etc. and all the different examples of asbestos locations eg. pipe-work insulation, insulation board, asbestos / cement sheeting, ceiling tiles, floor tiles etc.

A practical sampling exercise must be included.

Relevant Documentation

- (1) HSG 264 (2010) Asbestos: The Survey Guide
- (2) Asbestos and Man-Made Mineral Fibres in Buildings Practical Guidance, Thomas Telford DETR (1999)
- (3) HSE Guidance Note HSG 53 (2005) The Selection, Use and Maintenance of Respiratory Protective Equipment
- (4) HSG 247 Asbestos. The Licensed Contractors Guide
- (5) HSE Guidance Note HSG 227 (2002) Comprehensive Guide to Managing Asbestos in Premises
- (6) HSE Guidance INDG 223 (2001) Managing Asbestos in Workplace Premises
- (7) HSE Guidance HSG248 Asbestos: The Analyst's guide for sampling, analysis and clearance procedures

Course Length

It is envisaged that this course will be conducted over 2 days with a further 1 day for the examination and assessment.

This course will require 16 hours of study time (teaching and practical), some of which may need to be undertaken in the candidates own time.

Course Examination/Assessment

The students would be assessed as follows:

1. A 90 minute BOHS examination consisting of 40 short answer questions.
2. A practical assessment carried out by an approved practical assessor as detailed below.
3. Candidates are required to demonstrate that they have carried out, possibly under supervision, two field surveys for asbestos, which must include sampling, analysis and a material assessment.

Practical Assessment - The assessment must include:

- slide/video/photographic assessment procedure for identifying the presence of asbestos in different locations which must include a variety of asbestos products, confirm basic understanding of buildings and structures and use of material and priority assessments
- Level of intrusion required for the different types of survey
- Full procedure for taking samples
- use of PPE and RPE.

Full details of the practical assessment requirements are provided as a separate document GB.2, P402 Practical Requirements.

Report Submission

Candidates are required to demonstrate that they have carried out, possibly under supervision, two field surveys for asbestos, which must include sampling, analysis and a material assessment.

A copy of each of these two relevant reports must be submitted to BOHS within six months.

Full details of the report requirements are provided as a separate document GB.6, P402 Submission of Reports – Requirements for Candidates.

Successful completion of the above will lead to a:

**‘PROFICIENCY CERTIFICATE’ in
Buildings Surveys and Bulk Sampling for Asbestos**