

**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.

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 1994.

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. What parameters need to be assessed and recorded during the survey. i.e. location, product type, accessibility, condition, surface treatment. Typical errors and how to present results and record location of asbestos containing materials.
- Discuss the various Safety precautions required during survey work including an initial risk assessment and PPE requirements (3) (4).

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.

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.

REFERENCES

- (1) HSE Guidance MDHS 100 (2001) Surveying, Sampling and Analysis of Asbestos – Containing Materials
- (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) HSE Guidance HSG53. Respiratory Protective Equipment at Work.
- (5) HSG 247 Asbestos. The Licensed Contractors Guide
- (6) HSE Guidance Note HSG 227 (2002) Comprehensive Guide to Managing Asbestos in Premises
- (7) HSE Guidance INDG 223 (2001) Managing Asbestos in Workplace Premises
- (8) HSE Guidance HSG248 Asbestos: The Analyst's guide for sampling, analysis and clearance procedures

COURSE LENGTH

It is envisaged this course would be run over 3 days with 2 days for the course and a further 1 day for the examination/assessment.

COURSE EXAMINATION/ASSESSMENT

The students would be assessed as follows:

1. A 1 hour 15 minute MCQ BOHS examination (45 questions).
2. A practical assessment carried out by an approved practical assessor as follows:

PRACTICAL ASSESSMENT -ASBESTOS BUILDINGS SURVEY AND BULK SAMPLING

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.
- Full procedure for taking samples
- use of PPE and RPE

Full details of the practical assessment requirements are provided as a separate document GB2 P402 Practical Requirements

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.

Successful completion of the above will lead to a:

**‘PROFICIENCY CERTIFICATE’
in BUILDINGS SURVEYS AND BULK SAMPLING FOR ASBESTOS.**