

**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 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. 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).

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.

Relevant Documentation

- 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 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 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 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. See *Reports* section, below.

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.
- 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.

Reports -

1. General Requirements

- 1.1 In order to be awarded a Certificate for this examination, candidates are required to provide evidence of field proficiency. To satisfy this requirement candidates are required to demonstrate that they have carried out, possibly under supervision (please refer to 1.3 below), two field surveys for asbestos, which must include sampling, analytical results and a material assessment, e.g. a minimum Type 2 Survey as per MDHS 100, (please refer to 2.0 below for requirements on content). These reports must show to the examiner that the candidate is competent to do the work. It is required that the samples for analysis will be taken by the candidate and that this must be confirmed in the laboratory report (please see 2.2.7 below).
- 1.2 These reports will be examined for qualification purposes and will be returned to the candidates if requested or, if not, destroyed.
- 1.3 The reports submitted must be the candidate's own work (i.e. it must have been written by the candidate himself/herself). It must not be the work of his supervisor, although it is permissible for the surveys to be carried out under supervision. When the survey is carried out under supervision a signed statement by the supervisor stating that the work is that of the candidate must accompany the report and must also confirm that the premises or a defined area within the premises have not been used for supervised survey on a previous occasion. If this situation applies to one or both of your reports, please make the exact circumstances clear either in the report itself or in a covering letter. Failure to do so may delay the processing of reports.
- 1.4 Candidates are expected to submit two relevant reports to BOHS within six months of the date on which they were notified that they had passed both the written and practical assessments. Reports at time of submission must not be more than six months old. Where this is not practicable some variance may be allowed by notifying the Secretariat in writing. Both reports must be submitted at the same

time in order for them to be processed. Reports received by fax or in electronic format will not be acceptable.

- 1.5 Within two weeks of receipt, BOHS will issue an acknowledgment that it has received the reports, which will include an estimate of the time it anticipates it will take to process them.
- 1.6 BOHS cannot accept any liability for non-receipt, so recommends that reports are sent by Recorded/Special Delivery or a courier service.
- 1.7 Where candidates have not submitted reports within 18 months of passing both the modular examination and the practical assessment, the period shall be deemed to have lapsed and candidates will be required to re-sit the whole examination. Exceptions to this 18-month rule will be considered in certain circumstances only (e.g. serious illness/disability, involuntary unemployment). Written requests for consideration should be made as soon as the need is known, because only in very exceptional circumstances will an extension be granted after the 18-month period has actually lapsed. In the case of illness/disability please include a brief description of the illness/disability, and an estimate of the expected duration, if known. In the case of involuntary unemployment, please give an indication of the expected duration of the unemployment. All requests will be treated in the strictest confidence.
- 1.8 A Certificate of Authorship must be completed by the candidate for each report and where relevant a supervisor's declaration (please see 1.3 above). This must be submitted to BOHS at the same time as the reports themselves.
- 1.9 Both reports must be acceptable to the Society in order for the candidate to be awarded the Proficiency Module Certificate.
- 1.10 If a candidate's reports are not acceptable to BOHS they will be returned to the candidate with an explanation, and a set timescale in which to clarify the points raised, amend and re-submit reports, provide new reports, etc.
- 1.11 For the purpose of confidentiality, reports may be edited to delete/blank out the name of the company/organisation commissioning the report. But the report and the Certificate of Authorship must bear the full address of the premises surveyed. All such details will be maintained with the strictest confidence.
- 1.12 If at any time the submitted reports or accompanying documents are found to be misleading, plagiarised or fraudulent then BOHS will either not continue to process those reports or if a certificate has been issued immediately withdraw that certificate. Under these circumstances candidates will not be allowed to subsequently submit further reports.
- 1.13 Candidates right to appeal, in writing, against any such decision is retained.

2. Report Contents

- 2.1 There is no restriction on the maximum length of each report.
- 2.2 It is required that the report will contain:
 - 2.2.1 Title page, including a title and a unique number by which the report can be identified
 - 2.2.2 Concise summary
 - 2.2.3 Introduction or background including a description of the age and nature of the premises including a description, of the exterior as well as the interior, and the reason why the survey was conducted (eg. refurbishment/repair, demolition, etc). [For the purposes of this report premises are defined as; single domestic dwelling, individual buildings of >100m², separate floors in a multi-story building >100m², clearly defined section of industrial buildings or plant >100m².]
 - 2.2.4 Methodology for the survey including all relevant risk assessments and safety procedures.
 - 2.2.5 Details of where the surveyor looked and did not find asbestos, as well as the location(s) where it was found and where they might have expected to find asbestos where it was not found.
 - 2.2.6 A copy of the original hand written field notes, as an appendix to the report or as an attached document.
 - 2.2.7 Copy of the analysis report from a UKAS approved laboratory (outside UK an approved laboratory to ISO 17025), which includes the name of the surveyor who took the samples.
 - 2.2.8 Material assessment data, accessibility, discussion and recommendations.

The reports must reach conclusions in a clear and logical way so that it is easily understandable to the recipient. Where action (especially immediate) is required by the recipient, the surveyor could be deemed to be negligent if the report did not contain this advice. Note: if recommended action is not included in your company's standard report format then supplementary documentation will be required by BOHS with these reports.

- 2.2.9 Reference tables and graphs etc as appropriate
- 2.2.10 Plans (architect or sketch)
- 2.2.11 Where reference is made in the report to legislation, approved codes of practice or other documentation this must be the current situation and not out of date references.
- 2.3 If it is not customary for reports produced by your organisation to include all of the above then it will be necessary for you to provide that item either on a supplementary sheet or in an accompanying letter. Where it is normal for surveyors to use palm tops or other similar recording devices to assist them with their surveys, if these cannot be downloaded to give a working logsheet, candidates must produce normal operational log sheets for the two surveys they intend to submit for consideration. Without this information, we will be unable to assess your reports and they will be rejected.
- 2.4 Where a Type 2 [MDHS 100] survey has been conducted and no asbestos actually found the candidate must at least submit one sample for analysis which has been taken during the survey and describe in full all the subsequent procedures that should be implemented as if asbestos had been found.
- 2.5 Surveys and reports carried out by a team will only be acceptable if ownership of the report can be claimed by the candidate alone.
- 2.6 Only in exceptional circumstances will reports for surveys carried out on the same premises be allowed to be submitted. Use of exceptional circumstances for planned multiple surveys must be prior notified as there are additional requirements for the reports submitted. Please contact BOHS secretariat at Derby prior to any such survey.
- 2.7 Reports must be written by each individual candidate and the analytical data must confirm that the samples were taken and provided to the analytical laboratory by the candidate.
- 2.8 Where the report is generated from a computer generic report that requires the author to put information in about the premises being surveyed, please ensure that the information required has actually been put into the report and ensure that the contents of two reports are not mixed up with each other and each is a free-standing document.
- 2.9 Reports will also be rejected and returned to the author for correction and resubmission where they contain misleading or inconsistent information. For example, where conclusions have been made on the basis of insufficient samples.

Successful completion of the above will lead to a:

**'PROFICIENCY CERTIFICATE' in
Buildings Surveys and Bulk Sampling for Asbestos**