



British Occupational
Hygiene Society

The Chartered
Society for Worker
Health Protection

P400 Foundation Course:

Asbestos Surveying and Analysis

Course Specification

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Section 1

About BOHS

BOHS - The Chartered Society for Worker Health Protection

BOHS is the Chartered Society for Worker Health Protection. Our vision is to create a healthy working environment for everyone by preventing exposure to hazards in the workplace.

Founded in 1953, we have developed over the last 64 years into a highly respected and influential body on workplace health issues, working closely with organisations in the UK and overseas to promote our vision. We are a registered charity, professional society and a member of the International Occupational Hygiene Association, which is recognised as a non-government organisation by the International Labour Organisation (ILO) and the World Health Organization (WHO).

We were awarded a Royal Charter in 2013 in recognition of our pre-eminent role in protecting worker health.

BOHS is a membership organisation, open to anyone who has an interest in workplace health issues, and we have over 1,800 members in 57 countries.

BOHS courses and qualifications – the quality choice

We are the leading awarding body in our field. Our UK courses and qualifications are recognised and respected by independent agencies such as the Health and Safety Executive (HSE) and the United Kingdom Accreditation Service (UKAS), and further afield by industry and employers worldwide. Over 60,000 people have taken one of our qualifications through our network of training providers.

Our courses and qualifications are overseen by a team of highly experienced professionals, who are dedicated to developing the competence and career opportunities for the many thousands of people that play a key role in protecting worker health; in diverse fields such as asbestos, legionella and control technologies.

Information about all our courses and qualifications is available on our website:
www.bohs.org/qualifications-training/bohs-qualifications/

Section 2

P400 at a glance

What is the objective?

To provide candidates with a basic understanding of health risks associated with exposure to asbestos fibres, and to provide an introduction to the relevant legislation and safety procedures for managing asbestos-containing materials.

Who is it for?

Anyone who is training to become an asbestos surveyor or analyst.

What are the entry requirements?

There are no pre-requisites for candidates to take this course.

What are the main subject areas?

- Properties of asbestos.
- Health effects.
- Use and application of asbestos products.
- Legislation and guidance.
- Personal protection and decontamination procedures.
- Asbestos management requirements.

How long does it take?

Normally one day.

What level is it?

Level 3 in the BOHS qualifications framework.

How do candidates pass it?

Candidates must pass a 30 minute multiple-choice examination within 12 months.

Section 3

Background to the course

BOHS has provided asbestos proficiency qualifications in the UK for over 15 years, working closely with globally recognised bodies such as the HSE to set educational standards and to spread best practice. In that time, over 45,000 candidates have taken a BOHS asbestos examination.

P400 - Asbestos Surveying and Analysis is a foundation level course, designed as a progression route to the asbestos Proficiency qualifications for surveyors and analysts. It gives candidates an introductory level of knowledge on the health risks of asbestos fibres, and how to manage asbestos-containing materials in their work.

The course is in line with the recommended Foundation Material in the HSE's *Appendix 9: Core competencies to be achieved in asbestos core modules* in the draft version of *HSG248 Asbestos: The Analysts' Guide 2016* published for public consultation.

Section 4

Key features of the course

Objective

To enable candidates to identify the risks associated with asbestos, and to know how to manage asbestos-containing materials, to a standard which minimises the risk of exposure to airborne asbestos fibres.

Target audience

This course is suitable for anyone who:

- Is training to become an asbestos surveyor or analyst.
- Requires a foundation level of understanding in order to take a Level 4 asbestos Proficiency qualification (P401-4).

Entry requirements

There are no pre-requisites for this course. However, knowledge of *HSG264 Asbestos: the survey guide* and *HSG248 Asbestos: The analysts guide for sampling, analysis and clearance procedures* would be an advantage.

Level

The level of a course or qualification indicates the relative complexity and depth of knowledge and skills required to complete the course or qualification.

This course is set at Level 3 in the BOHS qualifications framework.

Fees

The examination fee for each candidate is published on the BOHS website:
www.bohs.org/qualifications-training/examination-fees/

Section 5

Delivering the course

Teaching and learning time

The P400 course normally runs over one day and includes at least five hours of teaching.

The course can be delivered more flexibly, such as an evening or part day course, but should still include five hours of teaching.

Tutors

The course should be taught by tutors who are experienced and qualified asbestos practitioners. As a guide, tutors will typically have:

- At least three years' current experience in working with asbestos;
- A recognised asbestos qualification or a professional occupational hygiene qualification.
- A level 3 teaching qualification or at least three years' experience of teaching accredited courses.

Teaching resources

Training providers must have the following facilities and equipment:

- Photographic examples for education purposes

Section 6

Syllabus

The course is structured into six sections, each with an indicative time allocation:

Section		Time allocation
1	Introduction	10%
2	Health effects of asbestos	20%
3	Use and application of asbestos products	20%
4	Legislation and guidance	20%
5	Personal protection and decontamination procedures	20%
6	Management requirements	10%

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

Educational objectives

Candidates will learn the health risks associated with exposure to asbestos fibres, and good practice for managing asbestos-containing materials.

The numbers in brackets refer to the publications listed in 'References and further reading' in Section 7.

1 Introduction (10%)

- 1.0.1 Introduction to asbestos as a mineral deposit, sources of supply and the main types of asbestos. Identifying that asbestos can be a contaminant in other minerals [talc etc.]

2 Health effects of asbestos [20%]

- 2.0.1 Outline the full range of health effects ranging from the benign (pleural plaques) to the terminal (mesothelioma), in light of results from epidemiological studies carried out on asbestos workers. Includes an overview of the methodology used.
- 2.0.2 Review influential publications. Cover dose-response relationships, latency, the effects of smoking whilst working with asbestos, and the risks to health from low- level exposure.
- 2.0.3 Outline past industrial exposures in relation to present-day work exposures, and the potential of low-level and long term exposure in some occupied buildings.

2.0.4 Outline of the requirements for medical examinations.

3 Use and application of asbestos products [20%]

- 3.0.1 Use of reference documents (7) (12) (13) as a primary source of information on products and their locations in buildings.
- 3.0.2 Outline the physical and chemical properties of asbestos and how it has been used in industry.
- 3.0.3 Outline 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 (e.g. vinyl tiles, roofing felts) commonly used in building construction.
- 3.0.4 Outline past uses of asbestos, reasons for use and when restrictions on use took effect. Awareness of imports from outside the EU which may be outside these restrictions.
- 3.0.5 Outline the uses and composition of other asbestos products likely to be used or found inside buildings on plant, machinery or domestic appliances (e.g. textiles, friction materials, seals, gaskets etc.) This should include the effects, heat weathering etc.
- 3.0.6 Awareness of the international chemical classification of asbestos types.

4 Legislation and guidance [20%]

- 4.0.1 Introduce the requirements for management of asbestos in buildings under the Health and Safety at Work Act 1974 (in particular sections 3, 7 and 8); Management

of Health and Safety at Work Regulations 1999; Control of Asbestos Regulations 2012; the Construction (Design and Management) Regulations 2015.

- 4.0.2 Introduce the features and status of L143 Approved Code of Practice (11) guidance documents; HSG248 [Analysts guide] (6); HSG264 [Surveyors guide] (7).
- 4.0.3 Awareness of other regulations and documents should include the COSHH regulations, UKAS guidance Lab 30 (14) and ISO 17025 (10).
- 4.0.4 Introduce the concept of setting exposure/control limits and the requirement to minimise exposure below those limits.
- 4.0.5 Introduce airborne asbestos data from a selection of common contractor work tasks. Compare the control limit, Short Term Exposure Limit (STEL) and clearance levels for typical analyst tasks.

5 Personal protection and decontamination procedures [20%]

- 5.0.1 Introduce the selection of PPE/RPE requirements. Understand and carry out face fit testing/donning/removal and care for equipment.
- 5.0.2 Awareness of potential threats to effectiveness of PPE/RPE, how much protection is likely and how it fits in with other methods of control.
- 5.0.3 Candidates should be able and prepared to carry out personal decontamination, and have an awareness of emergency procedures.
- 5.0.4 Awareness of how to assess if a site is safe for them to enter to begin work.

6 Management requirements [10%]

- 6.0.1 An overview of the role of the analyst, including the implications of lone working and the need for independence.
- 6.0.2 Awareness of the requirements and procedures for selecting a competent analyst and contractor.

- 6.0.3 Awareness of how to communicate clearly with colleagues and clients, and report findings in a formal manner.
- 6.0.4 Awareness of correct waste disposal procedures (including own kit and samples) in compliance with the Hazardous Waste Regulations 2005.
- 6.0.5 Awareness of when it might be necessary to use a DCU (Decontamination Unit) in non-licensed work (i.e. intrusive survey). Awareness of the methods/procedures of checking/testing DCUs for general safety.

Section 7

References and further reading

- (1) HSG227 (2002), A comprehensive guide to managing asbestos in premises, HSE (Appendix 2, paragraphs 5-6, plus table 2)
- (2) HSG227 (2002), A comprehensive guide to managing asbestos in premises, HSE (Appendix 3)
- (3) HSG227 (2002), A comprehensive guide to managing asbestos in premises, HSE (Appendix 4)
- (4) HSG227 (2002), A comprehensive guide to managing asbestos in premises, HSE (pages 48-69, material and priority assessments)
- (5) HSG247 (2006), Asbestos: The licensed contractors' guide, HSE
- (6) HSG248 (2005), Asbestos: The analysts guide for sampling, analysis and clearance procedures, HSE
- (7) HSG264 (2012), Asbestos: The survey guide, HSE
- (8) HSG53 (2013), Respiratory protective equipment at work: A practical guide, HSE
- (9) INDG223 (rev 5) (2012), Managing asbestos in buildings: A brief guide, HSE L143
- (10) ISO/IEC 17025 (2005), General requirements for the competence of testing and calibration laboratories
- (11) L143 (2013), Managing and working with asbestos. Control of Asbestos Regulations 2012, Approved Code of Practice and guidance, HSE
- (12) Sanderson, B. (2007), Asbestos for Surveyors (second edition), EG Books
- (13) Thomas Telford DETR (1999), Asbestos and man-made mineral fibres in buildings: Practical Guidance
- (14) UKAS (2015), Lab 30, Edition 3: Application of ISO/IEC 17025 for Asbestos Sampling and Testing

HSE guidance is reviewed and revised periodically. Training providers should check that the publications listed above are the current versions.

Useful websites

All the Health and Safety Executive (HSE) publications listed above are available as free downloads from the HSE website: www.hse.gov.uk/

Section 8

Completing the course

Candidates are required to pass one multiple-choice examination to complete the course.

Multiple-choice examination

The examination usually takes place at the end of the course. It enables candidates to demonstrate that they have understood the course content.

The examination is comprised of 20 multiple-choice questions, to be answered in 30 minutes. For each question, candidates will choose one of four possible answers. The questions are a mix of text and diagram-based questions.

The questions are worth one mark each. Candidates will be awarded 1 mark for a correct answer, and 0 marks for an incorrect answer.

Candidates should attempt all questions as no marks are deducted for incorrect answers.

The examination covers sections 1 to 6 of the syllabus content, in proportion to the time allocation given for each section. This gives a mark allocation as follows:

	Section	Number of questions (% of syllabus)
1	Introduction	2 (10%)
2	Health effects of asbestos	4 (20%)
3	Use and application of asbestos products	4 (20%)
4	Legislation and guidance	4 (20%)
5	Personal protection and decontamination procedures	4 (20%)
6	Management requirements	2 (10%)

The sections are clearly marked in the examination paper.

The examination is a closed-book examination, which means that candidates are not permitted to have access to any materials.

Invigilation

The examination is invigilated by the training provider.

Marking and results

All examination papers are marked by BOHS.

Candidates receive their results in writing from BOHS. The results are reported as pass or fail plus a percentage.

Training providers are sent a list of results for all candidates on a course.

Feedback

Candidates receive feedback on their examination performance. For example, the feedback for an examination in which a candidate scored 75% would be shown as follows:

Syllabus Area		Result	
1	Introduction	2/2	(100%)
2	Health effects of asbestos	4/4	(100%)
3	Use and application of asbestos products	2/4	(50%)
4	Legislation and guidance	2/4	(50%)
5	Personal protection and decontamination procedures	4/4	(100%)
6	Management requirements	1/2	(50%)
Total		15/20	75%

Training providers receive feedback on the performance of all candidates.

Written Exam Performance against syllabus		Number of candidates in each scoring band	
		0-	75-100%
P400 Written Exam	1: Introduction	1	6
P400 Written Exam	2: Health effects of asbestos	1	6
P400 Written Exam	3: Use and application of asbestos products	3	4
P400 Written Exam	4: Legislation and guidance	1	6
Exam P400	5: Personal protection and decontamination procedures	1	6
P400 Written Exam	6: Management requirements	1	6

Resits

Candidates may re-sit the examination, but must pass within 12 months of the original sitting.

Certification

Candidates who pass the course will receive a certificate of successful course completion.

Section 9

Quality assurance

Internal quality assurance

Training providers must operate an internal quality assurance system which evaluates and improves the delivery of the course.

External quality assurance

BOHS undertakes desk-based reviews of documents, including teaching materials, and conducts surveys of candidates. We also reserve the right to make unannounced visits to training providers to ensure that the examinations are conducted in line with our requirements.

Section 10

Offering the course

Approved training providers

Please complete and return the 'Application to Offer Additional Qualifications' form to qualifications@bohs.org. The form is available on the BOHS website.

New training providers

Please send an email to qualifications@bohs.org expressing your interest in offering the course, and we will advise you about the approvals process.

Section 11

Other courses and qualifications for asbestos practitioners

This course has been designed as a progression route into asbestos surveying and analysis qualifications.

P401 Identification of Asbestos in Bulk Samples (PLM)

Objective

The objective of P401 is to provide candidates with theoretical and practical knowledge in the techniques of asbestos sample identification using polarised light microscopy (PLM).

Target audience

The qualification is suitable for anyone who:

- Carries out bulk sampling as part of their work;
- Is considering a career as an asbestos analyst;
- Is responsible for managing asbestos analysts.

P402 Surveying and Sampling Strategies for Asbestos in Buildings

Objective

The objective of P402 is to improve the knowledge and skills required by asbestos surveyors up to a standard which is recognised as reducing ill health by minimising the risk of exposure to airborne asbestos fibres.

Target audience

The qualification is suitable for anyone who is:

- Required to survey asbestos as part of their work;
- Considering a career in asbestos surveying;
- Responsible for managing surveyors and surveyor teams.

P403 Asbestos Fibre Counting (PCM)

Objective

The objective of P403 is to provide candidates with theoretical and practical knowledge in the techniques of fibre counting of asbestos air samples using phase contrast microscopy (PCM).

Target audience

The qualification is suitable for anyone who:

- Carries out the approved methods of fibre count sampling as part of their work;
- Is considering a career as an asbestos analyst;
- Is responsible for managing asbestos analysts.

P404 Air Sampling of Asbestos and MMMF and Requirements for a Certificate of Reoccupation Following Clearance of Asbestos

Objective

The objective is to provide candidates with theoretical and practical knowledge in the techniques of air sampling and clearance testing, and the provisions for certification for reoccupation.

Target audience

The qualification is suitable for anyone who:

- Undertakes clearance testing, air sampling and fibre counting as part of their work (e.g. asbestos analyst);
- Issues certificates of reoccupation after asbestos clearance procedures.