



INSTITUTE OF WOOD PRESERVING & DAMP-PROOFING ASSOCIATION

EXAMINATION SYLLABUS

For Certificated Surveyor in Structural Waterproofing (C.S.S.W)

The principles of structural waterproofing

PARTS A & B

1. Building Construction

A Surveyor should have general knowledge of building construction and materials in the United Kingdom and in particular should be able to:

- 1.1 Identify the various types of concrete and masonry and their permeability to moisture.
- 1.2 Understand the methods of damp-proofing and structural waterproofing used during construction.
- 1.3 Demonstrate knowledge of ventilation requirements in a building.
- 1.4 Evaluate the structural implications of any treatment to be advised and to decide if it is within the competence of the remedial company concerned.
- 1.5 Understand factors relating to soil permeability, grading, loading and consolidation.

2. Diagnosis of the origin of water ingress

A Surveyor must have knowledge of the theory of moisture movement and the practical methods of diagnosis including:

- 2.1 The causes and effects of dampness in buildings, including ingressing water, capillary moisture and surface and interstitial condensation and their cure.
- 2.2 Physical aids to detection of moisture including the use of moisture meters and interpretation of results.

3. Basic principles of structural waterproofing

A Surveyor should:

- 3.1 Be fully conversant with BS8102: 1990, BSWA/BCA Design Guide, Approved Documents: Basements for Dwellings and other documents relating to structural waterproofing and control of dampness in Buildings.

- 3.2 Understand water movement, drainage, water tables and hydrostatic pressure/capillarity.
- 3.3 Understand design philosophy for structural waterproofing.
- 3.4 Have a full knowledge of structural waterproofing systems available and to be able to select and design the appropriate system for the conditions identified.
- 3.5 Be able to combine systems of different types and know limitations of such processes.
- 3.6 Understand the effects of loads on a material, deformation, stress/strain especially types of stresses - bending, compressive and tensile.
- 3.7 Understand the effects of hydrostatic pressure on a waterproofed structure and floatation.

4. Surveying and Reporting

A Surveyor should:

- 4.1 Be able to identify and report on the causes of dampness and sources of water ingress.
- 4.2 Be able to advise on safe remedial measures and any appropriate ancillary works.
- 4.3 Be able to assess ground conditions and structure.
- 4.4 Following assessment be able to prepare a full, comprehensive report and specification together with a suitable quotation.

5. Materials and Methods

A Surveyor must fully understand the performance characteristics of the commonly used products and their methods of application

- 5.1 Fully understand the principals and application of Cementitious and Cavity Drain systems; these include:
- 5.2 General principles of cementitious systems - sand/cement mixes, hydration of cements, shrinkage, bonding, importance and construction of floor/wall junctions, fixings and decoration.
- 5.3 General principles for cavity drains (internal and external) - fixings, fixing, lapping, sumps and pumps, floor/wall junction construction.
- 5.4 Maintenance of waterproofing systems.
- 5.5 Recognise other waterproofing systems, their uses and limitations - bonded sheet membranes, bentonite clay membranes, liquid applied membranes, mastic asphalt and chemical grouts.
- 5.6 Understand and recognise the advantages and disadvantages of the different systems.

6. Ancillary Procedures

A Surveyor should have general knowledge of the ancillary and supporting procedures and other methods which are employed in the control of dampness including:

- 6.1 All types of finishing systems including decorative finishes.
- 6.2 Re-plastering following the insertion of a chemical damp-proof course in relation to waterproofing systems.
- 6.3 Externally applied water repellents and renders.

PART C:

1. Legal Requirements

A Surveyor should:

- 1.1 Understand the legal implications of a report and estimate.
- 1.2 Be able to demonstrate knowledge of the correct procedures and checks before undertaking a survey or writing a report.
- 1.3 Have knowledge of the various Codes of Practice and Guidance Notes relating to surveying, reporting and conducting structural waterproofing and associated works.
- 1.4 Have general awareness of all Acts and Regulations, which could be applicable to structural waterproofing and ancillary works.

2. Assessments

A Surveyor must be able to demonstrate knowledge of:

- 2.1 Procedures for undertaking assessments required by regulations made under the Health and Safety at Work etc Act 1974 in particular the Control of Substances Hazardous to Health Regulations (COSHH) 1994; Management of Health and Safety at Work Regulations 1992; Provision and Use of Work Equipment Regulations 1998.
- 2.2 The difference between *hazard* and *risk*.
- 2.3 Information on product labels and other sources of safety data.

3. Product Safety

A Surveyor should be able to:

- 3.1 Demonstrate knowledge of the product hazards, limited to information on labels and in manufacturers' material safety data sheets.
- 3.2 Demonstrate knowledge of the safe handling of materials and products, the labelling of containers and how to deal with any spillage.
- 3.3 Specify the correct application rate and calculate the quantities of product required to complete the structural waterproofing works specified.
- 3.4 Describe the correct procedures for storing and transporting materials and products.

4. Safe Methods of Use

A Surveyor should:

- 4.1 Understand the correct procedures for protecting the public and the environment.
- 4.2 Demonstrate knowledge of the precautions to be taken by users of materials and machinery including appropriate protective clothing and equipment.
- 4.3 Have an understanding of ancillary risks associated with work in buildings such as fire, electrocution, falls, confined spaces, access equipment and temporary support.
- 4.4 Demonstrate knowledge of the relevant legislation governing the disposal of materials and general building waste.
- 4.5 Understand the correct procedures in the event of accidents including fires.