



Certificated Surveyor in Remedial  
Treatment and Structural Waterproofing

# Syllabus

Property Care Association  
Lakeview Court, Ermine Business Park, Huntingdon, Cambridgeshire, PE29 6XR

Tel: 0844 375 4301 Fax: 01480 417587

Email: [pca@property-care.org](mailto:pca@property-care.org) Website: [www.property-care.org](http://www.property-care.org)

# Module 1

---

## Legal and Health & Safety Aspects of Remedial Treatments for Infestation, Dampness and Below Ground Waterproofing

### 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 remedial treatments work, structural waterproofing and associated works.
- 1.4 Understand the legal responsibilities placed on them for the health and safety and welfare of anyone that may be affected by their actions or inactions.
- 1.5 Be able to demonstrate knowledge of legislation concerning the protection of animals and the environment including the Wildlife and Countryside Act 1981 (revised 1991) and the Conservation (Natural Habits etc) Regulations 1994 (revised 2007).
- 1.6 Have general awareness of all other Acts and Regulations which could be applicable to remedial treatments, structural waterproofing and ancillary works.

### 2. Assessments

*A Surveyor should be able to demonstrate knowledge of:*

- 2.1 The differences between **hazard** and **risk**, as defined by the Health and Safety Executive.
- 2.2 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) 2002, the Management of Health and Safety at Work Regulations 1999 and other relevant health and safety legislation.
- 2.3 Information on product labels and in 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 products and materials, the labeling of containers and how to deal with any fluid spillage.
- 3.3 Describe the correct procedures for storing and transporting products and materials.

### 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 products, materials and machinery including appropriate protective clothing and equipment.
- 4.3 Demonstrate knowledge of the relevant legislation governing the disposal of products, other materials used, contaminated waste and general building waste.
- 4.4 Have an understanding of ancillary risks associated with work in buildings such as fire, electrocution, falls, confined spaces, access equipment and temporary support.
- 4.5 Understand the correct procedure in the event of accidents including fires.

# Module 2

---

## The Identification and Remedial Treatment of Infested Timber

### 1. Building Construction

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

- 1.1 Identify the structural and joinery timbers in a property and their purposes.
- 1.2 Evaluate the structural implications of any treatment to be advised and to decide if it is within competence of the remedial treatment company concerned.
- 1.3 Demonstrate knowledge of the ventilation requirements of timber elements in a building.
- 1.4 Demonstrate knowledge of the moisture contents normally found within buildings.
- 1.5 Identify any source of dampness affecting the timbers in a building and give suitable advice to correct the fault or faults, or the need to seek specialist assessment.

### 2. Structure of Wood

*A Surveyor should have general knowledge of the structure and composition of wood and be able to:*

- 2.1 Identify sapwood and heartwood.
- 2.2 Differentiate between softwoods and hardwoods as sawn timbers.
- 2.3 Demonstrate some knowledge of the natural durability of timber.
- 2.4 Identify physical and chemical degradation of timber in buildings.
- 2.5 Understand the effect of timber permeability on the penetration of preservative when applied by various methods, including pre-treatment.

### 3. Surveying and Reporting

*A Surveyor should:*

- 3.1 Be able to identify and report on the causes of degradation of the timbers.
- 3.2 Be able to advise on safe remedial measures and any appropriate ancillary works required, including the *in situ* use of wood preservative if necessary.
- 3.3 Understand 'alternative' or 'non-pesticide based' approaches to the treatment of timber decay.
- 3.4 Where necessary, be able to specify an appropriate preservative treatment for replacement timbers.
- 3.5 Following assessment, be able to prepare a full and comprehensive report and specification.
- 3.6 Be able to demonstrate knowledge of the financial and practical implications of the defect and the repair strategies proposed.

### 4. Product Safety and Safe Use

*A Surveyor should be able to demonstrate knowledge of:*

- 4.1 Assessments required under the Control of Pesticides Regulations 1986 (as amended 1997).
- 4.2 Wood preservative products that may be specified including:
  - a) Active ingredients, their method of action and spectrum of activity.
  - b) Preservative types, their composition and performance characteristics.
  - c) Methods of application and their effect on preservative performance.
- 4.2 The dilution of concentrated products, the labeling of containers for the diluted product.
- 4.3 Specify the correct application rate and calculate the quantities of product required to complete the remedial works.
- 4.4 Demonstrate knowledge of the relevant legislation governing the disposal of products, empty containers and treated wood.

4.5 Understand the generic forms of pre-treatment, the common industrial methods employed and the preservative types used. Understand the advantages and disadvantages of commonly used methods.

## 5. Wood Borers

*Correct identification of wood borers attacking the timbers is essential if the appropriate treatment is to be advised. A Surveyor should:*

5.1 Understand the environmental conditions suitable for insect attack.

5.2 Be able to recognise the following from holes in the timber, the damage to the timber and the frass when present:

- Beetles**
- *Anobium punctatum*
  - *Ernobius mollis*
  - *Lyctus* spp
  - *Hylotrupes bajulus*
  - *Xestobium rufovillosum*
  - *Nacerderdes melanura*
  - *Ptilinus pectinicornis*
  - Forest longhorn
  - Pinhole borer

**Weevils**

**Marine borers**

**Wood wasps**

**Termites** (details of treatment will not be required)

**Non wood-boring insects**

5.3 Understand the significance of the insect attack in terms of the treatment required.

## 6. Fungi

*The presence of fungi in buildings indicates that damp conditions exist or have existed. A Surveyor should:*

6.1 Know the moisture content of timber necessary for the development of fungi.

6.2 Be able to identify the following fungi from fungal growths, including any fruit-bodies, strands or mycelium present and damage of timber where present:

- Decay fungi**
- *Asterostroma* spp
  - *Coniophora puteana*
  - *Donkioporia expansa*
  - *Fibroporia vaillantii*
  - *Paxillus panuoides*
  - *Phellinus contiguus*
  - *Pleurotus ostreatus*
  - *Serpula lacrymans*

- Plaster fungi**
- *Coprinus* spp
  - *Peziza* spp

**Moulds and slime moulds**

**Blue stain in service**

**Pocket rot**

6.3 Understand the significance of fungal growths in terms of the treatment required.

# Module 3

---

## The Identification and Remedial Treatment of Dampness

### 1. Building Construction

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

- 1.1 Identify the various types of masonry and their permeability to moisture and chemicals.
- 1.2 Understand the methods of damp-proofing used during construction.
- 1.3 Evaluate the structural implications of any treatment to be advised and to decide if it is within the competence of the remedial company concerned.
- 1.4 Demonstrate an understanding of the need for ventilation in a building.
- 1.5 Understand the implications of dampness affecting timber in buildings, identify timbers that have been affected by decay fungi or wood boring insects and give suitable advice on the need for specialist assessment.

### 2. Diagnosis of Dampness

*A Surveyor should 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 the ingress of water, capillary moisture and surface and interstitial condensation and their cure.
- 2.2 Physical aids for detection of moisture including the use of moisture meters and interpretation of results.
- 2.3 The use of chemical analysis as an aid to diagnosis.

### 3. Surveying and Reporting

*A Surveyor should be able to:*

- 3.1 Identify and report on the causes of dampness.
- 3.2 Advise on safe remedial measures and any appropriate ancillary works.
- 3.3 Following assessment, prepare a full and comprehensive report and specification.
- 3.4 Be able to demonstrate knowledge of the financial and practical implications of the defect and the repair strategies proposed.

### 4. Product Safety and Safe Use

*A Surveyor should be able to demonstrate knowledge of:*

- 4.1 Damp-proofing products that may be specified including active ingredients and their method of action.
- 4.2 Specify the correct application rate and calculate the quantities of product required to complete the remedial works.

### 5. Materials and Methods

*A Surveyor should:*

- 5.1 Be fully conversant with BS6576:2005 Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses.
- 5.2 Understand the performance characteristics of the commonly used chemical damp-proofing products including, where relevant, creams, solvent and water-based variants including:
  - a) Silicones
  - b) Siliconates
  - c) Polyoxo aluminium stearate
  - d) Polysiloxane/silane micro-emulsions
  - e) Injection mortars.

5.3 Understand the performance characteristics of the various application methods including:

- a) High pressure injection
- b) Low pressure injection
- c) Gravity feed
- d) Slurry guns and pumps
- e) Hand insertion.

## **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 Vertically applied damp-proofing and waterproofing materials and lining systems.

6.2 Re-plastering and decorating products that are utilized following the insertion of a chemical damp-proof course.

6.3 Externally applied water repellents and renders.

6.4 Other methods including:

- a) Electro-osmosis
- b) Siphon systems (evaporation tubes)
- c) Physical systems.

# **Module 4 - Below Ground Waterproofing**

---

## **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.
- 1.6 Understand the implications of dampness affecting timber in buildings, identify timbers that have been affected by decay fungi or wood boring insects and give suitable advice on the need for specialist assessment.

## **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 the ingress of 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: 2009, 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 the limitations of such processes.
- 3.6 Understand the effects of loads on a material, deformation, stress/strain especially bending, compressive and tensile stresses.
- 3.7 Understand the effects of hydrostatic pressure on a waterproofed structure and floatation.

## **4. Product Safety and Safe Use**

*A Surveyor should be able to demonstrate knowledge of:*

- 4.1 Waterproofing products that may be specified including active ingredients and their method of action.
- 4.2 Specify the correct application rate and calculate the quantities of product required to complete the structural waterproofing works specified.

## **5. Surveying and Reporting**

*A Surveyor should be able to:*

- 5.1 Identify and report on the causes of dampness and sources of water ingress.
- 5.2 Advise on safe remedial measures and any appropriate ancillary works.
- 5.3 Assess ground conditions and structure.
- 5.4 Following assessment, prepare a full and comprehensive report and specification.
- 5.5 Be able to demonstrate knowledge of the financial and practical implications of the defect and the repair strategies proposed.

## **6. Materials and Methods**

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

- 6.1 General principles of cementitious systems including sand/cement mixes, hydration of cements, shrinkage, bonding, importance and construction of floor/wall junctions, fixings and decoration.
- 6.2 General principals of structurally integral protection (type b) waterproofing systems.
- 6.3 General principles for cavity drains (internal and external) including fixings, fixing, lapping, sumps and pumps, floor/wall junction construction.
- 6.4 Maintenance of waterproofing systems and understand the need for on-going servicing maintenance and aftercare.
- 6.5 Recognise other waterproofing systems, their uses and limitations including bonded sheet membranes, bentonite clay membranes, liquid applied membranes, mastic asphalt and chemical grouts.
- 6.6 Understand and recognise the advantages and disadvantages of the different systems.

## **7. 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:*

- 7.1 All types of finishing systems including decorative finishes.
- 7.2 Maintenance of water management systems (land drains, sumps, pumps, channels).

**Edition 1 November 2009 Incorporating BWPDA © PCA 2009. This syllabus may not be photocopied or reproduced in any other form except with written permission of the Property Care Association**

Property Care Association Lakeview Court, Ermine Business Park, Huntingdon, Cambridgeshire, PE29 6XR  
Tel: 0844 375 4301 Fax: 01480 417587

Email: [pca@property-care.org](mailto:pca@property-care.org) Website: [www.property-care.org](http://www.property-care.org) Registered No. 5596488