

BUILDING CONSERVATION MASTERCLASSES STRUCTURAL REPAIR OF HISTORIC BUILDINGS

B3D07329 26-29 MARCH 2018 (3 day course)

This course is of special value to those who wish to gain a new perspective in applying engineering principles to the conservation of historic structures. The course will be of value to architects, conservation officers, masons, carpenters and others involved in conservation, as well as to engineers.

The five basic maxims of building conservation are 'conserve as found' and 'minimum intervention', 'like for like repairs', 'repairs should be reversible' and 'repairs should be sympathetic'. These philosophies must be tempered with responsibility for the safety and structural integrity of historic buildings, and for the safety of the users of those buildings. This course will attempt to draw together these two, sometimes seemingly opposing, views of conservation and safety.

Various permanent repair methods which might be applied to historic buildings are discussed and there will be debate about the merits of hidden repairs as against more obvious repairs. Not all historic buildings are as hazardous as they sometimes seem and we will discuss alternatives to the carrying out of repairs to apparently unstable structures.

The programme covers inspecting and repair works ranging from pointing and grouting to tying and underpinning. Use will be made of case studies to illustrate various points, discussion from the floor will be encouraged and there will be opportunity for

discussion in small groups to consider specific problems.

Please note: The informal evening sessions provide an opportunity for participants to present a structural problem for group discussion. Please come prepared with a case you would like to present; pictures/slides and/or drawings would be useful.

Ian Hume is a former Chief Structural Engineer at English Heritage and an Engineer Accredited in Conservation. Ian is a visiting lecturer on a number of university post-graduate conservation courses and runs seminars on the structural aspects of conservation. He has published a number of papers and articles

Edward Morton is a Director of The Morton Partnership and an Engineering Accredited in Conservation

Joe Thompson is the carpenter-in-residence at the Weald and Downland Living Museum

Recommended Reading:

Beckmann, Poul and Bowles, Robert, *Structural Aspects of Building Conservation*, Elsevier.

Robson, Patrick, *Structural Repair of Traditional Buildings*, Donhead Publishing.

A full reading list is at the foot of the course details.

OUTLINE PROGRAMME

Day 1	Monday
16.00-18.00	Register at Reception Desk
19.00	Dinner
Evening	Introduction to the course; who we are and what we do; philosophy of conservation; Discussion point: what is conservation? Reporting back
Day 2	Tuesday
Morning	<u>Understanding your building</u> The inspection of historic buildings, understanding the structure, what does its history say to you? Discussion point: the old library; Reporting back; The basics of structural behaviour
	<u>The 'do nothing' option; ways of avoiding intervention</u> Monitoring equipment and methods; Load testing; Floor loadings
Afternoon	<u>Visit to the Weald and Downland Living Museum</u> Looking at timber repairs

Beginning to do something

Scaffolding and temporary works; Discussion points: Thinking the process through; Reporting back; French drains

Evening Discussion of students' problem cases

Day 3 Wednesday

Morning The 'do nothing' option

Masonry repairs; Ties and anchors; Discussion point: Strengthening timber beams; Reporting back; Timber beam strengthening

Afternoon Visit to the Ruinette

The 'don't do very much' option

Pointing and grouting; Looking at more timber repairs; A look at repairs for metal; Minor intervention case studies

Evening Discussion of students' problem cases.

Day 4 Thursday

Morning A miscellany of thoughts

The structural aspects of service installations; Cantilever stairs, traffic vibrations; jacking structures

Conservation of modern movement buildings

The major intervention option

Underpinning; Case studies

Afternoon The major intervention option

Case studies

The value of accreditation; Drawing the course to a conclusion

16.00 Issue of certificates and depart.

Non-residential course fee £614

Fully inclusive residential course fee:

Shared bathroom facilities £785

Standard room with private bathroom facilities £845

Superior room with private bathroom facilities £905

HOW TO BOOK

Please complete one booking form, or copy of form, per person per course and enclose a deposit for each course booked. On receipt of your booking, we will send all the further details you will need for your visit, including the course details and your final payment slip. Travel instructions will be sent to all students.

For further information about the course, please contact the Course Organiser: +44 (0)1243 818219 or cpd@westdean.org.uk

For further information about booking, please telephone the Bookings Office: +44 (0)1243 818300.

Website: www.westdean.org.uk

Recommended Reading:

An overview in three volumes.

Volume 1 – Materials and skills for Historic Building conservation

Volume 2 – Structures and construction in Historic Building Conservation

Volume 3 – Understanding Historic Building Conservation

All published by Blackwell Publishing at £45 per volume

05/09/2017

Structural surveys and appraisals.

Non-destructive investigation of standing structures

Published by the Technical, Conservation, Research and Education Division of Historic Scotland

Guide to structural survey.

Clive Richardson, an Architects Journal reprint

Appraisal of existing structures.

published by the Institution of Structural Engineers

Surveys and inspections of buildings and similar structures.

published by the Institution of Structural Engineers

Structural appraisal of traditional buildings.

Patrick Robson, published by Gower

The stone skeleton.

Jacques Heyman, published by The Cambridge University Press

Arches, Vaults and Buttresses.

Jacques Heyman, published by Variorum

Recognising rot and insect damage in buildings.

published by the Building Research Establishment

Timber Decay in Buildings.

Brian Ridout. Published by Spon

Surveyors check-list for rehabilitation of traditional housing.

published by the Building Research Establishment

Site safety.

CIRIA special publication 1990.

Appraisal of existing iron and steel structures.

Michael Bussell.

Appraisal and repair of building structures.

Holland, Montgomery-Smith and Moore.

Appraisal and repair of masonry.

Parkinson, Shaw and Knowles.

Surveying historic buildings.

David Watt and Peter Swallow.

Survey and Repair of Traditional Buildings.

Richard Oxley. Published by Donhead

The technology of building defects.

John Hinks and Geoff Cook. Published by E & FN Spon

Defects and deformations in buildings

Barry A Richardson. Published by E & FN Spon

Has your house got cracks?

T J Freeman, R M C Driscoll & G S Littlejohn. Published by ICE & BRE

Structural monitoring.

Monitoring building structures.
J F A Moore, published by Blackie

Repair techniques.

Emergency repairs for historic buildings.
Eleanor Michell, published by English Heritage

Structural renovation of traditional buildings.
CIRIA Report 111

Structural repair of traditional buildings
Patrick Robson published by Donhead

Repair of ancient buildings.
A R Powys, published by the SPAB

Conservation of engineering structures.
published by the Institution of Civil Engineers

Rehabilitation and re-use of old buildings.
D Highfield, published by SPON

Practical building conservation, volumes 1-5.
John and Nicola Ashurst, published by English Heritage and Gower Press

The repair of historic buildings.
Christopher Brereton, published by English Heritage

Craft techniques for traditional buildings.
Adela Wright, published by Batsford

Conservation of Timber Buildings.
F W B Charles. Published by Donhead

Structural aspects of building conservation
Poul Beckmann and Robert Bowles, published by McGraw Hill

Old waterfront walls, management, maintenance and rehabilitation
R N Bray and P F B Tatham, published by Spon

The maintenance of brick and stone masonry structures
Edited by A M Sowden, published by Spon

The repair of historic timber structures
David Yeomans published by Thomas Telford

Appraisal and repair of timber structures
Peter Ross. Published by Thomas Telford

Building Research Establishment (BRE) publish a great deal of useful information on building problems and building repair

Conserving Buildings, a guide to techniques and materials
Martin E Weaver, published by Wiley

Preserving Post-War Heritage.
English Heritage. Published by Donhead

Conservation of Ruins.

John Ashurst. Published by Butterworth-Heinemann

Building maintenance and preservation

Edward Mills, published by The Architectural Press.

Building conservation contracts and grant aid.

Ken Davey, published by E & FN Spon

There are also many useful articles in "Context", the quarterly journal of the Institute of Historic Building Conservation. Many of these can be found on the IHBC web site www.ihbc.org.uk

The Journal of Architectural Conservation is a useful source of information.